

A. INTRODUCTION

This attachment considers the potential impact of the Proposed Action on natural resources including groundwater, floodplains, wetlands, vegetation, wildlife, and federal- and state-listed rare, threatened, and endangered species.

B. METHODOLOGY

The existing natural resource conditions in the area of the Proposed Action were identified through a combination of direct field observations as well as the following datasets and other sources of information:

- Federal Emergency Management Agency (FEMA) effective Flood Insurance Rate maps (FIRMs);
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps and Information, Planning, and Conservation (IPaC) System list of threatened, endangered, candidate, and proposed species for Nassau County;
- New York State Department of Environmental Conservation (NYSDEC) tidal and freshwater wetland maps;
- 2000–2005 Breeding Bird Atlas results for Blocks 6251B and 6251D;
- NYSDEC New York Nature Explorer site search;
- NYSDEC New York Natural Heritage Program; and
- Observations made during field survey conducted at the Proposed Substation site on October 25, 2018

Natural resources identified in the vicinity of the Proposed Action are inventoried below. Field investigations were conducted at the Proposed Substation parcel. Natural resource field investigations were not conducted for the proposed transmission circuits or distribution exit feeders because they will be primarily completed along previously disturbed public roadway rights-of-way (“ROW”) inclusive of road shoulders and sidewalk areas along Plainview Road, Old Country Road, Round Swamp Road and Bethpage Sweet Hollow Road/Spagnoli Road.

C. EXISTING CONDITIONS**GROUNDWATER**

The Proposed Action is located within the Nassau-Suffolk Aquifer System, which is a designated Sole Source Aquifer (43 FR 2661 [1978]). It consists of deposits of unconsolidated gravel, sand, silt, and clay from the Holocene, Pleistocene, and Late Cretaceous age that have a maximum total thickness of about 1,500 feet. Precipitation is the sole source of groundwater recharge. The system is primarily composed of the Upper Glacial, Lloyd, and Magothy aquifers.

In September 2017, temporary piezometers were installed at two locations in the immediate vicinity of the Proposed Substation. The most recent water level measurements collected from the piezometers (shortly after their installation) ranged from approximately 25 to 35 feet below ground surface; however, as water levels in these piezometers had decreased over the duration of their installation, groundwater levels likely did not fully stabilize prior to their removal from the site. Thus, depth to groundwater is likely deeper than these measurements suggest.

Based on the United States Geological Survey, Long Island Depth to Water Viewer, depth to groundwater below the Proposed Action Site is estimated at depths ranging from 30 feet to 100+ feet below grade, with the exception of a small area at the eastern end of Spagnoli Road, where groundwater is estimated at depths ranging from 21 to 30 feet below ground surface. Proposed Action excavation activities will not exceed the depth of groundwater, with the exception of HDD transmission circuit installation along Spagnoli Road, crossing Route 110. HDD activities in this area will extend to maximum depths of approximately 50 feet below grade over an approximate 1,200 linear foot area.

The Special Ground Water Protection Areas for Oyster Bay and West Hills-Melville (See **Figure 5**, “Water Resources Map”) as identified in the NYSDEC Critical Environment Area Maps 8 and 9 respectively, are adjacent to the Proposed Action. No project components are located within these areas.

Potable water supply to the Proposed Action area is serviced by the Plainview Water District and the South Huntington Water District. The Plainview Water District obtains its source water from 12 wells drilled into the Magothy aquifer.ⁱ Potable water supply to the Old Bethpage area is serviced by the Bethpage Water District. The Bethpage Water District obtains its source water from nine wells at six plant sites which draw from the Magothy aquifer.ⁱⁱ Potable water supply to the Melville area is serviced by the South Huntington Water District, which sources from both the Glacial and Magothy aquifers through 18 active wells.ⁱⁱⁱ

The Proposed Substation parcel is the existing Nassau County owned and operated Stormwater Recharge Basin No. 372. Existing infrastructure at the parcel includes three stormwater outlets which discharge to the recharge basin, including one culverted intake, and one overflow discharge pipe. During storm events, stormwater is captured and deposited to this parcel where it ponds, and recharges into the groundwater and aquifer systems. The existing recharge basin storage capacity is 87.54 acre-feet.

FLOODPLAINS

A review of the effective Flood Insurance Rate Maps (FIRMs) found the Proposed Action to be within maps 36059C0165G and 36103C0615H. The entire Proposed Action is within the Zone X – An Area of Minimal Flood Hazard. Zone X is also characterized as the areas which are outside of the Special Flood Hazard Areas, and which are at an elevation higher than those with a 0.2-percent-annual change of flooding. See **Figure 6**, “FEMA Map”, for a depiction that no FEMA flood hazard zones are within one-mile of the Proposed Action.

WETLANDS AND SURFACE WATERS

A review of NYSDEC GIS data indicates that there are no NYSDEC regulated wetlands, regulated adjacent areas or surface waters within one mile of the Proposed Action.

