DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)

for

BRIDGEHAMPTON TO BUELL NEW 69 KV UNDERGROUND TRANSMISSION CABLE

Suffolk County, New York

Lead Agency: Long Island Power Authority
Board Of Trustees
333 Earle Ovington Blvd
Suite 403
Uniondale, New York

Prepared by: PSEG Long Island as Agent for the Long Island Lighting Company d/b/a LIPA, a wholly owned subsidiary of the Long Island Power Authority
175 East Old Country Road
Hicksville, New York 11801

Nelson, Pope & Voorhis, LLC. (*Environmental Planning & Analysis)*
Nelson & Pope (*Civil Engineering)*
70 Maxess Road
Melville, New York 11747
Contact: Carrie O'Farrell, AICP
631.427.5665
COFarrell@nelsonpope.com

GEI (*Cultural Resources Analysis*)
1000 New York Avenue, Suite B
Huntington Station, New York 11746
Contact: Mary Beth Billerman
631.759.2979
mbillerman@geiconsultants.com

Paulus, Sokolowski & Sartor Engineering, PC (*Noise Analysis and Traffic Analysis*)
3 Mountainview Road
Warren, New Jersey 07059
Contact: Mark Lennon
732.584.0255
mlennon@psands.com

POWER Engineers Inc. (*Project Design and Civil Engineering*)
100 John L Dietsch Square
North Attleboro, MA 02760
Contact: Bill Stachowiak
904.588.3157
Bill.stachowiak@powereng.com

Paleowest (*Cultural Resources*)
55 West 116th Street
Suite 176
New York, New York 10026
Contact: Julie Duggins
212.567.2536
jduggins@paleowest.com

KAGE Engineering, PLLC (*Traffic Analysis*)
210 Suydam Lane
Bayport, NY 11705
Contact: Bill Blanchard, PE, PTOE
631.241.4121
bb@kagepc.com

Date of Acceptance by Lead Agency: May 18, 2022

Comments on this document are to be submitted to the Lead Agency by: July 12, 2022

Table of Contents

Tables

Figures

Appendices

H. **State Registry of Inactive Hazardous Waste Disposal Sites**
I. **Frac Out Contingency Plan Example**
J. **Materials and Safety Data Sheet**
K. **Suffolk County Water Authority Correspondence;** July 21, 2021
L. **United States Army Corps of Engineers Best Management Practices Timber Mat**
M. **Qualification Packages for PSEG Long Island Staff-**
N. **NYNHP Conservation Rank Status Definitions**
O. **NY Breeding Bird Atlas**
P. **New York Natural Heritage Program Correspondence – Proposed Action**
Q. **Village of Sag Harbor Correspondence**
R. **State Historic Preservation Office /Office of Parks Recreation and Historic Preservation Correspondence**
S. **Archeological Survey/Report (**PaleoWest, September 16, 2021**)**
T. **Sound Impact Evaluation and Assessment (**PS&S, November 2021**)**
U. **FCAF/Policy Analysis**
V. **Traffic Impact Evaluation and Assessment (**KAGE, October 14, 2021**)**
W. **NYNHP Correspondence – Alternative Routes,** November 30, 2021

Executive Summary

This Draft Environmental Impact Statement (DEIS) has been prepared in compliance with the State Environmental Quality Review Act (SEQRA). The DEIS examines the potential impacts of the proposed installation of a new underground 69 kilovolt (kV) transmission cable from the Bridgehampton Substation to the Buell Substation.

As indicated in the SEQRA Handbook[1], the Executive Summary may be a narrative statement that summarizes the main points of the Environmental Impact Statement (EIS). It should contain a brief description of the overall proposed action, and list the following:

- Purpose of and need for the project;
- Description of the environmental setting;
- Significant beneficial and adverse impacts;
- Alternatives considered;
- Mitigation measures proposed; and
- Issues of controversy (if any)

The details provided below include all elements required as per the SEQRA Handbook.

Description Of The Proposed Action and Location

Proposed Action

The Proposed Action is the installation of a new underground 69 kilovolt (kV) transmission cable from the Bridgehampton Substation located on Bridgehampton-Sag Harbor Turnpike in the Town of Southampton to the Buell Substation located on Cove Hollow Road in the Town of East Hampton (approximately 5.2 miles). Most of the proposed new underground cable would be installed below grade beneath the existing Long Island Power Authority (LIPA) owned and/or controlled right-of-way which is occupied by overhead transmission infrastructure (ROW), with the exception of approximately 0.4 miles in the area south of the Long Island Railroad (LIRR), north of the National Grid facilities, east to the Buell Substation, where it will be installed below grade in the existing LIRR ROW and will transition to land owned by National Grid. Additionally, due to the layout of the existing LIPA ROW and existing structures within it, the LIPA ROW would be expanded via easement for an additional 1,651 square foot area directly north of the ROW on the west side of Buckskill Road (see **Appendix D**). No other dimensional expansion or additions to the existing ROW are required. In addition to the proposed underground cable, fourteen manholes will be installed along the Proposed Action route. Existing overhead circuits are currently located within the ROW and will remain upon completion of the Proposed Action.

To facilitate installation of the new 5.2 mile cable and the 14 manholes, the Proposed Action Area also includes temporary construction staging and laydown area within the ROW west of the Bridgehampton Substation resulting in a Proposed Action Area which extends a total of 5.54 miles.

Both horizontal directional drill (HDD) and open trench construction methodologies will be used for cable and conduit installation. Approximately 80% of the cable and conduit will be installed via open trench,

[1] 4th Edition – 2020, Division of Environmental Permits New York State Department of Environmental Conservation

while the remaining 20% will be installed via HDD. HDD is being used both to protect sensitive natural resources and to install the cable and conduit beneath existing Long Island Railroad (LIRR) tracks.

Due to the sensitivity of the habitat within the Long Pond Greenbelt, the Proposed Action was designed to limit disturbance within this area to the maximum extent practicable. Approximately 3,450 linear feet of the cable extending east from the Bridgehampton Substation, passing beneath the Long Pond Greenbelt[2], to the west side of Widow Gavits Road will be installed via HDD. The HDD installation will be achieved in two segments, with a single manhole to be installed between segments within the Long Pond Greenbelt located in a previously disturbed area. The manhole installation in this location could not be avoided due to engineering constraints. A complete discussion of potential impacts to the habitats of the Long Pond Greenbelt is included in **Section 2.3**.

In addition to the HDD beneath the Long Pond Greenbelt, approximately 845 linear feet of the cable, located west of Cove Hollow Road and beneath the LIRR will also be installed via HDD. The remaining 23,415 linear feet of cable installation will be installed via trenching. Thirteen manholes will be installed along the portion of the cable to be trenched with the distance between manholes varying from approximately 1,600 feet to 2,500 feet.

To facilitate the temporary use of HDD equipment and conduit laydown during construction, a 0.9 acre area within the ROW north of the existing Bridgehampton Substation will be cleared; a 0.36 acre portion of the cleared area will also require grading to facilitate construction. Of the clearing and grading described above, approximately 0.31 acres of clearing and 0.11 acres of grading are within 535 feet of a known tiger salamander breeding pond. **Section 2.3** provides a discussion of potential impacts and associated mitigation identified for rare, threatened and endangered species, which is also summarized below.

Additionally, limited portions of the Proposed Action Area will require stabilization in order to allow machinery access for construction. Stabilization may include grading or excavation of existing soils and temporary placement of Recycled Concrete Aggregate (RCA). The use of timber matting was analyzed as an alternative to the use of RCA for construction access road stabilization. Due to the significant steep slopes and undulating topography in the ROW, use of timber matting was determined to not be feasible for the entire length of the access road. Although use of timber mats cannot be implemented for the entirety of the roadway, timber matting will be utilized in the most sensitive area for the installation of the manhole within the Long Pond Greenbelt. Additionally, timber matting will be utilized to protect a portion of the wetland located west of the Bridgehampton Substation during laydown activities. In total, the stabilized construction access roadway is approximately 3.9 miles in length.

Proposed Action Location and Existing Site Conditions

The 42.73 acre Proposed Action Area encompasses the cable and conduit installation area, the staging and laydown areas, the necessary connections within the substations and all of the required stabilized construction access roadways. The Proposed Action Area is located predominately in the ROW that extends from the existing Bridgehampton Substation located on Bridgehampton-Sag Harbor Turnpike in

[2] The Long Pond Greenbelt is an undeveloped area of parkland that is regionally protected and identified as a critical environmental area (CEA) by the Town of Southampton and the State of New York. This includes parks, trail, and natural resources that surround the Long Pond wetland complex, located between Bridgehampton Sag Harbor Turnpike and Widow Gavits Road.

the Town of Southampton to the Buell Substation located on Cove Hollow Road in the Town of East Hampton. The Proposed Action Area also includes work within the Bridgehampton Substation and the Buell Substation.

As shown in **Figure 1-1**, the "Proposed Action Area" begins approximately 1,600 feet west of the Bridgehampton Substation, and then continues east along the ROW encompassing the entirety of the Bridgehampton Substation and the area between the substation and the ROW. The Proposed Action Area continues east/southeast, crossing Bridgehampton Sag Harbor Turnpike, Widow Gavits Road, Sagg Road, Wainscott Northwest Road, and Stephen Hands Path, along the entire width of the ROW, and until intersecting with LIRR. The Proposed Action Area then continues east parallel to the LIRR for approximately 1,100 feet where it then crosses to the south side of the LIRR. Finally, the Proposed Action Area continues east, following the route of the paved access road, crosses Cove Hollow Road to the Buell Substation and encompasses the entirety of the substation and portions of the parcel on which the substation is sited.

The portion of the Proposed Action Area from the west to Town Line Road is located within the Critical Environmental Area (CEA) identified as the Suffolk Groundwater Protection Area (see **Figure 1 -1**). The portion of the Proposed Action Area from Town Line Road to Stephen Hands Path also is within the Water Recharge CEA (see Section 3.3 for further details). The portion of the ROW between Town Line Road and Daniels Hole Road is surrounded by largely undeveloped lands that offer passive recreation opportunities.

Currently, a 69 kV overhead transmission double circuit currently connects the Bridgehampton Substation and the Buell Substation in the ROW (see Figure 1-1). This double circuit is located along a single electrical transmission tower line within the ROW. These circuits were originally constructed in the early 1900's and are supported by steel lattice towers, which have a maximum height of approximately 80 feet. Standard maintenance practices (such as replacement and repair of existing equipment, as well as vegetation management along the LIPA ROW) are regularly conducted. The majority of the Proposed Action Area is vegetated with low growing shrubs and herbaceous species. A discussion and analysis of the habitats that are currently present within the ROW is included in **Section 2.3** and summarized below.

A discussion of Open Space and Recreation and Critical Environmental Areas can be found in **Section 3.2** and **Section 3.3,** respectively, and is summarized below.

Public Need

The eastern end of Long Island has been growing in terms of electrical demand at an average rate of 2.4% since 2009. The average annual forecasted net electric load growth for that area for the next 10 years is approximately 2% per year. The anticipated load growth will result in various thermal and voltage constraints on this portion of the T&D System resulting in the need for various transmission improvement projects in order to provide reliable electric service. Improvements, including the Proposed Action, have been selected which meet the anticipated T&D System needs until at least 2030.

The current configuration of existing transmission circuits is such that the loss of the existing double circuit in the ROW would result in a single 69 kV supply to portions of the North Fork and areas east of the Bridgehampton Substation on the South Fork. In 2025, under forecasted electric load conditions, such a loss would result in the remaining 69 kV supply exceeding its thermal capability and posing an unacceptable risk of damaging T&D System equipment, which could result in significant customer outages.

The Proposed Action will provide an additional transmission supply to the area and maintain and mitigate the risk to equipment on the T&D System and to customers.

In addition, in the event that the double circuit becomes inoperable, a Transient Voltage Recovery limitation is created. Transient Voltage Recovery is the ability of the T&D System to return to a set voltage threshold following a system disturbance such as the loss of the double circuit. Implementation of the Proposed Action reinforces the T&D System on the eastern portion of Long Island and will help mitigate potential Transient Voltage Recovery limitations, improving overall system reliability and resiliency.

Description of the Environmental Setting

This section summarizes the environmental setting of the Proposed Action in each of the categories analyzed within the DEIS. Refer to Sections 2, 3, and 4 of this DEIS for a complete discussion of the environmental setting.

Soils

According to the *Soil Survey of Suffolk County, New York*[1] (Soil Survey) soils are classified by soil characteristics, depositional histories and other factors~~,~~ into soil associations, which in turn are grouped into soil series. The Soil Survey provides complete mapping, classification, and descriptions of soils found in Suffolk County. An understanding of soil characteristics is important in land development and environmental planning, as it aids in determining vegetation type, slope, drainage characteristics, engineering properties, past disturbance, and land use limitations. These descriptions are general, however, and soil characteristics, particularly those of glacial origin, can vary greatly from location to location. The slope classifications noted in this subsection are generalized based upon regional soil types; see **Section 2.1.1.2** for a more detailed description of topographic conditions in the Proposed Action Area.

Approximately 44.2 percent of the soils in the Proposed Action Area are CpC–Carver and Plymouth sands, with 3-15% slopes. Four other soils are relatively common in this area, each ranging between 6 and 14 percent of the total acreage: CpE - Carver and Plymouth sands, 15-35% slopes (13.4± percent); PIA - Plymouth loamy sand, 03% slopes (12.4± percent); RdA - Riverhead sandy loam, 03% slopes (8.6± percent); and CpA-Carver and Plymouth sands, 03% slopes (6.1± percent). The remaining eight soil types comprise a minor portion of the Proposed Action Area, cumulatively comprising 15.4± percent, and with none individually exceeding 4.3 percent of the total acreage.

A site-specific *Subsurface Investigation and Geotechnical Evaluation* (Geotechnical Report), prepared by Power Engineers, Inc., December 22, 2020, was undertaken and included collection of data from nine soil borings within the Proposed Action Area. The descriptions in the Geotechnical Report are based on the subsurface soil and groundwater conditions encountered during field investigations performed in May, September and November 2020. Observations of the soil conditions in the Proposed Action Area found that all nine soil borings were found to encounter generally similar conditions across the length of the Proposed Action Area, consisting of very loose to medium compact sand, with lesser proportions of clayey sane, silt, gravel, and organic material that extended to depths ranging from 4± to 8± feet below ground surface (bgs). The surficial materials were generally underlain by non-plastic, coastal plains soils comprised predominantly of loose to compact sand with lesser proportions of silt, gravel and cobbles. The Geotechnical Report notes that actual subsurface conditions will vary between the borehole locations in both the horizontal and vertical dimensions.

Topography

The Proposed Action Area has been used as an overhead utility ROW and two substations. Therefore, ground elevations have been altered for the installation of utility infrastructure, including the placement of towers containing overhead electrical cables and associated equipment, and the existing unpaved path beneath the towers. However, the overall topography along the 5.2±-mile length will generally follow the natural contours of the land.

Land elevations in the Proposed Action Area generally slope downward in a west-to-east direction. The overall topography of the proposed cable route can be described as having pronounced undulations, particularly in the westerly portion of the route, while the proposed conduit laydown area to the west of the Bridgehampton Substation has less topographic relief. Land elevations in the Proposed Action Area range from a low of 14± feet above mean sea level (amsl) in the wetland area to the south of Long Pond to a high point of more than 130 feet amsl at multiple locations, including the area of the proposed cable route between Sagg Road and Northwest Path and again between Town Line Road and Wainscott Northwest Road within the cable route, as well as the westernmost end of the conduit laydown area.

Both substations are situated on essentially level ground, with the Bridgehampton Substation at an elevation of 102 feet amsl and the Buell Substation at 44 feet amsl. Additionally, both substations include areas of sloping land, situated in the northerly portion of the Bridgehampton Substation and the southeasterly portion of the Buell Substation.

Surface Waters, Wetlands, and Stormwater Drainage

Freshwater wetlands and surface waters associated with Long Pond are present within the segment of the proposed underground transmission cable route immediately to the east of the Bridgehampton Substation and west of Widow Gavits Road. Three freshwater wetlands within the Long Pond Greenbelt directly intersect the Proposed Action Area. The underground cable will be installed beneath these surface waters via HDD. A second area of freshwater wetlands and surface waters associated with the Great Swamp wetland complex is present to the west of the Bridgehampton Substation within the temporary conduit laydown area.

The majority of the Proposed Action Area is maintained utility ROW and does not contain impervious surfaces. Significant stormwater runoff is not generated within the ROW since runoff quickly infiltrates into the sandy soils in these areas. The wetlands and surface waters that intersect and adjoin the Proposed Action Area are locations where overland stormwater drainage from surrounding watersheds accumulates due to topography and the poor infiltrative properties of the underlying soils. Impervious surfaces are present within the substation properties associated with the access driveways and foundations within the substations for various equipment. The substations are stabilized with a granular substrate (dolomite) which allows for stormwater infiltration. The Proposed Action also involves limited trenching across five roadways including Sagg Road, Wainscott Northwest Road, Stephen Hands Path, Buckskill Road and Cove Hollow Road. These roads are all two-lane roadways without formal curbing or existing stormwater infrastructure.

Flood Zones

A small portion of the proposed cable route (approximately 200 feet in length, and located immediately west of Widow Gavits Road, within the Long Pond Greenbelt) lies within the 100-year floodplain, which is designated as Flood Zone “A” (no base flood elevation determined). Except for this limited location, floodplains are not present in the Proposed Action Area.

According to 6 NYCRR Part 490, "Projected Sea Level Rise," based on a starting date of 2004 , the Long Island Region could experience as much as 8 to 30 inches of sea level rise by the 2050s, depending on the rate of increase, as follows:

- low rate of rise – 8 inches
- low to medium rate of rise – 11 inches
- medium rate of rise – 16 inches
- high to medium rate of rise – 21 inches
- high rate of rise – 30 inches

As discussed above, the floodplain portion of the Proposed Action Area is located on the interior of the South Fork of Long Island. The Construction Plans for the Proposed Action indicate that the elevation in this area is approximately 12 feet above mean sea level.

Groundwater Resources

Special Groundwater Protection Area (SGPA) - The Proposed Action Area lies within the South Fork SGPA, which spans between the eastern portion of the Town of Southampton and the western portion of the Town of East Hampton. The South Fork SGPA was designated as a CEA by the Long Island Regional Planning Board on April 18, 1993, in order to protect groundwater.

Groundwater Hydrology/Hydrogeology- Aquifers are underground formations that transmit and yield water in usable quantities (NSWCA, 2022). The major water-bearing units beneath the Proposed Action Area are the Upper Glacial, Magothy and Lloyd aquifers, listed in order from the ground surface downward. The Magothy and Lloyd aquifers are separated by the Raritan Clay layer, which restricts flow between the two geologic units. The primary units from which water is drawn in the vicinity of the Proposed Action Area are the Upper Glacial and Magothy aquifers. In the Proposed Action Area, these unconsolidated water-bearing units comprise what is referred to by the United States Environmental Protection Agency (USEPA) as Long Island's "Sole Source Aquifer," which represents the only currently available source of drinking water in Suffolk and Nassau Counties and, therefore, must be protected to ensure its long-term quality and availability for future generations.

According to the *Suffolk County Comprehensive Water Resources Management Plan* (2015) the Proposed Action Area is also located within Groundwater Management Zone (GMZ) V. GMZ V is considered a deep recharge area, which contributes recharged water to a deep groundwater flow system that replenishes the quantity and preserves the quality of the long-term water supply.

Based on U.S. Geological Survey (USGS) data, the depth to the groundwater table in the Proposed Action Area ranges from the ground surface where wetlands associated with the Long Pond system are present to a maximum of approximately 125 feet bgs in the area of Town Line Road. Other areas of relatively shallow groundwater are in the area of the proposed cable route crossing of Wainscott NW Road and Stephen Hands Path where the depth to the water table is approximately 10 feet bgs. The Geotechnical Report, prepared by Power Engineers, Inc., dated December 22, 2020, recorded subsurface water at depths ranging from approximately 9.7 to 42.4 feet below the ground surface. However, the Geotechnical Report notes that these groundwater level readings "were likely affected by water utilized to advance the boreholes" such that the USGS data summarized above is likely more reflective of the depth to groundwater in the Proposed Action Area.

The westerly portion of Proposed Action Area is in a portion of the aquifer that flows in a generally northward direction, while the easterly portion of Proposed Action Area is in a portion of the aquifer that flows in a generally southward direction.

Groundwater Quality- Groundwater quality is an important factor for the health of area surface waters (which receive continuous inflow from groundwater discharges) and of local residents (who rely on groundwater for potable supply). While a primary issue for local surface water quality has been nutrient loading from fertilizers and septic systems, human health concerns also pertain to the presence or potential presence of certain contaminants in the groundwater supply. The Proposed Action Area is located partially within Suffolk County Water Authority (SCWA) Service Distribution Area #23 and also includes areas that are not served by SCWA. According to SCWA's annual 2021 Drinking Water Quality Report for the 2020 calendar year, of the over 100 different water quality parameters, including various inorganic constituents (IOCs), synthetic organic compounds, volatile organic compounds, disinfectants, disinfectant byproducts (i.e., resulting from chlorination), and pharmaceuticals and personal care products regularly tested that have been assigned a maximum contaminant level (MCL) by the USEPA, only iron, a naturally occurring IOC, was found to exceed its MCL for Distribution Area #23 during the 2020 calendar year. High levels of iron mostly affect aesthetics, relating to discoloration, poor taste and/or staining of household fixtures, and can be readily treated and/or filtered to overcome these issues.

One well in Distribution Area #23 was found to have measurable concentrations of propane during testing in 2020. The propane results for the water in this well ranged from ND to a maximum of 3.80 ppb. At these levels, SCWA indicates that propane poses a minimal risk for health effects.

There are two properties within or adjoining the Proposed Action Area that are listed New York State Superfund sites and where groundwater investigations have been completed; the Village of Sag Harbor Transfer Station (former Landfill) on the east side of Bridgehampton Sag Harbor Turnpike and the East Hampton Airport property.

The property identified as the Village of Sag Harbor Transfer Station site (DEC Site Code 152047) is located on the east side of Bridgehampton-Sag Harbor Turnpike and spans across the ROW to the west of Long Pond; however, the Transfer Station facility itself does not extend into the ROW and is confined to a portion of the Village-owned property located to the north of the ROW.

A Phase I Investigation was completed in 1989 and a State Superfund Preliminary Site Assessment (PSA) was completed in March of 1994 to identify any on-site groundwater contamination migrating from the former landfill on the north side of the ROW and to characterize the nature of any such contamination specifically in connection with the alleged disposal of hazardous substances at the landfill. Pursuant to the 1994 NYSDEC Classification Decision, the results of the investigations conducted at this site found no environmental issues associated with the disposal of hazardous waste. In consideration of these findings, NYSDEC removed the site from the New York State Registry of Inactive Hazardous Waste Disposal Sites in May 1995.

The East Hampton Airport (DEC Site Code 152250) is located adjacent to the south of the ROW in the hamlet of Wainscott. In 2019, the site was added to the New York State Registry of Inactive Hazardous Waste Disposal Sites due to contaminants related to fire-fighting foam used for crash response/training and stored at the airport. Chemicals including perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) have been detected in on-site soil and groundwater and off-site private drinking water wells.

However, the affected area is located entirely to the south of East Hampton Airport, which is south (i.e., down-gradient) of the Proposed Action Area[3]. Therefore, this groundwater issue does not affect the aquifer beneath the Proposed Action Area.

Vegetation

The Proposed Action Area is predominantly comprised of vegetated utility ROW that is bisected by a dirt path. Areas of natural vegetation exist throughout the majority of the Proposed Action Area. Adjacent contiguous vegetation in the area can generally be found along the western and central portions of the Proposed Action Area, while residential areas abut the ROW in the easterly end of the Proposed Action Area.

PSEG Long Island conducted six ecological investigations on January 8, March 11, May 8, June 24 and August 5 of 2019 and on April 23, 2021. Meander surveys were conducted to determine overall habitat composition and quality. Habitat classifications are defined by the NYSDEC classifications outlined in Ecological Communities of New York State (Edinger, 2014). The habitats encountered within the Proposed Action Area can best be described as successional shrubland, successional old field, coastal plain pond, coastal plain pond shore, red maple-hardwood swamp, coastal oak-heath forest, pitch pine-oak forest, successional southern hardwood forest, coastal oak-hickory forest, brushy cleared lands, mowed roadside/pathway, mowed lawn/mowed lawn with trees, and bare soil. Additional unvegetated areas are defined as developed lands and consist of paved roadways and the existing Bridgehampton and Buell Substations. The majority of the ROW undergoes routine maintenance tree trimming and mowing programs to help maintain the clearances required for the safe operation of the existing overhead transmission cables. Due largely to these maintenance activities, the ROW is comprised predominately of successional shrubland and successional old field.

Two threatened plant species were encountered during the meander surveys; narrow-leaved pinweed (*Lechea tenuifolia*) and primrose-leaved violet (*Viola primulifolia*). Both species are located within the maintained portions of the ROW between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road.

Wildlife

PSEG Long Island conducted six ecological investigations on January 8, March 11, May 8, June 24 and August 5 of 2019 and on April 23, 2021. Few wildlife species were observed on site, although it is expected that a number of species common to wooded, grassy, and suburban habitats would utilize the habitats on-site. During field investigation PSEG Long Island staff encountered few mammal species. Adult and juvenile raccoons and white tailed deer were observed in the Proposed Action Area. Based on habitats recorded on site the following small mammals would also be anticipated to utilize the site: muskrat Norway rat, house mouse, meadow vole, Virginia opossum, red fox, Eastern gray squirrel and various species of bats.

