

ATTACHMENT G

Revised Attachment G: Wetlands Functions and Values Report

CHAMPLAIN HUDSON POWER EXPRESS PROJECT
WETLANDS FUNCTIONS AND VALUES ASSESSMENT

February 2012
(Revised)

**CHAMPLAIN HUDSON POWER EXPRESS PROJECT
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1.0 INTRODUCTION

This report has been prepared by TRC on behalf of Champlain Hudson Power Express, Inc. (“CHPEI”), and provides a functional assessment of the freshwater wetland resources that may be impacted by construction and/or operation of the proposed Champlain Hudson Power Express Project (“Project”) located in Washington, Saratoga, Schenectady, Albany, Greene, and Rockland Counties, New York. This assessment is designed to address impacts to on-site wetlands not only in terms of area disturbed, but also by evaluating the potential for impacts to the functions and values of those wetlands that currently provide a public benefit.

The Project is designed to connect renewable sources of power generation to load centers in and around New York City. The Project will include underwater and underground high-voltage direct current (HVDC) transmission cables connecting an HVDC converter station in Canada with a HVDC converter station in Queens, New York. To the extent possible, CHPEI has proposed to install the transmission cables along existing waterways. However, an approximately 124-mile underground route (utilizing railroad corridors) is required to bypass the Champlain Canal and dredging activities associated with the Upper Hudson River Polychlorinated Biphenyls (PCBs) Dredging Project as well as significant natural aquatic resources. The underground route utilizing the railroad corridor extends from the Town of Dresden, in Washington County, New York, to the Town of Haverstraw in Rockland County, New York, and has been sited along the existing Canadian Pacific (CP) and CSX Corporation (CSX) railroad rights-of-way. Utilization of the railroad corridors for Project infrastructure was chosen to minimize environmental impacts to the extent possible by locating the cables within a previously disturbed corridor.

TRC and HDR Engineering, Inc. (“HDR”) were retained by CHPEI to identify and delineate federal and state jurisdictional wetlands and waterways along the underground route. Wetland scientists from TRC and HDR conducted wetland delineations from October to December 2009, April to June 2010, and October to December 2011. The delineations were performed in accordance with the United States Army Corps of Engineers (“USACE”) wetland delineation methodology outlined in the USACE 1987 Wetland Delineation Manual, the Interim Regional Supplement for the Northcentral and Northeast Region (USACE, 2009), and the New York State Freshwater Wetlands Delineation Manual (Browne et. al., 1995).

This Wetlands Functions and Values Assessment includes all wetlands that may be impacted by the Project that are potentially under federal and/or state jurisdiction. Alterations to state jurisdictional wetlands are regulated under Article 24 of the Environmental Conservation Law and Regulations (6NYCRR Parts 663, 664 and 665), as administered by the New York State Department of Environmental Conservation (“NYSDEC”) Freshwater Wetlands Program. State jurisdictional wetlands are mapped by the NYSDEC and include wetlands that are at least 12.4 acres in size as well as smaller wetlands that have unusual local importance as determined by the NYSDEC. The NYSDEC also regulates activities within the 100-foot Adjacent Area outside of the boundary of state jurisdictional wetlands.

Federal jurisdictional waters of the United States are subject to USACE permitting under Section 404 of the Clean Water Act (“CWA”) and Water Quality Certification under Section 401 of the CWA. Jurisdictional determination for federal wetlands is typically established as part of the USACE permitting process. This assessment is designed to evaluate all wetland areas potentially under federal jurisdiction that may be impacted by the Project.

2.0 FUNCTIONS AND VALUES ASSESSMENT METHODOLOGY

This functional assessment was conducted in accordance with the *Wetlands Functions and Values: Descriptive Approach* described in the September 1999 (NAEEP-360-1-30a) supplement to *The Highway Methodology Workbook* (“Supplement”) by the New England Division of the USACE. The method is descriptive and designed to provide a flexible approach that incorporates wetland science along with best professional judgment regarding more subjective values and benefits. As part of this method, the evaluator takes into account a number of “Considerations/Qualifiers” that can be used as indicators or descriptors of particular functions and values.

Appendix A of the supplement identifies from three to as many as 32 “Considerations/Qualifiers” that may be possible indicators of different wetlands functions and values. Ultimately, the “Considerations/Qualifiers” are designed to be flexible and based on best professional judgment, taking into account other relevant site-specific observations of the evaluator. Using these indicators, the evaluator determines which functions and values are present in the wetland, and which are the principal functions and values that make up the important physical aspects of the wetland and/or are of special value due to their ecological or economic importance, uniqueness, or their local, regional, and/or national significance.

Wetland functions are ecosystem properties that are present without regard to any subjective human values. They are considered to be the result of the biologic, geologic, hydrologic, biogeochemical and/or physical processes that take place within a wetland. The Supplement attributes the following possible functions to wetlands:

1. Groundwater Recharge/Discharge
2. Floodflow Alteration
3. Fish and Shellfish Habitat
4. Sediment/Toxicant/Pathogen Retention
5. Nutrient Removal/Retention/Transformation
6. Production (Nutrient) Export
7. Sediment/Shoreline Stabilization
8. Wildlife Habitat

Wetland values are considered to be the perceived benefits to society that can be derived from the ecosystem functions and/or other characteristics of a wetland. These values may depend on considerations such as location of the wetland, accessibility, human disturbance or pressures, economics, surrounding land uses, and cultural or historic information. Values attributed to wetlands in the Supplement include the following:

1. Recreation
2. Education/Scientific Value
3. Uniqueness/Heritage
4. Visual Quality/Aesthetics
5. Threatened or Endangered Species Habitat

Wetlands functions and values recognized under Article 24 of the Environmental Conservation Law and Regulations are similar to those described by the *Highway Methodology Workbook Supplement*, and include:

1. Flood and storm control by the hydrologic absorption and storage capacity of freshwater wetlands;

2. Wildlife habitat by providing breeding, nesting and feeding grounds and cover for many forms of wildlife, wildfowl and shorebirds, including migratory wildfowl and rare species such as the bald eagle and osprey;
3. Protection of subsurface water resources and provision for valuable watersheds and recharging ground water supplies;
4. Recreation by providing areas for hunting, fishing, boating, hiking, bird watching, photography, camping and other uses;
5. Pollution treatment by serving as biological and chemical oxidation basins;
6. Erosion control by serving as sedimentation areas and filtering basins, absorbing silt and organic matter and protecting channels and harbors;
7. Education and scientific research by providing readily accessible outdoor bio-physical laboratories, living classrooms and vast training and education resources; and
8. Open space and aesthetic appreciation by providing often the only remaining open areas along crowded river fronts and coastal Great Lakes regions; and
9. Sources of nutrients in freshwater food cycles and nursery grounds and sanctuaries for freshwater fish.

The New York Freshwater Wetlands Act also requires the NYSDEC to rank classified state jurisdictional wetlands quality/importance based on the benefits and values they provide. Wetlands with higher classifications are considered to provide the greatest level of benefits to the public and are afforded a higher level of protection. Lower class wetlands may provide some important functions and benefits, but typically will continue to provide these functions with less protection. Consideration of the classifications assigned by the NYSDEC is included in this functional assessment.

3.0 EXISTING FRESHWATER WETLANDS

A total of approximately 59.5 acres of freshwater wetlands will be affected by construction of the Project.

Wetland types were assigned based on classifications described in the U.S. Fish and Wildlife Service (“USFWS”) Classifications of Wetlands and Deepwater Habitats of the United States (Cowardin et al., 1979). This classification is a hierarchical system based primarily on the general classification into palustrine (freshwater wetland), riverine (stream), lacustrine (lake), estuarine and marine systems, and the dominant vegetation layer. Freshwater wetlands delineated in the Project belong to four basic types: palustrine forested (PFO), palustrine scrub-shrub (PSS), palustrine emergent (PEM) and palustrine open water (POW). Wetland communities were also classified according to the Ecological Communities of New York State (Edinger et al., 2002) based on field observations. Note that larger wetland areas may frequently contain more than one cover class and/or ecological community type. Table 1 summarizes the observed ecosystem classifications for wetland systems. NWI and ecosystem classifications are described below for the potentially impacted wetlands in the Project area.

TABLE 1
PALUSTRINE ECOLOGICAL COMMUNITIES ALONG THE
CHAMPLAIN-HUDSON POWER EXPRESS PROJECT

Code ¹	Community Type ¹
<i>Open Wetland Communities</i>	
A.1	Deep Emergent Marsh
A.2	Shallow Emergent Marsh
A.3	Shrub Swamp
B.2	Sedge Meadow
<i>Forested Wetland Communities</i>	
C.1	Floodplain Forest
C.2	Red Maple-Hardwood Swamp
C.4	Red Maple-Sweetgum Swamp
C.5	Silver Maple-Ash Swamp
C.6	Vernal Pool
C.7	Perched Swamp White Oak Swamp
C.8	Hemlock-Hardwood Swamp
<i>Cultural (Disturbed) Wetland Communities</i>	
E.3	Impounded Swamp
E.4	Reedgrass/Purple Loosestrife Marsh

¹Edinger et al., 2002

3.1 Palustrine Forested Wetlands (“PFO”)

Forested wetland cover types are dominated by trees and shrubs that have developed a tolerance to a seasonal high water table. In order to be characterized as forested, a wetland must be dominated by trees and shrubs that are at least six meters tall (Cowardin et. al., 1979). Forested wetlands typically have a mature tree canopy, and depending upon the species and density, can have a broad range of understory and groundcover community components. Forested wetland communities along the Project survey area include red maple (*Acer rubrum*) hardwood swamps, floodplain forest, and silver maple-ash swamps (Edinger et al., 2002). PFO wetlands occur as a single dominant wetland cover type, and also as a co-dominant wetland type when other plant community types exist within the wetland.

Red maple-hardwood swamps occur in poorly drained depressions, usually on inorganic soils. Red maple is either the only dominant tree species, or is codominant with one or more hardwoods (Edinger et. al, 2002). Hardwood species observed within this community type within the Project survey area include green and black ash (*Fraxinus pennsylvanica*, *F. nigra*), American and slippery elm (*Ulmus americana*, *U. rubra*), northern red oak (*Quercus rubra*), and white pine (*Pinus strobus*). Shrubs species commonly observed within red maple-hardwood swamps in the Project survey area include dogwoods, honeysuckle, speckled alder, and American hornbeam (*Carpinus caroliniana*). The herbaceous layer typically includes sensitive fern, cinnamon fern (*Osmunda cinnamomea*), tussock sedge (*Carex stricta*), goldenrods, reed canary grass, and royal fern (*Osmunda regalis*). Invasive species observed within red maple-hardwood forests included honeysuckle, buckthorn, and reed canary grass.

Floodplain forests typically occur on mineral soils on low terraces of river floodplains and river deltas (Edinger et al., 2002). Tree species observed within this community type in the Project survey area include green ash, cottonwood (*Populus deltoides*), red maple, silver maple (*Acer saccharinum*), American elm, box elder (*Acer negundo*), shagbark hickory (*Carya ovata*), burr oak (*Quercus*

macrocarpa), and swamp white oak (*Quercus bicolor*). Shrubs included dogwoods, speckled alder, honeysuckle, American hornbeam, and buttonbush (*Cephalanthus occidentalis*). Sensitive fern, cinnamon fern, goldenrods, ostrich fern (*Matteuccia struthiopteris*), horsetail (*Equisetum spp.*), and sedges were commonly found in the herbaceous layer. Invasive honeysuckles (*Lonicera spp.*) and buckthorns (*Frangula alnus* and *Rhamnus cathartica*) were also observed in floodplain forests within the Project survey area.

Silver maple-ash swamps occur in poorly-drained depressions or along the borders of large lakes and, less frequently, in poorly drained soils along rivers. Ash-elm dominated swamps with little or no maple are currently included as part of this community type (Edinger et. al., 2002). Tree species observed within this community within the Project survey area include green ash, silver maple, elms, and cottonwood. Shrub species observed included silky dogwood, flowering dogwood (*Cornus florida*), and witch hazel (*Hamamelis virginiana*). The herbaceous layer typically included tussock sedge, jewelweed (*Impatiens capensis*), cattails, goldenrods, sensitive fern, skunk cabbage (*Symplocarpus foetidus*), and rough bedstraw (*Galium asprellum*). Invasive species observed within silver maple-ash swamps included honeysuckles, buckthorns, and reed canary grass.

3.2 Palustrine Scrub-Shrub Wetlands (“PSS”)

The scrub-shrub wetland cover type includes areas that are dominated by saplings and shrubs that are less than 20 feet tall (Cowardin et. al., 1979). Scrub-shrub wetlands along the Project survey area were dominated by silky dogwood (*Cornus amomum*), gray dogwood (*Cornus foemina ssp. racemosa*), honeysuckle (*Lonicera spp.*), and speckled alder (*Alnus incana ssp. rugosa*). Other vegetation observed includes meadowsweet (*Spiraea latifolia*), highbush blueberry (*Vaccinium corymbosum*), winterberry (*Ilex verticillata*), spicebush (*Lindera benzoin*), elderberry (*Sambucus canadensis*), gray birch (*Betula populifolia*), and northern arrowwood (*Viburnum recognitum*). Invasive species observed within scrub-shrub wetlands includes honeysuckle and buckthorn (*Frangula alnus*). PSS wetlands occur as a single dominant wetland cover type, and also as a co-dominant wetland type when other plant community types exist within the wetland.

3.3 Palustrine Emergent Wetlands (“PEM”)

The palustrine emergent wetland cover type is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens (Cowardin et. al., 1979). The freshwater emergent wetlands along the Project survey area primarily include shallow emergent marshes, deep emergent marshes, and reedgrass/purple loosestrife marshes (Edinger et. al., 2002). PEM wetlands occur as a single dominant wetland cover type, and also as a co-dominant wetland type when other plant community types exist within the wetland.

Shallow emergent marshes occur on mineral soils or deep muck soils that are permanently saturated and seasonally flooded. Water depths range from 6 inches to 3.3 feet during flood stages (Edinger et. al., 2002). Characteristic vegetation of shallow emergent marshes within the Project survey area includes bluejoint grass (*Calamagrostis canadensis*), cattails (*Typha spp.*), sedges (*Carex spp.*), goldenrods (*Solidago spp.*), spotted joe-pye-weed (*Eupatorium maculatum*), reed canary grass (*Phalaris arundinacea*), scouring rush (*Equisetum hyemale*), sensitive fern (*Onoclea sensibilis*), and soft rush (*Juncus effusus*). Invasive species observed within the shallow emergent marshes include common reed (*Phragmites australis*) and purple loosestrife (*Lythrum salicaria*).

Deep emergent marshes occur on mineral soils or fine-grained organic soils with water depths ranging from 6 inches to 6.6 feet (Edinger et. al., 2002). Emergent vegetation observed within deep emergent marshes in the Project survey area includes cattails, bur-weeds (*Sparganium spp.*), bulrushes (*Scirpus*

spp.), and bluejoint grass. Common reed and purple loosestrife were observed within many of the emergent marshes within the Project corridor.

Reedgrass/purple loosestrife marshes consist of disturbed marshes where common reed or purple loosestrife has become dominant (Edinger et. al., 2002). This community was commonly found within disturbed areas adjacent to the rail bed.

The ditch/artificial intermittent stream community consists of artificial waterways constructed for drainage or irrigation (Edinger et. al., 2002). Vegetation within the ditches is typically dominated by grasses and sedges. Invasive species such as common reed, purple loosestrife, and reed canary grass are commonly found within the ditches along the railroad ROW.

3.4 Palustrine Open Water Wetlands (“POW”)

Besides vegetated wetlands, a few scattered small ponds are located along the transmission cable corridor, adjacent to the railroad ROW. These wetland areas are characterized by a vegetation cover of less than 30 percent, although there may often be emergent or shrubby vegetation bordering the open water areas. Pond substrates may be silt, mud, cobble, or sand.