A review of USFWS NWI maps indicates that the stormwater recharge basin on Proposed Substation parcel contains a series of small wetlands. See **Table C-1** for the NWI classifications. See **Figure 5** for Water Resources adjacent to the Proposed Action site.

Table C-1: NWI Wetlands Identified within the Proposed Substation Parcel

Wetland Acreage	Wetland NWI Classification	Classification details
3.66	PUSAx, Freshwater Pond,	P-Palustrine, US- Unconsolidated Shore, A Temporarily Flooded, x- Excavated
0.12	PUBHx, Freshwater Pond,	P-Palustrine, UB- Unconsolidated bottom, H- Permanently flooded, x- Excavated
0.20	PUBHx, Freshwater Pond,	P-Palustrine, UB- Unconsolidated bottom, H- Permanently flooded, x- Excavated
0.16	PUBFx, Freshwater Pond,	P-Palustrine, UB- Unconsolidated bottom, F- Semi permanently Flooded, x- Excavated
1.34	PSS1Ex, Freshwater Forested/Shrub wetland	P- Palustrine, SS – Scrub, 1 Broad-Leaved Deciduous, E - Seasonally flooded/Saturated, x- Excavated

All five wetland types identified in the table are classified as “x-Excavated”, which indicates that these wetlands are all wetlands that were excavated by mechanical means. The stormwater recharge basin on the Proposed Substation parcel is classified as a stormwater control feature constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off, and/or a groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention, and infiltration basins and ponds, constructed or excavated in upland or in non-jurisdictional waters (see 85 FR 22252) of the Navigable Waters Protection Rule: Definition of “Waters of the United States” developed by Department of the Army, Corps of Engineers, Department of Defense (33 CFR Part 328); and Environmental Protection Agency (EPA) (40 CFR Parts 110, 112, 116, 117, 120, 122, 230, 232, 300, 302 and 401) (paragraph (b)(11) of the final rule). Given that this feature is not located adjacent to a navigable water, does not possess a significant nexus to a navigable water, and is a man-made excavated basin, this feature is not regulated under federal jurisdiction.

The unregulated wetland area on the Proposed Substation parcel was delineated by a team of PS&S Biologists on July 20, 2016. Although NWI maps depict a total of 5.48 acres of wetlands on-site, the wetland delineation conducted by PS&S revealed that the current extent of the on-site wetland is 2.36 acres. The PS&S Biologists noted that while the necessary wetland indicators were present (hydrophytic vegetation, hydric soil, and wetland hydrology) within this 2.36-acre area, that normal circumstances^{iv} were not present due to human interaction and grading.

An additional NWI mapped wetland (2.94 acres) is located adjacent to Bethpage Sweet Hollow Road where one of the proposed transmission circuits will be installed. This wetland is characterized as a PUBHx freshwater pond. Based on an evaluation of aerial imagery, the feature is determined to be located outside of the construction area.

TERRESTRIAL ECOLOGICAL COMMUNITIES AND VEGETATION

No Significant Natural Communities mapped by NYSDEC are present on the Project Site. The Project Site consists of an excavated recharge basin which is utilized to capture and recharge stormwater for the surrounding development. Portions of the recharge basin regularly retain water and support

hydrophytic vegetation. The remainder of the recharge basin is comprised of vegetated areas consistent with terrestrial community types.

Following the ecological community classification system used by Edinger et al. 2014,^v the Proposed Substation parcel is best described as being comprised of palustrine cultural water recharge basin (approximately 2.36 acres), successional shrubland (approximately 5.00 acres), and successional southern hardwoods (approximately 3.71 acres) communities. The remaining 0.39 acres of the parcel are unvegetated. See **Figure 7** for a Substation Vegetation Map.

Given the widespread presence of exotic and invasive native species, the existing ecological communities on the Proposed Substation parcel are generally poor quality and the habitat is considered degraded. The ecological communities present are not considered rare nor could the communities be considered an outstanding example of a common natural community.

The lots surrounding the Proposed Substation parcel consist of paved parking lots or roadways. Stormwater from these parcels and other roadways are discharged to the Proposed Substation parcel creating an artificial pond and surrounding wetland area while the water infiltrates into groundwater. A field crew visited the site on October 25, 2018 to review the vegetation with particular attention to areas that would be impacted by the construction of the Proposed Substation. The dominant vegetation species covering the site are species listed in NYCRR Part 575 Prohibited and Regulated Invasive Species, as invasive-prohibited, including the Chinese bush clover (*Lespedeza cuneata*), mugwort (*Artemisia vulgaris*), Japanese honeysuckle (*Lonicera japonica*) and multiflora rose (*Rosa multiflora*).

Vegetation observed at the Proposed Substation site during the field surveys is included in **Table C-2**.