A variety of migratory and resident avian species would be expected to utilize the Proposed Action Area for nesting, breeding, feeding, migrating and over-wintering. During ecological investigations conducted by PSEG Long Island staff, the following 18 avian species were encountered: Red-Tailed Hawk, Wild Turkey, Northern Cardinal, Bald Eagle, Blue Jay, Mallard, European Starling, Red-Winged Blackbird, White-

[3] See East Hampton Airport Final Site Characterize Report (Nov. 30, ,2018), https://www.dec.ny.gov/data/DecDocs/152250/

Breasted Nuthatch, Tufted Titmouse, Great Blue Heron, Turkey Vulture, Downy Woodpecker, Barn Swallow, American Robin, Gray Catbird, Carolina Wren, and the Eastern Bluebird.

It is anticipated that the diversity of habitats within the Proposed Action Area would support a variety of reptile and amphibian species. Three reptile and amphibian species were noted within the Proposed Action Area during field surveys conducted by PSEG Long Island; eastern box turtle, ribbon snake, and the green frog.

Rare, Threatened or Endangered Species

The New York Natural Heritage Program (NYNHP) maintains records of observations of rare, threatened and endangered species and communities reported within the State. PSEG Long Island contacted NYNHP to determine if any records of rare, threatened or endangered species or communities are present within the Proposed Action Area. NYNHP reported the presence of eight animal species and eight plant species listed as rare, threatened or endangered in New York State as being reported within or in the vicinity of the Proposed Action Area. Additionally, three communities of high quality occurrence, rare, or uncommon communities were noted as being within or within the vicinity of the Proposed Action Area. See **Table S.1** for a complete list of species.

Table S.1: Rare, Threatened, or Endangered Species List

Common Name	Scientific Name	NYS Status
Animals		
Eastern Tiger Salamander	*Ambystoma tigrinum*	*Endangered*
Martha's Pennant	*Celithemis martha*	*Unlisted*
New England Bluet	*Enallagma laterale*	*Unlisted*
Scarlet Bluet	*Enallagma pictum*	*Threatened*
Pine Barrens Bluet	*Enallagma recurvatum*	*Threatened*
Coastal Barrens Buckmoth	*Hemileuca maia spp. 5*	*Special Concern*
Northern Long-eared Bat	*Myotis septentrionalis*	*Threatened*
Aureolaria Seed Borer	*Pyrrhia aurantiago*	*Unlisted*
Plants		
Small White Snakeroot	*Ageratina aromatica*	Endangered
Rose Coreopsis	*Coreopsis rosea*	Rare
Knotted Spike Rush	*Eleocharis equisetoides*	Threatened
Long-tubercled Spike Rush	*Eleocharis tuberculosa*	Threatened
Creeping St. John's Wort	*Hypericum adpressum*	Threatened
Velvety Bush Clover	*Lespedeza stuevei*	Threatened
Globe-fruited Ludwigia	*Ludwigia sphaerocarpa*	Threatened
Long-beaked Beak Sedge	*Rhynchospora scirpoides*	Rare
Communities		
Coastal Oak-Heath Forest	-	Uncommon Community
Coastal Plain Pond Shore	-	Rare Community
Pitch Pine-Oak Forest	-	High Quality Occurrence

Wetlands

Freshwater wetlands are found within the westernmost portions of the Proposed Action Area; specifically, west of Widow Gavits Road in the Town of Southampton. Freshwater wetlands and surface waters associated with Long Pond are present within the 4,000±-foot segment of the proposed underground transmission cable route immediately to the east of the Bridgehampton substation; and a second area of freshwater wetlands and surface waters associated with Great Swamp is present to the west of Bridgehampton Substation within the temporary conduit laydown area.

The Long Pond wetland complex is an interconnected chain of coastal plain ponds that extends from Sagaponack Inlet north to Sag Harbor. The ponds are groundwater fed and feature generally sloping shorelines. As the depth of the ponds fluctuate the variability of the exposed shorelines supports a wide array of species (USFWS Undated). The United States Fish and Wildlife Service (USFWS) recognizes the greenbelt as a "priority wetland" under the federal Emergency Wetland Resources Act. The greenbelt is also recognized as a "Priority Site for Biodiversity" by the NYNHP. Two areas of surface waters and freshwaters wetlands within the Long Pond Greenbelt directly intersect the Proposed Project Area. The underground cable will be installed beneath these surface waters via HDD.

A singular freshwater wetland intersects the HDD conduit laydown area to the west of the Bridgehampton Substation. This wetland is part of the larger Great Swamp wetland complex. Great Swamp features a series of freshwater wetlands that stretch from Bridgehampton-Sag Harbor Turnpike to the east and Brick Kiln Road to the west. The collection of freshwater wetlands comprising the Great Swamp are largely categorized as Red Maple Hardwood swamps and vernal ponds, which are surrounded by a mix of pitch pine-oak forest and coastal oak heath forest.

Cultural Resources

Archeological Resources-According to the New York Cultural Resource Information System (NY CRIS) no State Historic Preservation Office/Office of Parks, Recreation, and Historic Preservation (SHPO/OPRHP) archaeological resources are present in the study area (see Figure 3-3a – e). However, the study area traverses two Archaeological Sensitive Areas and two New York State (NYS) Museum Areas, including NYS Museum Areas 4928 (No Name) and 5531 (Long Pond) (NY CRIS 2021). Archaeologically sensitive areas are buffer areas that are a specified distance around archaeological sites that SHPO/OPRHP has inventoried. Museum areas are archaeological areas that the New York State Museum has inventoried. The NRHP status of the NYS Museum Areas are currently "undetermined".

A Phase IA investigation was performed in April and May 2021. Development has occurred in the area since the late nineteenth century. Most of the ground disturbances associated with the Proposed Action will occur within soils characterized by extensive prior disturbance, with no archaeological potential. However, and in accordance with the SHPO/OPRHP comments, portions of the Proposed Action area fall within soils lacking evidence of extensive prior disturbance and in locations with high archaeological sensitivity. These portions of the study area were recommended for Phase IB testing. The areas recommended for Phase IB testing included the entirety of the study area found within the Archaeological Sensitive Areas, including approximately 2.67-linear miles of the study area, which is described in detail in **Section 3.1**. No cultural materials were encountered during the Phase IB testing and as such, the study area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources.

Architectural Resources-There are no previously recorded architectural resources located in the study area (NY CRIS 2021; PaleoWest 2021). In addition, no buildings or structures are located in the study area with the exception of the existing transmission towers found within the LIPA owned and/or controlled overhead ROW. A total of 88 known architectural resources are located within one-mile of the study area and the majority of these resources are situated more than 0.50-mile east of the APE. Of the 88 known architectural resources, 11 are located within 0.50-mile of the study area. These resources include one NRHP listed Historic District (Buell Lane Historic District), three resources that are considered eligible for the NRHP, six resources that are not eligible for the NRHP, and one resource that has undetermined eligibility (PaleoWest 2021). The closest resources are situated within approximately 100-feet of the study area and include the National Grid East Hampton Generating Station (10303.000842), the Railroad Bridge over Sag Harbor Turnpike (10303.000861), and the Railroad Bridge over Cove Hollow Road (10303.000862). All of these architectural resources are listed as not eligible for the NRHP in the NY CRIS (NY CRIS 2021; PaleoWest 2021). The closest resources that have undetermined NRHP eligibility, are considered eligible for the NRHP, or are listed in the NRHP are located at least 0.23-mile from the study area.

Open Space and Recreation

Five public and private recreational areas are located adjacent to or within the Proposed Action Area. In addition, a variety of trails are located in the undeveloped open space areas that adjoin the Proposed Action Area. The open space and recreational areas are Great Swamp, Spring Farm, Long Pond Greenbelt, Sagaponack Woods, and Buckskill Preserve.

Critical Environmental Areas

The Proposed Action is located within five CEA's, four of which are recognized as CEAs as defined by 6 NYCRR 617.14(g) of the State Environmental Quality Review regulations and one of which is designated by the Town of Southampton. A list of each CEA and its reason for designation is provided below.

South Fork Special Groundwater Protection Area (SGPA)(located in the Town of Southampton and Town of East Hampton) – This CEA was designated by the Long Island Regional Planning Board on March 19, 1993 in order to protect groundwater.

Aquifer Protection Overlay District (located in the Town of Southampton) – This CEA was designated by the Town of Southampton on June 20, 1983 to preserve the water quality of the area.

Long Pond Greenbelt (located in the Town of Southampton) – This CEA was designated by Suffolk County on February 10, 1988 as it was recognized as a benefit to human health and to protect drinking water.

Water Recharge Overlay District (located in the Town of East Hampton) – This CEA was designated by the Town of East Hampton on February 12, 1988 to protect groundwater and drinking water.

Town of Southampton Freshwater Wetlands (located in the Town of Southampton) – This CEA is designated as per the Town of Southampton Town Code. It includes all freshwater wetlands within the town subject to Article 24 of the Environmental Conservation Law (ECL). The designation was added to Town Code on May 8, 1990.

In general, all of the CEAs in which the Proposed Action intersects are for the protection of groundwater/drinking water or surface waters.

Noise

PS&S Engineering, PC (PS&S) performed a Sound Impact Evaluation and Assessment (the "Assessment") for the construction of the Proposed Action to assess potential sound-level impacts at receptors in the vicinity of the Proposed Action Area

Ambient sound level readings were measured at eleven locations along the Proposed Action Area and existing sound sources potentially influencing the area were noted. The locations were selected to assess the existing sound levels at locations along the Proposed Action Route near sensitive receptors and near specific noise generating activities. For the purposes of this analysis, sensitive receptors are residential and/or commercial/industrial uses. One monitoring location was chosen to assess the potential sound level impact to wildlife in proximity to the Proposed Action Route. Five monitoring locations, Locations 1, 2, 3, 9, and 10 were selected to coincide with the proposed HDD entry and exit pits. All 11 locations were monitored during daytime (7 AM – 10 PM). Locations 1, 2, and 3 were also monitored during nighttime (10 PM-7 AM) periods.

The existing measured total sound levels varied between 47 dBA and 58 dBA during daytime hours, and between 47 dBA and 50 dBA during nighttime hours.

The major sound-level influences along the Proposed Action Route were from wildlife (birds and insects), local vehicular traffic, construction/maintenance work at nearby properties, as well as contributions from non-anthropogenic sources such as wind rustling nearby leaves. Airplane and helicopter traffic from the East Hampton Airport also generated irregular, increases in noise levels (up to 76 dBA) which were excluded from total sound results.

Coastal Zone

Pursuant to the Coastal Zone Management Act of 1972, the State developed and adopted the Waterfront Revitalization of Coastal Areas and Inland Waterways Law (Executive Law, Article 42). Article 42 defines the coastal area boundary, provides a basis for coordinating State actions affecting the coastal area and designates the New York State Department of State (NYSDOS) as the administering agency. The Coastal Management Program (CMP) outlines 44 coastal polices that provide the framework for decision-making to which agencies must adhere. The portion of the Proposed Action located in the Long Pond Greenbelt, and lying between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road, and the portion of the Proposed Action between Widow Gavits Road and Sagg Road is within the State designated coastal area boundary.

Significant Beneficial and Adverse Environmental Impacts

Soils and Topography

Soils

Excavation and soil disturbance totaling 18.78 acres will be required for the cable installation along the trenched segments of the cable route, for the installation of the manhole vaults and for the construction of a temporary construction access roadway and stabilized work zone areas within the ROW that are necessary to facilitate the movement of heavy construction equipment. Soil disturbance will also occur in a 0.9±-acre area to the north of the Bridgehampton Substation, which will serve as an operating location for HDD equipment to be used for cable installation.

Soil disturbance will be largely avoided along the 3,450±-foot (0.8± mile) section of the cable extending east from the Bridgehampton Substation, passing beneath the Long Pond Greenbelt, to the west side of Widow Gavits Road (split into two segments by the installation of a manhole vault). These two segments of the cable will be installed via HDD resulting in only limited soil disturbance associated with the installation of a single manhole vault between the two segments. An additional 845±-foot segment of the cable will be installed via HDD beneath the LIRR line to the west of the Buell Substation.

Overall, approximately 10,000 cubic yards of on-site soils will be cut and reused on site as part of excavation and grading activities, and 5,125 cubic yards of net fill will be needed to undertake the installation of the approximately 3.9 mile construction access roads and other work zone areas. This additional fill material is proposed to consist of recycled concrete aggregate (RCA), which has desirable properties for the purposes of stabilization to accommodate heavy construction vehicle traffic. RCA used to facilitate temporary vehicle access will be removed from the site upon the completion of construction. The intent at the completion of construction is that the stabilized construction access road will be removed and returned to its pre-existing grades along the ROW to the maximum extent practicable. No permanent stabilized roadway will be maintained within the ROW. Timber matting will be utilized in the most sensitive area for the installation of the manhole within the Long Pond Greenbelt.

Excess material from the installation of the 14 manholes and associated subsurface equipment is also anticipated and will be reused as fill to the extent practicable, depending on the sequencing of construction activities. Any material excavated within the Proposed Action Area that is not retained for on-site reuse would be transported to a suitable, approved disposal location in accordance with all applicable regulations.

Except for the small area to be occupied by the access covers for the 14 manholes to be installed along the proposed cable route, areas containing existing vegetation that have to be cleared and/or graded for the Proposed Action will be stabilized via revegetation as soon as practicable to minimize the potential for erosion and sediment transport.

Overall, the Proposed Action has been designed, through the inclusion of various mitigation measures, including restoration of disturbed areas via revegetation and removal of RCA, to minimize potential impacts to soils. Therefore, implementation of the Proposed Action is not expected to result in significant adverse soil impacts.

Topography

In general, existing topography is expected to be maintained along segments of the access roadway for which construction vehicle movement will be limited to lighter weight equipment needed for trench excavation. Temporary topographic adjustments, in the form of regrading, will be required for the installation of the approximately 3.9 mile temporary construction access road, which must have a maximum 7 percent gradient to allow for access by the HDD drilling equipment, and by the crane and delivery vehicles for the installation of the manhole vaults.

Once construction has been completed, temporary modifications that have been made to the topographic profile of the ROW to facilitate heavy equipment access will be restored to pre-construction conditions as practicable. Adjustments may be made, where appropriate, in areas that originally had very steep slopes, to moderate final gradients in an effort to minimize the potential for erosion upon the completion of site restoration.

Within approximately 0.8 mile of the 5.2±-mile route in the ROW, installation will occur via HDD, which will not alter topography or other aspects of the land surface. Along the majority of the proposed cable route, installation will occur via the excavation of a four-foot-wide trench, with a total length of 4.4± miles. After the cable has been placed, this trench will be backfilled to the original grade to the maximum extent practicable.

The Proposed Action also includes topographic changes in an area of 0.36± acre to the north of the Bridgehampton Substation in order to provide the necessary level construction site of sufficient size to accommodate the operation of the HDD drill and associated equipment. Currently, this area has a gradient of approximately 20 percent sloping downward to the north. The proposed regrading will cut into the northerly portion of this slope to provide an almost flat surface, with an embankment constructed at the southerly end to create the topographic transition to the adjacent elevated area developed with the existing substation facility. Upon completion of construction, topography will be restored to pre-existing conditions to the maximum extent practicable.

Overall, the Proposed Action has been designed, through the inclusion of various mitigation measures, to minimize potential impacts to topography. Therefore, implementation of the Proposed Action is not expected to result in significant adverse topographic impacts.

Water Resources

Surface Waters, Wetlands, and Stormwater Drainage

Proposed Action activities that have the potential to adversely impact water resources include trenching for cable installation, grading, vegetation clearing, road stabilization, manhole installation, and inadvertent release of HDD fluids at HDD entrance and exit locations.

The use of HDD allows the transmission cable to be installed via subsurface drilling without causing any disturbance to the land surface along the cable route. In this way, impacts to surface waters and wetlands within the segment of the Proposed Action Area between the Bridgehampton Substation and Widow Gavits Road will be avoided, thereby effectively mitigating potential impacts that would otherwise be associated with the use of standard trenching methods in sensitive areas containing surface waters and wetlands. While the HDD will avoid nearly all soil disturbance in the Long Pond Greenbelt section of the Proposed Project Area, a single manhole and HDD exit pit will be located within the previously disturbed area of the Long Pond Greenbelt, west of Widow Gavits Road. To facilitate this construction, the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road and a 0.34-acre area, inclusive of the existing access pathway, within the previously disturbed area will be temporarily stabilized with timber matting. Silt fencing and perimeter erosion controls will be put in place prior to construction to minimize the transport of soil and debris during the construction period. Complying with the conditions of PSEG Long Island's NYSDEC General Wetlands permit (#1-9901-0011/00032) will minimize potential impacts to wetlands in proximity to the proposed construction activities.

Use of the HDD method creates the potential for an inadvertent release of drilling fluid. Because the drilling fluid consists of an inert bentonite clay-water mixture, there is no potential for the release of hazardous substances to the environment. However, the drilling fluid does contain fine-grained sediment, which potentially could affect surface waters and wetlands if inadvertently released to the environment. To mitigate potential impacts associated with a frac-out event, a Frac-Out Contingency Plan (FCP) will be prepared that establishes specific protocols to minimize the potential for any such release of drilling fluid

and to minimize impacts if a release does occur**.** To further minimize the potential for impacts to water resources, drilling fluid will be recycled and reused to the degree practicable.

Timber mats will also be utilized in lieu of RCA in the conduit laydown area to the west of the Bridgehampton Substation where they laydown area crosses a wetland within the ROW. The timber mats will be removed upon the completion of construction, and any vegetated areas that have been disturbed will be restored in place with appropriate native shrubs and herbaceous plants.

The Proposed Action will result in a de minimis increase in impervious surfaces within the ROW, comprising 14 manhole covers spaced regularly along the cable route. This will cause a negligible increase in stormwater runoff, which will readily infiltrate into the pervious soils along the ROW.

Potential stormwater runoff impacts associated with the portion of the cable being installed via trenching in upland areas, will be readily and effectively mitigated using standard erosion and sediment control techniques. The Proposed Action will temporarily expose soils during construction, which potentially could cause erosion and sediment transport. However, such impacts will be avoided through implementation of a site-specific Storm Water Pollution Prevention Plan (SWPPP), which has been prepared for the Proposed Action and provides a comprehensive stormwater management strategy including a range of mitigation measures and best management practices.

Given the foregoing revegetation and erosion control measures, and the use of HDD in the most sensitive water resource areas, the Proposed Action will not increase the vulnerability of the area to long-term stormwater erosion during installation or operation of the new underground transmission cable. Proposed mitigation measures will prevent or minimize impacts to surface waters, wetlands, and stormwater drainage. Therefore, implementation of the Proposed Action is not expected to result in significant adverse impacts on these resources.

Flood zones

Approximately 100 feet of the Proposed Action Area is situated within the 100-year floodplain. Specifically, this area is a Flood Zone "A" (no base flood elevation determined), which means that it is subject to flooding of unspecified depth during the "base flood" or "100-year flood." However, the proposed underground transmission cable will be installed using HDD in this area; and the conduit containing the cable will be sealed to prevent water infiltration to ensure proper long-term functioning of the transmission line. Therefore, the Proposed Action will not cause or exacerbate flooding impacts and will not be susceptible to potential impacts due to a short segment of the cable being located in the floodplain.

Groundwater Resources

The Proposed Action will not generate hazardous materials or otherwise entail land use activities that could create a potential for adversely affecting groundwater quality. The drilling fluid and lubricant utilized in the HDD cable installation will not contain hazardous substances that could pose the potential for adversely affecting surface water quality. Similarly, this operation will not result in impacts to groundwater quality. While HDD activity will directly encounter the water table along the HDD route, it will not impact groundwater as no hazardous discharges will occur, and the drilling slurry is comprised of bentonite clay, which is inert and will not impact the quality of groundwater. Within the 4.4±-mile-long area proposed for trenching along the cable route, the water table is expected to be more than five feet below the ground surface, such that dewatering would not be required. The use of HDD in the area with

shallow groundwater depths (including areas of freshwater wetlands and standing waters at the surface associated with Long Pond) provides a means of drilling through saturated ground without having to excavate, thereby obviating the need for dewatering, while also minimizing the disturbance of overlying surface water resources.

During HDD drilling, it is anticipated that water usage/demand will be approximately 15,000 gallons per day. This volume is an anticipated maximum, which will fluctuate based on the ability to recycle some of the water during the drilling process. It is expected that this water supply will be drawn over a period of two to four months from local hydrants or via the installation of a temporary, metered connection that would be removed at the completion of the Proposed Action. As noted above, SCWA water supply will only be needed for the two-to-four-month period of HDD drilling and will not be needed for the long-term operation of the proposed transmission cable

Construction of the HDD-installed segment of the Proposed Action will use SCWA water obtained from local hydrants or a separate metered connection; therefore, this water will comply with state and federal drinking water standards, even though the water will be used to facilitate drilling along the conduit route beneath the surface waters and wetlands in the Long Pond system and beneath the LIRR line and will not be used for consumption. Wastewater generated during drilling activities, which cannot be reused will be collected in frac tanks, transported, and disposed at an approved disposal facility licensed to accept this type of waste. As noted above, after construction has been completed, the Proposed Action will not place a demand on the aquifer or SCWA, as no water supply will be required for the cable operation or for the restored vegetation.

A SWPPP has been prepared in accordance with the requirements of the NYSDEC SPDES General Permit for Discharges from Construction Activities. As a result, there is not a likelihood of flooding or on-site drainage issues during construction, as erosion and sediment controls (including silt fencing and a stabilized construction entrance) will be implemented, which will help to protect water resources while the Proposed Action Area is disturbed by construction.

Portions of the Proposed Action Area containing existing vegetation that will be disturbed during cable installation will be restored with suitable native plantings upon the completion of construction. This replacement vegetation will consist of native species and will not require irrigation or treatment with landscaping chemicals or fertilizers; and, thereby, will not place an ongoing demand on groundwater resources or contribute to the loadings of nutrients and other chemicals to the aquifer.

Soils excavated during the trenching operation will be retained on-site during construction and reused as backfill during site restoration to the degree practicable. Thereby, given the permeable nature of the Upper Glacial deposits and surface soils in the Proposed Action Area, the native soils that will be reused within the disturbed areas will continue to promote groundwater recharge after completion of the Proposed Action.

As discussed above, the Proposed Action has been designed, through the inclusion of various mitigation measures, to minimize potential impacts to groundwater resources. Therefore, implementation of the Proposed Action is not expected to result in significant adverse impacts on these resources.

Ecology

Vegetation

The majority of the Proposed Action Area is maintained as a utility ROW consisting of successional growth vegetation resulting from mowing and tree trimming maintenance activities as well as established dirt paths. The expected changes in habitat quantities of the overall Proposed Action Area are listed in **Table S.2** and would be the direct result of the construction phase of the Proposed Action. At the completion of construction, all but a negligible amount of disturbed areas would be revegetated. The only increase in permanently unvegetated/impervious areas will be from the underground manhole covers. Though the removal of some vegetation within the Proposed Action Area during construction is expected to result in a change in the characteristics of the habitats on site, the underground cable will not result in the permanent loss of vegetated areas. As a result, the site will continue to provide natural habitat for wildlife.

Table S.2: Existing & Proposed Habitat Quantities

Habitat Type	Existing Conditions		Proposed Action		Change (Acres)
	Coverage (acres)	Percent	Coverage (Acres)	Percent	
Successional Shrubland	13.76	31.96	7.68	17.84	-6.08
Successional Old Field	8.44	19.60	15.4	35.76	+6.96
Coastal Plain Pond	0.36	0.84	0.36	0.84	0
Coastal Plain Pond Shore	0.28	0.65	0.28	0.65	0
Red Maple-Hardwood Swamp	0.23	0.53	0.23	0.53	0
Coastal Oak-Heath Forest	3.95	9.17	3.56	8.27	-0.39
Pitch Pine-Oak Forest	0.55	1.28	0.53	1.23	-0.02
Successional Southern Hardwood Forest	0.51	1.18	0.48	1.11	-0.03
Coastal Oak-Hickory Forest	1.67	3.88	1.36	3.16	-0.31
Brushy Cleared Land	0.59	1.37	0.33	0.77	-0.26
Mowed Roadside/Pathway	2.66	6.18	2.66	6.18	0
Mowed Lawn/ Mowed Lawn with Trees	0.29	0.67	0.42	0.98	+0.13
Unvegetated	**9.77**	**22.69**	**9.77**	**22.69**	**0**
Bare Soil	6.75	15.68	6.75	15.68	0
Roadway	1.26	2.93	1.26	2.93	0
Substations	1.76	4.09	1.76	4.09	0
TOTAL	**43.06**	**100**	**43.06**	**100**	**0**

Wildlife

A total of 20.33 acres of existing natural vegetation are anticipated to remain undisturbed within the Proposed Action Area. Although there will be a temporary reduction of 12.63 acres of natural areas during construction, these areas will be restored upon the completion of construction activities. With the exception of the 154 SF of manhole covers, no permanent changes from vegetated areas to impervious areas will occur and as a result, long term impacts to wildlife are not anticipated.

Most of the species that utilize the Proposed Action Area are those that are somewhat tolerant of human activity. While it is expected that wildlife will be temporarily displaced during the construction phase of the Proposed Action, no permanent displacement of wildlife will result from operation of the underground cable. This may lead to an increase in abundance of wildlife populations in nearby and adjacent lands during the construction phase of the Proposed Action. Wildlife that is mobile is expected to migrate to adjacent suitable habitat during construction but will return to the Proposed Action Area upon the completion of construction.

Competition both within the species and across other species already utilizing the resources of the adjacent suitable habitat may result in a net decrease in population size for some species. While a significant portion of the existing habitat will remain, site-specific populations may decrease from the temporary loss of successional habitat which certain species may prefer. If a population decrease is experienced, it will only be temporary in nature, as populations will likely rebound following the return of the Proposed Action Area to its pre-existing condition. No significant adverse impacts to wildlife populations are anticipated to result from construction or operation of the Proposed Action.