4.0 ADJACENT UPLANDS

Characteristics of surrounding upland landscapes have the potential to influence the significant functions and values that may be provided by each wetland area. Land use in upland areas along the Project route is variable, ranging from urban and industrial developments, especially in the Schenectady area, to suburban residential, rural, agricultural, and forested landscapes. Upland community types were mapped and recorded as part of the wetland field survey efforts, and were also classified according to Ecological Communities of New York State (Edinger et al. 2002). Observed upland communities included 1) open upland communities 2) forested upland communities and 3) terrestrial cultural communities. Terrestrial communities are defined as ecosystems that have been either created and maintained by human activities, or modified by human influence to such a degree that the physical conformation of the substrate or the biological composition of the resident community is substantially different from the character of the substrate or community that existed prior to human influence (Edinger et al. 2002).

Open upland vegetative cover types that were observed in the vicinity of the Project included successional old field and successional shrubland. Observed forested uplands included Appalachian oak-hickory forest, Appalachian oak-pine forest, rich mesophytic forest, successional northern hardwoods, and successional southern hardwoods. Terrestrial cultural communities included cropland/row crops, pastureland, mowed roadside/pathway, unpaved road/path, paved road/path, roadcut cliff/slope, railroad, rip-rap/erosion control roadside, brushy cleared land, urban structure exterior, and urban vacant lot.

5.0 SITE WETLAND FUNCTIONS AND VALUES

Functions and values of the wetlands impacted by construction of the Project depend on their physical, geographic, and environmental characteristics. Influencing factors can include size and proximity of wetlands to development activities, geologic setting, soil characteristics, presence and duration of hydrology, landscape position, vegetation cover type, and dominant ecological community type. The effects of potential changes to these physical characteristics are evaluated in assessing whether the Project impacts will have a significant effect on wetland functions and values.

Table 2 in Attachment A lists each of the wetlands potentially impacted by the Project, along with the functions and values that may be provided by the wetland. The significance of various *Considerations/Qualifiers* for wetlands along the Project route is described below.

5.1 Groundwater Recharge/Discharge

Most wetlands perform some role in Groundwater Recharge/Discharge due to the fundamental interactions between wetlands and aquifers through the fluctuation of the water table. Groundwater in the Project area may be found in unconsolidated deposits of sand and gravel (surficial geology) and bedrock formations. Aquifer recharge may occur from precipitation directly on the land, by seepage from the tributary streams, rivers, and lakes flowing across the aquifer, by subsurface flow from the till on the sides of the valleys, and by seepage from bedrock and deposits of low permeability adjacent to the aquifers. Wetlands and streams also receive groundwater discharge typically where the water table is high relative to the wetland/waterbody elevation.

Wetlands in the Project area that are associated with a perennial or intermittent watercourse and have hydric soils may contribute groundwater baseflow to the stream when the water table is low and/or the stream may receive groundwater discharge when the water table is high. Wetlands that contribute to groundwater recharge or discharge often show signs of variable water levels. Wetlands in the Project area that function in groundwater recharge/discharge were observed to have characteristics such as ponded water, water-stained leaves, water marks, an intermittent outlet or other indications that the water level changes periodically or seasonally within the wetland.

Wetlands with the Groundwater Recharge/Discharge function often lack an inlet or outlet, or have a constricted outlet. Wetlands lacking an outlet or with a constricted outlet have the potential to contribute to groundwater recharge as water flowing to the wetland from surface water runoff and precipitation is retained and infiltrates into the groundwater. Where a wetland area lacks an inlet, this suggests that groundwater discharge or seepage may contribute to the saturation of the wetland. Within the Project area, wetland outlets are frequently constricted by the presence of a culvert along the railroad bed or at a road crossing.

In general, the majority of wetlands in the Project area contain fine-grained soils, including mineral silt, clay and/or organic soils. Because relatively few wetlands contain sandy or coarse-grained soils that may be particularly permeable, contributing to a higher potential for aquifer recharge/discharge, and are not near known groundwater withdrawal areas, most of the wetlands in the Project area are not considered to have groundwater recharge/discharge as one of their principal functions. For portions of the Project area where sandy soils are present, the importance of the Groundwater Recharge/Discharge function is expected to increase.

5.2 Floodflow Alteration

Most of the wetlands in the Project area have at least some ability to function for Floodflow Alteration. State-jurisdictional wetlands, in particular, tend to be large wetlands (over 12.4 acres), and often border on perennial and/or intermittent watercourses. These wetlands are mostly in a relatively flat area adjacent to the watercourse and receive waters from periodically from overbank flooding. Dense vegetation, often persistent emergent vegetation associated with deep emergent and/or shallow emergent marshes, along with hydric soils that can absorb water, both contribute to the ability to attenuate waters from flooding events, reducing the potential for downstream damage due to flooding. Many of these wetlands with a high potential to function for Floodflow Alteration have ponded water, water marks on trees or other visible signs of variable water.

Smaller wetlands in the upper part of the drainage basin can also be very important in this function, by receiving, retaining, and slowing flood waters flowing to downstream watercourses during storm events. In the Project area, this is a principal function of some headwater wetlands and other smaller wetlands bordering intermittent streams in the upper part of their drainage basins, where the wetlands receive overland sheetflow and where there is little or no flood storage in the watershed above the wetlands. This function is also important in urban areas where the watershed contains largely impermeable surfaces that cannot absorb waters during storm events, and economic consequences or other damage to downstream properties may result from flooding events. In some instances, reedgrass/purple loosestrife marshes that are connected to or located largely within railroad drainage ditches may contribute few other wetland functions and values, but serve primarily to collect and attenuate stormwaters and/or floodwaters entering downstream waterways.

5.3 Fish and Shellfish Habitat

Wetlands providing the Fish and Shellfish Habitat are typically associated with perennial streams or lakes. Wetlands along high quality streams or designated trout streams may have Fish and Shellfish Habitat as a principal function. Wetlands associated with perennial streams with slow to moderate streamflows, occurring in watersheds where undisturbed, forested land is dominant, are considered the best Fish and Shellfish Habitat. Streamside vegetation overhanging the banks provides shading for suitable habitat and cover objects such as cobbles, boulders or woody debris in the substrate may also improve habitat quality.

Wetlands were also included as contributing to potential Fish and Shellfish Habitat if they are adjacent to a perennial waterbody located nearby outside the Project area, and they contained intermittent tributaries and/or ponded wetland areas that may connect to that perennial waterbody and provide seasonal fish habitat.

5.4 Sediment/Toxicant/Pathogen Retention

Many of the wetlands in the Project area are suitable to function in the retention of excessive sediments or pathogens that may be carried by surface water runoff within the drainage, and many have this as a principal function. Characteristic wetlands in the Project area have fine-grained silty or clayey mineral soils, or organic soils that drain slowly. Many also have ponded water or other inundation. Where the water is ponded or moves slowly within the wetland sediments, toxicants and/or pathogens to settle out. Dense vegetation, which is typically present in deep and shallow emergent marshes throughout the Project area, can also assist in trapping sediment.

Wetlands are associated with a watercourse and provide Floodflow Alteration are often particularly involved in Sediment/Toxicant/Pathogen Retention, as excess sediments/toxicants are carried downstream and deposited in wetlands during flooding events. Sometimes the watercourses will have a visible decrease in velocity or become diffuse in the wetland, allowing sediment and other materials to be deposited.

Suspected potential sources of excess sediment or toxicants, such as construction sites, roadways, industrial activities, and/or other developments, in the watershed above the wetland may increase the importance of this function.

5.5 Nutrient Removal/Retention/Transformation

Most wetlands in the Project area are suitable for Nutrient Removal/Retention/Transformation. These wetlands share many of the characteristics that also assist in sediment trapping and sediment retention, such as ponded water and deepwater habitats, slowly-drained, fine-grained mineral or organic soils, and dense vegetation. An abundance and diversity of vegetation allows for more uptake, retention and transformation of nutrients in wetland systems. Wetlands associated with watercourses may show a decline in water velocity within the wetland, which may be due to thick vegetation or a constricted outlet.

Because portions of Project area are adjacent to agricultural land use, the Nutrient Removal/Retention/Transformation function is particularly important in helping reduce the input of excess nutrients to downstream watercourses in these areas. Excess nutrients in waterbodies can be associated with increased productivity, eutrophication and lowered dissolved oxygen, which may lower water quality, alter aquatic habitat and adversely impact fish and other aquatic species.

5.6 Production Export

This function relates to the ability of a wetland to produce resources that may be consumed or used by wildlife and humans. In order to perform this function, wetlands usually have high productivity levels. Often, these wetlands are also associated with the wildlife habitat function, as wildlife at the higher trophic levels consume and export vegetation, invertebrates and/or other wildlife at lower trophic levels that are using the wetland.

Many of the wetlands in the Project area are associated with some production export function. The exception to this is primarily reedgrass/purple loosestrife marshes and other wetlands that lack a diverse plant community and do not have significant wildlife habitat value. Wetlands with the Production Export function are often are deep or shallow emergent marshes, which typically have high productivity and use by wildlife. Often, high productivity and high levels of production export are indicated by a dense vegetative community, containing both relatively high species richness and high structural diversity. Wetlands with ponding or seasonal inundation also serve as breeding areas for insects that are consumed by bats, birds and other insects. Even lower-quality disturbed wetlands may serve this function because of the use of flowering plants, even invasive plants such as purple loosestrife, by nectar and pollen-gathering insects. Forested wetlands are typically lower in productivity, but also serve this function due to the availability of wildlife food sources such as berries and acorns.

Where Project-area wetlands border a perennial watercourse, production export may also occur via detritus or flushing from the permanent wetland outlet.

5.7 Sediment/Shoreline Stabilization

Sediment/Shoreline Stabilization is a function of most wetlands that border on a perennial or intermittent stream. This may be a principal function in areas where evidence and/or topography suggests otherwise highly erosive forces, especially during storm events when water is moving quickly. Wetlands in the Project area were considered to function in stabilizing the sediment and bank if they form a wide buffer zone adjacent to a waterbody and contain dense vegetation which acts to absorb energy during flood events. This vegetation may consist of dense emergent vegetation, trees and/or shrubs. Signs that large trees, saplings and other woody vegetation near a watercourse serves to stabilize the existing banks include a step between the stream bed and bank, typically with roots visible throughout. Although many Project-area wetlands are located in areas that are relatively flat, in some cases, a topographical gradient within the wetland indicates the presence of potential erosive forces. Other evidence of the

Sediment/Shoreline Stabilization function observed included sedimentation or siltation within a waterbody, channelized flow, high water flow velocities and/or the presence of decreased, sinuous or diffuse flows within the wetland.

5.8 Wildlife Habitat

Most wetlands have some functional value as Wildlife Habitat and many have this as a principal function. Exceptions are reedgrass/purple loosestrife marshes and other wetlands where the vegetative community lacks essential species diversity, structural diversity and/or wildlife food sources. Wildlife use or evidence of wildlife use was directly observed during field surveys in many of the larger wetlands. Canada geese, wood ducks, kingfisher, coyote, deer, green frogs, turtles and various other species were seen in Project wetlands during field surveys. Other evidence of wildlife use included old turtle nests, deer tracks or signs, mammal burrows, beaver dams and chews.

In some cases, wildlife use was not observed during field surveys, but wildlife habitat value was inferred by the characteristics of the wetland, particularly its ecological community type, dominant vegetation, and landscape setting. A number of the wetlands in the Project are part of relatively large contiguous areas of deep or shallow emergent marsh, which may be suitable for a variety of wetland bird species such as red-winged blackbird, Virginia rail and/or swamp sparrow. Emergent wetlands often support abundant insect populations which provide a food source for birds, bats and other wildlife. Aquatic vegetation such as woolgrass may be used by waterfowl.

Many of the Project area wetlands have pools and seasonally inundated areas that can provide aquatic breeding habitats for amphibians, as well as breeding areas for insects and other invertebrates that provide food sources for higher trophic levels.

Wooded swamps are also of particular habitat value for some species of birds and mammals. In shrub swamps and forested wetlands, shrubs and trees that produce berries such as blueberries, buckthorn, ashes and winterberry, may be used by birds and mammals. Hard-mast tree species (e.g. oaks, hickories) produce acorns, which are often consumed or cached by mammal species.

With the exception of certain urban and residential areas, much of the landscape in the Project area consists of agricultural lands, undeveloped lands and other open space. Many of the wetlands have an undeveloped buffer, providing a habitat matrix for wildlife and overland access to other upland or wetland habitats. The state jurisdictional wetlands in the Project area are typically part of a larger contiguous wetland complex, providing a large and relatively undisturbed wetland habitat area.

Human activity due to the presence of the railroad right-of-way, roadways and other development has caused disturbance that limits the value of other suitable habitat areas for wildlife. Invasive species, particularly common reed and purple loosestrife, have altered the habitat quality by reducing the diversity of native vegetation, affecting the abundance and quality of food sources and/or other affects. In other areas, habitat fragmentation due to development and the creation of barriers to wildlife movement (highways, culverts, etc.), has reduced the ability of wildlife to use otherwise suitable areas. These affects tend to have greater impact on the larger wildlife, wildlife that require an extensive home range or territory containing appropriate habitat, and species such as certain amphibians that need both aquatic and terrestrial habitats for portions of their life cycle. Even in areas fragmented by development, however, wetlands may provide important habitat islands or stop-overs for migrating birds.

5.9 Recreation

Most wetlands in the Project are not considered suitable for recreation, as they are located on private land without available public access, parking, or available recreational facilities. Although hunting on private lands may occur in the vicinity of the Project, access along or across the railroad rights-of-way is not permitted due to safety concerns. However, the wetlands located along or visible from New York Bike Route 9 and the Zim Smith Trail, as well as wetlands located partially on public lands such as the Wilton Wildlife Preserve and Park, the Saratoga Nursery, and the Saratoga Spa State Park, and other easily accessible public areas may have some recreational value to cyclists, hikers, wildlife observers, and other passive users. Considerations that may increase the value to these recreational users include the use of the wetland wildlife, aesthetic value, and the presence of perennial watercourses. Due to the limited public access and recreational opportunities, this is not a principal value for any of the wetlands in the Project area.

5.10 Educational/Scientific Value

The majority of wetlands in the Project area do not provide this value, as they are located on private land without available or safe public access, parking or facilities. This is not a principal value for any wetlands in the Project area. Wetland areas that are located partially within the Wilton Wildlife Preserve and Park, Saratoga Nursery and/or Saratoga Spa State Park, may have some educational value associated with these existing public lands and any outreach or education programs currently conducted within those lands. Wilton Wildlife Preserve and Park, in particular is managed for a wildlife species, especially Karner Blue Butterfly. Although this species does not typically use wetland habitats, the potential exists for future scientific use of wetlands associated with the Wilton Wildlife Preserve and Park for research relating to this or other wildlife species.

5.11 Uniqueness/Heritage

The Uniqueness/Heritage value takes into account the special value of a site in the context of the overall landscape, cultural features, and the rarity of the wetland/habitat type in the local area. Some of the wetlands in the Project area have Uniqueness/Heritage value primarily due especially large and un-fragmented nature of the wetland area, potential presence of threatened and endangered species, high quality of the wetland habitat and/or the presence of the wetland within protected or historic open space such Saratoga Spa State Park. Additionally, wetlands along the Champlain Canal were included as part of the open space and visual landscape along this historic feature.

5.12 Visual Quality/Aesthetics

Many of the wetlands in the Project area are unsuitable for Visual Quality/Aesthetics, because they lack a primary or publicly-accessible viewing location, or they are in locations where wetland quality has been degraded by invasive species, disturbance and/or development. Wetlands providing visual quality/aesthetic value along the Project route include the larger, un-fragmented emergent wetlands along large waterbodies such as the Champlain Canal or the Hudson River, wetlands that have an especially diverse assemblage of native species vegetation, wetlands that have been influenced by beaver activity and have a high interspersed of vegetation and open water, and wetlands that are partially located on public lands or recreational hiking or biking trails (see above). Some of these wetlands also have a high density of red maples that turn bright colors in the fall, and/or winterberry shrubs that keep attractive red berries throughout the winter. Views of the wetland to or from adjacent large waterbodies, such as Lake Champlain, the Champlain Canal, the Hudson River, or scenic perennial streams, were also considered.