Table C-2 Vegetation Observed at the Proposed Substation Site by Community

Water Recharge Basin

Species	Common Name	Species	Common Name
<i>Carex lurida</i>	Shallow sedge	<i>Phragmites australis</i>	Common reed
<i>Juncus effusus</i>	Soft rush	<i>Rosa multiflora</i>	Multiflora rose
<i>Lythrum salicaria</i>	Purple loosestrife	<i>Salix nigra</i>	Black willow
<i>Persicaria pensylvanica</i>	Pennsylvania smartweed	<i>Scirpus cyperinus</i>	Common woolgrass

Source: PS&S Field Survey conducted on 10/25/2018

Successional Southern Hardwoods

Species	Common Name	Species	Common Name
<i>Acer negundo</i>	Box elder	<i>Persicaria pensylvanica</i>	Pennsylvania smartweed
<i>Acer platanoides</i>	Norway maple	<i>Phragmites australis</i>	Common reed
<i>Alliaria petiolata</i>	Garlic mustard	<i>Phytolacca americana</i>	American pokeweed
<i>Ampelopsis brevipedunculata</i>	Porcelainberry	<i>Pilea pumila</i>	Black cherry
<i>Artemisia vulgaris</i>	Mugwort	<i>Polygonum virginianum</i>	Jumpseed

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<i>Arthaxon hispidus</i>	Small carpetgrass	<i>Prunus serotina</i>	Black cherry
<i>Betula sp.</i>	Birch species	<i>Pyrus calleryana</i>	Callery pear
<i>Carex lurida</i>	Shallow sedge	<i>Quercus alba</i>	White oak
<i>Celastrus orbiculatus</i>	Oriental bittersweet	<i>Quercus palustris</i>	Pin oak
<i>Fallopia japonica</i>	Japanese knotweed	<i>Quercus velutina</i>	Black oak
<i>Fraxinus sp.</i>	Ash species	<i>Rhus glabra</i>	Smooth sumac
<i>Geum canadense</i>	White avens	<i>Robinia pseudoacacia</i>	Black locust
<i>Juglans nigra</i>	Black walnut	<i>Rosa multiflora</i>	Multiflora rose
<i>Juncus effusus</i>	Soft rush	<i>Rubus allegheniensis</i>	Allegheny blackberry
<i>Juniperus virginiana</i>	Eastern red cedar	<i>Rubus phoenicolasius</i>	Wineberry
<i>Lespedeza cuneate</i>	Chinese bush clover	<i>Salix nigra</i>	Black willow
<i>Ligustrum vulgare</i>	Wild privet	<i>Scirpus cyperinus</i>	Common woolgrass
<i>Lonicera japonica</i>	Japanese honeysuckle	<i>Solidago gigantea</i>	Smooth goldenrod
<i>Lonicera maackii</i>	Amur honeysuckle	<i>Symphotrichum pilosum</i>	Frost aster
<i>Lythrum salicaria</i>	Purple loosestrife	<i>Toxicodendron radicans</i>	Poison ivy
<i>Morus alba</i>	White mulberry	<i>Ulmus americana</i>	American elm
<i>Oenothera biennis</i>	Common evening primrose	<i>Viola sp.</i>	Violet species
<i>Parthenocissus quinquefolia</i>	Virginia creeper		

Source: PS&S Field Survey conducted on 10/25/2018

Successional Shrubland

Species	Common Name	Species	Common Name
<i>Acer negundo</i>	Box elder	<i>Phytolacca americana</i>	American pokeweed
<i>Alliaria petiolata</i>	Garlic mustard	<i>Prunus serotina</i>	Black cherry
<i>Artemisia vulgaris</i>	Mugwort	<i>Pyrus calleryana</i>	Callery pear
<i>Arthaxon hispidus</i>	Small carpetgrass	<i>Quercus alba</i>	White oak
<i>Celastrus orbiculatus</i>	Oriental bittersweet	<i>Quercus palustris</i>	Pin oak
<i>Juniperus virginiana</i>	Eastern red cedar	<i>Quercus velutina</i>	Black oak
<i>Lespedeza cuneate</i>	Chinese bush clover	<i>Rhus glabra</i>	Smooth sumac
<i>Ligustrum vulgare</i>	Wild privet	<i>Robinia pseudoacacia</i>	Black locust
<i>Lonicera japonica</i>	Japanese honeysuckle	<i>Rosa multiflora</i>	Multiflora rose
<i>Lonicera maackii</i>	Amur honeysuckle	<i>Rubus flagellaris</i>	Dewberry
<i>Morus alba</i>	White mulberry	<i>Rumex acetosella</i>	Field sorrel

<i>Oenothera biennis</i>	Common evening primrose	<i>Solidago gigantea</i>	Smooth goldenrod
<i>Parthenocissus quinquefolia</i>	Virginia creeper	<i>Symphytotrichum pilosum</i>	Frost aster
<i>Persicaria longiseta</i>	Oriental lady's thumb	<i>Toxicodendron radicans</i>	Poison ivy
<i>Persicaria pensylvanica</i>	Pennsylvania smartweed		