Rare, Threatened, or Endangered Species

Select clearing of 0.31 acres of habitat and grading of 0.11 acres of habitat on the north side of the Bridgehampton Substation will occur within 535 feet of a known Eastern Tiger Salamander breeding pond and therefore may lead to the incidental take of individuals of this species. An incidental Take permit from NYSDEC is therefore required. The NYSDEC has been contacted to provide additional guidance regarding potential impacts to the species, and to discuss appropriate mitigation for those impacts. The mitigations proposed via the NYSDEC consultation process would constitute a net conservation benefit to the Eastern Tiger Salamander, as required under New York State Incidental Take regulations. Upon completion of construction, PSEG Long Island will restore all habitat within the 535-foot buffer of the known breeding pond resulting in no permanent loss of habitat. In addition to restoring the cleared and graded area on the north side of the Bridgehampton Substation, and in order to provide a net conservation benefit to the species, approximately 0.39 acres of sub-optimal habitat on the east side of Bridgehampton-Sag Harbor Turnpike owned by the Village of Sag Harbor will be restored to more suitable native habitat. Currently, the area features a high number of invasive species and large piles of debris, which include concrete blocks and scrap metals that currently make the area unsuitable for Eastern Tiger Salamander burrowing activities. Invasive species will be identified and removed and replaced with native tree, shrub, and herbaceous species including a mix of suitable oak species (red oak, white oak, and/or scarlet oak), dwarf heath species, mountain laurel, and warm season grasses. As a result of this proposed mitigation, these three areas will become more suitable tiger salamander habitat.

PSEG Long Island has contacted the Village of Sag Harbor about the restoration of this area, and will obtain the necessary agreements to conduct the restoration work on Village property upon finalization of the restoration plans.

Given that all disturbed areas within 535 feet of the known breeding pond will be restored and existing unsuitable/degraded habitat on the east side of Bridgehampton Sag Harbor Turnpike will be restored to a more suitable state, the requirement for a net conservation benefit to the species will be satisfied. An application for an Incidental Take permit will be submitted to NYSDEC prior to construction, which will include restoration plans.

Additionally, the construction methodology has been designed to avoid impacts to eastern tiger salamanders to the maximum extent practicable, and that the impacts associated with the temporary loss of habitat will be mitigated through comprehensive habitat restoration. As such, no permanent impacts to the species are anticipated to occur.

The Proposed Action will have no significant impacts to the two insect species or seven of the rare, threatened or endangered plant species identified by the NYNHP as these species utilize coastal plain ponds and coastal plain pond shoreline habitats. HDD will be utilized for installation of the cable in areas where suitable habitat occurs within the Proposed Project Area. No trenching or ground disturbance will occur within the coastal plain ponds or their associated shorelines. A single manhole will be installed within the Long Pond Greenbelt; however disturbance will be confined to previously disturbed dirt paths which occur more than 100 feet from the shoreline of the coastal plain ponds. Therefore, no significant adverse impacts to the rare, threatened or endangered species identified as potentially occurring within this area will occur.

The additional plant species identified by NYNHP, Velvety bushclover, was not identified onsite during the ecological surveys conducted by PSEG Long Island. Disturbance will be limited to the established ROW and will not impact the known occurrence of the species on the neighboring lands. No impacts to this species will occur as a result of the Proposed Action.

The narrow leaved pinweed and primrose-leaved violet were observed within the maintained portions of the ROW between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road. A single occurrence of each species was noted and no larger populations of these threatened species were observed. As cable will be installed via HDD within previously disturbed areas within the Long Pond Greenbelt and no disturbance to vegetation is anticipated in this area, the Proposed Action will have no impact on these species.

Wetlands

The Proposed Action will be installed directly beneath the two identified freshwater wetlands within the Long Pond Greenbelt via HDD. While uncommon, a "frac-out" event may occur if drilling fluid escapes from the HDD drill hole through fractures in the soil. Significant frac-out events are not common, but they can occur if the downhole pressures exceed the restraining forces of the surrounding formation, particularly during the pilot hole drilling operations when the pressures are the highest. The HDD entry and exit locations are most vulnerable to such effects, but they can occur at any location along the drill path. During all HDD activities, best management practices will be utilized to prevent construction material, including debris and drill cuttings, from entering the waterway. To mitigate potential impacts associated with a frac-out event, a FCP will be prepared that establishes specific protocols to minimize the potential for any such release of drilling fluid and to minimize impacts if a release does occur. As such, there are no anticipated impacts to turbidity or surface conditions of the ponds.

Furthermore, there are no anticipated ground disturbances within 150’ of the delineated boundaries of the wetlands. A single manhole will be installed within the previously disturbed dirt path on the east side of Long Pond within the ROW. There will be no change in habitat type or quality surrounding the wetland.

During construction, the temporary HDD conduit laydown area will extend across the vegetated area on the south side of the freshwater wetland within the ROW located west of the Bridgehampton Substation. No ground disturbance is proposed within this area and timber mats will also be utilized where the

laydown area crosses the wetland. The timber mats will be removed upon the completion of construction, and any vegetated areas that have been disturbed will be restored in place with appropriate native shrubs and herbaceous plants.

Given the lack of disturbance to wetlands or regulated adjacent areas as a result of the proposed installation methods for the cable, and the FCP, which will be implemented should a frac out occur during drilling activities, no significant adverse impacts to wetlands will occur as a result of the Proposed Action.

Cultural Resources

Archaeological Resources

No previously recorded SHPO/OPRHP Archaeology Sites are located in the study area and the study area traverses two Archaeological Sensitive Areas and two NYS Museum Areas (NYS Museum Areas 4928 and 5531). A Phase IA investigation was completed for the entirety of the study area and Phase IB testing was completed for those portions of the study area exhibiting high archaeological sensitivity. These areas included the Archaeological Sensitive Areas identified in the NY CRIS, including the locations of NYS Museum Areas 4928 and 5531. No cultural materials were encountered during the Phase IB testing and as such, the study area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources (PaleoWest 2021). Thus, no NRHP or State Register listed or eligible resources or locally designated archaeological resources will be impacted by the Proposed Action. For these reasons, the Proposed Action will not result in impacts archaeological resources, including any archaeological resources that could be considered historic resources pursuant to SEQRA and Section 14.09 of the New York State Historic Preservation Act.

Architectural Resources

There are no previously recorded architectural resources located in the study area and no buildings or structures are present in the study area. The only structures located in the study area are the existing transmission towers found within the LIPA owned and/or controlled overhead ROW (NY CRIS 2021; PaleoWest 2021). Thus, no NRHP or State Register listed or eligible resources or locally designated architectural resources will be directly impacted by the Proposed Action. The closest known architectural resources that have undetermined NRHP eligibility, are considered eligible for the NRHP, or are listed in the NRHP are located more than 0.23-miles from the study. Additionally, the Proposed Action will not introduce any changes to the existing viewshed or cultural context, as the project is proposed underground. For these reasons, no NRHP or State Register listed or eligible resources or locally designated architectural resources will be indirectly impacted by the Proposed Action. Thus, the Proposed Action will not directly or indirectly impact architectural resources, including any architectural resources that could be considered historic resources pursuant to SEQRA and Section 14.09 of the New York State Historic Preservation Act.

Open Space and Recreation

Temporary impacts to the identified open space and recreational resources along the Proposed Action route are anticipated to be a direct result of construction activities. Impacted recreational activities will include hunting, hiking and kayaking. Upon the completion of construction, all stabilization will be removed and graded areas will be returned to pre-construction conditions to the maximum extent practicable. All trail crossings will be restored to maintain connectivity within the trail systems and disturbed vegetated areas will be restored with appropriate native species. Additionally, no permanent

impacts to these resources will result from operation of the underground cable. No impacts to Great Swamp will occur as this area of open space is located outside of the Proposed Action Area.

Access and use of the ROW within Spring Farm will be restricted during construction activities for approximately 2 to 3 months. If necessary, a temporary bridge will be constructed over the pipes in the laydown area to allow for perpendicular access across the ROW. Conduits will also be placed to the edge of any access paths that are located parallel to the ROW to the maximum extent practicable to allow for continued vehicle access when construction activities are not occurring.

Construction in the Long Pond Greenbelt, including cable drilling activities and manhole construction, will have temporary adverse impacts to the use and enjoyment of that open space resource. Throughout the three to five month construction period, access to the trail and kayak launch on the east side of the Long Pond Greenbelt will be temporarily precluded to ensure public safety. Mitigation of this anticipated impact to the use of the Long Pond Greenbelt will include ensuring construction in this area occurs in the off-season months, November through March, when use of the area is reduced from peak use during the growing season. Upon completion of construction, disturbed areas will be reseeded with native species, and public access to the Long Pond Greenbelt will be fully restored.

Impacts to the remaining open space areas east of Widow Gavits Road along the Proposed Action route are also anticipated as a result of construction activities. Trail areas in and around the ROW may be temporarily restricted during construction activities. It is anticipated that any one section along the ROW will have access restricted for no more than one week during trenching activities, and one additional week during manhole installation activities. Once all construction activities are complete, no restriction to any trails or open space areas will remain along the Proposed Action route.

Critical Environmental Areas

The Proposed Action is not anticipated to significantly impact the resources associated with the CEA designations, as the Proposed Action has been designed to minimize impacts to both groundwater and surface water. The use of HDD to install the cable in proximity to surface waters results in no disturbance to the surface waters or land adjacent to it, thereby protecting the surface waters from sedimentation that would otherwise occur with trenching activities.

The HDD drilling activities utilize a drilling slurry that is inert and non-toxic and will not impact the quality of groundwater. Further, no water will be withdrawn or discharged along the Proposed Action route. Water necessary for drilling operations will be provided through a connection to the existing SCWA system. As discussed, the HDD operation will recycle the water and drilling fluid to the extent practicable. Wastewater generated during drilling activities which cannot be reused will be collected in frac tanks, transported, and disposed of at an approved disposal facility licensed to accept this type of waste. In the event of a frac out during drilling activities, a frac out contingency plan will be in place to ensure that any inadvertent release is appropriately contained in a timely fashion. Given the measures employed to protect both groundwater and surface water, and the mitigation employed in the event a frac out should occur, both groundwater and surface water will be protected to the maximum extent practicable and therefore no significant impacts to the CEA's will result from the Proposed Action.

Noise

No long-term increase in ambient sound levels is anticipated once the Proposed Action is completed and operational, as the Proposed Action does not include sound generating equipment or facilities.

Construction phase activities will cause a temporary, and in some cases, significant, increase in ambient sound levels along the entire route. Sound propagation modelling of construction phase activities was performed, and documented in the Assessment (October 2021), provided as **Appendix T**. Modeling was undertaken to project expected sound levels during the construction phase based on the specific activities that will be undertaken and equipment that will be utilized during construction. Construction activity using open trench installation will generate intermittent and transient noise along the entire segment of open trenching, while HDD activities will cause an increase in sound levels primarily at the entry and exit pits. Locations 1, 2, 3, 9, and 10 are locations where HDD installation methods will be utilized; Location 4 through 8 and Location 11 are locations where open trench installation methods will be utilized. The modeled total sound levels represent the worst-case scenarios anticipated at the nearest sensitive receptor with all construction equipment operating simultaneously. The modeled sound levels at residences near the construction activity will increase from the existing range of 48 to 51 dBA, to 71 to 85 dBA

Typical trenching activities can progress at a rate of approximately 200 feet per day when occurring on paved surfaces and approximately 300-500 feet per day when occurring within the unpaved ROW. As such, portions of the Proposed Action where only trenching occur are expected to experience transient periods of the worst-case modeled noise conditions for a single day before noise conditions will begin to attenuate as trenching activities progress along the ROW. Receptors in proximity to manhole construction may experience up to a week of continuous increased noise during construction between the hours of 7 AM to 7 PM. Noise generation sources from trenching construction are mobile and will operate along the existing linear ROW. As a result, noise barriers are not practicable for implementation during trenching construction.

As described in the Assessment, HDD work can be expected to produce sound levels of 99 dBA at 50 feet from the source and the nearest residence is more than 120 feet from the HDD work location. Overnight work will be required for a maximum of one 24-hour period at each of the HDD locations. Overnight work will be required for the pull through of the conduit through the HDD borehole. Once the pull through activity begins, it must continue until completion; stopping the pull through at nightfall and re-commencing the work in the morning would poses a significant risk that jeopardizes the overall success of the HDD. The remainder of the HDD activities would occur during standard construction hours, between 7AM and 7PM.

In order to reduce the noise level generated by HDD activities, flexible 16-foot high noise control mats or acoustic barriers (e.g. EchoBarriers) will be deployed to reduce construction related noise impacts resulting from the HDD. Acoustic barriers will be added to stationary equipment as applicable and affixed to the front of temporary construction fencing surrounding HDD locations to the maximum extent practicable. Use of the barriers ensures the sound levels experienced in the vicinity of the HDD locations are attenuated and minimized to the maximum extent practicable. With the use of the acoustic sound barriers, sound levels at sensitive receptors near the HDD construction activity will increase from the existing range of 48 to 58 dBA, to 68 to 83 dBA. If HDD activities are left unmitigated, modeled sound levels at sensitive receptors range from 70.8 to 89.7 dBA.

Coastal Zone

As a portion of the Proposed Action is located within the coastal area, and requires both state and federal approvals, a Federal Consistency Assessment Form (FCAF) was completed. The purpose of the FCAF is to

assist with ensuring the Proposed Action is consistent with the policies outlined in the CMP. The completed FCAF and associated policy discussion will be sent to the NYSDOS to determine coastal consistency concurrence prior to the commencement of construction of the Proposed Action. The FCAF and accompanying policy analysis is included as **Appendix U** and discussed in **Section 3.5.1**. Per the responses to the FCAF, fourteen of the forty-four CMP policies are potentially applicable to the Proposed Action.

The CMP policies potentially applicable to the Proposed Action fall within the following CMP categories*: Fish and Wildlife Policies; Flooding and Hazard Policies; Public Access Point Policies; Historic and Scenic Resource Policies; Emergency Management Policies; Water and Air Resources; Policies Wetlands Policy.* The Proposed Action has been designed to be installed primarily below-grade within the existing LIPA ROW, will not result in a change in land-use or habitats, will avoid and/or minimize impacts from exposed soils through implementation of the site-specific SWPPP and further minimized through use of the HDD through approximately 3,300 feet of the coastal zone, implement a "frac-out" contingency plan during HDD operations, and have no permanent impact to access to public water-related recreation resources and facilities within the coastal zone. Therefore, it remains consistent with the policies outlined in the CMP.

Mitigation

Soils and Topography

- Except for a minor increase in impervious surfaces, involving the installation of 14 manhole covers, the Proposed Action will retain existing pervious surface coverage, and areas of disturbed vegetation will be restored with native plant species. This will result in a negligible change in land coverage and associated effect on soils.
- The use of native plant species in landscaping restoration also will avoid the need to use fertilizers, pesticides and other chemical treatments, thereby minimizing the potential for impacts to soils related to landscape maintenance practices.
- Any material excavated within the Proposed Action Area that is not retained for re-use, will be transported to a suitable disposal location in accordance with applicable regulations.
- Upon the completion of construction, the topographic profile of the ROW will be restored to pre-construction conditions, as practicable. Adjustments may be made where appropriate, in areas that originally had very steep slopes, to moderate final gradients in an effort to minimize the potential for erosion upon the completion of site restoration.
- A Sediment & Erosion Control Plan, as required as part of the site specific SWPPP, has been prepared to identify a range of measures directed at avoiding or mitigating construction-related impacts resulting from stormwater runoff. Section 2.2.3 provides a detailed summary on this topic in the context of mitigation measures with respect to water resources (i.e., potential stormwater-induced impacts), which also encompasses measures that will serve to mitigate potential impacts to soils and topography.
- The preparation of a SWPPP is required under the NYSDEC State Pollutant Discharge Elimination System (SPDES) program for the review of stormwater control measures consistent with Phase 2 stormwater permitting for construction sites in excess of one acre (SPDES GP-0-20-002). Under this program, a Notice of Intent (NOI) must be filed with the NYSDEC 60 days prior to commencement of construction, and the SWPPP must be maintained on-site. This process, as well as construction and operation of the proposed transmission cable, are discussed in Section 1.4.

- Dust control shall be used during construction activities to mitigate air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety problems. Unpaved, high-traffic areas will be covered with suitable aggregate and exposed soils will be wetted as necessary during extended dry periods to minimize dust generation. Only potable water will be used for dust control. Several applications per day may be necessary, depending on the frequency of work and weather conditions. Dust control measures will be utilized until all disturbed areas of the Project are stabilized.
- RCA and timber matting that is placed in the Proposed Action Area to provide temporary ground surface stabilization to support construction equipment will be removed upon the completion of construction.

Water Resources

The following is a summary of measures that are included in the Proposed Action to avoid or minimize adverse environmental impacts to water resources.

- Except for a de minimis increase in impervious surface area due to 14 new manhole covers, the Proposed Action will retain existing pervious surface areas, with areas of disturbed vegetation being restored with native plant species. This will result in a negligible increase in stormwater runoff generated within the ROW, which will continue to be retained on-site, and will readily infiltrate into the site's pervious soils.
- The Proposed Action will comply with the SCWA's seasonal constraints, which will limit water supply for the HDD drilling operation to the eight months of the year between October and May. Follow-up coordination will occur with SCWA prior to the commencement of construction to finalize the details of the proposed water use, and to obtain a permit identifying the specific hydrant(s) or separate metered connection(s) to be used and other particulars of the approval. The Proposed Action will also comply with SCWA's requirement that the three HDD drilling operations (i.e., to the east of the Bridgehampton Substation and beneath the LIRR near the east end of the Proposed Action Area) be conducted in sequence and not concurrently, to limit daily water usage.
- The use of native plant species for revegetation in disturbed areas will avoid the need for irrigation, and the completed transmission cable and appurtenances will operate without water consumption. Therefore, operation of the Proposed Action will not place a demand on local potable water supplies.
- Revegetation with native species will also avoid the need to use fertilizers, pesticides and other chemical treatments, thereby protecting the quality of surface water and groundwater resources.
- A SWPPP, including an associated Sediment and Erosion Control Plan, has been prepared for the Proposed Action, which will be implemented during construction to avoid or mitigate potential impacts related to stormwater runoff. (see **Appendix F** for the full SWPPP):
- Coverage under PSEG Long Island's NYSDEC General Wetlands permit (#1-9901-0011/00032), which includes authorization for activities under Article 24 jurisdiction, as well as a permit from the USACE will be required for the proposed cable routing through the wetlands associated with Long Pond along the ROW segment to the east of Bridgehampton-Sag Harbor Turnpike, and for cable conduit laydown operations in the wetlands along the ROW to the west of the Bridgehampton Substation. This permitting process will ensure that potential impacts to surface waters and wetlands are mitigated to the extent practicable.

- Coverage under PSEG Long Island's General Permit also ensures that NYSDEC water quality certification is obtained, thereby assuring compliance with New York State water quality standards.
- To avoid impacts to the freshwater wetlands associated with Long Pond along the ROW segment to the east of Bridgehampton-Sag Harbor Turnpike, the Proposed Action will utilize HDD in this area, which will avoid disturbing the ground surface to install the proposed transmission cable.
- Monitoring the progress of the HDD drill head will occur via walk-over or a wireline, which are relatively benign methods that will not significantly impact surface waters and wetlands in the area of HDD installation.
- The HDD installation will utilize a drilling fluid consisting of water obtained from the SCWA and inert materials (e.g., naturally occurring bentonite clay), while a similarly innocuous lubricant will be used to facilitate the pulling of the HDD conduit through the HDD borehole. These methods will not pose the potential for releasing hazardous substances into the environment.
- The HDD operation will recycle the water and drilling fluid to the extent practicable. Specialized equipment to perform such recycling is standard for use in HDD installations. Wastewater generated during drilling activities, which cannot be reused, will be collected in frac tanks, transported, and disposed of at an approved disposal facility licensed to accept this type of waste. As noted above, the drilling fluid used in the HDD installation for the Proposed Action will consist of inert, non-hazardous materials (i.e., natural bentonite clay mixed with potable water), which will not pose the potential for hazardous substance impacts on the environment. However, the fine particulate matter suspended in the drilling fluid could potentially adversely affect surface waters and wetlands if there is an inadvertent release from the HDD drilling hole. Therefore, an FCP will be required, which establishes specific protocols to minimize the potential for any such release of drilling fluid and to minimize impacts if a release does occur. A typical FCP is provided in **Appendix I** which will be customized by the selected drilling contractor
- To minimize disturbance of the freshwater wetlands in the conduit laydown area along the ROW to the west of the Bridgehampton Substation, equipment operations shall be limited to a small, wheeled cart which shall be used to fuse the conduit sections. Any pickup trucks required for support in the conduit laydown area shall utilize the existing access roads, which are maintained to the east and west of the wetland.
- To mitigate potential impacts to freshwater wetlands in the conduit laydown area along the ROW to the west of the Bridgehampton Substation and for the HDD exit pit/underground manhole installation within the previously disturbed area of the Long Pond Greenbelt west of Widow Gavits Road, timber mats shall temporarily be installed during the construction period. Although the requirements for these mats and/or other suitable mitigation measures ultimately will be determined by NYSDEC, to be specified as conditions of the Incidental Take Permit for the Proposed Action (with any additional conditions as may be identified in the USACE permit), it is intended that the Best Management Practices established by the USACE (March 2016) will be followed (see **Appendix L**). The following protocols shall apply to the temporary HDD Laydown area west of the Bridgehampton Substation for minimal areas of wetland/stream channel crossings:
    - At "dry" crossings where no flow is present or anticipated during construction, the mats may be placed directly onto the ground in order to prevent excessive rutting, provided stream banks and bottoms are not adversely altered.
    - Construction mats may be used as a temporary bridge over a stream to allow vehicles access to the work site. Small sections of mat are placed within and along the stream parallel to the flow of water. Mats may then be placed perpendicular to the stream,

resting on top of the initial construction mat supports. It may be necessary to place additional reinforcement for extra stability and to minimize the amount of sediment that could fall between the spaces of each timber.
    - In areas where wildlife passage or migration is a consideration, mats may be installed in accordance with the diagram "Typical Stream Crossing with Swamp Mats" – see **Appendix L**.
    - Mats shall not be placed so that they restrict the natural flow of the stream.
    - The number of stream/wetland crossings shall be minimized. Where feasible, the crossing site should be located where stream channel is narrow for the shortest possible clear span and where stream banks are stable and well defined.
    - More than one layer of mats may be necessary in areas that are inundated or have deep organic wetland soils.
  - The following protocols shall apply to maintenance:
    - Matted wetland crossings shall be monitored to assure correct functioning of the mats.
    - Mats shall be inspected after use, looking for any defects or structural problems.
    - Mats that become covered with soils or construction debris shall be cleaned and the materials removed and disposed in an approved, upland location. The material shall not be scraped and shoveled into the resource area.
    - Mats that become imbedded must be reset or layered to prevent mud from covering them or water passing over them.
  - The follow protocols shall apply to removal:
    - Matting shall be removed by "backing" out of the site, removing mats one at a time. Any rutting or significant indentations identified during mat removal shall be regraded immediately, taking care not to compact soils.
    - Mats shall be cleaned before transport to another wetland location to remove soil and any invasive plant species seed stock or plant material.
    - Mats shall be cleaned of soil and any invasive plant species seed stock or plant material before installation.
    - Cleaning methods may include, but are not limited to, shaking, or dropping mats in a controlled manner with a piece of machinery to knock off attached soil and debris, spraying with water or air, and sweeping.
    - Crossings shall be inspected following mat removal to determine the level of restoration required.
- Construction materials that pose a potential contamination threat (e.g., petroleum products and hazardous materials) shall be managed to minimize exposure to stormwater. Such materials shall be kept in secure containers and properly labeled. All storage containers (including frac tanks) and motorized/mechanical equipment containing such materials (including generators) shall have secondary containment.
- Hazardous materials shall be used, stored, transported, and disposed in the manner specified by the manufacturer and by applicable regulations. Contractors and subcontractors shall be made aware of this requirement and shall alert site personnel of this requirement.
- Copies of Safety Data Sheets shall be maintained on-site for hazardous materials.
- Solid and liquid wastes shall be managed and disposed properly, and in accordance with applicable State and Federal requirements. Construction and demolition waste shall be separated from soils, and both shall be disposed at an approved disposal facility. All other wastes shall be disposed separately. Waste material shall be collected and stored in secure containers and removed from the site. Waste containers shall be inspected regularly. No solid or liquid wastes

shall be disposed (e.g., buried or poured) on-site. Excess construction materials, supplies or debris shall be inspected at the end of each work shift and managed or disposed the same day or as soon as reasonably possible.

- Contractor(s) and subcontractor(s) shall comply with applicable regulations regarding portable toilets. Each contractor and subcontractor shall provide wastewater collection facilities for its crews at the site throughout construction activities. Sanitary facilities shall not be placed near drainage courses or in low areas and shall be positioned so they are secure and cannot be tipped over. Sanitary facilities shall be serviced regularly.
- To compensate for the potential effects of the Proposed Action on surface waters and wetlands that comprise Eastern Tiger Salamander habitat and buffer areas, mitigation will be provided to enhance this habitat, thereby providing a net conservation benefit to the species. Currently, it is proposed that approximately 0.39 acre of sub-optimal habitat on the east side of Bridgehampton-Sag Harbor Turnpike be restored to more suitable native habitat. This proposal is subject to further review and, ultimately, approval by NYSDEC. PSEG Long Island has committed to the restoration of habitat within the 535-foot buffer of the known Eastern Tiger Salamander breeding pond upon completion of construction, resulting in no permanent loss of habitat. See **Section 2.3** for a more detailed discussion of potential impacts and mitigation with respect to this aspect of Proposed Action Area water resources.