5.13 Threatened or Endangered Species Habitat

Areas mapped as having documented presence and/or suitable habitat for state-listed rare, threatened, or endangered species is present in several areas along the ROW. Wetlands proposed to be impacted by construction activities that are located within these areas are identified in Table 2 (Attachment A). Listed species include both wetland and terrestrial species of flora and fauna. Given the proximity of the construction corridor to the railroad right-of-ways and the temporary nature of the work, construction activities within these areas are not anticipated to result in potential impacts to threatened and endangered species or their habitat.

6.0 SUMMARY

Of the 13 functions and values commonly attributed to wetlands, all 13 functions and values are associated with wetlands in the Project area. In general, the dominant natural community types are characterized as relatively large deep and shallow emergent marshes, wooded swamps and shrub swamps. Invasive species such as purple loosestrife and common reed are frequently common or dominant, particularly where wetlands connect to railroad ditches. The majority of the wetlands have the ability to provide some function in Groundwater Recharge/Discharge, Floodflow Alteration, Sediment/Toxicant Retention, Nutrient Removal/Retention/Transformation, Production Export and Wildlife Habitat.

Many of the Project area wetlands occur along intermittent streams, perennial streams, rivers or lakes. Wetlands associated with waterbodies may provide some function in Sediment/Shoreline Stabilization and/or Fish and Shellfish Habitat. Additionally, a few wetlands in the Project area possess values such as Recreation, Educational/Scientific Value, Uniqueness/Heritage and Visual Quality/Aesthetics.

No permanent loss of wetland acreage, functions, or values will result from construction and installation of Project facilities. Short-term impacts that will occur to wetlands from constructing these facilities include temporary disturbance to wetland soils, hydrology, and vegetation within construction workspace. Following construction, CHPEI will restore topsoil and pre-existing contours to the extent practicable, thereby restoring hydrology and promoting the re-establishment of hydrophytic vegetation. Ultimately, the physical, hydrologic, and chemical composition of the impacted wetland areas will be restored following the completion of construction. No significant long-term impacts for most existing functions and values are anticipated for wetlands temporarily affected by construction.

Because excavation activities for installation of the transmission cable will be relatively shallow (approximately 5 feet), soil will be replaced following trench excavation and no change in hydrology or affect on the Groundwater Recharge/Discharge is expected. Although, new fill in the form of low thermal resistivity uniformly graded sand or excavatable, low density concrete will be added around the cables, stockpiled trench material or other suitable mineral soil will be replaced in the trench on top of this fill material allowing for wetland revegetation to occur. In addition, all native topsoil material will be replaced. Therefore, temporary affects due to removal of vegetation and/or compaction of soil during construction are expected to be minor and will cease once construction is complete and the right-of-way has been restored.

Because the cables will be located underground without new aboveground structures in or adjacent to wetlands or watercourses, the Floodflow Alteration function will not be significantly affected. Any temporary affects due to removal of vegetation will be short-term, and vegetation density is expected to return to its previous level soon after construction is completed. Similarly, no long-term impacts to other physical/chemical functions such as Sediment/Toxicant Retention, Nutrient Removal/Retention/Transformation and Production Export are expected.

Impacts to the Wildlife Habitat function will be primarily short-term due to the disturbance of wetland habitat and clearing of vegetation. Typically, vegetation is expected to quickly re-establish once the ROW has been stabilized and restored. Some long-term impacts to wetland habitat may occur in areas where significant amounts of woody vegetation must be cleared, especially large trees. In general, these impacts have been minimized to the extent possible by aligning the Project adjacent to an existing, already disturbed railroad corridor. This alignment minimizes or avoids the creation of any new forest habitat fragmentation and reduces the potential impact on mature forest vegetation in general, since much of the corridor has been previously cleared. Because mature trees require a long period of time to re-establish, any clearing of forested vegetation may represent a long-term impact to wildlife habitat. Also, since trees will not be allowed to establish directly over the cable trench following construction, this may also represent a small area of permanent change in vegetation cover.

Clearing of forested wetlands, where applicable, would alter the wildlife habitat function of the wetland, by replacing one habitat type with another. This habitat alteration may reduce the quality of the habitat for some wildlife species while increasing the value for others. Due to the distribution and availability of similar forested habitat types in the immediate Project area and the relatively small area of forested wetland affected, construction is not expected to significantly impact wildlife habitat or wildlife populations and will not adversely affect the distribution or regional abundance of wildlife species.

An additional concern relative to the wildlife habitat function is the potential for establishment of exotic invasive plant species in newly restored wetland areas. As noted, purple loosestrife, common reed and a variety of other invasive plants are common wetland species in the Project area, particularly disturbed areas. Invasive plant species may reduce habitat quality (as well as affecting values such as Visual Quality/Aesthetics) by reducing species diversity, altering physical, chemical and ecological properties of the wetland, affecting the abundance of wildlife food sources, and changing structural properties of the habitat. To address these potential impacts, measures for the identification of invasive species along the right-of-way will be developed in the final design stage and best management practices to be implemented to minimize and/or control the spread of exotic invasive wetland plant species.

Values of Project area wetlands include Recreation, Educational/Scientific Value, Uniqueness/Heritage, Visual Quality/Aesthetics, and Threatened and Endangered Species Habitat. Because the Project will not result in a permanent loss of wetlands or open space, and physical, hydrologic and ecological characteristics are expected to return to pre-construction conditions following the completion of construction and restoration of the right-of-way, no significant adverse impact to these values is expected. In general, much of the Project area is not accessible to the public; however, where access is currently available along existing roads, pathways, or through publically-owned lands, the Project will not affect the ability of the public to access and enjoy these wetlands.

7.0 REFERENCES

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Attachment A

**TABLE 2
FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
Route 22 Right-of-Way								
102.2	A3511	N/A	PEM	N/A	-	906.5	Relatively small, mostly open wetland containing deep and shallow emergent marsh habitat. Portion of wetland outside of proposed work area contains open water with dense algae. Purple loosestrife scattered throughout wetland.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
102.3	A3411	N/A	PSS/RUB	N/A	-	163.4	Small sections of riparian fringe wetland habitat located along perennial water body. Area was recently flooded and gravel/sand bars were scattered within riparian wetland areas. Soils were alluvium sand (recently deposited). Wetland vegetation mostly restricted to the water body edge due to steep banks armored with riprap.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
103.0	A3311	N/A	PEM	N/A	-	104.3	Small pocket wetland located at edge gravel road at culvert crossing. It connects to additional wetland on opposite side of culvert that is located outside of the 50 ft. survey boundary. Hydrology is from road side ditch.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat

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Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
103.1	A3211	N/A	PEM	N/A	-	935.6	Saturated wetland that contains many seeps in upper areas located adjacent to Route 22 fill slope. Hydrology from toe slope seeps and road runoff from Route 22. Wetland is located within small transmission line right-of-way and in some areas wetland/upland vegetation is interspersed throughout.	Groundwater recharge/discharge* Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
103.2	A3111	N/A	PEM/PSS	N/A	-	266.4	Wetland located adjacent to private dirt fill road. Several seeps adjacent to Route 22, road side drainage, and water body AS-46 providing hydrology to wetland. AS-46 appears to overtop its banks frequently as evidenced by scattered woody debris and scouring. The culvert in the private road appears undersized. Small area of ponded water near culvert.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
103.7	A2911	N/A	PEM/PFO	N/A	1,233.5	-	Nice wetland system located adjacent to Ottenburgh Rd. Many sections of the wetland contained standing water and the wetland contains some pit and mound micro-topography. Several seeps located at the base of the Route 22 fill slope providing considerable hydrology. Forested wetland habitat transitions to PEM habitat in northern section of the wetland. The bottom of the soil profile was dominated by fairly dense clay.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
103.8	A2711	N/A	PEM	N/A	-	877.7	Much of the wetland is located within a drainage area for Route 22. The southern section of the wetland is located in a maintained lawn that drains under Boss Road via a culvert that drains down a slope. The northern section of the wetland appears to be abutted by a fill berm that has a mobile home on it. Purple loosestrife is scattered throughout the wetland. Several seeps located along the Route 22 fill slope are draining into the wetland.	Groundwater recharge/discharge* Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
103.8	A2811	N/A	PFO/RUB	N/A	1,435.5	-	Unique wetland system where a large perennial water body (AS-41) flows adjacent to a private residence and drains to the east. Many sections of exposed ledge are scattered throughout area. The Route 22 fill slope contains several seeps that all drain toward AS-41 and the soils of these areas were fairly dark. The wetland is restricted to riparian fringe habitat that contained wetland and upland vegetation species mixed together. During high water events it is apparent the wetland is located in the flood plain and appears to be inundated quite frequently (areas recently scoured).	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
103.9	A2611	N/A	PEM/POW	N/A	-	1,048.7	Wetland is essentially a fringe of PEM riparian vegetation bordering a man-made farm pond. Minnows were observed in the channel (AS-40) and also within the farm pond. Purple loosestrife is scattered throughout the wetland. Discussions with the land owner confirmed that the entire area has once been disturbed/excavated.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat* Recreation* Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
104.4	A2511	N/A	PFO	N/A	14.5	-	Palustrine forested wetland system located adjacent to Route 22 fill slope. Several seeps located along the Route 22 fill slope are draining into the wetland. Old fill berms scattered throughout wetland. The southern section of the wetland is bordered by a recent gravel fill pad. The soil test pit contained water to the surface and many areas of the wetland contained small pockets of standing water measuring 1-3 inches deep.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
104.8	A2411	N/A	PFO/RUB	N/A	28.7	527.2	Wetland is a riparian fringe wetland bordering a perennial water body (AS-37). Soils were typical flood plain soils in that they did not contain soil profile development and appeared to have been recently deposited. Many recent sand/gravel bars located within AS-37 adjacent to the wetland. The wetland floods frequently as evidenced by accumulated coarse woody debris/scour areas. Riprap recently installed along the southern boundary of the wetland to stabilize the bank of AS-37.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
104.9	A2311	N/A	PEM	N/A	-	109.9	Wetland is essentially a small section of riparian vegetation bordering an intermittent water body. The channel is incised and the wetland vegetation is marginal and restricted to the incised channel area. The wetland is essentially just part of the storm water system for Route 22. Low quality wetland habitat.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
105.2	A2211	N/A	PEM	N/A	-	2.5	Marginal wetland habitat located adjacent to an intermittent stream that is located at the toe slope of the Route 22 fill slope. The wetland/stream is bordered by a residence and the wetland vegetation was mowed at the time of the survey. The banks of the entire site were covered by Japanese knotweed. Junk and assorted trash scattered throughout site.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
105.7	A2111	N/A	PEM	N/A	-	299.2	Dense PEM wetland associated with a culvert that is part of the Route 22 drainage system. The soils of the wetland were saturated. Purple loosestrife observed scattered throughout the wetland. The wetland appears man-made and was likely created as part of the Route 22 construction.	Groundwater recharge/discharge* Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
107.2	A1811	N/A	PEM/PSS	N/A	-	293.2	The wetland is associated with an intermittent water body (AS-26). The wetland is located within a transmission line right-of-way in the northern section and this area was recently cleared by the utility company. The southern section of the wetland contains a saturated area that is dominated by cattails.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
107.3	A1611	N/A	PEM	N/A	-	322	Small pocket wetland located near the edge of the Route 22 fill slope. The wetland is bordered by exposed ledge to the east. The soil pit contained dense clay.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
107.4	A1511	N/A	PEM	N/A	-	338.2	Wetland is located at the base of the Route 22 fill slope at the edge of the riprap. Many seeps observed discharging into the wetland from the toe of the Route 22 fill slope. Dense cattails throughout wetland mixed with purple loosestrife.	Groundwater recharge/discharge* Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
108.1	A1311	N/A	PEM	N/A	-	1,196.3	Wetland is located in Route 22 drainage area at the toe of the fill slope. A culvert discharges into the wetland but was dry at the time of the investigation. The area just below the culvert was inundated with approximately 2-4 inches of standing water. The wetland is essentially a narrow ditch feature bordering Route 22. A large water snake was observed during the delineation.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
108.4	A1111	N/A	PFO	N/A	365	-	Wetland is bordered to the north by a fill slope, to the south by a steep forested slope, and to the west by the Route 22 fill slope. Many areas by the culvert draining to the wetland contain seeps and were discharging water to the wetland during the investigation. The soils in the area were very stony.	Groundwater recharge/discharge* Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
108.4	A1211	N/A	PSS	N/A	-	461	Wetland is associated with a perennial water body (AS-19) and is essentially a narrow band of riparian vegetation. The area recently flooded prior to the delineation and much of the riparian vegetation was scoured and areas of accumulated sand/gravel located within and along edges of the stream. A log jam within the water body is holding back a lot of water and it is causing upland habitat to be inundated.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
108.5	A1011	N/A	PSS	N/A	-	1,017.1	The wetland is a riparian fringe wetland bordering an intermittent water body (AS-17). The soils were dense clay. The channel is incised and wetland vegetation is restricted to the edges of the channel. The channel boundary and the wetland boundary are essentially the same.	Groundwater recharge/discharge* Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
109.2	A0511	N/A	PEM/PFO	N/A	23.4	-	Wetland associated with an intermittent channel and also many seeps located along Route 22 fill slope providing considerable hydrology. An old road traverses through the wetland and areas of ledge were observed bordering the wetland. The soils were very stony and some small pockets of standing water were observed during the investigation.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
109.6	A0811	N/A	PEM	N/A	-	10,256.1	The wetland is essentially a ditch feature bordering an agricultural field. An old road borders the wetland to the west. Areas of the wetland are essentially a ditch and in some areas the banks of the ditch are very low and wetland vegetation is expanding outside the ditch laterally toward Route 22. Purple loosestrife was scattered throughout the wetland.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
110.4	A0411	N/A	PEM	N/A	-	1,306	The wetland is associated with a disturbed area located within an active goat farm. A large berm is located adjacent to the wetland and it appears that the area west of the berm is an old farm silage area that is converting to wetland habitat. Concrete was found below this area and some soils are forming above the concrete. The Route 22 road side ditch that drains to the wetland is adding a significant amount of hydrology.	Groundwater recharge/discharge* Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
110.8	A0311	N/A	PEM/PSS	N/A	-	313.4	The wetland borders the Route 22 fill slope and many areas of the wetland contain standing water. Shallow emergent marsh habitat common throughout wetland. The northern section of the wetland contains palustrine scrub-shrub habitat. Many deer trails observed throughout wetland. Evidence of beaver activity observed.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
111.4	A0211	WH-2	PEM	I	-	361.4	Large wetland system containing deep emergent, shallow emergent, and some areas of shrub swamp communities. Wetland is bordered by the Route 22 riprap fill slope to the west and a railroad right-of-way to the east. Waterfowl habitat present; many areas of standing water with emergent vegetation.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export* Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
111.7	A0111	WH-2	PEM/PSS	I	-	1,234.8	Large, mostly open wetland containing deep emergent, shallow emergent, shrub swamp, and some forested wetland communities. Fill material located along Route 22 fill slope borders wetland to the west. Wetland bordered to the east by railroad right-of-way. Storm water flow from Route 22 drains into wetland system.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export* Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics Endangered species habitat
Route 22 Right-of-Way Subtotal:					3,100.6	22,340.9		
					(0.07 acres)	(0.51 acres)		