Source: PS&S Field Survey conducted on 10/25/2018

The transmission circuits and distribution exit feeders will be constructed primarily within public roadway ROW. Ecological communities identified within these areas are limited to paved road path, mowed lawn with trees, and mowed roadside/pathway communities. Paved road path is described as a road or pathway that is paved with asphalt, concrete, brick, stone, etc. There may be sparse vegetation rooted in the cracks in the paved surface.^{vi} Mowed lawn with trees is described as residential, recreational or commercial land in which ground cover is dominated by clipped grasses and forbs and is shaded by at least 30 percent cover of trees. Ornamental and or native shrubs may be present, usually with less than 50 percent cover. The ground cover is maintained by mowing and broadleaf herbicide application. Mowed roadside/pathway is characterized as a pathway along utility right-of-way corridors, or alongside a roadway. The vegetation is dominated by grasses, sedges and rushes, as well as forbs, vines and low shrubs that are tolerant to infrequent mowing.

WILDLIFE

The approximate 11.46 acre Proposed Substation parcel is available to support terrestrial wildlife within the vicinity of the Proposed Action. The area within the Proposed Substation parcel where the substation will be constructed has poor quality shrub and tree vegetation that are largely invasive or cultivated species. Wildlife within the paved road path and mowed roadside/pathway community portions of the proposed transmission circuits and distribution exit feeders will be very limited. Adjacent mowed lawn with trees habitat communities are likely to support local urban wildlife.

The adjacent uses to the Proposed Substation parcel include commercial developments and heavily trafficked parking lots. The Proposed Substation is on a parcel that is isolated from nearby open spaces; however, it is located approximately 600 feet northwest of the Pine Ridge Conservation Area, an approximate 165-acre forested parcel. While the Proposed Substation parcel may support habitat for urbanized wildlife, no contiguous pathway exists between the Proposed Substation parcel and the open space found at the Pine Ridge Conservation Area. Wildlife in the areas near the Proposed Substation would be drawn to the conservation area due to its larger size and greater contiguity.

Therefore, wildlife use at the Proposed Substation parcel is limited by the urbanized nature of the surrounding areas. Wildlife use in these settings is typically restricted to urban-adapted, habitat generalist species that can tolerate degraded environments and high levels of human activity.

BIRDS

The New York State Breeding Bird Atlas (BBA) projects are comprehensive statewide surveys designed to document the distribution of breeding birds within New York State. There were two BBA projects. The first project was conducted from 1980 to 1985 and the most recent took place from 2000 to 2004. Mapping for the BBA is based on a grid system that divided the state into discreet atlas blocks measuring 10 km by 10 km. The Proposed Action is located in Blocks 6251B and 6251D. The 2000

2004 BBA census documented 73 species as confirmed or probable/possible breeders in the survey block where the Proposed Action is located (see **Table C-3**). However, these BBA survey blocks also cover natural areas, where there may be suitable habitat to support many of the identified species. No avian species were encountered during the survey.

MAMMALS

Habitat for mammals is limited on and within the vicinity of the Proposed Action and is likely to be used only by urban-adapted species. These species include the raccoon (*Procyon lotor*), house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), gray squirrel (*Sciurus carolinensis*), eastern cottontail (*Sylvilagus floridanus*) and domestic cat (*Felis catus*). A gray squirrel was the only mammal observed at the Proposed Substation areas during the site visit.

REPTILES AND AMPHIBIANS

Suitable habitat for reptiles and amphibians may exist within the Proposed Action areas, and specifically in fringe habitat areas near the Proposed Substation parcel. Additional habitat may exist in the NWI-mapped wetland immediately north of Bethpage Sweet Hollow Road between Winding Road and Claremont Road. This wetland area is located outside the work area of the Proposed Action.

Reptile species that may be found include the common snapping turtle (*Chelydra serpentina*), eastern box turtle (*Terrapene Carolina*), redbelly turtle (*Pseudemys rubriventris*), slider turtle (*Trachemys scripta*), painted turtle (*Chrysemys picta*), northern brown snake (*Storeria dekayi*), common garter snake (*Thamnophis sirtalis*), and milk snake (*Lampropeltis triangulum*). Amphibians potentially present include the northern redback salamander (*Plethodon cinereus*), spotted salamander (*Ambystoma maculatum*), Fowler's Toad (*Bufo fowleri*), grey treefrog (*Hyla versicolor*), spring peeper (*Pseudacris crucifer*), bullfrog (*Rana catesbeiana*), wood frog (*Rana sylvatica*), pickerel frog (*Rana palustris*), and the spadefoot toad (*Scaphiopus holbrookii*).^{vii} No reptiles or amphibian species were encountered at the time of the survey.