Ecology

- Disturbance will be minimized to the maximum extent practicable as a result of the construction installation methods utilized and the minimization of the access path to the maximum extent practicable.
- Disturbance to wetlands associated with the Long Pond Greenbelt are avoided through the use of the HDD construction methodology.
- With the exception of the minimal area occupied by manhole covers all disturbed areas will be restored with appropriate native plant species.
- All disturbed areas within 535 feet of known Eastern Tiger Salamander breeding ponds will be restored with appropriate native species; additional areas on the east side of Bridgehampton-Sag Harbor turnpike will be cleared of unsuitable materials and invasive species and restored with native species to improve overall habitat suitability.
- No known invasive species will be utilized for restoration activities. Specifically, species listed in 6 NYCRR Part 575 will not be utilized.
- Timber mats will be used along the portion of the HDD conduit laydown area that crosses the freshwater wetland located west of the Bridgehampton Substation.
- A FCP will be implemented by the contractor during drilling operations should a frac-out occur.
- No debris, fill, sand, gravel or other materials will be placed within 150 feet of a wetland.

Cultural Resources

The Proposed Action is not expected to result in impacts to cultural resources. Specifically, the Proposed Action will not impact known historic resources or potential historic resources. As such, no mitigation is proposed for cultural or historic resources.

Open Space and Recreation

- If necessary, provide temporary bridges for existing access road crossings perpendicular to the ROW within Spring Farm to allow for continued vehicle access.

- Place conduit on the edge of any access roadways located parallel to and within the ROW to allow for vehicle access to Spring Farm to the maximum extent practicable.
- Conduct construction activities within the Long Pond Greenbelt during the off-season months, November thru March, when a reduction in typical use of the greenbelt occurs.
- Utilize rolling access restrictions (i.e., only close areas which are actively undergoing construction) on areas along the Proposed Action route to ensure that restrictions to trails are minimized to the maximum extent practicable.
- Enhanced outreach program to inform residents and other stakeholder groups about the construction schedule.
- Notice of anticipated trail crossing closures will be listed on the Proposed Action website.
- Remove all access restrictions upon the completion of construction activities to ensure no permanent loss of the use of open space or recreational resources occurs.

Critical Environmental Areas

- Use of HDD in the vicinity of wetlands to avoid surface disturbance.
- Use of public water supply for HDD activities to avoid the need for the installation of temporary well points.
- Use of inert materials for the HDD drilling slurry to ensure HDD activities will not affect groundwater quality.
- Employment of a frac out contingency plan to contain any inadvertent release of drill fluids in a timely manner.

Noise

The NYSDEC "Assessing and Mitigating Noise Impacts" guidance document includes techniques to reduce noise frequency and impulse noise at the source, reduce noise duration, and reduce noise sound pressure levels. The following BMP's will be utilized to mitigate the effects of increased noise during the construction phase of the Proposed Action.

- With the exception of HDD conduit pull-through anticipated to require a maximum of 1 x 24-hour work-day, all work activities will occur between 7 AM and 7 PM.
- Flexible noise control covers or acoustic barriers to be installed on 16 foot high fencing will be utilized on stationary HDD machinery to the maximum extent practicable.
- All equipment will be regularly maintained.
- Conduct an enhanced outreach program to coordinate potential scheduling adjustments where possible and inform residents about the construction schedule and resultant increase in noise levels.

Coastal Zone

- Disturbance to coastal zone associated with the Long Pond Greenbelt is avoided through the use of the HDD construction methodology to limit ground disturbance created by the use of trenching methodologies and the minimization of the disturbance areas to the maximum extent practicable.
- With the exception of the minimal area occupied by manhole covers for the singular manhole and the existing maintained access pathway, no above-ground structures will be sited in the coastal zone.
- All disturbed areas will be restored with appropriate native plant species.
- Timber mats in lieu of RCA will be installed for stabilization within the existing access pathway from Widow Gavits Road and for stabilization of machinery within the Long Pond Greenbelt.

- A frac out plan will be implemented by the contractor during drilling operations should a frac out occur.
- A site specific SWPPP will be implemented to mitigate potential impacts to stormwater resulting from temporarily exposed soils during construction.
- No debris, fill, sand, gravel or other materials will be placed within 150 feet of a wetland.
- Construction will occur during the off-season to mitigate the impact of access to recreation within the coastal zone.

Alternatives

Per the SEQRA requirement for the consideration of alternatives to the Proposed Action, the following alternatives were specified in the Final Scope:

1. Alternative 1 – No-Action: Under the No-Action scenario where the existing facilities remain in place with no improvements, and the Proposed Action does not proceed. Under the SEQR regulations, at 6 NYCRR §617.9(b)(5)(v), this alternative "should evaluate the adverse or beneficial site changes that are likely to occur in the reasonably foreseeable future, in the absence of the proposed action." "No action" is the only alternative that is explicitly required by SEQRA to be analyzed.

2. Alternative 2 – Northern Underground Route: This alternative considers a new 69kV Circuit installed underground from the Bridgehampton Substation north along Bridgehampton-Sag Harbor Turnpike, through Sag Harbor, and then south along East Hampton-Sag Harbor Turnpike to the Buell Substation. This new circuit would be installed underground via trenching within the existing road ROW and would follow the route of an existing LIPA circuit (see Figure 5.1).

3. Alternative 3 – Southern Underground Route: This alternative considers a new 69kV Circuit installed underground from the Bridgehampton Substation south along Bridgehampton-Sag Harbor Turnpike, east along Montauk Highway, and then north to the Buell Substation on East Hampton-Sag Harbor Turnpike. This new circuit would be installed underground via trenching within the existing road ROW and would follow the route of an existing LIPA circuit (see Figure 5.2).

4. Alternative 4 – Northern Hybrid Route: This alternative considers a new 69kV Circuit installed using overhead installation from the Bridgehampton Substation north to Sag Harbor, then underground installation via trenching within the Village, and then south to the Buell Substation via overhead installation (same route as Alternative 2, see Figure 5.3).

5. Alternative 5 – Overhead Route within LIPA Easement/ROW: This alternative would replace the existing Bridgehampton to Buell and Bridgehampton to East Hampton 69-kV Double Circuit by removing the 53 existing towers within the ROW (along the same route as the Proposed Action) and installing two new overhead lines on steel poles (approximately 134 steel poles, in two lines of 67 poles, with each pole at a height of approximately 60 feet above grade). See Figure 5.4.

The following provides a summary of the evaluation of each Alternative described above.

Alternative 1 – No Action: Under this scenario, the existing overhead electrical transmission facilities in the LIPA easement between the Bridgehampton and Buell Substations would remain in place and would continue to operate with no improvements, and the Proposed Action would not be undertaken. There is no cost associated with the No Action Alternative.

- Under the No Action Alternative, no changes to the existing conditions would occur. Therefore, no impacts to soils and topography, water resources, ecological resources, cultural resources, open space and recreation, critical environmental areas, noise levels, visual/aesthetic resources, or construction related impacts would occur. The No Action Alternative does not meet the objectives of the Project Sponsor.

Alternative 2 – Northern Underground Route: This alternative involves the installation of a new 69kV circuit along an underground route extending northward from the Bridgehampton Substation, through downtown Sag Harbor Village, and then southward to the Buell Substation. The total length of the above-described cable route is approximately 8.06 miles, which is about 55 percent longer than the 5.2±-mile route for the Proposed Action. See **Figure 5-1** for a map of the general routing for this alternative. The cost estimate for this Alternative is $78.6 million.

- *Soils and Topography*: Alternative 2 would result in an approximate 83 percent increase in the length of trenching – i.e., 8.06± miles, as compared to 4.4± miles for the Proposed Action (excluding the HDD segments). The net potential effect on soils and topography would be similar for the two scenarios, given the longer route for Alternative 2 and the wider area of disturbance associated with the temporary construction access road required for the Proposed Action.
- *Water Resources*: Alternative 2 would route the proposed 69kV circuit along public roadways, the majority of which do not contain or adjoin surface water resources. However, this route does include short sections of trenching within the roadway ROW adjacent to Otter Pond and wetlands associated with Ligonee Brook and Rattlesnake Creek in the Village of Sag Harbor and Northwest Creek just south of the Village boundary, where there would be a potential for natural resource impacts (see **Figure 5-5**). The Proposed Action will limit disturbance to wetlands through the use of HDD construction methodology and timber matting in sensitive areas. The net potential effect on water resources would likely be similar for the two scenarios.
- *Ecology*: Given the disturbed nature of the existing roadway ROWs, the required clearing for Alternative 2 is anticipated to be less than the clearing required under the Proposed Action. In comparison to Alternative 2, HDD will be used to install the cable through the most ecologically sensitive portion of the Proposed Action Area, thereby avoiding land surface disturbance and potential for construction-related impacts in this area. The Proposed Action will implement a site restoration plan using native vegetation species, which will mitigate potential impacts associated with land disturbance during construction. Appropriate site restoration would also occur under Alternative 2, although the affected project area would be located within roadway ROWs which generally are not believed to have important ecological value (except for the wetland areas identified above). Preliminary input received from NYSDEC's Natural Heritage Program indicates that the presence of Eastern Tiger Salamander has been documented in the Bridgehampton-Sag Harbor Turnpike area, but it is not specified whether this includes the segment of the Turnpike along the route for Alternative 2 between the Bridgehampton Substation and the Village of Sag Harbor.

- *Cultural Resources*: Although Alternative 2 similarly is not expected to contain significant archaeological resources as it comprises a previously disturbed roadway ROW, review of information available on New York State's Cultural Resources Inventory System (CRIS) reveals that much of this route traverses an area of archaeological sensitivity, and there are numerous adjacent National/State-listed historic resources, particularly within the Village of Sag Harbor. As discussed in **Section 3.1**, the Proposed Action Area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources, nor are any previously recorded architectural resources are located in the Proposed Action Area. It is likely that Alternative 2 would have a greater impact on Cultural Resources than that of the Proposed Action.
- *Open Space and Recreation*: Alternative 2 would place the transmission cable underground within roadway ROWs, which do not comprise open space/recreation resources. To the degree that trenching within this ROW may interrupt access to adjacent areas containing such resources, coordination with the respective owners and/or operators would be necessary to minimize impacts. It is likely that Alternative 2 would have a lesser impact on Open Space and Recreational Resources than that of the Proposed Action.
- *Critical Environmental Areas*: Alternative 2 would be located in the same CEAs as that of the Proposed Action. Alternative 2 would similarly be designed to minimize potential impacts to these resources, through the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport. Impacts to CEA's would be similar under both scenarios.
- *Noise:* Alternative 2 would involve a greater length of trenching, along roadway ROWs that generally lie in closer proximity to residential land uses and other sensitive noise receptors and, therefore, will likely pose a greater potential for noise impacts. Both cable routing scenarios would include a requirement for the use of Best Management Practices pursuant to NYSDEC guidance to minimize noise generation during construction, to the degree practicable, including use of flexible noise control covers or acoustic barriers on stationary HDD machinery under the Proposed Action. Neither scenario would entail operational noise impacts as there would be no permanent sound-generating equipment or facilities.
- *Visual/Aesthetic Resources*: Upon completion, both Alternative 2 and the Proposed Action would place the new 69kV circuit underground, such that significant long-term visual impacts would not result in either case.
- *Construction Impacts*: Alternative 2 would involve construction along public roadways. The lands along these roadways are occupied by various types of development, containing fairly dense mixed-use development in downtown Sag Harbor. Because of this land use setting, Alternative 2 would entail a greater potential for construction impacts to the community in comparison to the placement of the transmission cable within a LIPA easement under the Proposed Action.

Alternative 3 – Southern Underground Route: This alternative involves the installation of a new 69kV circuit along an underground route extending southward from the Bridgehampton Substation, eastward along Montauk Highway, and then northward to the Buell Substation. The total length of the above-described cable route is approximately 7.45 miles, which is about 43 percent longer than the 5.2±-mile route for the Proposed Action. See **Figure 5-2** for a map of the general routing for this alternative. The cost estimate for this Alternative is $84.7 million.

- *Soils and Topography*: Alternative 3 would result in an approximate 69 percent increase in the length of trenching – i.e., 7.45± miles, as compared to 4.4± miles for the Proposed Action (not counting the HDD segments). The net potential effect on soils and topography when considered together would be similar for the two scenarios, given the longer route for Alternative 3 and the wider area of disturbance associated with the temporary construction access road for the Proposed Action.
- *Water Resources*: Alternative 3 would route the proposed 69kV circuit along public roadways, which mostly do not contain or adjoin surface water resources. However, this route would include short segments of trenching adjacent to freshwater wetlands located south of the Bridgehampton Substation, Slate Pond (adjacent to the Bridgehampton Children's Museum) and associated wetlands on the east side of Bridgehampton-Sag Harbor Turnpike (adjacent to the South Fork Natural History Museum & Nature Center), and tidal and freshwater wetlands associated with the upper reaches of Georgica Pond, where there would be a potential for natural resource impacts. The Proposed Action will limit disturbance to wetlands through the use of HDD construction methodology and timber matting in sensitive areas. The net potential effect on water resources would likely be similar for the two scenarios.
- *Ecology*: The exact location of the cable installation under Alternative 3 would need to be determined based on detailed investigation of existing utilities. Therefore, the extent of required clearing within the existing roadway ROW for Alternative 3 is not known. However, given the disturbed nature of the existing roadway ROWs, the required clearing for Alternative 3 is anticipated to be less than the clearing required under the Proposed Action. The underground cable installation area for Alternative 3 adjoins a known breeding pond for Eastern Tiger Salamanders. It would be necessary to undertake a field survey to assess the potential for impacts to these species under Alternative 3 once the specific circuit route has been defined, and to determine the need for mitigation as appropriate in consultation with NYSDEC.
- *Cultural Resources*: Although the cable route for Alternative 3 is not expected to contain significant archaeological resources as it comprises a previously disturbed roadway ROW, review of information available on CRIS reveals that much of this route traverses an area of archaeological sensitivity, and there are National/State-listed historic resources along Bridgehampton-Sag Harbor Turnpike and Montauk Highway. As discussed in **Section 3.1**, the Proposed Action Area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources, nor are any previously recorded architectural resources are located in the Proposed Action Area. It is likely that Alternative 3 would have a greater impact on Cultural Resources than that of the Proposed Action.
- *Open Space and Recreation*: Alternative 3 would place the transmission cable underground within roadway ROWs, which do not comprise open space/recreation resources. To the degree that trenching within this ROW may interrupt access to adjacent areas containing such resources, coordination with the respective owners and/or operators would be necessary to minimize impacts. It is likely that Alternative 3 would have a lesser impact on Open Space and Recreational Resources than that of the Proposed Action.
- *Critical Environmental Areas*: Alternative 3 would be located in the same CEAs as that of the Proposed Action. Alternative 3 would similarly be designed to minimize potential impacts to these resources, through the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport. Impacts to CEA's would be similar under both scenarios.

- *Noise:* As compared to the Proposed Action, Alternative 3 involves a greater length of trenching, along roadway ROWs that generally lie in closer proximity to residential land uses and other sensitive noise receptors and, therefore, may pose a somewhat greater potential for noise impacts. Both cable routing scenarios would include a requirement for the use of Best Management Practices pursuant to NYSDEC guidance to minimize noise generation during construction, to the degree practicable, including use of flexible noise control covers or acoustic barriers on stationary HDD machinery under the Proposed Action. Neither scenario would entail operational noise impacts as there would be no permanent sound-generating equipment or facilities.
- *Visual/Aesthetic Resources*: Upon completion, both Alternative 3 and the Proposed Action would place the new 69kV circuit underground, such that significant long-term visual impacts would not result in either case.
- *Construction Impacts*: Alternative 3 would involve construction along public roadways. The lands along these ROWs are occupied by various types of development, including a relatively high density, mixed-use area in downtown Bridgehampton around the intersection of Montauk Highway and Bridgehampton-Sag Harbor Turnpike and within the Village of East Hampton in the eastern portion of the route. Because of this land use setting, Alternative 3 would entail a greater potential for construction impacts to the community in comparison to the placement of the transmission cable within a LIPA easement under the Proposed Action.

Alternative 4 – Northern Hybrid Route: This alternative would place a combination new underground/overhead 69kV circuit along the same 8.06±-mile route as Alternative 2, extending northward from the Bridgehampton Substation, through downtown Sag Harbor Village, and then southward to the Buell Substation. As depicted in **Figure 5-3**, the circuit in Alternative 4 would begin by exiting the Bridgehampton Substation overhead, go underground upon entering into the southwestern area of the Village, re-emerge overhead upon leaving the southeastern area of the Village and continue overhead to the Buell Substation. Construction of Alterative 4 would entail a cost estimated at $46.2 million, approximately the same as the estimated cost of the Proposed Action.

- *Soils and Topography*: Overhead installation would significantly reduce project-related effects on soils and topography along the majority of the Alternative 4 project route, as land disturbance would be limited to the drill holes for individual poles. However, Alternative 4 includes trenching for the 10,000 linear feet segment of the cable route within the Village of Sag Harbor, which would expose soils in that area to potential erosion in the same manner as will occur under the Proposed Action. Overall, impacts to soils and topography are anticipated to be less in Alternative 4 than those anticipated to occur under the Proposed Action.
- *Water Resources*: Alternative 4 would route the proposed 69kV circuit along public roadways, which mostly do not contain or adjoin surface water resources. However, this route includes a short section of Otter Pond and freshwater wetlands associated with Ligonee Brook and Rattlesnake Creek in the Village of Sag Harbor and Northwest Creek just south of the Village boundary (see **Figure 5-13**) where trenching (within the Village) or pole installation (outside the Village) would occur within road right of ways; which may include temporary construction disturbances within wetland adjacent areas. The Proposed Action will limit disturbance to wetlands through the use of HDD construction methodology and timber matting in sensitive areas. The net potential effect on water resources would likely be similar for the two scenarios.

- *Ecology*: The exact location of the cable installation under Alternative 4 would need to be determined based on detailed investigation of existing utilities, spatial constraints requiring separation from the existing cable along the road and similar constraints. Therefore, the extent of required clearing within the existing roadway ROW for Alternative 4 is not known. However, given the disturbed nature of the existing roadway ROWs and limited area of disturbance associated with overhead pole placements/greater flexibility to adjust pole placement to avoid significant vegetated area, the required clearing for Alternative 4 is anticipated to be less than the clearing required under the Proposed Action. Although the actual occurrence of rare, threatened or endangered species along the roadway ROWs that comprise the circuit route for Alternative 4 appears less likely than within the utility easement for the Proposed Action, it would still be necessary to undertake a field survey to assess the potential for impacts to these species under Alternative 4 once the specific circuit route has been defined, and to determine the need for mitigation as appropriate in consultation with NYSDEC.
- *Cultural Resources*: The northerly circuit route that applies to both Alternative 2 and Alternative 4 is not expected to contain significant archaeological resources as this project area comprises a previously disturbed roadway ROW. However, review of information available on CRIS reveals much of this route traverses an area of archaeological sensitivity, and there are numerous adjacent National/State-listed historic resources, particularly within the Village of Sag Harbor. As discussed in **Section 3.1**, the Proposed Action Area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources, nor are any previously recorded architectural resources are located in the Proposed Action Area. It is likely that Alternative 4 would have a greater impact on Cultural Resources than that of the Proposed Action.
- *Open Space and Recreation*: The use of overhead installation on transmission poles along the northerly circuit route in Alternative 4 would reduce the potential for conflicts with open space and recreation resources during construction as compared to fully underground installation via trenching along this route under Alternative 2 and with trenching in the LIPA ROW under the Proposed Action. However, the replacement of approximately 200 poles of 60-70 feet in height above grade from poles that are currently 30 – 45 feet in height above grade poses the potential for visual impacts on open space/recreation resources, as well as other land uses, along the Bridgehampton-Sag Harbor Turnpike and East Hampton-Sag Harbor Turnpike legs of the route for Alternative 4. Ultimately, it is anticipated that the Proposed Action would have a greater impact on Open Space and Recreational Resources than those that would occur under Alternative 4.
- *Critical Environmental Areas*: Alternative 4 would be located in the same CEAs as that of the Proposed Action. Alternative 4 would similarly be designed to minimize potential impacts to these resources, through the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport. Impacts to CEA's would be similar under both scenarios.
- *Noise:* As compared to the trenching and HDD drilling under the Proposed Action, the more limited land disturbance involved in the use of poles for overhead installation along most of the route for Alternative 4 would be expected to decrease the overall magnitude of noise generation during construction. However, this would be offset by the fact that Alternative 4 would occur along roadway ROWs that generally lie in closer proximity to residential land uses and other sensitive noise receptors. Both Alternative 4 and the Proposed Action would include a requirement for the use of Best Management Practices pursuant to NYSDEC guidance to minimize

noise generation during construction, to the degree practicable; and neither scenario would entail operational noise impacts as there would be no permanent sound-generating equipment or facilities.

- *Visual/Aesthetic Resources*: Alternative 4 primarily would involve the installation of an overhead circuit along the same northerly route as for Alternative 2, with a 10,000±-linear foot underground section through the Village of Sag Harbor. Although Alternative 4 would involve the replacement of existing poles at most locations (i.e., 188 of the 200 total poles that would be required), the new poles would be significantly taller (at 70 feet in height above grade) than the ones to be removed to accommodate both transmission and distribution. Given the increases in height and number of poles, a visual impact may occur from the overhead portion of this Alternative. It is expected that in order to mitigate the visual impact, only wood poles would be utilized for the overhead portion of the route. However, the height increase and density of the poles may result in a noticeable change to the character of the corridor. Therefore, although an overhead installation, in lieu of the proposed underground circuit, would meet the objectives of the sponsor of the Proposed Action, this is not considered to be a preferred alternative due to the potential perceived visual and community character impacts, which would be greater than what would occur under the Proposed Action.
- *Construction Impacts*: This alternative would involve the same potential for construction impacts as discussed with respect to Alternative 2 for the 10,000±-linear foot segment of the route that would remain underground through the Village of Sag Harbor, including: potential disruption of adjacent development due to trench excavation and other construction activities; one lane of traffic closures in many areas during active trenching; and full roadway closures, requiring traffic detours, during manhole installation. The remaining 6.17±-mile overhead portion of the 8.06±-mile circuit route under this alternative would see a reduced potential for construction-related impacts as compared to the fully underground version of the northerly route under Alternative 2 due to the limited land disturbance associated with pole installation. Because of this land use setting, Alternative 4 would entail a greater potential for construction impacts to the community in comparison to the placement of the transmission cable within a LIPA easement under the Proposed Action.

Alternative 5 – Overhead Route within LIPA Easement: As illustrated in **Figure 5-5**, this alternative would install a new overhead 69-kV double circuit to replace the existing overhead 69-kV double circuit within the LIPA easement between the Bridgehampton and Buell Substations. The existing circuits in the LIPA easement are carried by overhead lines on 53 existing steel towers between the Bridgehampton and Buell Substations. Alternative 5 would remove these towers and would separate the two circuits onto two separate lines of new steel poles. A minimum of 134 new steel poles (67 poles in each line, with a spacing of approximately 400 feet along the 5.12±-mile circuit route) would be required under Alternative 5. The two lines of new poles installed under Alternative 5 would occupy essentially the entire width of the LIPA easement, to provide the required minimum separation distance between the transmission lines to allow for independent circuits and optimal performance. This design consideration would necessitate clearing of essentially the entire width of the easement (approximately 36 acres). Additionally, since the two overhead circuits in Alternative 5 would run along the edges of the existing ROW, trees outside the ROW for a distance of approximately 50 feet would need to be removed in order to provide and maintain the required safety clearances. Construction of Alterative 5 would cost approximately $56.1 million, which is approximately 22% more than the cost of the Proposed Action.

- *Soils and Topography*: Alternative 5 would entail limited excavation to create 15-foot-deep drill holes for the estimated 134 individual transmission poles required along the 5.2±-mile circuit route within the LIPA easement. However, as noted above, this design alternative would necessitate the removal of vegetation within essentially the entire width of the easement to create the necessary clearances, thereby entailing a larger area of disturbance and increasing the potential for erosion and sediment transport as compared to the Proposed Action. Impacts to soils and topography would be greater under this Alternative than those that would occur under the Proposed Action.
- *Water Resources*: Alternative 5 would route a new double 69kV overhead circuit along the LIPA easement between the Bridgehampton and Buell Substations, which includes wetlands associated with Long Pond (see **Figure 5-17**). As noted above, this alternative would include the installation of approximately 16 poles in a 3,400±-foot segment of the cable route in the area of Long Pond; whereas disturbance within this area (with the exception of the single manhole to be installed) will be avoided under the Proposed Action by using HDD conduit installation. This section of the LIPA easement area includes areas of steep and undulating topography which would require significant fill, clearing and grading to accommodate the movement of construction equipment (including crane access) and materials. Alternative 5 would follow the same route for overhead wire installation that will occur with the underground cable to be installed for the Proposed Action; however, the installation of poles required for the Alternative 5 overhead installation would involve significant land disturbance within regulated Eastern Tiger Salamander habitat and regulated wetland areas, as depicted in **Figure 5-17**. Impacts to water resources are anticipated to be greater under this Alternative than those anticipated under the Proposed Action due to disturbance that would occur within wetland areas.
- *Ecology*: This overhead routing alternative would require a significant increase in the extent of disturbance (clearing and grading) within the LIPA easement between the Bridgehampton and Buell Substations than will occur under the Proposed Action, which would magnify the overall impacts to habitat within the easement. Alternative 5 would entail substantial ground disturbance in the area of Long Pond for the installation of transmission poles, which would pose the potential for directly impacting the ecological resources in this area. In contrast, the Proposed Action will avoid such impacts with the use of HDD to run a 3,400±-foot segment of the cable underneath the easement in the vicinity of Long Pond, thereby avoiding land surface disturbance and potential for construction-related impacts in this area. The extent of disturbance anticipated for construction of the temporary construction roadway to accommodate the heavy equipment needed to transport and install the poles and remove the existing towers for Alternative 5 would be significantly greater than for the Proposed Action. As compared to the Proposed Action, implementation of Alternative 5 would result in the need for a more extensive site restoration plan to compensate for the greatly increased impacts to ecological resources. Impacts to ecological resources under this Alternative include the permanent loss of habitat resulting from the installation of utility pole foundations and clearing required to maintain transmission line clearances. Impacts to Ecological Resources are anticipated to be greater under this Alternative than those that would occur under the Proposed Action.
- *Cultural Resources*: As discussed in **Section 3.1**, Phase IB testing performed as part of the DEIS investigation indicates that the Proposed Action Area, which also comprises the project area for Alternative 5, does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources; and, furthermore, no previously recorded

architectural resources are located in this area, nor are there any buildings or structures except for the existing transmission towers. Impacts to Cultural Resources would not occur under this Alternative or the Proposed Action.