**TABLE 2
FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
Canadian Pacific (CP) Railroad Right-of-Way								
113.5; 113.9; 116.4	B54	N/A	PEM/PSS/PFO	N/A	33,011.5	177,031.4	Large wetland consisting of shallow emergent marsh, shrub and red maple-hardwood swamps, bordering on the Champlain Canal and perennial tributaries. Fine-textured soils and areas of inundation. Nearby New York State Bike Route 9.	Groundwater discharge Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat* Uniqueness/heritage Recreation Visual quality/aesthetics
115.6	B55	N/A	PEM/PSS	N/A	-	5,356.8	Shallow emergent marsh and shrub swamp on the east side of the tracks along the Champlain Canal. Soils consist of fibrous muck underlain by sandy clay. Soils saturated within 12 inches, drainage patterns, and oxidized rhizospheres were observed. The town of Whitehall is identified as having documented occurrence of the state-listed endangered giant pine drops (<i>Pterospora andromedea</i>) ² . However, as this is an upland species, it is not anticipated that suitable habitat exists within this wetland.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization* Wildlife habitat Recreation Educational/scientific value Uniqueness/heritage Visual quality/aesthetics
117.5	B53	N/A	PEM	N/A	-	40,602.9	Relatively large shallow emergent marsh in a predominantly cleared/agricultural landscape. Borders on the Champlain Canal and intermittent tributaries. Fine-textured soils. Nearby New York State Bike Route 9.	Groundwater discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization* Wildlife habitat* Recreation
117.8	B52	N/A	PEM	N/A	-	5,002.6	Shallow emergent marsh and red maple-hardwood swamp on both sides of the tracks, connected by a culvert containing Stream B52-1. Flows east to the Champlain Canal under North Old Route 4 via a culvert, and ultimately the Hudson River. Surface water, soils saturated within 12 inches, and drainage patterns were observed. The town of Whitehall is identified as having documented occurrence of the state-listed endangered giant pine drops (<i>Pterospora andromedea</i>) ² . However, as this is an upland species, it is not anticipated that suitable habitat exists within this wetland.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization Wildlife habitat Recreation Educational/scientific value Uniqueness/heritage Visual quality/aesthetics

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
118.1	B51	N/A	PEM	N/A	-	64,341.2	Deep emergent marsh and open water along and parallel to the west side of the tracks, hydrologically connected to the Champlain Canal beyond the ROW to the east, and ultimately the Hudson River. Surface water and drainage patterns were observed. Beaver and fish observed.	Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Wildlife habitat* Recreation Educational/scientific value Uniqueness/heritage Visual quality/aesthetics
118.6	B50	N/A	PEM	N/A	-	433	Open water pond hydrologically connected to the Champlain Canal beyond the ROW to the east, and ultimately the Hudson River. Buttonbush present along the north edge. Pond is permanently flooded; depth unknown.	Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Wildlife habitat* Recreation Educational/scientific value Uniqueness/heritage Visual quality/aesthetics
118.9; 119.1	B48	N/A	PEM/PFO	N/A	2,282.9	16,322.2	Shallow emergent marsh and red maple-hardwood swamp along both sides of the tracks, including 2 areas east of North Old Route 4 along the Champlain Canal, which flows to the Hudson River. Soils consist of gravelly loam throughout profile. Surface water and drainage patterns were observed. Fish observed in pond in wetland.	Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Wildlife habitat* Recreation Educational/scientific value Uniqueness/heritage Visual quality/aesthetics
119.0	B49	N/A	PEM	N/A	-	1,140.3	Open water pond hydrologically connected to the Champlain Canal beyond the ROW to the east, and ultimately the Hudson River. Pond is permanently flooded; depth unknown.	Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Wildlife habitat* Recreation Educational/scientific value Uniqueness/heritage Visual quality/aesthetics

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
119.3	F19	N/A	PFO	N/A	155	-	Red maple-hardwood swamp on both sides of the tracks, connected via a culvert under the tracks. Flows south along the east side of the tracks to Wetlands F20 and F17, then to the Champlain Canal and ultimately the Hudson River. Soils consist of muck underlain by silt loam. Soils saturated to the surface, high water table, water marks, water stained leaves, and drainage patterns were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
119.8; 120.4	F17	FA-13	PFO/POW	1	753.4	37,698	Extensive shrub swamp, shallow emergent marsh, and deep emergent marsh wetland complex along both sides of the tracks between Lakes to Lock Passage (US Route 4) and South Old Route 4. Flows to the Champlain Canal via culverts under South Old Route 4, and ultimately the Hudson River. Soils consist of muck throughout profile. Surface water, soils saturated to the surface, and high water table were observed. Painted turtle, turtle egg shells, snapping turtle observed, and frog calls heard.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics
121.7	F14	N/A	PFO	N/A	2,762.5	-	Silver maple-ash swamp on the north side of the tracks and to the south of Flat Rock Road. Flows to the Champlain Canal under the tracks via a culvert at its center. Soils consist of fine sandy loam throughout profile. Water stained leaves and drainage patterns were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
121.9	F13	N/A	PFO	N/A	4,763.4	-	Silver maple-ash swamp on the north side of the tracks and to the south of Lakes to Lock Passage (US Route 4). Flows to the Champlain Canal under the tracks via a culvert at its north end. Soils consist of loamy sand underlain by sand. Water stained leaves and oxidized rhizospheres were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
122.0; 122.4	F12	N/A	PSS/PFO	N/A	18,939.9	-	Floodplain forest and shrub swamp on the west side of the tracks and to the east of Lakes to Lock Passage (US Route 4). Flows to the Champlain Canal under the tracks via a culvert that contains an unnamed tributary, and ultimately the Hudson River. Soils consist of sand underlain by clay loam. Soils saturated within 12 inches, water stained leaves, and oxidized rhizospheres were observed.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization Wildlife habitat Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics

**TABLE 2
FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
122.8	F11	N/A	PSS/PFO	N/A	23,480.4	-	Floodplain forest and shrub swamp along and parallel to the west side of the tracks, and connected to the north bank of Halfway Creek, which flows to the Champlain Canal and ultimately the Hudson River. Soils consist of sand throughout profile. Soils saturated within 12 inches and water stained leaves were observed. Snapping turtle observed.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization Wildlife habitat Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics
123.2	F10	N/A	PSS/PFO	N/A	3,336.4	-	Silver maple-ash swamp and shrub swamp on the east side of the tracks along the Champlain Canal south of Ann Street (State Route 149). Soils consist of loam underlain by clay loam, and oxidized rhizospheres were observed.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization Wildlife habitat Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics
124.2; 124.3; 124.4; 125.2; 125.3; 125.6	F8	N/A	PEM/PSS/PFO	N/A	64,818.8	59,220.7	A large wetland area bordering on Champlain Canal and tributaries and consisting of predominantly of shallow emergent, floodplain forest and silver maple-ash forest cover types. Contains areas of inundation and/or ponded open water. Coyote and potential turtle/amphibian habitat observed. Nearby New York State Bike Route 9.	Groundwater discharge Floodflow alteration Fish/shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization* Wildlife habitat* Recreation
127.2; 127.5	F4	N/A	PEM/PSS	N/A	-	52,923.3	Shallow emergent marsh and shrub swamp predominantly on the west side of the tracks with a small area east of the tracks at its south end. Flows east to the Champlain Canal via Stream F04, and ultimately the Hudson River. Soils consist of clay throughout profile. Surface water and soils saturated to the surface were observed.	Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
128.4	F2	N/A	PEM/PSS	N/A	-	46,557.9	Relatively large wetland area bordering on Champlain Canal and perennial tributary. Consists predominantly of shallow emergent marsh vegetation. Fine-textured soils. Deer tracks and nesting oriole observed.	Groundwater discharge Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat*
129.6; 130.2	A54	N/A	PEM/PSS	N/A	-	177,328.5	Large wetland bordering on Champlain Canal and a perennial tributary. Characterized primarily as deep and shallow emergent marshes and shrub swamp, with smaller floodplain forest. Seasonal inundation and fine-grained mineral soils. Muskrat and geese observed.	Groundwater discharge Floodflow alteration Fish/shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat* Uniqueness/heritage Visual quality/aesthetics
131.9; 132.3	A2	N/A	PEM/PSS	N/A	-	76,512.5	Predominantly shallow emergent marsh and shrub swamp along and parallel to both sides of the tracks south of State Route 196 and the Glens Falls Feeder Canal. Flows east through adjacent wet fields to the Champlain Canal and ultimately the Hudson River. Soils consist of fine sandy loam throughout profile, and were saturated within 12 inches of the surface. Deer, beaver, painted turtle, mallard, and king fisher observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat*
133.3	A5	N/A	PSS	N/A	-	6,108.7	This is a narrow disturbed wetland occupying a ditch area between the railroad embankment and a dirt access road. The wetland was probably formerly part of a larger contiguous wetland that is present on the other side of the road, outside of the Project area. Predominant community type is reedgrass/purple loosestrife marsh, with some saplings and shrubby disturbance-tolerant species. Observed soils are sandy loams.	Groundwater recharge Floodflow alteration

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Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
133.6	A6	N/A	PFO	N/A	372.6	-	Forested mine spoil wetland and potential vernal pool between the west side of the tracks and industrial development to the west. Flows south to an unnamed tributary (A07) of the Old Champlain Canal and ultimately the Hudson River. Soils consist of silt loam through profile. Surface water, soils saturated to the surface, and high water table were observed. Wetland is within area identified as having documented occurrence of the state-listed endangered small whorled pogonia (<i>Isotria medeoloides</i>) ¹ . However, as this is an upland species, it is not anticipated that suitable habitat exists within this wetland.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export
135.8	A14	N/A	PEM/PSS	N/A	-	1,288.3	Relatively small wetland connecting to a drainage ditch along the railroad bed. The wetland also has an intermittent outlet draining towards the Hudson River. The outlet is constricted by a culvert under the railroad bed. Dominant cover types are shrub swamp in the wetland and shallow emergent marsh in the connected ditch.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Sediment/shoreline stabilization Wildlife habitat
135.9	A15	N/A	PSS	N/A	-	377.6	Hydrologically isolated shrub swamp west of the tracks. Soils consist of fine sandy loam throughout profile and water stained leaves were observed.	Groundwater recharge/discharge* Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat
136.0	A16	N/A	PFO	N/A	766.2	-	Red maple-hardwood swamp with potential vernal pools present, on the west side of the tracks. Flows to Wetland A0017 to the south via an upland swale, and ultimately the Hudson River. Soils consist of silt loam underlain by silty clay loam and fine sandy loam. Surface water, soils saturated to the surface, high water table, and water stained leaves were observed. Squirrel observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat
136.1	A17	N/A	PFO	N/A	2,096.8	-	Predominantly shrub swamp and sedge meadow on both sides of the tracks, starting on the west side and flowing south via Stream A17-1 to a culvert that flows under the tracks to the east portion. Flows east under West River Road to the Hudson River beyond the ROW via wet meadows and forested wetlands. Soils consist of mucky loam underlain by silt loam. Deer tracks observed; potential bog turtle habitat present.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
136.7	A23	N/A	PEM	N/A	-	148.9	Small wetland upstream of a railroad culvert, with an intermittent outlet that drains through the culvert towards the Hudson River. Ecological community is primarily shallow emergent marsh. Soils are fine-grained and hydric.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation
136.9	A24	N/A	PEM/PSS	N/A	-	2,442.7	This wetland is primarily located in a deep/wide ditch but connects to other wetlands outside of the Project area. The dominant cover is shallow emergent marsh, particularly reed canary grass. The wetland is also associated with an intermittent inlet and drains towards the nearby Hudson River. Observed soils were silty clay loams.	Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation*
137.1; 137.2	A26	F-20	PEM/PSS/PFO	2	1,056.2	13,007.8	This is a relatively large wetland adjacent to the Hudson River. In the Project area, the cover is primarily shallow emergent marsh and scrub-shrub swamp. Fine-textured soils.	Groundwater discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat*
137.8	A28	N/A	PFO	N/A	158	-	Shrub/forested swamp and potential vernal pool on the west side of the tracks that is hydrologically connected to Wetland A0029 and Stream A29 (North Branch Snook Kill) to the southwest, and ultimately the Hudson River. Soils consist of silt loam throughout profile. Surface water, soils saturated to the surface, high water table, drainage patterns, and water stained leaves were observed. Frog observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Recreation Uniqueness/heritage
137.9	A30	F-7	PSS	2	-	1,034.4	Floodplain forest and shrub swamp on the west side of the tracks that is hydrologically connected to Wetland A0029 and Stream A29 (North Branch Snook Kill) to the northeast, and ultimately the Hudson River. Soils consist of silt loam underlain by sandy loam and silty clay loam. Soils saturated within 12 inches, water stained leaves, and vegetative morphological adaptations observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Recreation Uniqueness/heritage
138.5	A36	F-7	PSS	2	-	406.7	Shrub swamp on both sides of the tracks, connected by a culvert containing Stream A36 (unnamed tributary of North Branch Snook Kill), which flows north through the wetland and ultimately to the Hudson River. Surface water, soils saturated to the surface, high water table, oxidized rhizospheres, and water stained leaves were observed.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export* Sediment/shoreline stabilization Wildlife habitat

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
138.8; 139.0	A38	F-7	PSS/PFO	2	19,188	28,319.2	A moderate-sized wetland connecting to a larger NYSDEC-mapped wetland system outside the Project area. This wetland is predominantly red maple-hardwood and hemlock-hardwood swamp. Soils are sandy and there are signs of variable water level. Portions of the wetland are only connected through a railroad drainage ditch.	Groundwater recharge/discharge* Floodflow alteration Production export Wildlife habitat*
139.8	A41	N/A	PSS	N/A	-	5,081.7	Reverted drained muckland and shrub swamp on the west side of the tracks that flows southeast under the tracks via a culvert containing Stream A41 (unnamed tributary of Snook Kill) and ultimately the Hudson River. Soils consist of silt loam throughout profile. Water marks, drainage patterns, and water stained leaves were observed. Deer tracks observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat
141.3	A47	N/A	PFO	N/A	4,567.5	-	Medium-sized wetland area located on both sides of the right-of-way. Portions have been significantly affected by the presence of houses/lawn. Includes shrub swamp south of the right-of-way and forested wetland to the north.	Groundwater recharge Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation* Production export Wildlife habitat
141.4	A48	N/A	PFO	N/A	404	-	Red maple-hardwood swamp on the west side of the tracks north of Gurn Springs Road, which flows north to an unnamed tributary of Snook Kill and ultimately the Hudson River. Soils consist of sandy loam throughout profile. Surface water and soils saturated to the surface were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage
141.7; 141.8; 142.1	A49	Q-32	PSS/PFO	1	21,767.1	1,755.7	Moderately-sized forested red maple-hardwood swamp associated with the mid to upper reaches of perennial and intermittent tributaries to Rice Brook. Connects to larger downstream NYSDEC-mapped wetlands. Portions of the wetland have been altered by railroad drainage ditches.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Sediment/shoreline stabilization* Production export Wildlife habitat
142.2	A52	N/A	PFO	N/A	2,018.5	-	A small apparently isolated wetland in a forested area. This wetland may be a potential vernal pool. Dominant cover is red maple-hardwood swamp. Soils are loamy sand with a histic epipedon.	Groundwater recharge Sediment/toxicant/pathogen retention Production export Wildlife habitat*

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Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
142.9	D7	GA-20	PEM	2	-	8,663.4	Shallow emergent marsh on both sides of the tracks along Rice Brook, which flows to Cole Brook, Snook Kill, and ultimately the Hudson River. Soils consist of sandy loam underlain by sand. Surface water associated with Rice Brook was observed.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization Wildlife habitat Recreation Education/scientific value Uniqueness/heritage
143.0	D6	N/A	PEM/PFO	N/A	1,254.2	-	This is part of a large NYSDEC-mapped wetland that borders on the mid to upper reaches of a perennial unnamed tributary to Rice Brook. The community is primarily red maple-hardwood. Soils are sandy and shallow seasonal pools are present.	Groundwater recharge/discharge Floodflow alteration* Production export Wildlife habitat
143.1	D4	N/A	PFO	N/A	342.7	-	Red maple-hardwood swamp on the west side of the tracks that flows north via an unnamed tributary to Rice Brook, which ultimately flows to Cole Brook, Snook Kill, and the Hudson River. Soils consist of sandy loam throughout profile. Surface water, soils saturated within 12 inches, oxidized rhizospheres, and water stained leaves were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Recreation Uniqueness/heritage
143.2	D3	N/A	PFO	N/A	17,230.3	-	This is part of a large NYSDEC-mapped wetland that borders on the mid to upper reaches of a perennial unnamed tributary to Rice Brook. Soils are hydric loam to sandy loam. The community is primarily red maple-hardwood. Potential amphibian breeding areas were noted.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat*
143.4	D2	N/A	PFO	N/A	732	-	Red maple-hardwood swamp on the west side of the tracks, and emergent marsh on the east side connected via a culvert under the tracks. Flows north via an unnamed tributary to Rice Brook, which ultimately flows to Cole Brook, Snook Kill, and the Hudson River. Soils consist of loamy sand underlain by sand. Surface water and water stained leaves were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Recreation Uniqueness/heritage