Table C-3: NYS BBA Results for Blocks 6251B and 6251D

Species	Common Name	Species	Common Name
American Crow	<i>Corvus brachyrhynchos</i>	House Wren	<i>Troglodytes aedon</i>
American Goldfinch	<i>Carduelis tristis</i>	Indigo Bunting	<i>Passerina cyanea</i>
American Redstart	<i>Setophaga ruticilla</i>	Killdeer	<i>Charadrius vociferus</i>
American Robin	<i>Turdus migratorius</i>	Mallard	<i>Anas platyrhynchos</i>
Baltimore Oriole	<i>Icterus galbula</i>	Mourning Dove	<i>Zenaida macroura</i>
Bank Swallow	<i>Riparia</i>	Northern Bobwhite	<i>Colinus virginianus</i>
Barn Swallow	<i>Hirundo rustica</i>	Northern Cardinal	<i>Cardinalis</i>
Black-and-white Warbler	<i>Mniotilta varia</i>	Northern Flicker	<i>Colaptes auratus</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>	Northern Mockingbird	<i>Mimus polyglottos</i>
Blue Jay	<i>Cyanocitta cristata</i>	Northern Parula	<i>Parula americana</i>
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>
Blue-winged Warbler	<i>Vermivora pinus</i>	Orchard Oriole	<i>Icterus spurius</i>
Brown Thrasher	<i>Toxostoma rufum</i>	Ovenbird	<i>Seiurus aurocapilla</i>
Brown-headed Cowbird	<i>Molothrus ater</i>	Pine Warbler	<i>Dendroica pinus</i>
Canada Goose	<i>Branta canadensis</i>	Prairie Warbler	<i>Dendroica discolor</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>	Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Cedar Waxwing	<i>Bombycilla cedrorum</i>	Red-eyed Vireo	<i>Vireo olivaceus</i>
Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	Red-tailed Hawk	<i>Buteo jamaicensis</i>
Chimney Swift	<i>Chaetura pelagica</i>	Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Chipping Sparrow	<i>Spizella passerina</i>	Ring-necked Pheasant	<i>Phasianus colchicus</i>
Common Grackle	<i>Quiscalus quiscula</i>	Rock Pigeon	<i>Columba livia</i>
Common Yellowthroat	<i>Geothlypis trichas</i>	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
Cooper's Hawk	<i>Accipiter cooperii</i>	Savannah Sparrow	<i>Passerculus sandwichensis</i>
Downy Woodpecker	<i>Picoides pubescens</i>	Scarlet Tanager	<i>Piranga olivacea</i>
Eastern Kingbird	<i>Tyrannus</i>	Song Sparrow	<i>Melospiza melodia</i>
Eastern Screech-Owl	<i>Megascops asio</i>	Spotted Sandpiper	<i>Actitis macularius</i>
Eastern Towhee	<i>Pipilo erythrophthalmus</i>	Tree Swallow	<i>Tachycineta bicolor</i>
Eastern Wood-Pewee	<i>Contopus virens</i>	Tufted Titmouse	<i>Baeolophus bicolor</i>
European Starling	<i>Sturnus vulgaris</i>	Veery	<i>Catharus fuscescens</i>
Field Sparrow	<i>Spizella pusilla</i>	Warbling Vireo	<i>Vireo gilvus</i>
Gray Catbird	<i>Dumetella carolinensis</i>	White-breasted Nuthatch	<i>Sitta carolinensis</i>
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	White-eyed Vireo	<i>Vireo griseus</i>

Great Horned Owl	<i>Bubo virginianus</i>	Willow Flycatcher	<i>Empidonax traillii</i>
Hairy Woodpecker	<i>Picoides villosus</i>	Wood Thrush	<i>Hylocichla mustelina</i>
Horned Lark	<i>Eremophila alpestris</i>	Yellow Warbler	<i>Dendroica petechia</i>
House Finch	<i>Carpodacus mexicanus</i>	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>
House Sparrow	<i>Passer domesticus</i>		

Source: NYS Breeding Bird Atlas (2000-2005)

THREATENED, ENDANGERED, SPECIAL CONCERN SPECIES AND SIGNIFICANT HABITATS

New York Natural Heritage Program (NHP) data was requested on August 28, 2018 and May 29, 2020. Responses were received on October 3, 2018 and June 11, 2020 (See **Appendix E**) detailing that no NHP data for the presence of rare or state-listed animals and or significant natural communities exists for the Project Site or in the immediate vicinity. The absence of data does not necessarily mean that rare or state listed species or significant natural communities do not exist on or in the adjacent areas. The absence of data may simply indicate that comprehensive field surveys have not been completed.

A USFWS IPaC Report was generated May 29, 2020 for the Project Site (See **Appendix F**). The official species list contained six threatened or endangered mammal, bird and flowering plant species. These species are listed in **Table C-4** below. No critical habitats for protected species were identified within the Project Site.

Table C-4: USFWS IPAC Official Species List

Species Common Name	Scientific Name	Listing
<i>Mammal</i>		
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Threatened
<i>Birds</i>		
Piping Plover	<i>Charadrius melodus</i>	Threatened
Red Knot	<i>Calidris canutus rufa</i>	Threatened
Roseate Tern	<i>Sterna dougallii</i>	Endangered
<i>Flowering Plants</i>		
Sandplain Gerardia	<i>Agalinis acuta</i>	Endangered
Seabeach Amaranth	<i>Amaranthus pumilus</i>	Threatened

Piping plover, red knot, roseate tern, and seabeach amaranth are associated with maritime beach habitat which is not found on or in the vicinity of the Project Site. Therefore, these species are not likely to be present within the Project Site.