- *Open Space and Recreation*: As compared to the Proposed Action, Alternative 5 would involve more extensive site preparation for construction vehicle access, which may increase the potential for impacts to open space and recreation resources. On the other hand, Alternative 5 would not require the use of the conduit laydown area located within the open space associated with Spring Farm, to the west of the Bridgehampton Substation which is needed for the Proposed Action. Similar to the Proposed Action, coordination would be needed with the respective owners and/or operators of the affected open space/recreation lands to minimize impacts under Alternative 5. Impacts to Open Space and Recreational Resources are anticipated to be greater under this Alternative than those that would occur under the Proposed Action.
- *Critical Environmental Areas*: Alternative 5 would be located in the same CEAs as that of the Proposed Action. Alternative 5 would similarly be designed to minimize potential impacts to these resources, through the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport. Impacts to CEA's would be similar under both scenarios.
- *Noise:* As compared to the Proposed Action, Alternative 5 would involve more extensive site preparation for construction vehicle access; although once the access road is in-place, the installation of poles under Alternative 5 would be expected to be less intensive than the trenching and HDD drilling under the Proposed Action. Therefore, it is not clear whether either scenario would result in a significantly greater magnitude of noise generation. However, in both cases, impacts would be minimized by the fact that there are few sensitive noise receptors proximate to the LIPA easement, and both would have a requirement for the use of Best Management Practices pursuant to NYSDEC guidance to minimize noise generation during construction, to the degree practicable; and neither scenario would result in operational noise impacts as no permanent sound-generating equipment or facilities would be installed.
- *Visual/Aesthetic Resources*: Visual impacts associated with Alternative 5 include a noticeable increase in cleared area from publicly accessible areas (including trails and road crossings with the ROW), an increase in density of poles, and a potential increase in the contrast of steel poles with the existing weathered lattice towers. Overall, Alternative 5 would likely have a greater visual impact to the public than that experienced under the Proposed Action, which will place the transmission circuit entirely underground. The existing towers generally are placed centrally along the ROW, whereas Alternative 5 would place the poles along the edges of the ROW to achieve the necessary separation distance between the circuits. Thus, as compared to the existing lattice towers, the poles in Alternative 5 would be closer to, and more visible from~~,~~ land uses adjacent to the ROW, including residential neighborhoods to the east of Stephen Hands Path in the easterly portion of the Proposed Action Area. Additionally, as noted previously, the entire width of the LIPA ROW would have to be cleared in addition to a 40 to 50-foot buffer distance on either side of the existing easement, which will also require tree clearing, and land acquisition or land access rights, to accommodate the two lines of transmission poles in Alternative 5. The clearing would remove existing screening vegetation within the ROW and would need to be maintained in perpetuity. Alternative 5 would also involve the installation of 67 pairs of new poles, as compared to the 53 existing towers that would be retained under the Proposed Action. Based on the foregoing, it is expected that the poles that would be installed under Alternative 5 would be more

visible for viewers within the ROW, such as the users of the trails in this area, as well as from the various public roadways that intersect the ROW.

- *Construction Impacts*: Alternative 5 would occur along the same route as the Proposed Action (i.e., along the LIPA easement between the Bridgehampton and Buell Substations). Although common mitigation measures in both cases would include implementation of a SWPPP during construction, replanting of disturbed vegetated areas, and removal of stabilization for construction access and restoration of these areas to pre-construction conditions to the degree practicable, differences between the two scenarios indicate an increased potential for construction impacts under Alternative 5.

Issues of Controversy

As with any large project, there is public interest with respect to the installation and operation of the Proposed Action. Issues of controversy primarily include: impacts on the Long Pond Greenbelt, impacts to endangered species, and impacts to passive parklands along the Proposed Action route. All potential impacts including issues of controversy are addressed in this Draft EIS, which was prepared to conform to the Final Scope.

Matters to be Decided

Prior to the issuance of any permits or approvals, the SEQRA must be completed. This DEIS is intended to provide LIPA (as lead agency under SEQRA for the Proposed Action) and all involved agencies with the information necessary to render an informed decision on the Proposed Action, and provide the public and other interested parties an opportunity to comment on the Proposed Action . Once accepted, the document will be the subject of public review, followed by the preparation of a Final Environmental Impact Statement (FEIS). Upon completion of the FEIS, LIPA will be responsible for the adoption of a Statement of Findings.

Permits and Approvals Required

Regulatory Authority	Permit or Approval Type
Long Island Power Authority-Lead Agency	SEQRA
Village of Sag Harbor	Property Easements
Town of Southampton	License Agreements
Town of East Hampton	Property Easements
Suffolk County	Property Easements
Long Island Railroad	Crossing Permit
Long Island Railroad	Longitudinal Permit
New York State Department of State	Coastal Consistency
New York State Department of Environmental Conservation	Incidental Take Permit (Part 182)
New York State Department of Environmental Conservation	Coverage Under NYSDEC GP# 1-9901-0011/00032 (Article 24- Freshwater Wetlands)
New York State Department of Environmental Conservation	Stormwater Pollution Prevention Plan (GP#0-20-001)
United States Army Corp of Engineers	Nationwide Permit #57

1.0 Description Of The Proposed Action

The Proposed Action is the installation of a new underground 69 kilovolt (kV) transmission cable from the Bridgehampton Substation located on Bridgehampton-Sag Harbor Turnpike in the Town of Southampton to the Buell Substation located on Cove Hollow Road in the Town of East Hampton (approximately 5.2 miles). Most of the proposed new underground cable would be installed below grade beneath the existing Long Island Power Authority (LIPA) owned and/or controlled right-of-way (ROW), which is occupied by overhead transmission infrastructure. Additionally, due to the layout of the existing LIPA ROW and existing structures within it, the LIPA ROW would be expanded via easement for an additional 1,651 square foot area directly north of the ROW on the west side of Buckskill Road. Further, the cable will be installed in a limited area outside of the existing ROW, in the area south of the Long Island Railroad (LIRR), north of the National Grid facilities, east to the Buell Substation. In addition to the proposed underground cable, fourteen manholes will be installed along the Proposed Action route.

To facilitate installation of the new 5.2 mile cable and the 14 manholes, the Proposed Action Area includes temporary construction staging and laydown area within the ROW west of the Bridgehampton Substation for a Proposed Action Area which extends a total of 5.54 miles. Portions of the ROW within the Proposed Action Area extend across 63 parcels as shown in **Appendix A**. **Table 1.1**, which offers a complete list of affected parcel numbers that encompass the ROW, substations, laydown area, and areas adjacent to the ROW where work is occurring, including the LIPA owned parcel and the parcels which will only be used for cable and conduit laydown.

Table 1.1: ROW Parcel Information

Location	Tax Map #
Spring Farm Hunting Club (laydown area only)	900-25-01-5.6
Spring Farm Hunting Club (laydown area only)	900-25-01-5.7
LIPA Parcel	900-39-01-27
LIPA Parcel	900-39-01-26
Bridgehampton Sag Harbor Turnpike	None
1180 Bridgehampton Sag Harbor Bridgehampton	900-40-03-5.6
1310 Bridgehampton Sag Harbor Tpke	900-40-01-3.1
Suffolk County-Long Pond Greenbelt	900-40-01-10.2
Town of Southampton-Long Pond Greenbelt	900-40-03-7.4
735 Sprig Tree Path, Sag Harbor	900-40-03-45.1
Sprig Tree Path	None
720 Sprig Tree Path, Sag Harbor	900-40-02-42.1
Suffolk County-Long Pond Greenbelt	900-40-03-19
33 Widow Gavits Road Sagaponack	900-40-03-33.3
Private Ownership- Long Pond Greenbelt	900-40-03-25.1
Long Pond, Sag Harbor; No Street Address	900-40-02-44.3
185 Widow Gavits Road, Sag Harbor	900-40-02-28
Widow Gavits Road	None

Location	Tax Map #
212 Widow Gavits Road, Sag Harbor	900-40-03-31.15
156 Widow Gavits Road, Sag Harbor	900-40-03-31.22
974 Sagg Road, Sagaponack	900-40-03-30.2
1121 Sagg Road, Sag Harbor	900-40-03-32
1175 Sagg Road, Sag Harbor	900-40-02-19
Sagg Road	None
1114 Sagg Road, Sag Harbor	900-41-02-02
1178 Sagg Road, Sagaponack	900-41-02-6.1
1190 Sagg Road, Bridgehampton	900-41-02-3.4
1186 Sagg Road, Sag Harbor	900-41-02-3.2
385 Northwest Path Sagaponack	900-55-01-15.6
360 Sagg Road, Sag Harbor	900-55-01-30.1
460 Northwest Path, Sag Harbor	900-41-01-98
Northwest Path, Sag Harbor	900-55-01-20.2
385 Northwest Path Sagaponack	900-55-01-20.1
435 Northwest Path, Sagaponack	900-55-01-22.2
485 Northwest Path Sagaponack	900-55-01-22.1
No Street Address	900-55-06-1
433 Northwest Path, Sag Harbor	900-55-02-1.1
437 Northwest Path, Sag Harbor	900-55-02-1.2
1940 Town Line Road, Sagaponack	900-55-02-11.4
Town Line Road	None
27 Six Pole Highway, Wainscott	300-155-01-18
No Street Address	300-180-01-9.1
Wainscott Northwest Road: No Street Address	300-180-01-11
Wainscott Northwest Road, No Street Address	300-180-01-10
449 Wainscott Northwest Road, East Hampton	300-180-01-1.1
Northwest Road (paper street)	None
No Street Address	300-180-01-7.1
380 Route 114, East Hampton	300-181-01-7
30 Middle Highway, East Hampton	300-181-01-2.1
38 Middle Highway, East Hampton	300-181-01-3.1
174 Daniels Hole Road	300-181-01-5.1
Wolf's Hold Road (Middle Highway)	None
Middle Hwy: No Street Address	300-181-01-1.1
225 Buckskill Road, Wainscott	300-184-01-3
Stephen Hands Path	None
137 Stephen Hands Path, East Hampton	300-184-01-4.3

Location	Tax Map #
215 Buckskill Road, East Hampton	300-184-01-5.2
Buckskill Road	None
Montauk Boulevard	None
13 Blue Jay Way, East Hampton	300-183-02-3.5
23 Blue Jay Way, East Hampton	300-183-03-1.16
29 Blue Jay Way, East Hampton	300-183-03-1.15
14 Second Ave, East Hampton	300-183-01-6.12
33 Blue Jay Way, East Hampton	300-183-03-1.13
18 Second Ave, East Hampton	300-183-01-4.4
35 Blue Jay Way, East Hampton	300-183-03-1.14
Green Hollow Road	None
54 Towhee Trail, East Hampton	300-184-03-10
58 Towhee Trail, East Hampton	300-184-03-9.1
66 Towhee Trail, East Hampton	300-184-03-6
No Street Address	300-184-03-1.1
Long Island Railroad, East Hampton	300-184-03-5
National Grid Cove Hollow Road, East Hampton	300-185-02-2
Cove Hollow Road	None
Buell Substation LIPA	300-185-02-37

Both horizontal directional drill (HDD) and open trench construction methodologies will be used for cable and conduit installation. Approximately 80% of the cable and conduit will be installed via open trench, while the remaining 20% will be installed via HDD to protect sensitive natural resources and to be able to install the cable and conduit beneath existing LIRR tracks. More specifically, approximately 3,450 linear feet of the cable extending east from the Bridgehampton Substation, passing beneath the Long Pond Greenbelt[4], to the west side of Widow Gavits Road will be installed via HDD.

Due to the sensitivity of the habitat within the Long Pond Greenbelt, care was taken during the design phase of the Proposed Action to limit disturbance within this area to the maximum extent practicable. Although a single manhole will be installed within the Long Pond Greenbelt, it will be located in a previously disturbed area, which is comprised of a dirt access path. The ROW between the Bridgehampton Substation and Widow Gavits Road experiences two oppositely oriented horizontal curves that have the potential to negatively impact an HDD installation by increasing complexity and elevating the anticipated frictional forces experienced by the pipe during construction. To increase the likelihood of a successful installation, the HDD will be conducted in two separate drill operations that align at the single manhole within the previously disturbed area of the Long Pond Greenbelt.

[4] The Long Pond Greenbelt is an undeveloped area of parkland that is regionally protected and identified as a critical environmental area (CEA) by the Town of Southampton and the State of New York. This includes parks, trail, and natural resources that surround the Long Pond wetland complex, located between Bridgehampton Sag Harbor Turnpike and Widow Gavits Road.

A more complete discussion of potential impacts to the habitats of the Long Pond Greenbelt is included in **Section 2.3**. In addition to the HDD beneath the Long Pond Greenbelt, approximately 845 linear feet of the cable, located west of Cove Hollow Road and beneath the LIRR will also be installed via HDD. The remaining 23,415 linear feet of cable installation will be installed via trenching. Thirteen manholes will be installed along the portion of the cable to be trenched with the distance between manholes varying from approximately 1,600 feet to 2,500 feet.

To facilitate the temporary use of HDD equipment and conduit laydown during construction, a 0.9 acre area within the ROW north of the existing Bridgehampton Substation will be cleared; a 0.36 acre portion of the cleared area will also require grading to facilitate construction. Of the clearing and grading described above, approximately 0.31 acres of clearing and 0.11 acres of grading are within 535 feet of a known tiger salamander breeding pond. **Section 2.3** provides a discussion of potential impacts and associated mitigation identified for rare, threatened and endangered species.

Additionally, portions of the Proposed Action route will require stabilization in order to allow machinery access for construction. Stabilization may include grading or excavation of existing soils and temporary placement of Recycled Concrete Aggregate (RCA). The use of timber matting was analyzed as an alternative to the use of RCA for construction access road stabilization. Due to the significant steep slopes and undulating topography in the ROW, use of timber matting was determined to not be feasible for the entire length of the access road. Although use of timber mats cannot be implemented for the entirety of the roadway, timber matting will be utilized in the most sensitive area for the installation of the manhole within the Long Pond Greenbelt. Additionally, timber matting will be utilized to protect a small portion of the wetland located west of the Bridgehampton Substation during laydown activities.

This Draft EIS (DEIS) has been prepared to identify and analyze the potential impacts of the Proposed Action pursuant to the requirements of New York's State Environmental Quality Review Act (SEQRA). The main body of the DEIS evaluates and analyzes the Proposed Action while the alternatives chapter (**Section 5.0**) evaluates and analyzes the five alternatives listed in the Final Scope (**Appendix B-1**). For each of the five alternatives, the reasonable worst-case is analyzed in each of the technical sections in order to disclose all potential impacts. This chapter of the DEIS contains a discussion of: the public purpose and need for the Proposed Action; a description of the Proposed Action, construction operations, and agency actions, permits, and approvals required.

1.1 Proposed Action Background, Need, Objectives and Benefits

1.1.1 Proposed Action Background and History

The Proposed Action addresses the Transmission & Distribution (T&D) System constraints on the South Fork of Long Island. This area has been growing in terms of electrical demand at an average rate of 2.4% since 2009. The average annual forecasted net electric load growth for that area for the next 10 years is approximately 2% per year, and therefore the Proposed Action is needed to support current and future forecasted electric load growth. While ongoing efforts have been undertaken to upgrade the T&D System on the South Fork, the existing transmission circuits do not have sufficient capacity to meet future needs under peak conditions. As a result of the increase in electric load demand on the South Fork T&D System, PSEG Long Island, as agent of and acting on behalf of LIPA, issued a Request for Proposal (RFP) in 2015 for the solicitation of resources to be located on the South Fork of Long Island in order to defer and/or eliminate the need to move forward with an extensive transmission expansion plan that would otherwise

be required to meet the anticipated T&D System needs. Many of the proposals received in response to the RFP incorporated renewable energy sources, including batteries, solar, fuel cells, thermal storage, and offshore wind. Upon qualitative and quantitative review of all the proposals received, the RFP selection team recommended a portfolio of projects that included transmission, battery energy storage, load reduction measures, and offshore wind to help meet the electric load needs of the South Fork through at least 2030. In addition, temporary generators have been utilized during the summer period until all of the proposed T&D projects are completed.

Listed below are the initiatives of the selected portfolio, some of which have already been placed into service.

- T&D System Enhancements:
    - Canal to Southampton New Transmission Cable – in-service 2019
    - Wildwood to Riverhead Upgrade Transmission Line – in-service 2021
    - Riverhead to Canal New Transmission Cable – in-service 2021
    - Bridgehampton Substation to Buell Substation New Transmission Cable – expected service 2024
    - Conversion of the South Fork T&D System from 23 kV to 33 kV, including seven substations – expected service 2024
- Non-Wire Alternatives:
    - Applied Energy Group (AEG) Load Reduction Program – 8 Megawatts (MW) – in-service; phased in over 3 years
    - East Hampton and Montauk Energy Storage Centers – 10 MW – in-service 2018
    - Emergency Generation – Up to 8 MW as Needed – in-service from 2017 to 2023.

Even with the improvements that are part of the selected portfolio from the RFP, including the T&D System enhancements and non-wire alternatives, the Proposed Action is required to satisfy the forecasted increase in electrical load on the South Fork.

On April 6, 2021 LIPA, serving as Lead Agency, and pursuant to 6 NYCRR 617.6(b)(3) determined the Proposed Action may have significant adverse effects on the environment and issued a Positive Declaration, triggering the need for the development of an Environmental Impact Statement (EIS). A Draft Scope for the Proposed Action was published for public comment on May 12, 2021. On June 30, 2021 the Final Scope for the Proposed Action was issued, which incorporated all public comments received. The Final Scope, Full Environmental Assessment Form and Positive Declaration are included as **Appendix B-1, B-2 and B-3**, respectively.

1.1.2 Public Need and LIPA Objectives

The Public Need for the Proposed Action relates to LIPA's objective of providing safe and reliable electric service to the eastern end of Long Island.

As described in **Section 1.1.1**, this area has been growing in terms of electrical demand at an average rate of 2.4% since 2009. The average annual forecasted net electric load growth for that area for the next 10 years is approximately 2% per year. The anticipated load growth will result in various thermal and voltage constraints on this portion of the T&D System resulting in the need for various transmission improvement projects in order to provide reliable electric service. As discussed in **Section 1.1.1**, improvements have been selected which meet the anticipated T&D System needs until at least 2030.

PSEG Long Island's Transmission Planning Criteria dictates the electrical and thermal loads acceptable for the T&D System. The current configuration of existing transmission circuits are such that the loss of the existing overhead transmission wires within the ROW would result in a single 69 kV supply to portions of the North Fork and areas east of the Bridgehampton Substation on the South Fork. The two existing circuits in the Proposed Action Area are not independent, such that the loss of power in either circuit, whether intentional (e.g., for scheduled maintenance or repairs) or not (e.g., resulting from storm impacts), also incapacitates the other circuit. In 2025, under forecasted electric load conditions, such a loss would result in the remaining 69 kV supply exceeding its thermal capability that poses an unacceptable risk of damaging T&D System equipment, which can result in significant customer outages. The Proposed Action will provide an additional transmission supply to the area and maintain and mitigate the risk to equipment on the T&D System and to customers.

In addition, in the event that a double circuit becomes inoperable, a Transient Voltage Recovery limitation is created. Transient Voltage Recovery is the ability of the T&D System to return to a set voltage threshold following a system disturbance such as the loss of the double circuit. Implementation of the Proposed Action reinforces the T&D System on the eastern portion of Long Island and will help mitigate potential Transient Voltage Recovery limitations.

1.1.3 Objectives of the Proposed Action Sponsor

PSEG Long Island operates the electric system on Long Island and the Rockaways, as Agent for the Long Island Lighting Company d/b/a LIPA, a wholly owned subsidiary of the Long Island Power Authority. As development increases throughout LIPA's service area, load demand consequently increases. The current T&D System does not always have ample capacity to address load growth The construction of new electric facilities is often necessary to adequately address load growth, and to ensure continuous, reliable, and safe operation of existing electrical infrastructure.

While ongoing efforts have been undertaken to upgrade the transmission system on the South Fork, the existing transmission circuits do not have sufficient capacity to meet future needs. The objective of the Proposed Action is to mitigate customer outages, enhance the voltage profile of the South Fork system during times of heavy load, and to improve the power quality experienced by customers. The Proposed Action is part of LIPA's overall long range expansion plans to meet the demands of eastern Suffolk County, and to reduce dependence on local generation by the implementation of an increase in use of renewable energy sources and the necessary improvements to the T&D System to allow for the connection of those sources.

1.1.4 Benefits of the Proposed Action

The Proposed Action addresses the T&D System constraints on the South Fork of Long Island. The existing T&D System, built in the early 1900's, was not originally designed to meet the projected electric demand,

and therefore the Proposed Action is needed to support forecasted electric load growth. While ongoing efforts have been undertaken to upgrade the T&D System on the South Fork, the existing transmission circuits do not have sufficient capacity to meet future needs under peak conditions.

The Proposed Action will have beneficial impacts to the T&D System and the surrounding community within the eastern portion of Suffolk County with its many residential, commercial, and institutional uses, through improved reliability and resiliency. The Proposed Action will relieve overload conditions in the event of the loss of a double circuit on the existing transmission circuits currently serving the eastern end of Long Island. In addition, forecasted load for the eastern end of Long Island is expected to increase 2% per year over the next ten years, which only increases the potential for future overload conditions.

Therefore, the Proposed Action will benefit both the T&D System and the customers of the eastern end of Long Island, as the Proposed Action will serve to relieve potential overload conditions and minimize customer outage risk, while also supporting future forecasted load growth. Further, operation of the Proposed Action will reduce LIPA's dependence on local generation.

1.2 Proposed Action Location and Existing Site Conditions

The 43.06 acre Proposed Action Area encompasses both the cable and conduit installation area and the staging and laydown area in addition to the necessary connections within the substations. The Proposed Action Area is located predominately below grade beneath the ROW that extends from the existing Bridgehampton Substation located on Bridgehampton-Sag Harbor Turnpike in the Town of Southampton to the Buell Substation located on Cove Hollow Road in the Town of East Hampton. The Proposed Action includes work within the Bridgehampton Substation and the Buell Substation. The ROW directly west of and extending 1,600 feet from the western parcel boundary of the Bridgehampton Substation will be utilized during the construction of the Proposed Action for laydown of the HDD conduit.

The entirety of the Proposed Action Area from the west to Town Line Road in the east is located within the critical environmental area (CEA) identified as the Suffolk Groundwater Protection Area (see **Figure 1-1**). The west side of the Proposed Action Area extends approximately 1,600 feet from the west side of the Bridgehampton Substation. Beginning in the Town of Southampton and upon exiting the Bridgehampton Substation, the ROW veers east, crosses Bridgehampton-Sag Harbor Turnpike and enters the Long Pond Greenbelt. The Long Pond Greenbelt is an undeveloped area of parkland that is regionally protected and identified as a CEA by the Town of Southampton and the State of New York. A discussion of Open Space and Recreation and CEAs can be found in **Section 3.2** and **Section 3.3,** respectively. The ROW exits the east side of the Long Pond Greenbelt and continues east crossing Widow Gavits Road and then Sagg Road. Residential developments are present to the north and south of the Proposed Action Area in this location. The ROW passes through the area identified as Sagaponack Woods, which is an undeveloped area that offers passive recreational opportunities. Sagaponack Woods extends to the town boundary where the ROW crosses from the Town of Southampton to the Town of East Hampton.

The Proposed Action Area from Town Line Road to Stephen Hands Path is within the Water Recharge CEA. The portion of the ROW between Town Line Road and Daniels Hole Road is surrounded by largely undeveloped lands that offer passive recreation opportunities. Upon crossing Daniels Hole Road, the ROW passes directly north of the East Hampton Airport and continues on to Stephen Hands Path. Crossing Stephen Hands Path and Buckskill Road, the ROW is abutted by residential developments and continues southeast until encountering the LIRR ROW. The Proposed Action Route travels approximately 1,300 feet

along the north side of the LIRR ROW before passing beneath the tracks and exiting onto industrial property operated by National Grid. The Proposed Action Route continues east, crossing Cove Hollow Road and enters the Buell Substation property where it will connect into the existing Substation from the north side of the fence line. Currently, a 69 kV overhead transmission double circuit currently connects the Bridgehampton Substation and the Buell Substation in the ROW (see **Figure 1-1**). This double circuit is located along a single electrical transmission tower line within the ROW. These circuits were originally constructed in the early 1900's and consist of steel lattice towers, which have a maximum height of approximately 80 feet. Standard maintenance practices (such as replacement and repair of existing equipment, as well as vegetation management along the LIPA owned and/or controlled ROWs which are occupied by overhead transmission infrastructure) are regularly conducted. As such, the majority of the Proposed Action Area is vegetated with low growing shrubs and herbaceous species. A more in-depth discussion and analysis of the habitats that are currently present within the ROW is included in **Section 2.3**.