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Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
145.9; 146.0	B39	N/A	PEM/PFO	N/A	10,361.2	-	Red maple-hardwood swamp and shallow emergent marsh on the west side of the tracks. Flows north to Delegan Brook, a tributary of Snook Kill, which flows to the Hudson River. Soils consist of fine sandy loam throughout profile. Surface water, high water table, drainage patterns, and water stained leaves were observed. Wetland is within Saratoga Sand Plains Wildlife Management Area.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat* Recreation Educational/scientific value Uniqueness/heritage
149.5	B1	S-7	PEM	2	-	124.3	Red maple-hardwood swamp and emergent marsh on both sides of the tracks along Spring Run, which flows south to Lake Lonely, Kayaderosseras Creek, Saratoga Lake, Fish Creek, and ultimately the Hudson River. Soils consist of sand throughout profile. Soils saturated within 12 inches and drainage patterns were observed. Deer tracks observed.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization Wildlife habitat Recreation Education/scientific value Uniqueness/heritage
150.5; 150.6; 150.7	B3	S-19	PEM/PSS/PFO	1	565.7	31,512.1	A moderate to large wetland relatively high in the watershed above Loughberry Lake. Observed communities are predominantly shallow emergent marsh with reedgrass/purple loosestrife marsh in the associated ditch. Also associated with an intermittent stream. Soils are organic, within areas of ponding. Deer signs observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Sediment/shoreline stabilization Production export Wildlife habitat
151.4	B4	S-19	PEM/PSS	1	-	15,603.3	This is part of a large wetland system that drains towards Putnam Brook. The ecological community is largely shrub swamp and shallow emergent marsh. Fine-textured soils.	Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat
152.3	B5	S-19	PEM/PSS	1	-	190.9	Shallow emergent marsh and shrub swamp along both sides of the track, bordering Stream B05-2 (Putnam Brook) on the west side. Portions of Wetland B05 east of the tracks flow northwest to Putnam Brook via a culvert under the tracks at its south end. Flows to Kayaderosseras Creek, Saratoga Lake, Fish Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by fine sandy loam and clay loam. Soils saturated to the surface, drainage patterns, and hydrogen sulfide odor was observed. Deer tracks observed.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics

**TABLE 2
FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
152.8	B6	N/A	PEM/PSS	N/A	-	9,927.8	This is a shrub swamp located on the west side of the right-of-way in a moderately developed area near the train station. Soils are sandy.	Groundwater recharge Floodflow alteration Nutrient removal/retention/transformation* Production export* Wildlife habitat
154.9	D9	S-21	PEM	3	-	105,889.5	A large wetland complex that has been altered by beaver activity, with portions deep emergent marsh, shallow emergent marsh, alder-dominated shrub swamp and red maple swamp. Impounded/ponded areas. Snapping turtle, deer and other wildlife. Southern portion of wetland is adjacent to Saratoga Nursery and Saratoga Spa State Park.	Groundwater recharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat* Recreation Educational/scientific value Uniqueness/heritage Visual quality/aesthetics*
155.5	B47	S-21	PEM/PSS/PFO	3	1,236.2	-	Connected to the above wetland complex, this area has also been flooded by beaver activity. Soils organic. More disturbance and ditching are present along the railroad in this area. Also an intermittent stream within the wetland. Adjacent to Saratoga Nursery and Saratoga Spa State Park.	Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Wildlife habitat* Recreation Educational/scientific value Uniqueness/heritage Visual quality/aesthetics
155.9	B45	N/A	PEM	N/A	-	27,191.5	This wetland is predominantly a shallow emergent marsh, associated with a perennial and two intermittent streams draining towards Kayaderosseras Creek. Some areas permanently flooded. Beaver activity and fish were observed within the wetland/stream complex. Portions of the wetland may be artificially ditched. Soils mostly coarse-grained.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Wildlife habitat*
157.0	B44	N/A	PEM/PFO	N/A	13,625.3	-	This wetland contains long areas of ditched wetland, and is contiguous with a perennial unnamed tributary to Kayaderosseras Creek (outside of the corridor). Dominant ecological communities include shallow emergent marsh, reedgrass/purple loosestrife marsh and red maple-hardwood swamp. Soils are loams to sands.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Wildlife habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
157.1	B41	N/A	PFO	N/A	11,966.4	-	Red maple-hardwood swamp on the west side of the tracks that flows east under the tracks via a culvert that contains an unnamed tributary of Kayaderosseras Creek, which flows to Saratoga Lake, Fish Creek, and ultimately the Hudson River. Receives hydrology from the unnamed tributary, which flows from Ballston Spa Reservoir to the west. Soils consist of muck throughout profile. Surface water, soils saturated to the surface, high water table, drainage patterns, and water stained leaves were observed. Wetland is adjacent to Wood Hollows Nature Preserve.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat* Recreation Educational/scientific value Uniqueness/heritage
157.5; 158.0	B10	N/A	PFO	N/A	21,682.6	-	Red maple-hardwood swamp on both sides of the tracks connected via a box culvert under the tracks. Flows south and east to unnamed tributaries of Kayaderosseras Creek, Saratoga Lake, Fish Creek, and ultimately the Hudson River. Soils consist of sandy loam throughout profile. Soils saturated within 12 inches, drainage patterns, and water stained leaves were observed. Raccoon tracks, opossum tracks, and deer tracks observed.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage Visual quality/aesthetics
158.3	B17	N/A	PFO	N/A	4,439.4	-	Red maple-hardwood swamp on both sides of the tracks connected via a culvert under the tracks, which flows east to Mourning Kill, Kayaderosseras Creek, Saratoga Lake, Fish Creek, and ultimately the Hudson River. Soils consist of silt loam throughout profile. Soils saturated to the surface and water stained leaves were observed. Deer tracks, squirrel caches, green frog, and burrows observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat* Recreation Education/scientific value Uniqueness/heritage
158.7	B16	N/A	PFO	N/A	14,919.0	-	Red maple-hardwood swamp on the west side of the tracks that flows south to Wetland B17, then east under the tracks to Mourning Kill, Kayaderosseras Creek, Saratoga Lake, Fish Creek, and ultimately the Hudson River. Soils consist of silt loam throughout profile. Soils saturated to the surface, high water table, and water stained leaves were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat*
159.0	B18	N/A	PEM/PSS	N/A	-	19,595.8	This is a moderately large shrub swamp located to the west of the railroad tracks. The wetland connects to portions of railroad ditch. One upland island is included within the wetland. Soils are fine-grained.	Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation* Production export Wildlife habitat*

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
159.1	B20	N/A	PEM/PSS	N/A	-	281.6	Shallow emergent marsh (ditch) between two spur tracks west of the main tracks that flows south via an upland swale to Wetland B21, then east via a culvert under the tracks. Flows east to an unnamed tributary of Mourning Kill, then Kayaderosseras Creek, Saratoga Lake, Fish Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by clay. Soils saturated to the surface, high water table, and drainage patterns were observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export
159.3	B21	R-50	PEM	3	-	801.6	Shallow emergent marsh (ditch) on the west side of the tracks that flows east under the tracks via a culvert to an unnamed tributary of Mourning Kill, then Kayaderosseras Creek, Saratoga Lake, Fish Creek, and ultimately the Hudson River. Green frogs observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export
159.5	B23	N/A	PEM	N/A	-	908.2	This area includes wetlands connected to intermittent streams artificial drainage ditches, all of which are hydraulically connected to a larger wetland system off the railroad property. The dominant wetland class on the property is reedgrass/purple loosestrife marsh. Mapped soils are fine-grained. Green frogs were observed in the wetland system.	Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat
160.1; 160.4	B25	R-3	PEM/PSS/PFO	3	12,939.3	43,512.7	Mid-watershed wetland draining towards Mourning Kill. Predominantly deep emergent marsh, shrub swamp and forested. Winterberry provides food source and aesthetic quality. Intermittent stream present. Fine-textured soils. Near Zim Smith hike/bike trail.	Groundwater recharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat* Recreation Visual quality/aesthetics*
160.7	B28	N/A	PEM	N/A	-	188.8	Shallow emergent marsh to the northwest of the intersection of State Route 67 and the tracks. Flows north to a large wetland complex then east under the tracks via a culvert containing Stream B25-1, then to an unnamed tributary of Mourning Kill, Kayaderosseras Creek, Saratoga Lake, Fish Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by sandy loam. Soils saturated within 12 inches, high water table, drainage patterns, and water stained leaves observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export
160.9	B29	N/A	PEM/PSS	N/A	-	1,934	A small wetland that drains through a culvert under the railroad to a ditch/stormwater system. The predominant cover is shallow emergent marsh. Soils are fine-grained.	Groundwater discharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient retention/removal/transformation

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
161.2	B30	N/A	PEM/PSS	N/A	-	17,326.6	This wetland is predominantly shallow emergent and reedgrass/purple loosestrife marsh. Much of it occurs along a ditch under a utility line; however, portions are contiguous with two intermittent streams.	Groundwater recharge/discharge Floodflow alteration Nutrient removal/retention/transformation Sedimentation/shoreline stabilization* Wildlife habitat
161.6	B31	R-11	PEM	2	-	19,125.6	Connected to a large NYSDEC-mapped wetland system contiguous with Ballston Lake, low in the watershed. Intermittent stream is present. Loam to silt loam soils. Vegetative communities include shallow emergent marsh and shrub swamp.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization* Wildlife habitat
161.8	B32	N/A	PEM	N/A	-	11,480.6	Connected to a large NYSDEC-mapped wetland system contiguous with Ballston Lake, low in the watershed. Intermittent stream is present. Silt loam soils. Vegetative communities include shallow emergent marsh and red maple hardwood swamp. Pounded water present. Portions of wetland connected by ditches.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization* Wildlife habitat*
162.9	B-C1	N/A	PEM	N/A	-	14,393.4	This wetland is mostly located within a railroad ditch, hydraulically connected to C1. This is mostly shallow emergent marsh and reedgrass/purple loosestrife marsh.	Floodflow alteration*
162.9; 163.0; 163.1	C1	N/A	PEM/PSS	N/A	-	22,714.7	This wetland is located on the west side of the railroad tracks and is contiguous with a perennial tributary to Ballston Lake. The wetland type is primarily shallow emergent marsh. Some ditching. Soils are fine-grained.	Floodflow alteration* Fish and shellfish habitat Nutrient removal/retention/transformation Sediment/shoreline stabilization
163.4	C4	N/A	PEM	N/A	-	7,594.8	Wetland area associated with ditch along the railroad containing hydrophilic vegetation. The dominant community type is shallow emergent marsh.	Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation
163.7	C5	N/A	PEM	N/A	-	1,114.6	Small shallow emergent marsh connected by an intermittent outlet to larger NYSDEC-mapped wetland areas contiguous to Ballston Lake. Organic and silty soils. Near the Ballston Veteran's Bikeway.	Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat
164.4	C8	R-18	PEM	2	-	29,015.9	This wetland is a shrub swamp on both sides of the railroad right-of-way, connected to a larger NYSDEC-mapped wetland system adjacent to Ballston Lake. Two intermittent streams flow through the wetland. Silty soils.	Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat Recreation Visual quality/aesthetics

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
164.9	C15	R-18	PFO	2	19,784.5	-	Red maple-hardwood swamp on the east side of the tracks; part of an extensive wetland system along the west side of Ballston Lake, which flows to Ballston Creek, Round Lake, Anthony Kill, and ultimately the Hudson River. Soils consist of loam throughout profile. Soils saturated to the surface, high water table, and water stained leaves were observed. Spring salamander observed. Ballston Lake is a state-listed Warm Water Fish Concentration Area.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Sediment/shoreline stabilization Wildlife habitat* Recreation Educational/scientific value Uniqueness/heritage Visual quality/aesthetics
167.1	C29	B-31	PEM	2	-	2,994.2	This is a deep emergent marsh bordering Alplaus Kill and an intermittent tributary that flows under the railroad. Soils have a thick organic surface horizon underlain by silt loam. Portions inundated with a significant perennially ponded area off the right-of-way. Disturbance and residential development have affected nearby uplands.	Floodflow alteration Fish/shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat
167.5	C31	N/A	PEM	N/A	-	10,504.3	Wetland is associated with a larger wetland system along Alplaus Kill, relatively low within the drainage basin. An intermittent tributary flows through the wetland. Soils are fine-textured mineral. The plant communities are predominantly shallow emergent marsh and shrub swamp.	Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat
168.2	C35	N/A	PEM/PSS	N/A	-	8,397.6	This wetland is located along the west side of the tracks near Alplaus Kill. The wetland community is predominantly reedgrass/purple loosestrife marsh, shallow emergent marsh and shrub swamp. Observed soils include fine-grained and sandy horizons. No inlet/outlet observed.	Groundwater recharge Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation* Production export Wildlife habitat
170.0; 170.2	C42	S-107	PEM/PSS/PFO	2	11,858.7	64,155.9	This is part of a large NYSDEC-mapped wetland adjacent to the Hudson River. Two intermittent tributaries flow through the wetland. The wetland is characterized as deep emergent and shrub swamp, and has been altered by beaver activity. Pounded water is present. Other wildlife observations included deer, woodcock and red-tailed hawk. Soils are mostly fine-grained.	Groundwater recharge/discharge Floodflow alteration* Fish/shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat* Visual quality/aesthetics

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
170.5	X01	N/A	PSS/PFO	N/A	20,062.0	24,928.4	Deep emergent and shrub swamp on west side of tracks. Water flows adjacent and through wetland via two ditches. Pondered water is present. Potential vernal pools present in southern portion of wetland. Other wildlife observations included woodcocks and passerine species.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat* Visual quality/aesthetics
171.4	C44	S-112	PEM	2	-	282.7	Floodplain forest on the west side of the tracks. Flows east under the tracks to a large wetland complex via a culvert containing an unnamed tributary of the Mohawk River. Soils consist of silt loam throughout profile. Surface water, soils saturated to the surface, high water table, water marks, and water stained leaves were observed. Wetland is within area identified as having documented occurrence of the state-listed endangered erect knotweed (<i>Polygonum erectum</i>) and side oats grama (<i>Bouteloua curtipendula</i> var. <i>curtipendula</i>) ⁵ . However, as these are upland species, it is not anticipated that suitable habitat exists within this wetland.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat Recreation Educational/scientific value Uniqueness/heritage
174.8	C46	N/A	PEM	N/A	-	3,316.9	Shallow emergent marsh on the south side of the tracks between an abandoned rail line adjacent to the main line and a steep bluff to the south. Flows north under the tracks via a culvert containing Stream C46, and then west to a large wetland system along the Mohawk River (Wetland C57). Soils consist of sandy loam throughout profile. Soils saturated within 12 inches, high water table, water marks, and water stained leaves were observed. Deer droppings observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
175.0	C48	N/A	PEM	N/A	-	2,116.8	Shallow emergent marsh on the south side of the tracks north of the abandoned rail line, and reedgrass marsh north of the tracks, connected via a culvert containing Stream C48. Flows west on the north side of the tracks to a large wetland system along the Mohawk River (Wetland C57). Soils consist of sandy loam throughout profile. Soils saturated within 12 inches, high water table, and water stained leaves were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
175.3	C56	N/A	PEM	N/A	-	9,491.3	Purple loosestrife marsh on the south side of the tracks north of the abandoned rail line. Assumed hydrologic connection to wetlands north of the tracks via groundwater. Soils consist of loamy sand throughout profile. Surface water, soils saturated to the surface, and high water table were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
CP Railroad Right-of-Way Subtotal:					369,698.6 (8.49 acres)	1,335,722.8 (30.66 acres)		
CSX Railroad Right-of-Way – Rotterdam to Catskill, NY								
178.4	E2	N/A	PSS	N/A	-	5,568.7	This is a seasonally saturated headwater wetland that drains towards Normans Kill. No inlet or outlet was mapped within the Project area. Community types present include red maple-hardwood and shrub swamp. Soils are sandy.	Groundwater recharge/discharge Floodflow alteration Production export* Wildlife habitat*
178.8; 178.9	E3	N/A	PEM/PFO	N/A	18,295.6	17,520.6	This wetland is present on both sides of the railroad track, and is contiguous with perennial and intermittent tributaries to Normans Kill. The dominant ecological type is reedgrass/purple loosestrife marsh, and the wetland is generally degraded by human activity, including rutting from vehicle tires and various invasive species. Soils are sandy.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Sediment/shoreline stabilization*
179.1	E4	N/A	PEM	N/A	-	26,522.3	This is a wide wetland bordering on a perennial tributary to Normans Kill. Reedgrass/purple loosestrife marsh is the dominant community in much of the wetland; however some shrub swamp and emergent marsh (with native species) is also present. Soils range from sandy and fine-grained mineral to organic within portions of the wetland. Areas of inundation are present.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Sediment/shoreline stabilization* Production export Wildlife habitat
179.5	E5	N/A	PEM/PFO	N/A	14,092.1	3,116.3	Located on the west side of the railroad tracks, this wetland is contiguous with adjacent railroad ditches; however, no inlet or outlet connecting to other wetlands or waterways was observed. The dominant ecological communities are red maple-hardwood swamp and forested vernal pool. One amphibian egg mass was observed within the potential vernal pool portion of the wetland. Soils are loams/silt loam.	Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Wildlife habitat*