Sandplain gerardia was traditionally a maritime grassland species maintained by fire and grazing. The plant species now only survives in remnant grasslands with scattered shrubs or areas “scraped bare” such as by a bulldozer. Habitat types that support sandplain gerardia include pine barrens with broad, grassy swaths; Hempstead Plains grasslands, and composite and disturbed grasslands, and remnant grasslands of the South Fork surrounding golf courses, along roadsides and railroads (NYNHP 2019a).

Based on these species' requirements, and the lack of suitable habitat for the species within the Project Site, these species are not likely to occur within the Project Site.

The northern long-eared bat (NLEB) is a federally listed species that may utilize habitat similar to that present within the Project Site, although the presence of that habitat is considered unlikely. The NLEB is typically associated with mature forests and NLEB are known to avoid woodlands with significant edge habitats (NYNHP 2019b). Winter habitats are restricted to caves or mines known as hibernacula (USFWS 2015). There are no documented hibernacula in Nassau or Suffolk County so there is no winter habitat present in the vicinity of the Project Site. During the summer, NLEB roost under bark, in cavities or crevices in live or dead trees. NYSDEC records indicate that documented summer roost tree(s) have been identified within the Town of Oyster Bay.^{viii} However, NHP data did not indicate the presence of documented summer roost trees in the vicinity of the Project Site.

The successional forest present at the Proposed Substation parcel is not likely to contain suitable summer roost trees for the NLEB. There exists the potential for the forested areas and trees abutting the proposed 69kV UG transmission circuits and UG 13kV distribution exit feeders to include suitable roost trees for the NLEB; however, given the lack of contiguous mature forests in the vicinity of the Project Site, their presence is considered unlikely.

D. PROBABLE IMPACTS OF THE PROPOSED ACTION

This section covers the permanent impacts associated with site operations of the Proposed Action once construction is completed.

GROUNDWATER

The substation and transmission/distribution components of the Proposed Action will not be installed at depths below the groundwater table, with the exception of the HDD transmission circuit installation along Spagnoli Road crossing over Route 110. Transmission cable installation in this area will not result in the degradation of groundwater given that solid conductor cable is proposed, drilling fluid is inert and non-hazardous, and no pumping of groundwater will occur from the HDD operation.

The Proposed Action will increase the capacity of the existing Nassau County recharge basin. Therefore, the Proposed Action will not result in a reduction in the amount of groundwater infiltration occurring when compared to existing conditions.

Stormwater quality and volume will be addressed in a Stormwater Pollution Prevention Plan (SWPPP) that has been prepared in accordance with the requirements and the technical specifications set forth in the NYSDEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities Permit No. GP-0-20-001 (NYSDEC SPDES Permit No. GP-0-20-001) and New York State Stormwater Management Design Manual (NYSSMDM) or the "Blue Book". The proposed project improvements depicted in the SWPPP demonstrate that the selected stormwater management practices are in conformance with the requirements of the NYSSMDM and the NYSDEC SPDES Permit No. GP-0-20-001. The proposed best management practices (BMPs) replicate pre-development hydrology including maintaining existing flow patterns and providing water quality volume treatment and stormwater runoff peak flow rate reduction.

Significant adverse impacts to groundwater will therefore not occur as a result of construction or operation of the Proposed Action.

FLOODPLAINS

The Proposed Action does not lie within the FEMA 100- or 500-year floodplains.

The Proposed Action will result in an increase in impervious surface when compared to existing conditions. A 33,300-square foot gravel/dolomite surface will be installed for the Proposed Substation equipment, and a paved access road will be constructed to provide access to the Proposed Substation, resulting in a 0.89-acre increase in impervious surface. The Proposed Substation equipment will be constructed on concrete foundations.

As detailed above, through adherence to the SWPPP, the proposed BMPs replicate pre-development hydrology including maintaining existing flow patterns and providing water quality volume treatment and stormwater runoff peak flow rate reduction. Therefore, construction and operation of the Proposed Action will not result in significant adverse impacts to flood levels, flood risk, or the flow of flood waters on or within the vicinity of the Proposed Action.

WETLANDS AND SURFACE WATERS

A review of NYSDEC GIS data indicates that the Proposed Action will not be located within NYSDEC regulated wetlands nor regulated adjacent areas and as such, no significant adverse impacts to NYSDEC regulated wetlands will occur as a result of the Proposed Action.

As noted above, NWI maps depict a freshwater pond and a forested/shrub wetland within the stormwater recharge basin. The stormwater recharge basin is a stormwater control feature that is not considered “Waters of the United States” and subject to federal jurisdiction under the Navigable Waters Protection Rule given that this feature is not located adjacent to a navigable water, does not possess a significant nexus to a navigable water, and is a man-made excavated basin. As such, the Proposed Action will not result in adverse impacts to federally regulated wetlands.