1.3 Proposed Action Design and Layout

1.3.1 Overall Site Layout

The Proposed Action is the installation of a new underground 69 kV transmission cable from the Bridgehampton Substation located on Bridgehampton-Sag Harbor Turnpike in the Town of Southampton to the Buell Substation located on Cove Hollow Road in the Town of East Hampton (approximately 5.2 miles). The new underground cable is designed to be installed below grade beneath the existing LIPA owned and/or controlled ROW which is occupied by overhead transmission infrastructure. 62 easements within the parcels listed in **Table 1.1** are required for the installation of the underground cable. Easements will be required from private landowners, the Town of Southampton, Town of East Hampton, Village of Sag Harbor, and Suffolk County. In 2019, pursuant to SEQRA, a separate Environmental Assessment (the "2019 Environmental Assessment") was conducted and a Negative Declaration issued for the acquisition of the easements. At that time, the Proposed Action had not been sufficiently designed to allow a full SEQRA review of the Proposed Action. The 2019 Environmental Assessment and Negative Declaration were permissible pursuant to 6 NYCRR 617.3(g)(1), because the subject EIS review of the Proposed Action was to be conducted prior to undertaking the Proposed Action. A copy of the Negative Declarations for the acquisition of the easements and a table of the required easements is provided as **Appendices C-1, C-2, C-3 and C-4**.

A map depicting the overall layout of the Proposed Action is provided as **Figure 1-1**. **Table 1.2** provides the land use components or cover types of the Proposed Action. A temporary access road will be constructed along the proposed cable route within the ROW in order to provide a safe and stable area for construction vehicles to traverse during installation. Approximately 3,450 linear feet of the cable extending east from the Bridgehampton Substation to the west side of Widow Gavits Road will be installed via HDD with a single manhole installed within the previously disturbed area west of Widow Gavits Road. The HDD laydown area will extend approximately 1,600 feet west of the Bridgehampton Substation within the ROW. HDD will also be utilized to drill beneath the wetland located adjacent to the west of Widow Gavits Road, for approximately 700 feet. Laydown for this portion of the drill will occur in the ROW on the east side of Widow Gavits Road. Finally, approximately 845 linear feet of the cable located west of Cove Hollow Road and beneath the LIRR will also be installed via HDD. The remaining portions of cable installation will be installed via trenching. The cable will terminate at the Bridgehampton Substation and the Buell Substation. Further details on the termination structures are provided in **Section 1.3.2** below.

Table 1.2: Proposed Action Area and Disturbance

Land Use or Cover Type	Proposed Action (acres)	Proposed Disturbance (acres)
Roads, Buildings, and other paved or impervious surfaces	3.02	0.44
Forested	6.48	1.50
Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	25.61	11.51
Wetlands	0.87	0
Non-vegetated (bare rock, earth or fill)	6.75	5.33
Total	**43.06**	**18.78**

Drilling activities will require the use of water for the creation of the slurry necessary to stabilize the bore hole. Water will be provided via access to a hydrant, permission for which will be obtained from the Suffolk County Water Authority. During installation of the approximately 3,450-linear foot HDD segments of the proposed underground transmission cable, it is anticipated that water usage/demand will be approximately 15,000 gallons per day. This volume is an anticipated maximum, which will fluctuate given the ability to recycle some of the water during the drilling process. Wastewater generated during drilling activities which cannot be reused will be collected in frac tanks located within the staging area, transported, and disposed of at an approved disposal facility licensed to accept this type of waste. No operational use of water will occur in association with the Proposed Action.

1.3.2 Structures

In addition to the underground cable, fourteen manholes will be installed along the Proposed Action route. The location of the manholes is depicted on the Bridgehampton to Buell Underground Transmission Circuit (Sheets 1 – 50) in **Appendix A**. The cable will be located completely underground, with the exception of where it meets the termination structure(s) within the substations. At the Bridgehampton Substation, a new terminal structure will be constructed in the northeast portion of the substation to provide an interconnection point for the cable. At the Buell Substation, the cable will enter the northeast side of the Substation and will terminate at a new termination structure to be located in the northeast corner of the Substation. All of the remaining permanent structures will be located at or below grade. No additional structures will be installed in association with construction or operation of the Proposed Action.

1.3.3 Clearing, Grading and Drainage System

The topography within the Proposed Action Area is rolling and contains several areas with steep slopes (see **Section 2.1** for further detail). As a result, some grading and stabilization within the Proposed Action Area is required to safely allow for construction activities to be conducted. To facilitate the temporary use of HDD equipment and pipe laydown during construction, a 0.9 acre portion of the ROW north of the existing Bridgehampton Substation will be cleared; a 0.36 acre portion of the cleared area will also require grading to facilitate construction. A single manhole will be located within this cleared area. Additionally, a 15.84 acre area will be cleared and graded to accommodate the proposed access roadway and an additional 1.25 acres will be disturbed to accommodate the installation of the proposed underground

cable and manholes. The access roadway will be located along the entirety of the route between Widow Gavits Road and the Buell Substation, totaling approximately 4.8 miles in length. The width of the access road varies, but will be a minimum of 15 feet wide and no greater than 30 feet wide at any location. As described in **Section 2.3**, a 0.39 acre area of sub optimal habitat on the parcel owned by the Village of Sag Harbor will be restored. Restoration of these areas will include removal of concrete and other debris, and fine grading/smoothing of the surface once all debris is removed. A complete discussion of the vegetation occurring within the proposed disturbance area is included in **Section 2.3**. Areas where the HDD equipment will be set up will require a greater area for stabilization, which will interconnect with the access road. The access road and areas of stabilization for HDD activities are depicted on the Construction Plans, prepared by Nelson & Pope located in **Appendix D**. The remainder of the area to be cleared is comprised of the area encompassed by the trench for the conduit, which will be four feet in width, and the areas disturbed for the installation of the manholes, which vary but are approximately 50 feet by 200 feet in size. In total, 18.78acres of clearing and grading are required during construction activities. Upon completion of construction, all disturbed areas will be restored with a mix of appropriate native species. Details regarding restoration are further provided in **Section 2.3**.

Grading is required in order to achieve slopes that will allow for a crane to set the manholes. Slopes of no greater than 7% are required for safe operation of the crane. As further described in **Section 2.1**, there are existing slopes within the Proposed Action Area that exceed 18% in certain locations. While grading will be necessary within the access roadway, certain areas adjacent to the access roadway will also require grading in order to achieve the 7% slope. Discrete areas east of Widow Gavits Road and west of Wainscott Road will require fill. Limited grading is required east of Wainscott Road.

An area of the ROW 1,290 feet east of Sagg Road features particularly steep slopes. In order to grade this area to achieve the required slope for construction along the access roadway, the side slopes of the graded area would exceed the width of the ROW. In order to minimize grading to the width of the ROW within this area, concrete blocks will be utilized to achieve the necessary grade transitions. Thus, all grading can be achieved within the limits of the ROW.

Given the topography and the required grade for safe operation of a crane, a total of ±10,010 cubic yards (CY) of cut is required, and ±15,135 CY of fill is required, for a net fill of ±5,125 CY. It is noted that material excavated will be utilized on site as fill in areas that require fill in order to minimize any import of additional fill required. Any imported fill will be clean, weed free, and meet all applicable New York State Department of Environmental Conservation (NYSDEC) requirements for clean fill. . The provider of any fill will supply appropriate documentation in order to ensure appropriate material is utilized during construction activities.

Coverage is required as per the NYSDEC State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities (GP 0-20-001) as the proposed ground disturbance exceeds one acre. Since the Proposed Action is the installation of an underground linear utility, only sediment and erosion controls are required as per the General Permit; no post construction stormwater management is required or proposed in association with the Proposed Action.

1.3.4 Vehicle Access

Vehicle access points during construction will be from existing roadways to the access path within the ROW or other existing paths that lead to the ROW. Access to the Bridgehampton Substation will be provided from the existing dirt access road on the north side of the Substation.

Access to the manhole on the west side of Widow Gavits Road will be provided via an existing dirt access path located approximately 390 feet south of the ROW. Select trees may need to be removed along this path in order to accommodate the crane.

Access to the ROW on the east side of Widow Gavits Road will be provided from Widow Gavits Road and Sagg Road. Access to the east of Sagg Road will be provided from the stabilized construction access roadway between Sagg Road and Wainscott NW Road. Access to the east of Wainscott NW Road will be provided from a graded path on the east side of Wainscott NW Road, which will lead to the stabilized construction roadway. The stabilized construction access roadway will continue to Stephen Hands Path. The un-stabilized access roadway between Stephen Hands Path and Buckskill Road is adequate for use by construction vehicles. A stabilized construction access roadway will continue on the east side of Buckskill Road and will extend east for approximately 3,700 feet, where it will terminate on the north side of the LIRR tracks. As the cable will be drilled beneath the LIRR tracks for this portion of the Proposed Action, no stabilized construction access roadway or other access will be permitted for approximately 864 feet between the access roads. Access to the drill pit located on the south side of the LIRR tracks will be provided from the existing dirt path that intersects with Cove Hollow Road. All remaining work towards the Buell Substation will be on the existing dirt path within the ROW; stabilization for this portion of the path is not required. In total, the stabilized construction access roadway is approximately 3.9 miles in length. All vehicle access points are illustrated on the Construction Plans, prepared by Nelson & Pope located in **Appendix D.**

Upon completion of construction, the stabilized construction access roadway will be removed and returned to its pre-existing grade and revegetated with appropriate native species to the maximum extent practicable. Long term maintenance of the access road within the ROW will be conducted by the service provider for LIPA. Maintenance activities include regular tree trimming and brush clearing to ensure the safe operation of the overhead electrical lines. Minor grading of the dirt path may occur from time to time should conditions result in the need to correct conditions resulting from rain events, equipment use, etc. No permanent stabilized roadway will be maintained within the ROW.

1.4 Construction Process and Operations

1.4.1 Construction Process

It is anticipated that the overall construction period will be 18 months and be completed in a single phase with different types of construction activities overlapping. Soil disturbance is necessary for installation of the underground cable and manholes as well as to establish suitable grades for the installation of the stabilized construction access roadway necessary for the construction of the Proposed Action and will occur throughout the Proposed Action Area with the exception of the following areas: (i) HDD conduit laydown area to the west of the Bridgehampton Substation; (ii) between Bridgehampton Sag Harbor Turnpike and the first manhole located within the Long Pond Greenbelt; (iii) Widow Gavits Road; and (iv) beneath the LIRR. Grading consisting of cutting and filling will be required throughout the ROW. Installation of the Proposed Action necessitates a maximum grade of 7% for the safe operation of large construction equipment for construction of the Proposed Action. Overall, it is anticipated that grading

activities will require cut ranging from 0 feet to approximately 5 feet and fill ranging from 0 feet to approximately 15 feet. RCA will be temporarily placed to help stabilize construction areas for the movement of heavy equipment and installation of manholes. All RCA will be removed upon the completion of construction and grades will be returned to pre-existing conditions to the maximum extent practicable. The site stabilization plan detailing the limit of disturbance is included as **Appendix D**.

Two construction methodologies will be employed for the installation of the underground transmission cable and fourteen underground manholes; HDD and open trench. HDD will be utilized to install the approximate 3,450 feet of underground transmission cable extending from the west side of Bridgehampton-Sag Harbor Turnpike to the east side of Widow Gavits Road. Initially, a 0.36 acre area north of the Bridgehampton Substation will be cleared and graded to provide a level area for the setup of the HDD equipment. Typical equipment that will be utilized for HDD includes but is not limited to a drill rig, mobile generator, recycler, frac out tank, and track mounted equipment such as an excavator.

The HDD equipment will be set up north of the Bridgehampton Substation and drilling will occur beneath approximately 2,700 linear feet of the westernmost portion of the Long Pond Greenbelt. The HDD exit pit and the underground manhole will be located within the previously disturbed area of the Long Pond Greenbelt at this location. To facilitate this construction, the existing access dirt access path entering the Long Pond Greenbelt from Widow Gavits Road and a 0.34 acre area, inclusive of the existing access pathway, within the previously disturbed portion of the Long Pond Greenbelt will be temporarily stabilized with timber matting. The temporary installation of timber matting will provide a stabilized area for the setup of the HDD equipment (drill rig, excavator, frac out tank and pump), manhole installation (crane and excavator) as well as cable splicing equipment. The HDD conduit laydown area, which is necessary to provide adequate space to fuse the conduit together will extend approximately 1,600 feet west of the HDD entry pit located north of the Bridgehampton Substation. No ground disturbance for laydown activities is required, however timber mats will be installed across the southern portion of the wetlands that cross this area to prevent damage to this habitat.

An additional HDD entry pit will be located on the east side of Widow Gavits Road within the ROW. This location will be used to conduct drilling operations headed west beneath Widow Gavits Road and Long Pond and exit in the same previously disturbed location as the western drill and underground manhole.

From the east side of Widow Gavits Road to the north side of the LIRR tracks, the Proposed Action will be installed via open trench methodology. Typically, this requires the excavation of a 4 foot wide trench that varies in depth but is a minimum of 42 inches below grade. Track mounted equipment including but not limited to excavators and skid steers will facilitate the installation. Pickup trucks will help deliver personnel and small equipment to the Proposed Action Area and larger equipment such as cable reels and conduit will be delivered via 18-wheelers.

An approximately 845 linear foot portion of the underground transmission cable will be installed via HDD beneath the LIRR ROW. The HDD entry pit will be located on the south side of the LIRR tracks and within the impervious parking facility on the north side of the National Grid owned property. The HDD exit pit will be located on the north side of the LIRR tracks approximately 2,730 feet east of the intersection of the ROW and Buckskill Road.

From the entry pit east across Cove Hollow Road, the underground cable will be installed via open trench. Construction will follow the open trench methodology outlined above.

Storing and staging of the construction equipment will occur within the established ROW of the Proposed Action Area. No storage or staging will occur on public roadways.

In total the Proposed Action will require approximately 10,010 CY of cut and 15,135 CY of fill resulting in approximately 5,125 CY of net fill required to undertake the installation of the stabilized construction access roadway and work zone areas. All soils removed during the trench operations will be backfilled over the trenches once the conduit has been installed. During the installation of the manholes, soils will be backfilled to the maximum extent practicable. In addition to the cut and fill required for the stabilized construction access roadway, excess material from the installation of the 14 manholes and associated subsurface equipment would generate a maximum of approximately 42 CY per manhole. Soil excavated during grading activities will be re-utilized to the maximum extent practicable for areas of the Proposed Action that require fill. Excess soils that cannot be re-utilized will be transported off-site and disposed of in an approved upland location.

Silt fencing and perimeter erosion controls will be put in place prior to construction to minimize the transport of soil and debris during the construction period. A Proposed Action specific Stormwater Pollution Prevention Plan (SWPPP) will be developed and filed with a Notice of Intent (NOI) with NYSDEC in conformance with the SPDES General Permit for Stormwater Discharges from Construction Activity (GP-0-20-001).

As described in **Section 2.0**, mitigation activities will be undertaken to reduce potential impacts to natural and sensitive areas. Mitigation activities will include but not be limited to restoration of vegetated areas with appropriate native species, the use of timber mats to prevent degradation of a freshwater wetland that intersects the HDD laydown area west of Bridgehampton Substation, and limiting the limits of disturbance within the existing ROW to the maximum extent practicable.

1.4.2 Construction Operations

Truck trips to and from the Proposed Action Area will occur as a result of construction activities. These trips are primarily associated with delivery of personnel, equipment and materials. Truck trips may vary depending on location of construction, overlapping construction activities, availability of materials and other factors. The number of truck trips may vary across the length of construction and may involve many deliveries in one day, and then no deliveries for a time period. An example would be delivery of equipment and machinery for HDD setup which could involve multiple deliveries in a single day, and then no deliveries until the conduit is delivered. Over the course of a day, a worst-case scenario would involve simultaneous construction in multiple areas along the Proposed Action Area (which could occur at times during the construction schedule). Below are worst-case scenario estimate ranges of the average number of trucks per day for construction of various components of the Proposed Action as well as worker vehicles.

Trucks will primarily include delivery box trucks, flatbed trucks, and trailers with equipment and larger 10-wheelers and 18-wheelers. All roads that access the Proposed Action Area have residential development that may experience temporary truck activity associated with the construction of the Proposed Action. It is estimated that construction within the ROW could progress at approximately 400-500 feet of underground cable per day and a rate of 200 feet per day when crossing the developed roadways, which could potentially generate 3 truck trips per day. Additionally, the installation of an underground manhole could necessitate 4 truck trips per day and the HDD operation and pulling of the underground cable may generate 7 truck trips per day; and stabilization and grading of the access path could generate 6 to8 truck

trips per day. Developed roadways that intersect the Proposed Action Area and will be utilized to facilitate construction are: Bridgehampton-Sag Harbor Turnpike, Widow Gavits Road, Sagg Road, Wainscott NW Road, Stephen Hands Path, Buckskill Road, and Cove Hollow Road. Truck traffic will be distributed among these named roadways and is expected to vary based upon which portions of the Proposed Action Area are undergoing construction at any given time. Truck access is temporary during the construction period, intermittent due to delivery schedules, dispersed due to road configuration, and not excessive given the estimates provided above. Truck materials and equipment deliveries are also intermittent. As a result of these factors, significant adverse impacts due to truck activity are not expected. All of the access roads are in good condition as noted above, and capable of truck delivery activity. All truck activity associated with development will conform in all respects with local roadway requirements in regard to vehicle, weight, speed, roadway sweeping, bonding for road repair, and other applicable local requirements.

With respect to construction worker traffic, such activity will be associated with smaller vehicles and therefore less impact that is more typical of residential street traffic. Since some workers will carpool to/from the site in personal vehicles or arrive/depart via large groups in commercial vehicles, it is reasonable to assume vehicle occupancy of more than one worker per vehicle. Given the variability of construction worker activity, worker vehicle trips are not expected to adversely or significantly impact area roads. See **Section 4.1** for further discussion of anticipated construction impacts.

Construction activities will typically occur Monday through Friday from 7:00am to 7:00pm. Occasional Saturday work may be required. Nighttime work may be required for the pull through of the conduit in the areas of HDD. A maximum of 1 night of work will potentially be required for the pull through of the longer HDD segment underneath the west side of the Long Pong Greenbelt.

1.5 Permits and Approvals Required

Prior to the issuance of any permits or approvals, the SEQRA must be completed. This DEIS is intended to provide LIPA (as lead agency under SEQRA for the Proposed Action) and all involved agencies with the information necessary to render an informed decision on the Proposed Action, and provide the public and other interested parties an opportunity to comment on the Proposed Action . Once accepted, the document will be the subject of public review, followed by the preparation of a Final Environmental Impact Statement (FEIS). Upon completion of the FEIS, LIPA will be responsible for the adoption of a Statement of Findings.

Due to the potential temporary loss of tiger salamander habitat, a Part 182 Incidental Take permit will be required from the NYSDEC. The NYSDEC has been contacted to provide additional guidance regarding potential impacts to the species. The NYSDEC and PSEG Long Island personnel have attended multiple meetings to review the potential impacts resulting from the Proposed Action and to discuss appropriate mitigation for those impacts. Temporary loss of suitable habitat within 535 feet of a known tiger salamander breeding pond will result in a significant adverse impact to the species for which mitigation has been developed. PSEG Long Island has committed to the restoration of all habitat within the 535 foot buffer of the known breeding pond upon completion of construction resulting in no permanent loss of habitat. In order to provide a net conservation benefit to the species, approximately 0.39 acres of sub-optimal habitat on the east side of Bridgehampton-Sag Harbor Turnpike will be restored to more suitable native habitat. See **Section 2.3** for a discussion of potential impacts and mitigation. See **Table 1.3** for a list of permits and approvals required.

Table 1.3: Permits and Approvals Required

Regulatory Authority	Permit or Approval Type
Long Island Power Authority-Lead Agency	SEQRA
Village of Sag Harbor	Property Easements
Town of Southampton	License Agreement
Town of East Hampton	Property Easements
Suffolk County	Property Easements
Long Island Railroad	Crossing Permit
Long Island Railroad	Longitudinal Permit
New York State Department of State	Coastal Consistency
New York State Department of Environmental Conservation	Incidental Take Permit (Part 182)
New York State Department of Environmental Conservation	Individual Permit (Article 24- Freshwater Wetlands)
New York State Department of Environmental Conservation	Stormwater Pollution Prevention Plan (GP#0-20-001)
United States Army Corp of Engineers	Nationwide Permit #57

2.0 Natural Environmental Resources

2.1 Soils and Topography

2.1.1 Existing Conditions

The following sections of this DEIS discuss existing conditions in the Proposed Action Area with regard to soils (**Section 2.1.1.1**) and topography (**Section 2.1.1.2**).

2.1.1.1 Soils

According to the *Soil Survey of Suffolk County, New York*[5] (Soil Survey) soils are classified by soil characteristics, depositional histories and other factors into soil associations, which in turn are grouped into soil series. The Soil Survey provides complete mapping, classification, and descriptions of soils found in Suffolk County. An understanding of soil characteristics is important in land development and environmental planning, as it aids in determining vegetation type, slope, drainage characteristics, engineering properties, past disturbance, and land use limitations. These descriptions are general, however, and soil characteristics, particularly those of glacial origin, can vary greatly from location to location. The slope classifications noted in this subsection are generalized based upon regional soil types; see **Section 2.1.1.2** for a more detailed description of topographic conditions in the Proposed Action Area.

The acreages and percentages of the soils in the Proposed Action Area are summarized in **Table 2.1**, below and depicted in **Figure 2-1**.

Table 2.1: Existing Soils

Soil Type	Acres	Percentage of Proposed Action Area
Bridgehampton silt loam, 0-2 % slopes (BgA)	0.52±	1.21±%
Carver and Plymouth sands, 0-3 % slopes (CpA)	2.58±	5.99±%
Carver and Plymouth sands, 3-15 % slopes (CpC)	19.22±	44.63±%
Carver and Plymouth sands, 15-35 % slopes (CpE)	5.66±	13.15±%
Cut and fill land, gently sloping (CuB)	0.77±	1.78±%
Haven loam, 0-2 % slopes (HaA)	0.62±	1.47±%
Made land (Ma)	0.95±	2.20±%

[5] Warner et al. *Soil Survey of Suffolk County, New York.* United States Department of Agriculture and Cornell University Agricultural Experiment Station. April 1975.

Soil Type	Acres	Percentage of Proposed Action Area
Plymouth loamy sand, 0-3 % slopes (PIA)	5.24±	12.18±%
Plymouth loamy sand, 3-8 % slopes (PIB)	1.52±	3.52±%
Plymouth loamy sand, silty substratum, 0-3 % slopes (PsA)	1.79±	4.15±%
Plymouth loamy sand, silty substratum, 3-8 % slopes (PsB)	0.25±	0.59±%
Riverhead sandy loam, 0-3 % slopes (RdA)	3.62±	8.41±%
Swansea muck, 0-1 % slopes, coastal lowland (PsA)	0.32±	0.74±%
Total	43.06±	100%

As indicated in the table above, approximately 44.6± percent of the soils in the Proposed Action Area are CpC - Carver and Plymouth sands, 3-15% slopes. Four other soils are relatively common in this area, each ranging between 6 and 14 percent of the total acreage: CpE-Carver and Plymouth sands, 15-35% slopes (13.2± percent); PIA-Plymouth loamy sand, 0-3% slopes (12.2± percent); RdA-Riverhead sandy loam, 0-3% slopes (8.4± percent); and CpA-Carver and Plymouth sands, 0-3% slopes (6.0± percent). The remaining eight soil types comprise a minor portion of the Proposed Action Area, cumulatively comprising 15.6± percent, and with none individually exceeding 4.2 percent of the total acreage.

The following descriptions of the soil types found in the Proposed Action Area are based on information in the Soil Survey:

Bridgehampton silt loam, 0--2 % slopes (BgA) – This gently sloping soil is on outwash plains on large, moderately undulating areas or on side hills between broad flats and intermittent drainageways. Included with this soil are areas of Haven and Riverhead soils too small to be mapped separately. Also included are small areas near Bridgehampton hamlet that have a thin layer of sand between the upper and lower parts of the subsoil. The hazard of erosion is moderate for this Bridgehampton soil. The erosion hazard and the tendency of the soil to crust on drying are the main concerns for management. Measures need to be taken to control runoff. This soil type, comprising about 1.2 percent of the Proposed Action Area, is found in two locations at the eastern end of the proposed cable route, between the LIRR crossing adjacent to the Buell Substation and in the Buell Substation.

Carver and Plymouth sands, 0-3 % slopes (CpA-) – These soils are mainly on outwash plains; however, they are also on some flatter hilltops and intervening draws on moraines. A small part of this mapping unit is slightly undulating. This unit can be made up entirely of Carver sand, entirely of Plymouth sand, or of a combination of the two soil types. The Carver soil in this

mapping unit has the profile described as representative of the Carver series. The Plymouth soil has a profile similar to the one described as representative of the Plymouth series, except that its texture is sand throughout the profile, rather than loamy sand. Included with these soils in mapping are small areas of Plymouth loamy sand and areas of loamy sands that have a profile similar to soils of the Carver series. The hazard of erosion is slight on the soils in this unit. These soils are droughty. Natural fertility is low. This soil type, comprising about 6.0 percent of the Proposed Action Area, is found in two locations, at the eastern end of the proposed cable route, around Stephen Hands Path and between Buckskill Road and the LIRR (in the vicinity of Stations 21100 and 23000-24000, respectively[6]).