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Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
179.7; 179.8	E7	N/A	PEM/PSS	N/A	-	12,295.5	This wetland borders on a perennial tributary to Normans Kill. Stream flows are somewhat sinuous/diffuse within the wetland. The wetland includes primarily reedgrass/purple loosestrife marsh and shrub swamp. Portions of the wetland connect to a wet ditch.	Groundwater recharge/discharge Floodflow alteration* Fish/shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Sediment/shoreline stabilization* Production export Wildlife habitat
180.0; 180.1; 180.3	E9	S-117	PEM/PSS	2	-	65,989.3	This is a wide wetland bordering unnamed perennial tributaries to Normans Kill. Cover is predominantly reedgrass/purple loosestrife marsh, shallow emergent marsh, and red maple-hardwood swamp. Inundated areas are present in portions of the wetland. Thick organic horizon is present over sandy soils.	Groundwater recharge/discharge Floodflow alteration* Fish/shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation* Sediment/shoreline stabilization* Wildlife habitat*
180.6; 180.7	E10	N/A	PEM/PSS	N/A	-	9,479.8	Two perennial tributaries to Normans Kill flow within this wetland. Dominant ecological classes include shallow emergent marsh, with contiguous areas of forested wetland and shrub swamp located mostly off the right-of-way. Observed soils were sandy.	Groundwater recharge/discharge Floodflow alteration* Fish/shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Sediment/shoreline stabilization* Production export Wildlife habitat
180.8	E12	N/A	PEM/PFO	N/A	19,464.2	199.9	This wetland is predominantly forested and shallow emergent marsh and occurs along perennial unnamed tributaries to Normans Kill. Sampled soils were fine-grained.	Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Sediment/shoreline stabilization* Production export Wildlife habitat*
181.2; 181.6; 181.7; 181.8	E15	N/A	PEM/PSS/PFO	N/A	14,296.1	12,530.4	This includes wetland areas bordering on two perennial tributaries to Watervliet Reservoir. Portions of the wetland are contiguous with railroad ditches. Dominant wetland communities include shallow emergent marsh, shrub swamp and red maple-hardwood swamp. Pounded water visible from adjacent roadway. Soils are sandy.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization* Wildlife habitat* Uniqueness/heritage Visual quality/aesthetics*

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
182.0	E95	N/A	PEM	N/A	-	496.6	Relatively small wetland area between two railroad tracks, bordering on a perennial tributary to Watervliet Reservoir flowing through railroad culverts. The dominant cover is shallow emergent marsh and shrub swamp. Observed soils were sandy and gravelly. Evidence of deer and nesting wild turkey was observed.	Groundwater recharge/discharge Floodflow alteration Fish/shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat
182.1; 182.2	E96	N/A	PEM/PSS/PFO	N/A	208.5	5,103.5	This seasonally-flooded wetland includes emergent marsh (along to the railroad right-of-way) and red maple-hardwood swamp (adjacent to the right-of-way), upstream of Watervliet Reservoir. No inlets or outlets within the Project area were observed. Soils range from silt loam to sandy loam.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Wildlife habitat*
182.4; 182.5	E97	N/A	PEM/PSS	N/A	-	1,089.5	This wetland consists primarily of shallow emergent marsh bordering on a perennial tributary to Watervliet Reservoir. The tributary shows signs of sedimentation. Wetland soils are sandy loams.	Groundwater recharge/discharge Floodflow alteration Fish/shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Sediment/shoreline stabilization* Wildlife habitat
183.3	E80	N/A	PEM/PSS	N/A	-	1,139.8	Shrub swamp and shallow emergent marsh on the west side of the tracks to the east of Watervliet Reservoir, which flows to Normans Kill and ultimately the Hudson River. Soils consist of silt loam underlain by clay loam. Soils saturated within 12 inches and oxidized rhizospheres were observed. The town of Guilderland is identified as having documented occurrence of the state-listed endangered blunt-lobe grape fern (<i>Botrychium oneidense</i>) ² .	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Recreation Educational/scientific value Uniqueness/heritage Endangered species habitat*
183.4	E79	N/A	PSS/PFO	N/A	6,124.8	-	Predominantly shrub swamp and forested wetland dominated by elm and ash. This wetland is contiguous with the Watervliet Reservoir, and inundation/ponding is extensive within the wetland. Soils are fine-grained mineral.	Floodflow alteration* Fish/shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat*
183.5	E77	N/A	pPSS	N/A	-	5,319.7	This wetland is directly associated with the Watervliet Reservoir and contains areas of ponded water. The dominant community type is shrub swamp. Soils are fine-grained.	Floodflow alteration* Fish/shellfish habitat Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat*

**TABLE 2
FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
183.8	E75	N/A	PFO	N/A	1,079.1	-	In the Project area this is a small wetland finger draining toward Watervliet Reservoir. The wetland is predominantly red maple-hardwood swamp. Observed wetland soils are fine-grained but contain some gravel.	Groundwater recharge/discharge Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Wildlife habitat*
184.2; 184.2	E17	N/A	PSS/PFO/POW	N/A	721.1	14,236.5	This is an apparently isolated pool in a forested area, corresponding to the ecological classification forested vernal pool. No inlet or outlet was observed and the wetland area itself is largely unvegetated. Soils are sandy.	Groundwater recharge Floodflow alteration Nutrient removal/retention/transformation Wildlife habitat*
185.8; 186.2; 186.2; 186.3	E21	N/A	PEM/PSS/PFO	N/A	8,817.3	63,071.8	A relatively long wetland near railroad yard, which includes shallow emergent, reedgrass/purple loosestrife, forested wetland and shrub swamp communities. Associated with intermittent tributaries to Black Creek. Soils are loamy Udorthents. Canada geese and muskrat observed.	Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Sediment/shoreline stabilization* Production export Wildlife habitat
186.5; 186.7; 186.9; 186.9	E24	V-51	PEM/PSS/PFO	3	21,882.2	29,039.8	This is a moderate to large wetland system located upstream of Vly Creek. Wetland communities include forested communities with dominant elm and deep emergent wetland. Forested areas exhibit relatively undisturbed vegetation, but some trash is present. Soils are fine-grained.	Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation* Production export Wildlife habitat*
187.3	E26	N/A	PEM/PSS	N/A	-	10,535.5	This wetland is a perched swamp white oak wetland and shrub swamp, above nearby downslope wetlands. No inlet/outlet was observed in the Project area. Soils are fine-grained and hydric.	Floodflow alteration Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Wildlife habitat
187.5; 187.7; 187.8	E28	V-52	PSS/PFO	2	4,500.5	20,722	Along a perennial tributary upstream of Vly Creek, this wetland is mixed deep emergent marsh, impounded swamp and vernal pool. The wetland soils are fine-grained mineral to organic. This wetland area has been altered by beaver activity; kingfisher and wood duck were also observed. Significant ponded open water is present.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization* Wildlife habitat* Visual quality/aesthetics
188.0; 188.0	E29	N/A	PSS/PFO	N/A	991.8	7,469.4	Located along a perennial tributary to Vly Creek, this wetland is predominantly shrub swamp with smaller portions of forested cover. The wetland is located between the railroad and an adjacent road, and the stream shows evidence of disturbance and sedimentation. A neighbor commented on past issues with flooding. Soils are Udorthents and were observed to be mostly fine-grained in the wetland. Accessible but generally degraded appearance.	Groundwater recharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization* Wildlife habitat

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
189.2	E31	N/A	PSS	N/A	-	2,013.4	Shallow emergent marsh on the east side of the tracks that flows south to an unnamed tributary of Vloman Kill (Stream E032), which flows to the Hudson River. Soils consist of loam underlain by clay loam. Sediment deposits and water stained leaves were observed. The northern portion of Wetland E031 is within area identified as having documented occurrence of the state-listed threatened Carey's smartweed (<i>Polygonum careyi</i>) ^{1,2} .	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Uniqueness/heritage Endangered species habitat
189.8	E33	N/A	PEM/PSS/PFO	N/A	1,822.1	1,309.5	This wetland is located along perennial tributaries to Vloman Kill. Cover type is primarily shrub swamp. Soils range in texture from sandy loam to fine-grained mineral to organic. Wildlife observed include kingfisher, spring peeper and garter snake.	Groundwater recharge/discharge Floodflow alteration* Fish/shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation* Sediment/shoreline stabilization Production export Wildlife habitat*
190.4	E35	N/A	PFO	N/A	3,111.6	-	Red maple-hardwood swamp on the east side of the tracks that flows east to Vloman Kill, and ultimately the Hudson River. Soils consist of loam underlain by clay loam. Surface water, soils saturated within 12 inches, high water table, water stained leaves, and oxidized rhizospheres observed. Woodpecker holes observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat
190.7	E37	N/A	PFO	N/A	5,330.7	-	This wide wetland is located in a flatter area downstream of wetland E36 and is associated with a perennial tributary to Vloman Kill. The wetland is dominated by shrub swamp. Areas of seasonal inundation are present. Soils are fine-grained mineral.	Groundwater recharge/discharge Floodflow alteration* Fish/shellfish habitat Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization* Wildlife habitat
191.1	E39	N/A	PEM	N/A	-	15,667.3	A relatively wide wetland low in the watershed, associated with an unnamed intermittent tributary to Vloman Kill. This wetland is primarily reedgrass/purple loosestrife and shallow emergent marsh. Has fine-grained mineral soils. Located just outside the Five Rivers Education Center.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation* Sediment/shoreline stabilization* Wildlife habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
191.5; 191.6	E43	N/A	PEM/PFO	N/A	4,450	1,003.1	Predominantly reedgrass/purple loosestrife marsh on the east side of the tracks that flows east to Vloman Kill via linear wetlands through farm field, and ultimately the Hudson River. Soils consist of silt loam underlain by clay loam. Soils saturated to the surface, drainage patterns, water stained leaves, and oxidized rhizospheres were observed. Wetland is within area identified as having documented occurrence of the state-listed threatened Henslow's sparrow (<i>Ammodramus henslowii</i>) ² . Wetland is adjacent to an area identified as the Five Rivers Education Center.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Educational/scientific value Uniqueness/heritage Endangered species habitat*
194.0	E51	N/A	PEM	N/A	-	9.8	Reedgrass marsh on the west side of the tracks that flows southeast to an unnamed tributary of Coeymans Creek, and ultimately the Hudson River. Soils consist of silty sand throughout profile. Surface water, soils saturated to the surface, and high water table were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation
194.1	E52	N/A	PEM	N/A	-	972.5	Reedgrass marsh on the west side of the tracks that flows southeast to an unnamed tributary of Coeymans Creek, and ultimately the Hudson River. Soils consist of silty sand throughout profile. Surface water, soils saturated to the surface, and high water table were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation
194.1	E59	N/A	PEM	N/A	-	1,618.4	Reedgrass marsh on the west side of the tracks south of Feura Bush Road (State Route 32) that flows southeast to an unnamed tributary of Coeymans Creek, and ultimately the Hudson River. Soils consist of clay throughout profile. Surface water, soils saturated within 12 inches, water stained leaves, and drainage patterns were observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation
194.2	E58	N/A	PEM	N/A	-	42,097.4	Reedgrass marsh ditch along and parallel to the west side of the tracks extending southeast from Feura Bush Road (State Route 32) to South Albany Road. Flows southeast to an unnamed tributary of Coeymans Creek, and ultimately the Hudson River. Soils consist of silt loam throughout profile, and drainage patterns were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation
197.2	E104	N/A	PEM	N/A	-	38,523.1	Reedgrass/purple loosestrife marsh within a drainage ditch along the Selkirk Yard. Soils are fine-grained.	Floodflow alteration*

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
199.2	M71/E101	N/A	PEM/PSS	N/A	-	66,744.4	Reedgrass/purple loosestrife marsh and shrub swamp along the west side of the tracks extending southeast from Bridge Street (State Route 396) and following the track alignment as it becomes a ditch and rounds the corner to the south. Drains to an unnamed tributary of Coeymans Creek, and ultimately the Hudson River. Soils texture is loam to sand. Evidence of deer and frogs observed. Wetland is within mapped habitat for the state-listed endangered puttyroot (<i>Aplectrum hyemale</i>) ² , cut-leaved evening primrose (<i>Oenothera laciniata</i>) ^{1,2} , and glaucous sedge (<i>Carex glaucoidea</i>) ^{1,2} . However, it is not anticipated that suitable habitat exists within this wetland for puttyroot as it typically inhabits forested areas.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
199.3	M70	N/A	PFO	N/A	1,235.9	-	Red maple-hardwood swamp perched above the railroad tracks on the west side of ROW. Extends west and is part of a large NWI-mapped PFO that flows to an unnamed tributary of Coeymans Creek, and ultimately the Hudson River. Soils consist of fine sand throughout profile and were saturated to the surface. Evidence of ponding observed. Wetland is within mapped habitat for the state-listed endangered cut-leaved evening primrose (<i>Oenothera laciniata</i>) ^{1,2} and glaucous sedge (<i>Carex glaucoidea</i>) ^{1,2} .	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Wildlife habitat* Uniqueness/heritage Endangered species habitat*
199.6	M69	N/A	PEM/PFO	N/A	19,972.3	1,653.3	Predominantly a red maple-hardwood swamp along both sides of the tracks with shrub swamp and reedgrass/purple loosestrife marsh within the transmission line ROW at its north end, and reedgrass/purple loosestrife marsh at its southwest end. Hydrologically connected to an unnamed tributary of Coeymans Creek to the east, and ultimately the Hudson River. Soils consist of fine sand throughout profile. Evidence of significant ponding in predominantly depressional areas and some flowing water observed. Deer tracks observed. Wetland is within mapped habitat for the state-listed endangered cut-leaved evening primrose (<i>Oenothera laciniata</i>) ^{1,2} and glaucous sedge (<i>Carex glaucoidea</i>) ^{1,2} .	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export* Wildlife habitat* Uniqueness/heritage Endangered species habitat*