The grubbing and regrading of the Proposed Substation parcel will result in temporary construction phase impacts to the 2.36-acre unregulated wetland area present on the parcel. After the regrading and the construction of the Proposed Substation is complete, the parcel will be revegetated with native seed and plantings, resulting in an approximate 0.46-acre increase in recharge basin, which will provide higher quality habitat than the existing habitat.

The construction workspace for the transmission circuit installation along Bethpage Sweet Hollow Road will be entirely within the previously disturbed public roadway ROW. No impacts are anticipated to the freshwater pond adjacent to the roadway.

Construction activities will adhere to BMPs with regard to erosion and sediment control which will prevent significant adverse impacts to wetlands and surface waters.

TERRESTRIAL ECOLOGICAL COMMUNITIES AND VEGETATION

Installation of the proposed transmission circuits and distribution exit feeders may result in the need to remove vegetation within the mowed lawn with trees and mowed roadside/pathway ecological communities that are present along the transmission and distribution route, particularly along Trail View State Park located along the central portion of Old Country Road segment of the Proposed Project and along the northern portion of Round Swamp Road adjacent to the Country Pointe at Plainview residential development where moderately dense to dense vegetation exists.

Given the Proposed Substation construction will require the grubbing and regrading of a 9.34-acre portion of the parcel, construction will result in a disturbance of trees, vegetation and the ecological communities present within the parcel. After construction of the Proposed Substation and access roads, the parcel will be stabilized and revegetated as detailed in the draft Landscape Plan, included as **Appendix I**. This plan is subject to change based on final Nassau County review and acceptance, however, only native plant species will be utilized in restoration activities, with the exception of perimeter screening vegetation, which will consist of non-native and non-invasive evergreen trees.

Following the ecological community classification system used by Edinger et al., Table C-5 below summarizes the modifications in ecological community types on the Proposed Substation parcel that will result from the Proposed Action.

Although the Proposed Substation will result in the permanent loss of approximately 0.6-acres of vegetated cover, no Significant Natural Communities, as defined by NYSDEC, are present within the Proposed Substation parcel. The dominant species covering the Proposed Substation parcel under existing conditions are primarily invasive species listed as prohibited under NYCRR Part 575 and represent poor quality and degraded habitat.

Table C-5: Modifications to Ecological Community Types on the Proposed Substation Parcel Resulting from the Proposed Action

Ecological Community Type	Current Acreage	Current Percentage	Acreage After Project Completion	Percentage After Project Completion	Change (Acres +/-)	Change (Percent +/-)
Unvegetated	0.39	3.40%	1.06	9.25%	+0.67	5.85%
*Palustrine Cultural Water Recharge Basin	2.36	20.60%	2.82	24.61%	+0.46	4.01%
Successional Southern Hardwoods	3.71	32.37%	0	0%	-3.71	-32.37%
Successional Shrubland or Successional Old Field	5.00	43.63%	7.58	66.14%	+2.58	22.51%
<i>Totals</i>	<i>11.46</i>	<i>100%</i>	<i>11.46</i>	<i>100%</i>	<i>0.00</i>	<i>0%</i>

* Delineated by PS&S on July 20, 2016

The vegetation detailed in the Landscape Plan will enhance habitat on the Proposed Substation parcel via the planting of native species. Native plants are adapted to the local climate and soil conditions and provide nectar, pollen, and seeds that serve as food for native butterflies, insects, birds and other wildlife. Overall, habitat quality in the area will improve due to the use of the native species and removal of invasive species.

Tree planting will be implemented in accordance with ANSI A300 (Part 6) (2012). Planting will occur during the proper season for the species selected (in accordance with planting and seeding specifications that will be included in construction plans) and will be overseen by a qualified professional. Tree

plantings will be monitored periodically following construction in order to achieve an 80% survival rate. Monitoring will occur in the late spring during leaf out and late summer to look for signs of stress relative to other nearby trees. Monitoring may include photo logs to check for yellowing, dieback, wilt or flagging. If these features are observed, appropriate arboricultural remedial measures will be performed. These may include a watering (irrigation) program, diagnostic surveys and/or structural risk assessments. Plantings will be replaced should significant damage result in plant mortality.

The implementation of the Landscape Plan will improve the quality of the ecological communities and habitat present on the Proposed Substation parcel. Much of the exotic and invasive native species present on the Proposed Substation parcel will be removed during the regrading and restoration of the parcel. Post construction habitats will either be Successional Shrubland or Successional Old Field, depending on the final revegetation plan approved by Nassau County. While these are two different community types, both will provide habitat for a variety of fauna through the use of native species, and will serve to enhance the poor quality habitat currently present. Given the poor quality of the existing habitat and the proposed restoration plan, a net improvement in habitat quality will be realized through the implementation of the restoration plan. The permanent loss of habitat associated with the substation and access driveway does not represent a significant impact given the relatively small size of the loss in the overall landscape. Sufficient habitat will be available for local fauna subsequent to construction. Given the above factors, no significant impact to vegetation will occur as a result of the Proposed Action.