Carver and Plymouth sands, 3-15 % slopes (CpC) – These soils are mainly on rolling moraines; however, they are also on the side slopes of many drainage channels on the outwash plains. Individual areas of this mapping unit are large on the rolling topography of the Ronkonkoma moraine, and in these areas slopes are complex. On the outwash plain, this unit is in long, narrow strips parallel to drainageways. This unit can be made up entirely of Carver sand, entirely of Plymouth sand, or of a combination of the two soils. Small areas of these soils on moraines are as much as 25 percent gravel throughout, especially along the crests of low ridges. In the bottom of many closed depressions, these soils have siltier accumulations from adjoining hillsides; and in some places silty lenses are deep into the substratum. The hazard of erosion is slight to moderate on the soils in this unit. These soils are droughty, and natural fertility is low. In some places, slope is a limitation to use. This soil type, comprising about 44.6 percent of the Proposed Action Area, is found at numerous locations throughout the entire length of the proposed cable route, in the proposed laydown area, and at both substations.

Carver and Plymouth sands, 15--35 % slopes (CpE) – These soils are almost exclusively on moraines, except for a few steep areas on side slopes along some of the more deeply cut drainage channels on outwash plains. On morainic landforms these areas are large, and slopes generally are complex, especially on the Ronkonkoma moraine. On the outwash plains the areas are in long, narrow strips parallel to the drainage channels. Some areas are made up entirely of Carver sand, others entirely of Plymouth sand, and still others of a combination of the two soils. Included with these soils in mapping are small areas of loamy sand and small areas of Carver and Plymouth sands, 0 to 3 percent slopes, or 3 to 15 percent slopes. Also, on moraines, some areas of this unit contain as much as 30 percent gravel and a few cobblestones. Such areas generally are small and are in a mixed pattern with soils that contain less gravel. The hazard of erosion is moderate to severe for the soils in this unit. These soils are droughty and natural fertility is low. Moderately steep to steep slopes are a limitation to use. This soil type, comprising about 13.2 percent of the Proposed Action Area, is found at multiple locations in the westerly portion of the proposed cable route, to the west of Wainscott Northwest Road (in the vicinity of Station 13400).

Cut and fill land, gently sloping (CuB) – This series is comprised of areas that have been cut and filled for nonfarm uses. The areas generally are large, but some areas are about five acres in size. This soil type is comprised of moderately sloping areas that have been graded for building sites. Slopes range from 1 to 8 percent. This soil type, comprising about 1.8 percent of the Proposed Action Area, is found at the Bridgehampton Substation.

[6] See Construction Access Plan, **Appendix D**. Station 0 is at the westerly terminus of the proposed underground transmission cable installation route at the Bridgehampton Substation. The easterly end of the proposed cable route is at Station 27416 at the Buell Substation. The station numbers indicate distance in feet from the westerly terminus, see **Appendix D.**

Haven loam, 0-2 % slopes (HaA) – This soil has the profile described as representative of the series. It is mostly nearly level and generally is on outwash plains. Some areas of this soil are on moraines and generally are on the top of low-lying hills. Some of these areas are slightly undulating. Most areas of this soil are large, but on moraines the areas are smaller and are irregular in shape. Included with this soil in mapping are small areas of Scio soils and some crescent-shaped, gravelly areas. Also included are soils that have a moderately coarse-textured surface layer and a medium-textured subsoil. In many areas of this soil that are mapped in association with Bridgehampton soils, the soil is deeper and siltier than that described as representative of the series. Also included, on moraines, are areas of Montauk soils that have a very weak fragipan (i.e., a hard, dense soil layer that restricts vertical water flow). The hazard of erosion is slight on this Haven soil. Primary management concerns are keeping the soil from crusting after rain and susceptibility to agricultural impacts (i.e., maintaining tilth and reducing the plow pan). This soil type, comprising less than 2 percent of the Proposed Action Area, is found in three locations: in a strip along the east side of the Bridgehampton Substation, the westerly portion of the laydown area, and a small segment of the cable route to the west of Stephen Hands Path (in the vicinity of Station 19200).

Made land (Ma) – Made land comprises areas that are mostly covered with pieces of concrete, bricks, trash, wire, metal, and other non-soil material. Some areas are on the surface of the original soil, others are in large holes dug for disposal purposes, and still others are in old gravel pits converted to this use. Included with this unit in mapping are sanitary landfills that have been excavated and subsequently filled with waste material. After these areas were filled, they were covered with several feet of soil. This soil type, comprising approximately 2.2 percent of the Proposed Action Area, is found in one location, along a segment of the proposed cable route to the immediate east of Bridgehampton-Sag Harbor Turnpike (in the vicinity of Station 500).

Plymouth loamy sand, 0-3 % slopes (PIA) – This soil has the profile described as representative of the series. It is mainly on outwash plains south of the Ronkonkoma moraine. It is also on flat hilltops and in drainageways on morainic deposits. The areas generally are nearly level, but they are somewhat undulating in some places. Areas on outwash plains are large and uniform, and areas on the moraine are small and irregular. Included with this soil in mapping are small areas of Riverhead soils that have a texture that is marginal to loamy sand. Also included are some loamy sands that have a profile similar in appearance to the soils of the Carver series. On moraines, scattered areas of Montauk sandy variant soils that have a weak fragipan and loose underlying till layers are included. These areas intergrade between Plymouth loamy sands and Montauk loamy sand, which are sandy variants. In the larger areas of this unit, small acreages of Carver and Plymouth sands are included. Scattered throughout the County are areas that are dominantly fine sand. The hazard of erosion is slight for this Plymouth soil. This soil type, comprising about 12.2 percent of the Proposed Action Area, is found at multiple locations in the eastern portion of the proposed cable route, between Wainscott Northwest Road and the LIRR (between Station 13400± and Station 24200±).

Plymouth loamy sand, 3--8 % slopes (PIB) – This soil is on moraines and outwash plains. Slopes are undulating, or they are single along the sides of intermittent drainageways. The undulating areas generally are large. The areas along intermittent drainageways are narrow and long, and they follow the course of the drainage channels. Included with this soil in mapping are small areas of Riverhead soils that are marginal to loamy sand in texture. Also included are loamy sands that have profiles similar to those of soils in the Carver series. The hazard of erosion is slight on this Plymouth soil. This soil tends to be droughty. This soil type, comprising approximately 3.5

percent of the Proposed Action Area, is found in a few limited locations at the westernmost end of the overall area, including a strip along the east side of the Bridgehampton Substation and the westerly portion of the Proposed Action laydown area.

Plymouth loamy sand, silty substratum, 0-3 % slopes (PsA) – This nearly level Plymouth soil is almost exclusively on outwash plains between Sagaponack and East Hampton. It generally is associated with Bridgehampton soils, and it exists as a transition to the coarser-textured Carver and Plymouth soils. The elevation of this soil is slightly higher than that of the adjoining Bridgehampton soils. This soil has few or no coarse fragments in the surface layer, in the subsoil, and in the upper part of the substratum. Included with this soil in mapping are areas that are sandy loam in the surface layer and in the upper part of the subsoil and loamy sand in the lower part of the subsoil above the silty substratum. Also included are areas that have Plymouth sand overlying the silty layers. The hazard of erosion is slight for this Plymouth soil. This soil is more droughty than adjoining areas of Bridgehampton soils. This soil type, comprising about 4.2 percent of the Proposed Action Area, is found in two locations in the easterly portion of the proposed cable route, between Buckskill Road and the Buell Substation (between Station 23000± and Station 28050±).

Plymouth loamy sand, silty substratum, 3-8 % slopes (PsB) – This soil is on outwash plains between Sagaponack and East Hampton, and along shallow drainageways. Slopes are undulating in many places. This soil is associated with Bridgehampton soils. It commonly is between Bridgehampton soils and nearby areas of Carver and Plymouth soils. This soil has few or no coarse fragments in the surface layer, in the subsoil, or in the silty substratum. Included with this soil in mapping are soils in which the surface layer and upper part of the subsoil are sandy loam, but the lower part of the subsoil is loamy sand. Also included are areas in which the material over the silty substratum is sand. The hazard of erosion is slight in this Plymouth soil. Because of the slope, lateral movement of moisture above the substratum tends to make this soil almost as droughty as Plymouth loamy sand, 3 to 8 percent slopes. This soil type, comprising less than 1 percent of the Proposed Action Area, is found only in a single, isolated location to the west of the proposed LIRR crossing near the Buell Substation (in the vicinity of Station 25000).

Riverhead sandy loam, 0-3 % slopes (RdA) – This soil has the profile described as representative of the series. It generally is on outwash plains, and the areas are large and uniform. Where this soil occurs on outwash plains, it generally has slope characteristics of this landform. Slopes are undulating in places. A few small, irregular areas are on moraines. Included with this soil in mapping are small areas of Sudbury soils that are less than 1 to 2 acres in size. The hazard of erosion is slight for this Riverhead soil. This soil is limited only by moderate droughtiness in the moderately coarse textured solum. It tends to develop a plow pan if it is intensively farmed. This soil type, comprising about 8.4 percent of the Proposed Action Area, is found in one segment of the easterly portion of the proposed cable route, to the east of Wainscott Northwest Road (between Station 15000± and Station 18000±).

Swansea muck, 0-1 % slopes, coastal lowland (SwA) – Muck consists of very poorly drained organic soils that formed in partly decomposed or almost completely decomposed woody or herbaceous plants. The areas generally are nearly level and occur in the bottom of closed depressions or kettle holes and along a few of the larger streams. A few areas are between tidal marshes and areas of better drained upland soils. Muck is made up of 16 to 48 inches of spongy organic material over loose sand and gravel. The amount of partly decayed plants in the organic layer varies. The water table is at or near the surface most of the year. Several inches of water

are on the surface late in winter and in spring. Included with this land type in mapping are small areas that are muck to a depth of more than 48 inches. This soil type, comprising less than 1 percent of the Proposed Action Area, is found only in a single, isolated location in the wetland area to the south of Long Pond (in the vicinity of Station 3400).

Table 2.2 presents a list of soil features that may affect development activities associated with the Proposed Action, as well as soil limitations that may constrain development of the Proposed Action. It is noted that the Soil Survey also provides information regarding a range of soil features that may affect development activities and soil limitations that may constrain development which are not relevant to the Proposed Action, including those relating to irrigation, building foundations, sewage disposal, agricultural suitability, home sites, streets and parking lots, sanitary landfills, camp areas, picnic grounds and athletic fields. Soil features affecting Made land are not included in the table below, as the Soil Survey has determined that characteristics are too variable to estimate soil feature impacts and limitations. Additionally, limitations are not specified for Made land for similar reasons regarding the variability of the unit.

As summarized in **Table 2.2**, according to the Soil Survey, some soils in the Proposed Action Area have only slight limitations, which indicates that these soils have few or no limitations for a particular use(s) or that any limitations that are present can be overcome at little cost. A rating of moderate indicates a limitation that is more difficult and/or costly to correct. A rating of severe indicates that the use of the given soil is severely limited by one or more soil characteristics that are difficult and/or costly to overcome. A severe rating does not mean that a soil cannot be used for the specific use, but points out the soil's limitations that must be overcome through engineering design.

Table 2.2: Soil Limitations Within the Proposed Action Area

Soil Type[7]	Soil Features Affecting Drainage	Limitations for		
		Lawns and Landscaping[8]	Pipeline Locations	Paths and Trails
Bridgehampton silt loam, 0-2 % slopes (BgA)	Well drained to moderately well drained; poor stability	Slight	Slight	Slight
Carver and Plymouth sands, 0-3 % slopes (CpA)	Excessively drained	Severe: sandy surface layer	Severe: stability	Severe: sandy surface layer
Carver and Plymouth sands, 3-15 % slopes (CpC)	Excessively drained	Severe: sandy surface layer	Severe: stability	Severe: sandy surface layer
Carver and Plymouth sands, 15-35 % slopes (CpE)	Excessively drained	Severe: slopes; sandy surface layer	Severe: stability	Severe: sandy surface layer; slopes
Haven loam, 0-2 % slopes (HaA)	Well drained	Slight	Moderate: stability	Slight
Made land (Ma)	N/A	N/A	N/A	N/A
Plymouth loamy sand, 0-3 % slopes (PIA)	Excessively drained	Severe: sandy surface layer	Moderate: stability	Moderate: sandy surface layer
Plymouth loamy sand, 3-8 % slopes (PIB)	Excessively drained	Severe: sandy surface layer	Moderate: stability	Moderate: sandy surface layer
Plymouth loamy sand, silty substratum, 0-3 % slopes (PsA)	Excessively drained	Severe: sandy surface layer	Moderate: stability	Moderate: sandy surface layer

[7] Note Cut and fill land, gently sloping (CuB) is not included in this Table as this soil type is comprised of areas that have been cut and filled, therefore specific soil limitations range based on fill qualities. See site-specific soil boring results below.

[8] The Soil Survey does not provide a category for limitations for native plant restoration. Limitations for Lawns and Landscaping provide the closest analogous category, however, no lawn or landscaping will be installed as part of the Proposed Action.

Soil Type[7]	Soil Features Affecting Drainage	Limitations for		
		Lawns and Landscaping[8]	Pipeline Locations	Paths and Trails
Plymouth loamy sand, silty substratum, 3-8 % slopes (PsB)	Excessively drained	Severe: sandy surface layer	Moderate: stability	Moderate: sandy surface layer
Riverhead sandy loam, 0-3 % slopes (RdA)	Well drained	Slight	Moderate: stability	Slight
Swansea muck, 0-1 % slopes, coastal lowland (PsA)	N/A	Severe: prolonged high water table above depth of ½ foot with some ponding	Severe: prolonged high water table above depth of ½ foot	Severe: prolonged high water table above depth of ½ foot

A site-specific *Subsurface Investigation and Geotechnical Evaluation* (Geotechnical Report), prepared by Power Engineers, Inc., December 22, 2020, was undertaken to "…ascertain the general subsurface soil and water conditions at select locations along the proposed underground transmission route, to evaluate the engineering significance of these findings, and to provide geotechnical recommendations related to the design and installation of underground transmission circuit and vault structures." See **Appendix E** for the full report, which is summarized below.

The investigation conducted for the Geotechnical Report included collection of data from nine soil borings within the Proposed Action Area, as follows (from west to east):

Table 2.3: Soil Borings

Boring #	Location	Boring Depth (feet)
1	Just west of the Bridgehampton Substation (near Station 240±)	101
2	Just northeast of Tower 982 (near Station 1600±)	102
3	Just southeast of Tower 985 (near Station 3050±)	101
4	Just east of Sagg Road (near Station 4540±)	16
5	Just west of Northwest Road (near Station 13400±)	16
6	Just west of Stephen Hands Path (near Station 21060±)	16
7	Just west of Blue Jay Way (near Station 23900±)	16
8	Just west of HDD crossing, north side of LIRR (near Station 25560±)	41
9	Just northwest of the Buell Substation (near Station 25960±)	42

The descriptions in the Geotechnical Report are based on the subsurface soil and groundwater conditions encountered during field investigations performed in May, September and November 2020. Observations of the soil conditions in the Proposed Action Area included:

- All nine soil borings were found to encounter generally similar conditions across the length of the Proposed Action Area, consisting of very loose to medium compact sand, with lesser proportions of silt, gravel, and organic material that extended to depths ranging from 4± to 8± feet below ground surface (bgs).
- The surficial materials were generally underlain by non-plastic, coastal plains soils comprised predominantly of loose to compact sand with lesser proportions of silt, gravel and cobbles that extended to boring termination depths ranging from 16± to 42± feet bgs in Borings 4 through 9, and 22± to 42± feet in Borings 1, 2, and 3.
- Underlying the medium compact silty, gravelly sand at a depth of 27± feet bgs, Boring 1 encountered medium compact silt and fine sand that extended to a depth of 47± feet bgs, followed by layers of compact to very compact silty sand, and very compact sand and gravel that extended to boring termination at a depth of 101± feet bgs. The exceptions are discrete layers of medium compact to very compact clayey sand with silt encountered between depths of 52± and 57± feet bgs, and between depths of 82± and 87± feet bgs.
- Underlying the medium compact gravelly sand with silt at a depth of 22± feet bgs, Boring 2 encountered varying layers of medium compact to compact sand with intermittent zones of gravel and trace clay that extended to a depth of 82± feet bgs, underlain by compact silty sand with lesser proportions of gravel that extended to boring termination at a depth of 102± feet bgs.
- Underlying the loose to medium compact silty sand with gravel at a depth of 42± feet bgs, Boring 3 encountered medium compact to compact sand and silt containing isolated zones of trace clay that extended to a depth of 78± feet bgs, underlain by medium compact to compact silty sand with varying proportions of clay and gravel that extended to boring termination at a depth of 101± feet bgs.
- Cobbles and cobble fragments were encountered within the sand and gravel layers throughout the depths investigated.

- Trace amounts of wood fragments were encountered in Borings 4, 5 and 8 at depths ranging from 2± to 14± feet bgs.

The Geotechnical Report notes that actual subsurface conditions will vary between the borehole locations in both the horizontal and vertical dimensions.

2.1.1.2 Topography

The Proposed Action Area has been used as an overhead utility ROW and two substations. Therefore, ground elevations have been altered for the installation of utility infrastructure, including the placement of towers containing overhead electrical cables and associated equipment, and the existing unpaved path beneath the towers. However, the overall topography along the 5.2±-mile length of the ROW that will serve as the route for the proposed underground transmission cable between the Bridgehampton and Buell Substations and the ROW segment to the west of the Bridgehampton Substation that will be used for conduit laydown, will generally follow the natural contours of the land.

As illustrated in **Figure 2-2** and detailed in the engineering drawings (see **Appendix A**), land elevations in the Proposed Action Area generally slope downward in a west-to-east direction. The overall topography of the proposed cable route can be described as having pronounced undulations, particularly in the westerly portion of the route, while the proposed conduit laydown area to the west of the Bridgehampton Substation has less topographic relief. Land elevations in the Proposed Action Area range from a low of 14± feet above mean sea level (amsl) in the wetland area to the south of Long Pond (in the vicinity of Station 3400) to a high point of more than 130 feet amsl at multiple locations, including the area of the proposed cable route between Sagg Road and Northwest Path (in the vicinity of Station 6000) and again between Town Line Road and Wainscott Northwest Road (in the vicinity of Station 11000) within the cable route, as well as the westernmost end of the conduit laydown area.

Within the proposed cable route, proceeding eastward from its westerly terminus, there is a steady drop in elevation within the segment proposed for HDD installation between the Bridgehampton Substation and the low point to the south of Long Pond (in the vicinity of Station 2200, with elevation 20± feet amsl). Continuing to the east, topography undulates generally in the elevation range of 15± to 40± feet amsl, to the termination of the HDD segment to the east of Widow Gavits Road (in the vicinity of Station 4700). The ground elevation generally rises thereafter in an eastward direction, with some undulations, in the section proposed for trenching installation, to the vicinity of Station 5900 (at elevation 130± amsl); and then goes through a series of pronounced hills ranging between 95± and 130± feet amsl to the vicinity Town Line Road (Station 9600±). Continuing eastward, the topography flattens to a series of more gentle slopes to the vicinity of Station 11700 between elevations 110± and 130± feet amsl; and then the elevation steeply rises from 100± to 130± feet amsl (in the vicinity of Station 11900), and then decreases steadily to 70± feet amsl at Station 12800, rises again to 100± feet amsl at Station 13100±, and then decreases gradually below 25 feet amsl in the vicinity of Station 14200 just to the west of Wainscott Northwest Road. Thereafter, continuing eastward, the topography is gently rolling, with elevations remaining in the range of 20 to 50 feet amsl, to the easterly terminus of the route at the Buell Substation.

As illustrated in **Appendix A**, the topography of the proposed 1,600±-linear foot conduit laydown area slopes gradually downward, with slight undulations, from a high of more than 130 feet amsl at its westerly end to a low of approximately 100 feet amsl in the area of the Bridgehampton Substation. Both substations are situated on essentially level ground, with the Bridgehampton Substation at an elevation of 102 feet amsl and the Buell Substation at 44 feet amsl. Additionally, both substations include areas of sloping land, situated in the northerly portion of the Bridgehampton Substation and the southeasterly portion of the Buell Substation.

Table 2.4 shows the breakdown of slope categories in the limits of anticipated disturbance (see the Proposed Construction Access Plans, **Appendix D**), ranging from 0 to 10 percent gradients for gentle slopes, to 10 to 15 percent gradients for intermediate slopes, to gradients exceeding 15 percent for moderate to steep slopes.[9]

Table 2.4: Existing Slope Conditions in the Limits of Anticipated Disturbance

Slope Category	Acres	Approximate Percentage of Proposed Action Area
0-10 %	14.22±	75.7± %
10-15 %	2.50±	13.3± %
>15 %	2.06±	11.0± %

2.1.2 Anticipated Impacts

The following sections analyze the anticipated effect of the Proposed Action on soils (**Section 2.1.2.1**) and topography (**Section 2.1.2.2**).

2.1.2.1 Soils

The Proposed Action involves the installation of an underground transmission cable along a 5.2±-mile route within a ROW as described in detail in **Section 1.4**. Along approximately 85 percent of the overall 5.2±-mile cable route (i.e., 4.4± miles), the cable will be installed underground via trenching (approximately four-foot-wide trench). In addition to excavation for the cable installation along the trenched segments of the cable route, soil disturbance will also be necessary for the installation of the manhole vaults and for the construction of a temporary construction access roadway and stabilized work zone areas within the ROW that are necessary to facilitate the movement of heavy construction equipment. Soil disturbance will also occur in a 0.9±-acre area to the north of the Bridgehampton Substation, which will serve as an operating location for HDD equipment to be used for cable installation described below. The area of ROW to the west of the Bridgehampton Substation that is proposed to be used for temporary conduit laydown for the HDD installation will not require any clearing, grading or excavation. Soil disturbance will be largely avoided along the 3,450±-foot (0.8±-mile) section of the cable extending east from the Bridgehampton Substation, passing beneath the Long Pond Greenbelt, to the west side of Widow Gavits Road (split into two segments by the installation of a manhole vault). These two segments of the cable will be installed via HDD resulting in only limited soil disturbance associated with the installation of a single manhole vault between the two segments. An additional 845±-foot segment of the cable will be installed via HDD beneath the LIRR line to the west of the Buell Substation, between Station 26125± at its west end and Station 27075± at its east end.

The trench that will be used to install the majority of the length of the proposed transmission cable (i.e., totaling 4.4± miles of the 5.2±-mile cable route, not including the segment to be installed via HDD) will be a minimum of 42 inches below-grade and four feet in width. The twelve inches that occupy the greatest depth of the trench will contain the cable and associated conduits. Excavation depths will fluctuate somewhat depending on small scale variations in topography, as the base of the trench will have smoother

[9] The three ranges of slopes gradients discussed in this DEIS are as specified in Part 1 of the Environmental Assessment Form (question E.2.f)included as Appendix B-2.

and more moderate gradients than the existing ground surface. Larger excavations (a minimum of 20 feet wide by 25 feet long) will be needed for each of the 14 manholes (8 feet by 16 feet) to be installed along the proposed cable route.

The HDD installation will eliminate the need to excavate downward from the ground surface to install the proposed underground transmission cable at the desired depth, in contrast to trenching. The HDD operation will result in cuttings from the one±-foot-diameter, 4,295±-foot HDD segment, which will generate only about 3 percent of the volume of excavated material per foot of cable installation in comparison to the material that will be generated by the trenching installation method.

Disturbance of the ground surface outside of the trenching excavation will be required to install the cable. It will also be necessary to utilize the ROW for the passage of construction equipment and vehicles needed for construction activities, including installation of a stabilized construction access road in order to allow for safe installation of the cable and stabilized work zone areas (approximately 200 feet in length by 50 feet in width) within portions of the ROW as illustrated in the Proposed Construction Access Plans in **Appendix D**. It is estimated that approximately 1.8 acres of disturbance will occur within the substations and 15.84 acres of disturbance will occur within the ROW area along the proposed cable route for trenching, installation of manholes, operation of the HDD equipment, and vehicle access. Since the design details regarding this construction access path are primarily influenced by topography, the description and anticipated impacts in regard to same are presented in the following section of this DEIS (**Section 2.1.2.2**).

Clearing/disturbance is also proposed in a 0.9±-acre area within the ROW north of the Bridgehampton Substation to accommodate the HDD drilling equipment. A 0.36-acre portion of the cleared area will also require grading to facilitate construction. Overall, it is estimated that approximately 18 acres of disturbance will occur within the 43.06±-acre Proposed Action Area; only about 2.7 acres of this disturbance area is accounted for by the 4.4-mile long, four-foot-wide trench.

It is estimated that approximately 10,010 CY of soil excavation (cut) will be required for construction of the access roadway within the ROW and grading at the Bridgehampton Substation, while approximately 15,135 CY of material will be needed for fill and stabilization to provide the necessary grades to facilitate the movement of heavy equipment in the Proposed Action Area.

Overall, therefore, approximately 5,125 CY of net fill will be needed to undertake the installation of construction access roads and other work zone areas (required for installation of manholes and temporary staging of the HDD drill and associated equipment).[10] This additional fill material is proposed to consist of RCA, which has desirable properties for the purposes of stabilization to accommodate heavy construction vehicle traffic. The use of timber matting was analyzed as an alternative to the use of RCA for construction access road stabilization. Due to the significant steep slopes and undulating topography in the ROW, use of timber matting was determined to not be feasible for the entire length of the access road. Although use of timber mats cannot be implemented for the entirety of the roadway, timber matting will be utilized in the most sensitive area for the installation of the manhole within the Long Pond Greenbelt. As noted

[10] Included in these quantities is the area requiring grading to the north of the Bridgehampton Substation to accommodate the HDD drilling equipment, which is anticipated to result in 1,445 cubic yards of soil to be excavated, of which 80 cubic yards will be reused in this area for fill, for a net cut volume of 1,365 cubic yards.

previously, RCA used to facilitate temporary vehicle access will be removed from the site upon the completion of construction – see further discussion in **Section 2.1.3**.