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
199.8	M67	N/A	PEM/PSS/PFO	N/A	86,948.6	-	Predominantly floodplain forest and shrub swamp with an area of shallow emergent marsh at the north end associated with mowed lawns on private residences. Flows to Wetland M68 to the east via a culvert under the tracks; hydrologically connected to Coeymans Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by silty clay. Ponding to a depth of approximately 1 foot observed in the northern portion and saturated soils also observed. Wetland is within mapped habitat for the state-listed endangered cut-leaved evening primrose (<i>Oenothera laciniata</i>) ^{1,2} and glaucous sedge (<i>Carex glaucoidea</i>) ^{1,2} .	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Recreation Uniqueness/heritage Endangered species habitat*
200.3	M65	N/A	PEM/PSS/PFO	N/A	5,324.7	939	Predominantly floodplain forest with an area of reedgrass/purple loosestrife marsh to the east of the mobile home park. Small area of shrub swamp along an unnamed tributary (Stream MS66) to the south. Flows south to Coeymans Creek via Stream MS66 and wetland M64, and ultimately the Hudson River. Soils consist of silt loam throughout profile. Ponding observed in depressional areas and saturated soils also observed. Significant bird activity noted; several occurrences of blue jays. Deer tracks observed. Wetland is within mapped habitat for the state-listed endangered cut-leaved evening primrose (<i>Oenothera laciniata</i>) ^{1,2} .	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat* Uniqueness/heritage Endangered species habitat*
200.3	M66	N/A	PEM/PFO	N/A	2,028.4	-	Reedgrass/purple loosestrife marsh in the natural gas pipeline ROW east of the tracks. Remaining areas consist of silver maple-ash swamp. Hydrologic divide present in wetland east of the tracks: southern portion flows south, northern portion flows west under tracks. The entire wetland is hydrologically connected to Coeymans Creek, and ultimately the Hudson River. Soils consist of a fine sandy loam underlain by silt loam and silty clay loam. Ponding to a depth of approximately 2 inches observed in reedgrass/purple loosestrife marsh and saturated soils also observed. Wetland is within mapped habitat for the state-listed endangered cut-leaved evening primrose (<i>Oenothera laciniata</i>) ^{1,2} .	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
200.8	M63	N/A	PEM/PSS/PFO	N/A	9,586	1,723.1	Red maple-hardwood swamp perched above and connected to a large surface depression that contains a purple loosestrife marsh/shrub swamp complex. Flows to Coeymans Creek via Stream MS62 and wetland M64, and ultimately the Hudson River. Soils consist of silty clay throughout profile and were saturated in some areas. Northern portion of wetland is within mapped habitat for the state-listed endangered cut-leaved evening primrose (<i>Oenothera laciniata</i>) ^{1,2} .	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
201.1	M62	N/A	PEM	N/A	-	9,693.5	Shallow emergent marsh to the northwest of the intersection of an access road and the tracks. Water is channeled north via a linear shrub swamp that connects to Stream MS59 and Coeymans Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by silty clay. Surface water, soils saturated to the surface, and high water table were observed. Deer tracks observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage
201.1	Y36	N/A	PEM	N/A	-	170.2	Reedgrass/purple loosestrife marsh, shrub and forested wetlands and on either side of the tracks. Stream MS60 flows west to east through Y36 and under the tracks via a culvert and ultimately flows to Coeymans Creek, and ultimately the Hudson River. The southern portion of Y36 east of the tracks flows north to Stream MS60 and the remainder of Y36, which consists of riparian areas along Stream MS60. Soils consist of silty clay throughout profile. Surface water, soils saturated to the surface, and high water table were observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Uniqueness/heritage
201.2	M61	N/A	PEM/PSS/PFO/P OW	N/A	7,468.9	125,850.2	Large linear wetland complex that runs parallel along the west side of the tracks and is hydrologically connected to Coeymans Creek, and ultimately the Hudson River. Ecological communities include reedgrass/purple loosestrife marsh, shallow emergent marsh, shrub swamp, eutrophic pond, and red maple-hardwood swamp. Soils consist of silt loam underlain by silty clay. Surface water, soils saturated to the surface, and high water table were observed. Deer tracks observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Uniqueness/heritage

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
202.0	Y34	N/A	PEM/PSS	N/A	-	4,174.7	Extensive reedgrass/purple loosestrife marsh, shrub swamp, and floodplain forest. A majority of Y34 is east of the tracks, including a shrub swamp area at its southeast end separated from the northern portion of Y34 by a spur track, connected via a culvert under the track off the ROW to the east. Areas north of the spur track and east of the main track consist of a mix of the communities above. Stream YS34 flows north through this area to a large pond that outlets to an unnamed tributary to Coeymans Creek, and ultimately the Hudson River. Y34 west of the tracks consist of a shallow emergent marsh fringed by shrub swamp, with floodplain forest to the north and south that drain to Stream MS58, which flows west to east through this portion of the wetland and under the tracks to the pond previously mentioned. Surface water, soils saturated to the surface, and water-stained leaves were observed. Soils consist of silt loam underlain by silty clay loam.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat (freshwater), Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat Uniqueness/heritage
202.2	M60	N/A	PEM/PFO	N/A	42,172.3	-	Silver maple-ash swamp with a fringe of shallow emergent marsh that runs along and parallel to the west side of the tracks. Flows east under the tracks via a culvert to wetland Y34 and Coeymans Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by silty clay. Surface water, soils saturated to the surface, and high water table were observed. Deer tracks observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
202.4	M59	N/A	PEM/PSS/PFO	N/A	3,464.2	-	Meandering floodplain forest on the west side of the tracks with an area of shrub swamp at its southern end and a linear shallow emergent marsh toward its northern end along the tracks. Flows east under the tracks via a culvert to wetland Y34 and Coeymans Creek, and ultimately the Hudson River. Soils consist of gravelly silt loam underlain by silty clay loam. Surface water, soils saturated to the surface, and high water table were observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention Nutrient removal/retention/transformation Production export Wildlife habitat*
202.6	Y33	N/A	PEM	N/A	-	20,273.4	Shallow emergent marsh and shrub swamp along and parallel to the west side of the tracks. Hydrologically connected to wetlands to the north and Coeymans Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by silty clay. Surface water, soils saturated to the surface, and high water table were observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Visual quality/aesthetics

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
203.0	M58	N/A	PEM/PSS	N/A	-	3,605.9	Shallow emergent marsh surrounded by shrub swamp that receives hydrology from urban areas to the west and flows north to Stream MS56 and Coeymans Creek, and ultimately the Hudson River. Soils consist of silty clay loam throughout profile. Surface water, soils saturated to the surface, and high water table were observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Education/scientific value Uniqueness/heritage Visual quality/aesthetics
203.1	M57	N/A	PEM/PFO	N/A	3,904.5	-	Apparently hydrologically isolated shallow emergent marsh with a fringe of floodplain forest along its western edge. Receives hydrology from urban areas to the west. Soils consist of gravelly loamy sand throughout profile and were saturated to the surface.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Uniqueness/heritage
203.9	M56	N/A	PEM/PSS/PFO	N/A	368.9	-	Shallow emergent marsh that extends parallel along the west side of the tracks with silver maple-ash swamp to the west. Receives hydrology from urban areas to the west. Flows under the tracks via a culvert to a shallow emergent marsh and shrub swamp east of the tracks, then a tributary of Hannacroix Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by clay loam and were saturated to the surface.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Uniqueness/heritage
204.4	M53	N/A	PEM	N/A	-	16,555.4	Reedgrass/purple loosestrife marsh that extends parallel to the right side of the tracks, outlets to Stream YS32b at its north end, and flows to a tributary of Hannacroix Creek, and ultimately the Hudson River. Soils consist of gravelly silt loam underlain by silty clay loam. Surface water, soils saturated to the surface, and high water table were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² . Wetland M53 is also within area mapped as having documented occurrence of the state-listed threatened Northern dropseed (<i>Sporobolus heterolepis</i>) ¹ .	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation, production export Wildlife habitat Uniqueness/heritage Endangered species habitat*

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
204.6	M52	N/A	PEM	N/A	-	2,543.7	Reedgrass/purple loosestrife marsh that extends parallel to the right side of the tracks and flows to a tributary of Hannacroix Creek to the south, and ultimately the Hudson River. Soils consist of sandy loam underlain by sandy clay loam. Surface water, soils saturated to the surface, and high water table were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² . Wetland M52 is also within area mapped as having documented occurrence of the state-listed threatened Northern dropseed (<i>Sporobolus heterolepis</i>) ¹ .	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
204.9	Y32	N/A	PEM/PSS	N/A	-	1,219.7	Shallow emergent marsh and shrub swamp along and parallel to the west side of the tracks with a small area of shallow emergent marsh on the east side of the tracks where the wetland outlets to from under the tracks via a culvert. Y32 west of the tracks flows north to an unnamed tributary of Hannacroix Creek; Y32 east of the tracks flows north to the same unnamed tributary of Hannacroix Creek via wetlands beyond the ROW to the east, and ultimately the Hudson River. Soils consist of silty sand throughout profile. Surface water, soils saturated to the surface, and water-stained leaves were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² . Wetland Y32 is also within area mapped as having documented occurrence of the state-listed threatened Northern dropseed (<i>Sporobolus heterolepis</i>) ¹ .	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat Uniqueness/heritage Endangered species*
205.1	Y31	N/A	PEM/PSS	N/A	-	3,409	Floodplain forest, shrub swamp, and shallow emergent marsh on the east side of the tracks north of New Baltimore Road. Flows north to an unnamed tributary of Hannacroix Creek via wetlands beyond the ROW to the east, and ultimately the Hudson River. Soils consist of silty loamy muck underlain by silty clay and fine sand. Surface water, soils saturated to the surface, high water table, and water stained leaves were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² .	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Wildlife habitat Uniqueness/heritage Endangered species*

**TABLE 2
FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
205.4	Y30	N/A	PEM	N/A	-	3,492.1	Shrub swamp and shallow emergent marsh east of the track that is hydrologically connected to Hannacroix Creek to the south, and ultimately the Hudson River. Soils consist of sandy loam underlain by sandy clay. Surface water, soils saturated to the surface, and water stained leaves were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² .	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species*
206.1	M48	N/A	PSS	N/A	-	760.2	Shrub swamp that receives water from streams off the ROW to the west, outlets to Stream MS49 at its north end, which flows to Hannacroix Creek, and ultimately the Hudson River. Soils consist of fine sand throughout profile. Surface water, soils saturated to the surface, and high water table were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² .	Groundwater recharge/discharge* Floodflow alteration Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
206.5	M47	N/A	PEM/PSS	N/A	-	7,091.9	Reedgrass/purple loosestrife marsh and shallow emergent marsh complex present in all four quadrants of the State Route 104 and CSX tracks intersection, connected by culverts. Small area of shrub swamp north of the shallow emergent marsh in the northeast quadrant. Soils consist of silt loam throughout profile. Surface water, soils saturated to the surface, and high water table were observed. Flows southeast off the ROW to Sickles Creek, Cocksackie Creek, and ultimately the Hudson River. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² .	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
208.0	Y27	N/A	PEM/PSS	N/A	-	340	Shallow emergent marsh and shrub swamp on both sides of the tracks, connected via a culvert under the tracks. Flows east to an unnamed tributary of Sickles Creek, then Cocksackie Creek, and ultimately the Hudson River. Soils consist of loam underlain by clay loam and clay. Surface water, soils saturated to the surface, and drift deposits were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² .	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*

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Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
208.4	Y26	N/A	PEM	N/A	-	93.8	Shallow emergent marsh on west side of tracks. Flows north to an unnamed tributary to Coxsackie Creek, and ultimately the Hudson River. Soils consist of clay loam underlain by clay. Surface water, soils saturated to the surface, and water-stained leaves were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² .	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
208.8	M42	N/A	PEM/PSS	N/A	-	7,238.3	Shallow emergent marsh extending parallel along the west side of the tracks with a fringe of shrub swamp along its west edge. Flows south to Stream MS43, Sickles Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by clay loam. Surface water, soils saturated to the surface, and high water table were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² . Wetland is also within area identified as having documented occurrence of the state-listed threatened upland sandpiper (<i>Bartramia longicauda</i>) ² . However, it is not anticipated that suitable habitat exists within this wetland for the upland sandpiper as it is a grassland species. Deer tracks observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
208.9	M41	N/A	PEM/PSS/PFO	N/A	11,404.1	-	Predominantly silver maple-ash swamp with a depressionally shallow emergent marsh fringed by shrub swamp at its center. Flows north to Stream MS41, Sickles Creek, and ultimately the Hudson River. Hydrologically connected to Wetland Y24 to the south. Soils consist of silt loam underlain by clay loam. Surface water, soils saturated to the surface, and high water table were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² . Wetland is also within area identified as having documented occurrence of the state-listed threatened upland sandpiper (<i>Bartramia longicauda</i>) ² . However, it is not anticipated that suitable habitat exists within this wetland for the upland sandpiper as it is a grassland species. Deer tracks observed.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat (freshwater), Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat Uniqueness/heritage Endangered species habitat*