WILDLIFE

The Proposed Action will not result in significant adverse impacts to wildlife at either the individual or population level. Construction of the Proposed Substation will result in the temporary displacement of all wildlife at the site to the adjacent parcels. Given the close proximity of the Pine Ridge Conservation Area, a 165-acre forested parcel, it is likely that some displaced wildlife will migrate to that area. Given the suburbanized surrounding environment, the wildlife likely to be displaced are habitat generalists and species that are disturbance tolerant. Individuals of these species may temporarily be displaced from the Proposed Substation property during construction. However, they are likely to return to the Proposed Substation parcel once construction is completed.

THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES AND SIGNIFICANT HABITATS

As discussed under “Existing Conditions,” piping plover, red knot, roseate tern, and seabeach amaranth are associated with maritime beach habitat, which is not found on or in the vicinity of the Proposed Action. Sandplain gerardia suitable habitat type was also not found to be present in the vicinity of the Project Site. As a result, no impacts are expected to these species.

The successional forest present at the Proposed Substation parcel is not likely to contain suitable summer roost trees for the NLEB. There exists the potential for the forested areas and trees abutting the proposed 69kV UG transmission circuits and UG 13kV distribution exit feeders to include suitable roost trees for the NLEB; however, given the lack of contiguous mature forests in the vicinity of the Project Site, their presence is considered unlikely. Although NYSDEC online records indicate that summer roost trees have been documented within the Town of Oyster Bay, NHP data did not indicate the presence of documented summer roost trees in the vicinity (within 1.5-mile) of the Project Site.

NLEB is listed by the USFWS as threatened due to white nose syndrome; habitat loss has not been identified as a factor in the decline in NLEB populations. Nonetheless, the USFWS has issued guidance

related to NLEB habitat, which focuses on impacts to hibernacula and maternity roost trees. The USFWS considers removal of trees as potentially resulting in an impact on NLEB. Tree trimming activities would not result in an impact to the species.

On January 14, 2016, USFWS issued a Final 4(d) Rule for the NLEB, imposing a number of specific conservation measures. This rule states that most incidental take (defined as impacts to the species from otherwise legal activities) is allowed without the need for a federal permit with the following specific exceptions:

- All incidental take within known hibernacula is prohibited;
- Incidental take resulting from tree removal within a 0.25-mile buffer around known occupied NLEB hibernacula or within a 150-foot buffer around known occupied maternity roost trees during the pup season (June 1 through July 31).

Therefore, based on available NHP data, the Proposed Action is not located within 0.25-mile of a known NLEB hibernacula or 150 feet within a documented maternity roost tree, the Proposed Action may affect, but is not likely to adversely affect the NLEB and incidental take is excepted under the Final 4(d) Rule.

NYSDEC concurs with the conclusion of the USFWS that the NLEB population decline is not the result of habitat loss. However, because the State endangered species law and its implementing regulations require consideration of impacts to occupied habitat of listed species, NYSDEC has required additional conditions on tree cutting in order to protect NLEBs that may be roosting in the trees in the vicinity of documented summer occurrences. However, given that no summer roost trees have been documented within 1.5 miles of the Project Site, no seasonal tree clearing restrictions are applicable to the Proposed Action and no incidental take permit from NYSDEC under 6 NYCRR Part 182 is required.

Based on this information, the Proposed Action will not have a significant effect on rare, threatened, endangered species or significant natural communities.

ⁱ Plainview Water District. 2018. 2017 Annual Water Quality Report. Available Online. Accessed 3/27/2019. <http://plainviewwater.org/wp-content/uploads/2018/04/18.04.10-2017-PLWD-Drinking-Water-Quality-Report.pdf>

ⁱⁱ Bethpage Water District. 2018. 2017 Drinking Water Quality Report. Available Online: <http://bethpagewater.com/Portals/0/Content/2017%20Annual%20Water%20Quality%20Report.pdf>. Accessed 3/27/2019.

ⁱⁱⁱ South Huntington Water District. N.d. 1018 Annual Water Quality Report. Available online: https://www.shwd.org/wordpress/wp-content/uploads/2019/01/13927_SHWD_WR_JAN2018_Final_LOWRES_v1.pdf Accessed 3/27/2019 .

^{iv} Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss. Available Online: <https://www.lrh.usace.army.mil/Portals/38/docs/USACE%2087%20Wetland%20Delineation%20Manual.pdf>. Accessed 3/27/2019.

^v Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.

^{vi} Ibid.

^{vii} NYSDEC. Herp Atlas Project. Available online: <https://www.dec.ny.gov/animals/7140.html>. Accessed 6/1/2020.

^{viii} NYSDEC. Northern Long-eared Bat Occurrences by Town, Data accurate as of June 28, 2018. Available online: https://www.dec.ny.gov/docs/wildlife_pdf/nlebtowns.pdf. Accessed 5/18/2020.