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
209.0	M40	N/A	PSS	N/A	-	3,012.1	Shrub swamp that connects to wetland Y24 beyond the ROW to the west and ultimately Sickles Creek. Soils consist of silt loam underlain by clay loam and were saturated to the surface. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² . Wetland is also within area identified as having documented occurrence of the state-listed threatened upland sandpiper (<i>Bartramia longicauda</i>) ² . However, it is not anticipated that suitable habitat exists within this wetland for the upland sandpiper as it is a grassland species.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
209.0	Y24	N/A	PEM/PSS	N/A	-	4,556.9	Silver maple-ash swamp and shallow emergent marsh on the west side of the tracks. Flows to the east under the tracks via Stream YS27 to Sickles Creek, and ultimately the Hudson River. Soils consist of clay throughout profile. Surface water, soils saturated to the surface, and high water table were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² . Deer tracks observed. Wetland is also within area identified as having documented occurrence of the state-listed threatened upland sandpiper (<i>Bartramia longicauda</i>) ² . However, it is not anticipated that suitable habitat exists within this wetland for the upland sandpiper as it is a grassland species.	Groundwater recharge/discharge Floodflow alteration Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat Uniqueness/heritage Endangered species habitat*
209.8	Y22	N/A	PEM	N/A	-	3,339.2	Shallow emergent marsh and shrub swamp that runs parallel along both sides of the tracks. Flows east to an unnamed tributary of Sickles Creek, and ultimately the Hudson River. Soils consist of silt loam underlain by clay. Surface water and soils saturated to the surface were observed. The town of New Baltimore is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² . Wetland is also within area identified as having documented occurrence of the state-listed threatened upland sandpiper (<i>Bartramia longicauda</i>) ² . However, it is not anticipated that suitable habitat exists within this wetland for the upland sandpiper as it is a grassland species.	Groundwater recharge/discharge Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
210.4	M36	N/A	PFO	N/A	3,801.6	-	Silver maple-ash swamp that extends beyond the ROW to the west. Flows west to Cocksackie Creek, and ultimately the Hudson River. Soils consist of silt loam throughout profile. Surface water, soils saturated to the surface, and high water table were observed. Wetland is within area identified as having documented occurrence of the state-listed threatened upland sandpiper (<i>Bartramia longicauda</i>) ² . However, it is not anticipated that suitable habitat exists within this wetland for the upland sandpiper as it is a grassland species.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat*
210.6	M35	N/A	PSS	N/A	-	353	Shrub swamp that leads west to forested wetlands beyond the ROW. Flows to Cocksackie Creek, and ultimately the Hudson River. Soils consist of silt loam throughout profile and were saturated to the surface. Wetland is within area identified as having documented occurrence of the state-listed threatened upland sandpiper (<i>Bartramia longicauda</i>) ² . However, it is not anticipated that suitable habitat exists within this wetland for the upland sandpiper as it is a grassland species.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Uniqueness/heritage
210.7	M34	HN-101	PEM/PFO	N/A	878.8	1,000	Reedgrass/purple loosestrife marsh along the east side of the tracks that extends east to a large farm field beyond the ROW. Small areas of silver maple-ash swamp along Cocksackie Creek at the north end and on the south end west of the tracks. Hydrologically connected to Cocksackie Creek directly and via Stream MS35, and ultimately the Hudson River. Soils consist of silty sand throughout profile and were saturated to the surface. The north end of wetland M34 is within the town of New Baltimore, which is identified as having documented occurrence of the state-listed endangered navel corn salad (<i>Valerianella umbilicata</i>) ² . Wetland is also within area identified as having documented occurrence of the state-listed threatened Northern harrier (<i>Circus cyaneus</i>) ² .	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat (freshwater), Wetiment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
210.9	Y21	N/A	PEM	N/A	-	2,755.1	Shallow emergent marsh and shrub swamp on both sides of the tracks connected via a culvert under the tracks. Flows northwest to Cossackie Creek via a linear wetland ditch through a farm field, and ultimately the Hudson River. Soils consist of fine sandy loam throughout profile. Surface water, soils saturated to the surface, and high water table were observed. Wetland is within area identified as having documented occurrence of the state-listed threatened Northern harrier (<i>Circus cyaneus</i>) ² . Deer tracks and frogs observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
211.2	Y20	N/A	PEM	N/A	-	25,734.5	Shallow emergent marsh and shrub swamp on both sides of the tracks connected via a culvert under the tracks. Flows northwest to Cossackie Creek via a linear wetland ditch through a farm field, and ultimately the Hudson River. Soils consist of silty clay loam underlain by gravelly loam. Surface water and soils saturated to the surface were observed. Wetland is within area identified as having documented occurrence of the state-listed threatened Northern harrier (<i>Circus cyaneus</i>) ² .	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
211.7	M33	N/A	PEM/PFO	N/A	14,138.8	222.2	Reedgrass/purple loosestrife marsh (ditch) along the east side of the tracks that flows north from Bailey Street and connects to a shrub swamp/red maple-hardwood swamp complex, all of which flow to a reedgrass/purple loosestrife marsh depression at its north end. The depressional area also receives water from upgradient commercial properties to the east, and flows under the tracks via a culvert to Cossackie Creek, and ultimately the Hudson River. Soils consist of silt loam throughout profile. Surface water, soils saturated to the surface, and high water table were observed in shrub swamp area.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat Uniqueness/heritage
211.8	Y19	N/A	PEM	N/A	-	850.4	Shallow emergent marsh and shrub swamp on the west side of the tracks, connected to Wetland M33 to the east via a culvert under the tracks. Flows west to an unnamed tributary of Cossackie Creek, and ultimately the Hudson River. Soils consist of coarse sandy loam underlain by fine sand. Surface water, soils saturated to the surface, high water table, and drift deposits were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
212.3	Y18	N/A	PEM	N/A	-	83,459.4	Extensive shrub swamp and reedgrass/purple loosestrife marsh that runs along and parallel to both sides of the tracks between Flint Mine Road and Stacey Road/Bailey Street. Leads to emergent wetlands beyond the ROW to the east and west. West of the tracks flows to Cocksackie Creek, east of the tracks flows to an unnamed tributary of Murderers Creek, Sleepy Hollow Lake, and ultimately the Hudson River. Soils consist of silt loam underlain by clay and clay loam. Surface water, soils saturated to the surface and high water table were observed. Wetland is within area identified as having documented occurrence of the state-listed threatened Northern harrier (<i>Circus cyaneus</i>) ² .	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat Uniqueness/aesthetics Endangered species habitat*
213.5	M32	N/A	PEM/PSS/PFO	N/A	62,458.3	-	Extensive reedgrass/purple loosestrife marsh and shallow emergent marsh complex on both sides of the tracks, with an area of shrub swamp and silver maple-ash swamp at its southwestern extent. Flows to Murderers Creek via Stream MS34, and ultimately the Hudson River. Soils consist of silt loam throughout profile and were saturated to the surface. Wetland is within area identified as having documented occurrence of the state-listed threatened Northern harrier (<i>Circus cyaneus</i>) ² .	Groundwater recharge/discharge* Floodflow alteration Sediment/toxicant/pathogen retention*, Nutrient removal/retention/transformation* Production export Wildlife habitat Uniqueness/heritage Endangered species habitat*
214.5; 216.0	Y16	HN-108	PEM	1	-	317,090.4	Extensive wetland system that runs along either side of the tracks for approximately 5 miles from just north of the Catskill/Athens town border north to Flats Road in Cocksackie. Ecological communities include shallow emergent marsh, reedgrass/purple loosestrife marsh, shrub swamp, and silver maple-ash swamp. Flows to Murderers Creek to the north and Corlaer Kill to the south, and ultimately the Hudson River. Soils generally consist of silty clay loam, clay loam, or sapric peat underlain by clay or silty clay. Surface water, soils saturated to the surface, and high water table were observed. Wetland is within area identified as having documented occurrence of the state-listed threatened stiff-leaf goldenrod (<i>Oligoneuron rigidum var. rigidum</i>) ¹ . However, it is not anticipated that suitable habitat exists within this wetland for the stiff-leaved goldenrod as it is an upland species. Bird nests observed.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat (freshwater) Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Sediment/shoreline stabilization Wildlife habitat Uniqueness/heritage

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FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
216.8	Y17	HN-108	PEM	1	-	719.2	Reedgrass/purple loosestrife marsh in a topographic depression southeast of the intersection of the tracks Route 28 (Schoharie Turnpike). Flows north under Route 28 to a portion of Wetland Y16, an unnamed tributary of Murderers Creek, and ultimately the Hudson River. Soils consist of sapric peat underlain by clay. Surface water, soils saturated to the surface and high water table were observed. Wetland is within area identified as having documented occurrence of the state-listed threatened stiff-leaf goldenrod (<i>Oligoneuron rigidum var. rigidum</i>) ¹ . However, it is not anticipated that suitable habitat exists within this wetland for the stiff-leaved goldenrod as it is an upland species.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen Retention* Nutrient removal/retention/transformation Production export Wildlife habitat
220.2	Y15	N/A	PEM	N/A	-	37,575.7	Reedgrass/purple loosestrife marsh and silver maple-ash swamp along and parallel to both sides of the tracks north of Browns Crossing Road. The southern portion of Y15 flows south to an unnamed tributary of Hans Vosen Kill (YS16), which flows to Catskill Creek; the northern portion of Y15 flows north to an unnamed tributary of Corlaer Kill, which ultimately flows to the Hudson River. Soils consist of silt loam underlain by clay. Surface water, soils saturated to the surface, and high water table were observed. Deer tracks and droppings observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
220.4	Y14	N/A	PEM	N/A	-	2,055.3	Shallow emergent marsh and shrub swamp along the east side of the tracks south of Browns Crossing Road. Flows south to an unnamed tributary of Hans Vosen Kill (Stream YS16), which flows to Catskill Creek, and ultimately the Hudson River. Soils consist of loam underlain by clay. Surface water, soils saturated to the surface, and high water table were observed. Eastern cottontail, and deer rubbings and tracks observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
220.8	Y13	N/A	PEM	N/A	-	1,804.5	Shallow emergent marsh and shrub swamp along the east side of the tracks. Flows north to an unnamed tributary of Hans Vosen Kill (Stream YS16), which flows to Catskill Creek, and ultimately the Hudson River. Soils consist of clay loam throughout profile. Surface water, soils saturated to the surface, and high water table were observed.	Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat

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Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
220.9	M29	N/A	PEM	N/A	-	6,925.3	Reedgrass/purple loosestrife marsh parallel to the east side of the tracks at the State Route 23 overpass. Flows south to wetland M28 via Stream MS26 which flows to Catskill Creek, and ultimately the Hudson River. Soils consist of loamy sand underlain by sandy clay loam. Surface water, soils saturated to the surface, and high water table were observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
222.0	M25	N/A	PEM/PFO	N/A	1,301.2	-	Reedgrass/purple loosestrife marsh along both sides of Stream MS21 on the east side of the tracks. Flows south to Stream YS13 via Stream MS21, then Catskill Creek, and ultimately the Hudson River. Soils consist of loamy clay underlain by silty clay. Surface water and soils saturated to the surface were observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat
222.5	M24	N/A	PEM/PFO	N/A	4,945.5	-	Floodplain forest on the west side of the tracks and reedgrass/purple loosestrife marsh on the east side of the tracks. Stream YS12, an unnamed tributary Mineral Spring Brook flows through the wetland from west to east under the tracks via a culvert, and ultimately the Hudson River. Soils consist of loamy clay underlain by silty clay and were saturated to the surface. Deer tracks observed.	Groundwater recharge/discharge Floodflow alteration* Fish and shellfish habitat (freshwater). Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat
223.2	Y11	N/A	PEM	N/A	-	10,694.2	Reedgrass/purple loosestrife marsh on the east side of the tracks that flows to Mineral Springs Brook, and ultimately the Hudson River. Soils consist of clay loam underlain by clay. Surface water, soils saturated to the surface, and drift deposits observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat
223.6	M21	N/A	PEM	N/A	-	11,086.6	Shallow emergent marsh on both sides of the tracks to the north and south of an access road that traverses the tracks. Flows east to Mineral Spring Brook, and ultimately the Hudson River. Soils consist of silt loam underlain by sandy loam. Surface water and soils saturated to the surface were observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation
223.8	M20	N/A	PFO	N/A	242.8	-	Silver maple-ash swamp on the east side of the tracks that flows east to an unnamed tributary of Mineral Spring Brook, and ultimately the Hudson River. Soils consist of silt loam underlain by silty clay loam and clay loam, and were saturated to the surface.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat

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					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
224.1	M19	N/A	PFO	N/A	2,133.3	-	Red maple-hardwood swamp on the east side of the tracks that flows east to an unnamed tributary of Mineral Spring Brook, and ultimately the Hudson River. Soils consist of silt loam underlain by silty clay loam, and were saturated to the surface.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
224.3	Y10	N/A	PEM	N/A	-	10,106.9	Reedgrass/purple loosestrife marsh on either side of the tracks that flows to an unnamed tributary of Mineral Spring Brook, and ultimately the Hudson River. Soils consist of silt loam underlain by clay. Surface water, soils saturated to the surface, water marks, and drift deposits were observed. Deer tracks observed.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
224.5	Y9	N/A	PEM	N/A	-	852.2	Shallow emergent marsh and shrub swamp along the east side of the track that flows to an unnamed tributary of Mineral Spring Brook, and ultimately the Hudson River. Soils consist of loam underlain by clay. Surface water, soils saturated to the surface, and high water table were observed. Deer tracks observed.	Groundwater recharge/discharge Floodflow alteration Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
225.0	M16	N/A	PEM	N/A	-	928.4	Reedgrass marsh on the east side of the tracks which flows east beyond the ROW to Post Creek, and ultimately the Hudson River. Soils consist of gravelly sandy loam underlain by sandy loam. Surface water and soils saturated to the surface were observed.	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Wildlife habitat
225.2	M15	N/A	PEM	N/A	-	1,281	Reedgrass/purple loosestrife marsh along and parallel to the east side of the tracks. Flows to Stream MS11 at its south end, then Post Creek, and ultimately the Hudson River. Soils consist of gravelly, mucky loamy sand. Surface water, soils saturated to the surface, and high water table were observed. Wetland is within area identified as having documented occurrence of the state-listed rare Delmarva Beggar-ticks (<i>Bidens bidentoides</i>) ¹ .	Groundwater recharge/discharge* Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat

**TABLE 2
FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR**

Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
226.0	M12	N/A	PEM	N/A	-	4,326.7	Reedgrass/purple loosestrife marsh located between the tracks and several spur tracks to the east. Small area of shrub swamp beyond the ROW to the east at the center of the marsh. Receives water from Stream MS9 to the northwest via a culvert under the tracks, and flows to an unnamed tributary of the Hudson River to the east via a culvert under the spur tracks. Soils consist of silt loam underlain by sandy clay loam. Surface water, soils saturated to the surface, and drift deposits observed. Wetland is within area identified as having documented occurrence of the state-listed threatened spongy arrowhead (<i>Sagittaria montevidensis var. spongiosa</i>) ¹ .	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export, Wildlife habitat Uniqueness/heritage Endangered species*
226.2	M11	N/A	PEM/PFO	N/A	904.5	-	Reedgrass/purple loosestrife marsh west of the tracks that flows east under the tracks to a reedgrass/purple loosestrife marsh and silver maple-ash swamp complex. Receives water from MS7 to the north and upgradient wetlands to the south. Flows to a large pond to the east and ultimately the Hudson River. Soils consist of sand underlain by clay loam, and were saturated to the surface. Wetland is within area identified as having documented occurrence of the state-listed threatened spongy arrowhead (<i>Sagittaria montevidensis var. spongiosa</i>) ¹ .	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export Wildlife habitat* Uniqueness/heritage Endangered species*
226.3	M9	N/A	PSS/PFO	N/A	8,714.2	-	Silver maple-ash swamp on the east side of the tracks with an area of shrub swamp at its south end. Flows to a large pond to the east and ultimately the Hudson River. Soils consist of silt loam underlain by silty clay loam and silty clay, and were saturated to the surface. Wetland is within area identified as having documented occurrence of the state-listed threatened spongy arrowhead (<i>Sagittaria montevidensis var. spongiosa</i>) ¹ .	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export* Wildlife habitat* Uniqueness/heritage Endangered species*
226.5	M8	N/A	PEM/PFO	N/A	1,753.4	-	Extensive wetland system on the east side of the tracks consisting of reedgrass/purple loosestrife marsh associated with a pond at the south end and wetland swales along and parallel to the tracks. Marsh leads to silver maple-ash swamp to the east and north that flows to a large pond to the north and ultimately the Hudson River. Soils consist of silt loam underlain by silty clay, and were saturated to the surface.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation* Production export* Wildlife habitat*

TABLE 2 FUNCTIONS AND VALUES OF WETLANDS ALONG THE OVERLAND TRANSMISSION CABLE CORRIDOR								
Approx MP	Field ID Number	NYSDEC Wetland ID	Cowardin Classification ^{a/}	NYSDEC Wetland Class	Total Impacts within the Workspace ^{b/}		Summary	Functions and Values (* denotes principal functions/values)
					Forested Wetland ^{c/}	Non-Forested Wetland		
					(square feet)	(square feet)		
227.1	M3	N/A	PEM/PSS	N/A	-	8,985.0	Reedgrass/purple loosestrife marsh to the south and shrub swamp to the north between the east side of the tracks and an access road to the east. Depressional area that flows north to Stream MS2 and ultimately an unnamed tributary of the Hudson River. Soils consist of silt loam underlain by clay loam, and were saturated to the surface.	Groundwater recharge/discharge Floodflow alteration* Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization Wildlife habitat
CSX Railroad Right-of-Way – Haverstraw Bay Bypass, NY								
298.5	Y4	N/A	PEM	N/A	-	1,224.2	Riparian floodplain forest and shallow emergent marsh along the north side of Minisceongo Creek west of the tracks. Soils consist of sandy loam underlain by fine sandy loam. Surface water, soils saturated to the surface, high water table, and water stained leaves were observed.	Groundwater recharge/discharge* Floodflow alteration* Fish and shellfish habitat (freshwater)*, Sediment/toxicant/pathogen retention* Nutrient removal/retention/transformation Production export Sediment/shoreline stabilization* Recreation Wildlife habitat Uniqueness/heritage Visual quality/aesthetics
CSX Railroad Right-of-Way Subtotal:					420,339.9 (9.65 acres)	1,233,171.6 (28.31 acres)		
Overland Route Total					793,139 (18.2 acres)	2,591,235 (59.5 acres)		

a/ May include classification for portions of the wetland outside of the area of impact.

1. New York Natural Heritage Program Online "Nature Explorer" GIS viewer - <http://www.nynhp.org/>
2. Data obtained from New York Natural Heritage Program, 2008

b/ The Workspace, which ranges from 46- to 48- feet in width depending on the location within or outside railroad or highway rights-of-way, includes those areas temporarily impacted by construction activities (e.g., trenching, access, equipment staging, spoil storage) as well as those areas permanently impacted by vegetation maintenance.

c/ If multiple Cowardin classifications exist for any given wetland identified as containing PFO (i.e. PFO/PSS), impacts were assigned to forested wetland.