Excess material from the installation of the 14 manholes and associated subsurface equipment is also anticipated (approximately 42 CY per manhole, or a total of 588± CY). This material will be reused as fill to the extent practicable, depending on the sequencing of construction activities. Any material excavated within the Proposed Action Area that is not retained for on-site reuse would be transported to a suitable, approved disposal location in accordance with all applicable regulations. Given the generally coarse-grained nature of the soils in the Proposed Action Area, and the absence of intensive uses of the ROW that could have caused significant contamination, it is expected that any such exported material would be suitable for use as clean fill and would not require special disposal if removal from the Proposed Action Area is required.

The intent at the completion of construction is that the stabilized access road will be removed and returned to its pre-existing grades along the ROW to the maximum extent practicable. Minor grading of the dirt path may occur from time to time should conditions result in the need to correct conditions resulting from rain events, equipment use, etc. No permanent stabilized roadway will be maintained within the ROW. See further discussion in **Section 2.1.2.2** regarding topographic modifications during construction along the proposed cable route.

An assessment of soils conducted based on Soil Survey information indicates that on-site soils have some limitations for development due to sandy surface layer, stability, and slopes. However, modern engineering design and construction methods are effective in overcoming these limitations, such that significant adverse impacts related to soils are not expected to result from the Proposed Action. In particular, a site-specific SWPPP and associated Erosion & Sediment Control Plan have been developed, which are designed to provide stabilization as soon as practicable after disturbance, and to otherwise prevent or minimize sediment transport during construction, including measures to address potential sediment transport resulting from both the action of water and wind. See the SWPPP and Erosion and Sediment Control Plan in **Appendix F,** and a detailed synopsis in **Section 2.1.3** below.

Except for the small area to be occupied by the 14 manholes to be installed along the proposed cable route, areas containing existing vegetation that have to be cleared and/or graded for the Proposed Action will be stabilized via revegetation as soon as practicable to minimize the potential for erosion and sediment transport.

Upon completion of the Proposed Action and re-establishment of vegetative cover in disturbed areas, the ROW containing the new underground transmission cable will have equivalent long-term stability with regards to soil erosion and sediment transport as applies under existing conditions, with the generally coarse-grained characteristics of these soils helping to promote rapid infiltration and moderating the generation of surface runoff, and restoration plantings providing soil stabilization as well as stormwater control. As noted above, the Proposed Action will result in only a minimal increase in impervious surface area – i.e., 154± square feet associated with 14 new manholes access covers – resulting in a negligible increase in the generation of stormwater runoff generated within the ROW, which will readily be absorbed by and infiltrate into the surrounding pervious soils along the ROW.

The HDD installation for the Proposed Action will utilize a drilling fluid to facilitate the advancement of the drill bit through the soil, which is a standard practice for such operations. This drilling fluid will consist

of potable water obtained from the Suffolk County Water Authority (SCWA) mixed with inert materials, such as naturally occurring bentonite clay, which will not pose the potential for releasing hazardous substances into soils. The HDD drilling operation is also expected to utilize Polywater® J Lubricant, or equivalent, to facilitate the pulling of the conduit through the borehole. This product contains no hazardous components as defined under federal regulations and, therefore, like the drilling fluid, will not pose the potential for releasing hazardous substances into soils – see **Appendix G**.

A 15±-foot wide by 1,600±-foot long section of ROW to the west of the Bridgehampton Substation will be used temporarily as a laydown area for cable conduit to be installed via HDD. No soil excavation, filling or other direct impacts to soils will occur in this area. Timber matting will be used in the cable conduit laydown area to provide a stable work surface as needed, particularly at locations having saturated substrate, including a portion of the laydown area that extends into freshwater wetlands. Similarly, temporary timber matting will be used to stabilize the existing access dirt access path entering the Long Pond Greenbelt from Widow Gavits Road and a 0.34-acre work zone area necessary for installation of a manhole. This timber matting will be removed upon the completion of the HDD installation. Care will be taken to remove residual soil from the timber matting so that this material can be retained on-site and not allowed to be transported to other locations.

Temporary stabilization is expected to be needed along the construction access roadway within the ROW. This temporary surface treatment will ensure that the ground surface has sufficient firmness to support the heavy equipment needed for the installation of the Proposed Action; otherwise, there would be an increased potential for impacts associated with the possibility that equipment would have to be extracted if they become mired on the unpaved access roadway. It is proposed that the vehicle access stabilization consist of RCA due to its desirable properties in providing ground surface stabilization. As noted previously, RCA used to facilitate temporary vehicle access will be removed from the site upon the completion of construction – see further discussion in **Section 2.1.3**. The use of such temporary stabilization will not occur on any wetland areas along the cable route since these areas will not be subject to ground disturbance due to the use of subsurface HDD installation.

Overall, the Proposed Action has been designed, through the inclusion of various mitigation measures, to minimize potential impacts to soils (see **Section 2.1.3**). Therefore, implementation of the Proposed Action is not expected to result in significant adverse soil impacts.

2.1.2.2 Topography

Within approximately 0.8 mile of the 5.2±-mile route in the ROW, installation will occur via HDD, which will not alter topography or other aspects of the land surface. Along the majority of the proposed cable route, installation will occur via the excavation of a four-foot-wide trench, with a total length of 4.4± miles. After the cable has been placed, this trench will be backfilled to the original grade to the maximum extent practicable. As discussed in **Section 2.1.1.2**, the intent is to retain excavated soil on-site to the degree practicable in order to minimize the need to export material from the site.

As noted previously, the 1,600±-linear foot conduit laydown area to the west of the Bridgehampton Substation will be used for construction staging of conduit only and will not be subject to direct land disturbance. Therefore, this area will not experience changes to topography under the Proposed Action.

In general, existing topography is expected to be maintained along segments of the access roadway for which construction vehicle movement will be limited to lighter weight equipment needed for trench

excavation. Temporary topographic adjustments, in the form of regrading, will be required for the installation of the temporary construction access road, which must have a maximum 7 percent gradient to allow for access by the HDD drilling equipment, and by the crane and delivery vehicles for the installation of the manhole vaults.

As necessary, temporary stabilization will be installed in areas in which existing gradients will be retained to ensure a suitable driving surface that can properly support the movement of the trenching equipment. As discussed in **Section 2.1.2.1**, it is proposed that any necessary temporary stabilization for vehicle access utilize RCA, which will be placed atop geotextile fabric. The use of geotextile will enhance the stability of the RCA layer, while also creating a more discrete separation between the RCA and the underlying substrate. The latter function of the geotextile will facilitate the planned removal of the RCA upon the completion of construction. The method used for RCA recovery and removal, which will serve to mitigate the potential impacts of this aspect of the construction process, is described in **Section 2.1.3**, below.

The use of timber matting was analyzed as an alternative to the use of RCA for construction access road stabilization. Due to the significant steep slopes and undulating topography in the ROW, use of timber matting was determined to not be feasible for the entire length of the access road. Although use of timber mats cannot be implemented for the entirety of the roadway, timber matting will be utilized in the most sensitive area for the installation of the manhole within the Long Pond Greenbelt. Additionally, timber matting will be utilized to protect a small portion of the wetland located west of the Bridgehampton Substation during laydown activities.

Manholes will be installed at intervals as specified on the Proposed Action Plans provided in **Appendix A**, along the underground cable route. These manholes will be prefabricated; and, because of their size and weight, heavy-duty construction vehicles will be required to deliver these structures to the site and cranes will be required for installation. Optimal design to facilitate roadway access for these large vehicles will generally limit surface gradients to 7 percent (i.e., one foot of elevation change per 14± feet of distance). Along segments of the ROW that presently exceed this 7-percent threshold, temporary grading will be needed to achieve that desired slope, through a combination of cutting and filling depending on localized gradients. In order to minimize grading to the width of the ROW within areas of very steep slopes, concrete blocks will be utilized to achieve the necessary grade transitions. The only area that requires concrete blocks for stabilization is located 650 feet east of Sagg Road (at the approximate location of Stations 61+00 and 62+00 as illustrated on the Construction Plans provided in **Appendix D**). All other grading can be achieved within the limits of the ROW.

The temporary vehicle access path/roadway is described as follows (in a west-to-east direction) as illustrated in the engineering drawings in **Appendix D**:

- The westerly pit for the HDD drilling will be placed to the west of Bridgehampton-Sag Harbor Turnpike, to the immediate north of the Bridgehampton Substation (at Station 1275±). This area has slopes in the 25-percent range and will require regrading to provide a suitably level area for the operation of the HDD drilling rig and associated equipment.
- The segment of the cable installation between Bridgehampton-Sag Harbor Turnpike (Station 1300±) and just to the west of Widow Gavits Road (Station 3900±) will not require vehicle access, as the cable in this area will be installed via HDD.
- The HDD exit pit and a manhole will be installed at Station 3900±, to the west of Widow Gavits Road, within the HDD segment of the cable route. This is a previously disturbed area of the Long

Pond Greenbelt. The existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road and a 0.34-acre area, inclusive of the existing access pathway, within the previously disturbed portion of the Long Pond Greenbelt will be temporarily stabilized with timber matting. The manhole at this location will also serve as the HDD exit pit for a short segment of HDD with its entrance pit to the east of Widow Gavits Road, as further discussed below.

- A 50-foot wide disturbance area for the easterly entrance pit for the HDD drilling will be placed to the east of Widow Gavits Road, accessible along the ROW from Widow Gavits Road. East of this HDD exit pit disturbance area (starting at Station 4925±), construction access will continue eastward as a 30-foot-wide vehicle path approximately centered on the cable trench, to Sagg Road (Station 5400±).
- East of Sagg Road, complex topography requires grading and stabilization, with variations in the width of the access roadway (ranging from 15± feet to the full 50-foot width of the ROW), to provide an eastward connection to four manhole locations (at Stations 5425±, 7300±, 9450±, and 11800±) from Sagg Road. This includes the area where the greatest amount of fill will be needed, in addition to where the concrete blocks will be utilized, along the north and south sides of the ROW, to achieve the necessary grade transitions.
- East of the manhole installation at Station 11800±, construction access will continue as a 30-foot-wide vehicle path to Station 14100± to the west of Wainscott Northwest Road.
- A manhole installation location just to the west of Wainscott Northwest Road (at Station 14250±) will be accessed directly from that roadway.
- To the immediate east of Wainscott Northwest Road (Station 14325±), grading will be needed to reduce an approximately 18 percent upward slope over a distance of 125± feet; a 30-foot-wide vehicle access path will continue to the east of that, to Station 15800±.
- East of Station 15800± complex topography requires grading and stabilization, with variations in the width of the access roadway (ranging between 15± and 30± feet, except where manhole construction will span the entire 50-foot width of the ROW), to provide a westward construction vehicle access to four manhole locations (at Stations 15900±, 18300±, 20100±, and 21950±) from Stephen Hands Path (at Station 22000±).
- A short segment of 30-foot-wide vehicle access path will span between Stephen Hands Path (at Station 22000±) and Buckskill Road (at Station 22350±). East of that, complex topography requires grading and stabilization, with variations in the width of the access roadway (ranging between 15± and 30± feet, except where manhole construction will span the entire 50-foot width of the ROW), to provide an eastward connection from Buckskill Road to two manhole locations (at Stations 23900± and 25900±) and the westerly/northerly HDD exit pit (at Station 26125±) for the HDD installation beneath the LIRR line.
- Cable installation beneath the LIRR line will occur via HDD, such that the segment of the Proposed Action Area between the northwestern and southeastern HDD entry and exit pits (Station 26125± to Station 27075±, respectively) will not require vehicle access.
- East of the easterly/southerly HDD entry pit for the LIRR traversal at Station 27075±, construction access will continue as a 30-foot-wide vehicle path to the easterly terminus of the cable route at the Buell Substation (Station 28050±).

As discussed in **Section 2.1.1.2,** the disturbance area for the Proposed Action consists of 13.48± acres (74.9± percent of the overall area) in the 0-to-10 percent gradient range, 2.50± acres (13.9± percent of

the overall area) in the 10-to-15 percent gradient range, and 2.01± acres (11.2± percent of the overall area) exceeding 15 percent gradient.

Once construction has been completed, temporary modifications that have been made to the topographic profile of the ROW to facilitate heavy equipment access will be restored to pre-construction conditions, as practicable. Adjustments may be made where appropriate, in areas that originally had very steep slopes, to moderate final gradients in an effort to minimize the potential for erosion upon the completion of site restoration.

The Proposed Action also includes topographic changes in an area of 0.36± acre to the north of the Bridgehampton Substation in order to provide the necessary level construction site of sufficient size to accommodate the operation of the HDD drill and associated equipment. Currently, this area has a gradient of approximately 20 percent sloping downward to the north. The proposed regrading will cut into the northerly portion of this slope to provide an almost flat surface, with an embankment constructed at the southerly end to create the topographic transition to the adjacent elevated area developed with the existing Bridgehampton Substation facility.

Overall, significant impacts to topography are not anticipated, as project-related topographic modifications will be temporary, to accommodate vehicle and equipment access during construction, and topographic conditions will be restored as near as practicable to pre-construction conditions upon the completion of the cable installation. Furthermore, various mitigation measures have been incorporated into the Proposed Action to minimize potential impacts associated with the temporary topographic modifications during construction, as discussed in **Section 2.1.3**, below.

2.1.3 Proposed Mitigation

As discussed in **Section 2.1.2**, above, the assessment of potential impacts of the Proposed Action with respect to soils and topography, when considering the mitigation techniques proposed, no significant adverse impacts will occur. More specifically, the following is a summary of measures that will be implemented to avoid or minimize adverse environmental impacts associated with soil disturbance and topographic adjustments during construction of the Proposed Action. Refer also to **Section 2.2.3** for a discussion of mitigation measures for the protection of water resources, which are closely related to mitigation with respect to soils and topography, including a detailed discussion of the SWPPP and Frac-Out Contingency Plan (FCP) for the Proposed Action.

- Except for a minor increase in impervious surfaces, involving the installation of 14 manhole covers, the Proposed Action will retain existing pervious surface coverage, and areas of disturbed vegetation will be restored with native plant species. This will result in a negligible change in land coverage and associated effect on soils.
- The use of native plant species in landscaping restoration also will avoid the need to use fertilizers, pesticides and other chemical treatments, thereby minimizing the potential for impacts to soils related to landscape maintenance practices.
- Any material excavated within the Proposed Action Area that is not retained for re-use, will be transported to a suitable disposal location in accordance with applicable regulations.
- Upon the completion of construction, the topographic profile of the ROW will be restored to pre-construction conditions, as practicable. Adjustments may be made where appropriate, in areas that originally had very steep slopes, to moderate final gradients in an effort to minimize the potential for erosion upon the completion of site restoration.

The Proposed Action includes a SWPPP, with an accompanying Sediment & Erosion Control Plan, which has been prepared to identify a range of measures directed at avoiding or mitigating construction-related impacts resulting from stormwater runoff. See **Appendix F** for the SWPPP and Erosion/Sediment Control Plan. Section 2.2.3 provides a detailed summary on this topic in the context of mitigation measures with respect to water resources (i.e., potential stormwater-induced impacts), which also encompasses measures that will serve to mitigate potential impacts to soils and topography**.** In addition to the elements of the SWPPP relating specifically to stormwater, the following measures shall be implemented to mitigate potential wind-induced sediment transport impacts:

- Dust control shall be used during construction activities to mitigate air movement of dust from disturbed soil surfaces that may cause off-site damage, health hazards, and traffic safety problems. Unpaved, high-traffic areas will be covered with suitable aggregate and exposed soils will be wetted as necessary during extended dry periods to minimize dust generation. Only potable water will be used for dust control. Several applications per day may be necessary, depending on the frequency of work and weather conditions. Dust control measures will be utilized until all disturbed areas of the Proposed Action are stabilized.
- The preparation of a SWPPP is required under the NYSDEC SPDES program for the review of stormwater control measures consistent with Phase 2 stormwater permitting for construction sites in excess of one acre (SPDES GP-0-20-002). Under this program, a NOI must be filed with the NYSDEC 60 days prior to commencement of construction, and the SWPPP must be maintained on-site. This process, as well as construction and operation of the proposed transmission cable, are discussed in **Section 1.4**.

RCA and timber matting that is placed in the Proposed Action Area to provide temporary ground surface stabilization to support construction equipment will be removed upon the completion of construction. This removal will be performed by using a combination of construction equipment and vehicles. A milling machine will remove the majority of RCA material present. After the milling machine has completed its work, conventional excavation equipment (e.g., bulldozer, excavator, and front-end loader) will be used to remove the remainder of RCA to the extent practicable. Remaining RCA along the edge of access path will then be consolidated and removed. The RCA will be loaded into dump trucks for transport to a suitable, approved processing facility for reuse or disposal. It is intended that the temporary RCA path will be used as much as possible to provide access to facilitate the removal of RCA at the conclusion of the construction process.

2.2 Water Resources

2.2.1 Existing Conditions

The following sections of this DEIS discuss existing conditions in the Proposed Action Area with regard to surface waters, wetlands and stormwater drainage (**Section 2.2.1.1**), flood zones (**Section 2.2.1.2**), and groundwater resources (**Section 2.2.1.3**).

2.2.1.1 Surface Waters, Wetlands, and Stormwater Drainage

The Proposed Action will occur at the Bridgehampton and Buell Substations and beneath the ROW which extends approximately 5.2 miles between these two substations. Additionally, a 1,600±-foot segment of the ROW to the west of the Bridgehampton Substation will be used temporarily during construction as a laydown area for the conduit that is to be installed via HDD.

Freshwater wetlands and surface waters associated with Long Pond are present within the segment of the proposed underground transmission cable route immediately to the east of the Bridgehampton Substation and west of Widow Gavits Road. A second area of freshwater wetlands and surface waters

associated with the Great Swamp wetland complex is present to the west of the Bridgehampton Substation within the temporary conduit laydown area.

The collection of freshwater wetlands comprising the Great Swamp complex located in the Proposed Action Area are largely categorized as Red Maple Hardwood swamps and vernal ponds. Two wetland areas, separated from one another by Bridgehampton-Sag Harbor Turnpike, are identified as containing Eastern Tiger Salamander breeding ponds and associated buffers: one of these ponds is located within the ROW approximately 840 feet east of Bridgehampton-Sag Harbor Turnpike, immediately to the east of the Bridgehampton Substation; and the second pond is located approximately 1,300 feet to the west of the Bridgehampton Substation within the temporary conduit laydown area (see **Section 2.2.3.3** for additional information). **Figure 2-3** depicts all NYSDEC and National Wetland Inventory (NWI) freshwater wetlands within the vicinity of the Proposed Action Area. These wetlands are regulated by the NYSDEC under Article 24 and are identified as freshwater wetlands SA-27, SA-3 and SA-4.

As illustrated in **Figure 2-3**, three areas of surface waters and freshwaters wetlands within the Long Pond Greenbelt directly intersect the Proposed Action Area. The underground cable will be installed beneath these surface waters via HDD, at a depth of more than 50 below the identified Eastern Tiger Salamander breeding pond located in the vicinity of Stations 2200± through 2500±, and at least 20 feet below the other areas of surface waters/wetlands. The Proposed Action also includes construction staging in a 0.9±-acre area in the northern portion of the Bridgehampton Substation parcel. To facilitate the temporary use of HDD equipment and conduit laydown during construction at the Bridgehampton Substation, a 0.36-acre portion of the cleared area will also require grading to facilitate construction. Of the clearing and grading described above, approximately 0.31 acres of clearing and 0.11 acres of grading are within 535 feet of the known Eastern Tiger Salamander breeding pond located to the west of the Bridgehampton Substation.

The majority of the Proposed Action Area is maintained utility ROW consisting of successional growth vegetation resulting from mowing and tree trimming maintenance activities as well as established dirt paths. As this maintained ROW does not contain impervious surfaces, significant stormwater runoff is not generated within the ROW since runoff quickly infiltrates into the sandy soils in these areas. The wetlands and surface waters that intersect and adjoin the Proposed Action Area are locations where overland stormwater drainage from surrounding watersheds accumulates due to topography and the poor infiltrative properties of the underlying soils. Impervious surfaces are present within the substation properties (Bridgehampton and Buell) associated with the access driveways and limited foundations within the substations for various equipment. While these substations do not contain drainage infrastructure (e.g., catch basins, leaching pools, etc.), the substations are stabilized with a granular substrate (dolomite) which allows for stormwater infiltration within the void spaces of the dolomite and within the well-drained soils underlying the dolomite. The Proposed Action also involves limited trenching across five roadways including Sagg Road, Wainscott Northwest Road, Stephen Hands Path, Buckskill Road and Cove Hollow Road. These roads are all two-lane roadways without formal curbing or existing stormwater infrastructure in proximity to the Proposed Action Area.

2.2.1.2 Flood Zones

The National Flood Insurance Program (NFIP) was established with Congress's adoption of the National Flood Insurance Act of 1968. NFIP requirements apply to locations that are designated as "Special Flood Hazard Areas" (SFHAs) on FEMA Flood Insurance Rate Maps (FIRMs). SFHAs are geographic areas that can

be expected to be inundated by the "base flood" or "100-year flood," which is dependent on land surface elevations, proximity to surface water bodies and other factors. A 100-year flood is defined as a flood event of a magnitude that has a one percent chance of occurring during any given year.

NFIP requirements for activities in the 100-year floodplain include, but are not limited to:

- Elevation of new and substantially improved residential structures above the base flood elevation;
- Elevation or dry flood-proofing of new or substantially improved non-residential structures (i.e., watertight structures);
- Prohibition of development in floodways which are defined as the central portion of a riverine floodplain needed to carry deeper and faster moving water; and
- Additional requirements to protect buildings in coastal areas from the impacts of waves, high velocity, and storm surge.

The purpose of the NFIP is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions that are designed to:

- Regulate uses that are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- Require that uses vulnerable to floods, including facilities serving such uses, be protected against flood damage at the time of initial construction;
- Control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
- Control filling, grading, dredging and other development which may increase erosion or flood damages;
- Regulate the construction of flood barriers which would unnaturally divert floodwaters or which may increase flood hazards to other lands; and
- Qualify for and maintain participation in the NFIP.

A small portion of the proposed cable route (approximately 200 feet in length, in the vicinity of Station 3400[11]) lies within the 100-year floodplain, which is designated as Flood Zone "A" (no base flood elevation determined) as per the applicable FIRM. Except for this limited location, floodplains are not present in the Proposed Action Area. **Figure 2-4** illustrates FIRM 36103C0531H, effective May 4, 1998.

The New York State Community Risk and Resiliency Act (CRRA) required NYSDEC to adopt science-based sea level rise projections into its regulations and requires applicants for permits or funding under a number of specified State programs[12] to demonstrate that future risks due to sea-level rise, storm surge and flooding have been assessed, and that NYSDEC consider incorporating these factors into certain facility-siting regulations. According to 6 NYCRR Part 490, "Projected Sea Level Rise," based on a starting

[11] Station 0 is at the westerly terminus of the proposed underground transmission cable installation route at the Bridgehampton Substation. The easterly end of the proposed cable route is at Station 27416 at the Buell Substation. The station numbers indicate distance in feet from the westerly terminus. See Construction Plan, **Appendix D.**

[12] The affected State programs that may pertain to development activities in the Proposed Action Area include freshwater wetland permitting, protection of waters certifications, and coastal zone management initiatives through the New York State Department of State.

date of 2004 in the Long Island Region, the Long Island Region could experience as much as 8 to 30 inches of sea level rise by the 2050s, depending on the rate of increase, as follows:

- low rate of rise – 8 inches
- low to medium rate of rise – 11 inches
- medium rate of rise – 16 inches
- high to medium rate of rise – 21 inches
- high rate of rise – 30 inches

As discussed above, the floodplain portion of the Proposed Action Area is located on the interior of the South Fork of Long Island. The Proposed Action Construction Plans indicate that the elevation in this area is approximately 12 feet amsl (see **Appendix D**). Therefore, even with the high estimate of 30 inches (2-½ feet), inundation due to projected sea level rise would remain well below the land surface in the Proposed Action Area through the end of the projection period in 2050.

2.2.1.3 Groundwater Resources

Special Groundwater Protection Area

Article 55 of the New York State Environmental Conservation Law designates specific areas on Long Island as Special Groundwater Protection Areas (SGPAs). The Proposed Action Area lies within the South Fork SGPA, which spans between the eastern portion of the Town of Southampton and the western portion of the Town of East Hampton, as depicted on **Figure 2-5**.

The *Long Island Comprehensive Special Groundwater Protection Area Plan* classifies nine SGPAs in Nassau and Suffolk Counties and states that SGPAs are recharge watershed areas within a designated sole source aquifer that "are particularly important for the maintenance of large volumes of high quality groundwater for long periods of time".[13] All SGPAs are CEAs and are significant, largely undeveloped or sparsely developed geographic areas of Long Island that provide recharge to portions of the deep flow aquifer system. **Section 3.3** of this DEIS provides a discussion of the South Fork SGPA in meeting the criteria for CEAs which, according to the NYSDEC website[14], are areas that have an exceptional or unique character in connection with one or more of the following:

- *a benefit or threat to human health;*
- *a natural setting (e.g., fish and wildlife habitat, forest and vegetation, open space and areas of important aesthetic or scenic quality);*
- *agricultural, social, cultural, historic, archaeological, recreational, or educational values; or*
- *an inherent ecological, geological or hydrological sensitivity to change that may be adversely affected by any change.*

The South Fork SGPA was designated as a CEA by the Long Island Regional Planning Board on April 18, 1993, in order to protect groundwater.

[13] Long Island Regional Planning Board. *The Long Island Comprehensive Special Groundwater Protection Area Plan*. July 27, 1992

[14] NYSDEC. *Critical Environmental Areas (CEAs)*; available from https://www.dec.ny.gov/permits/6184.html.

Groundwater Hydrology/Hydrogeology

Aquifers are underground formations that transmit and yield water in usable quantities (NSWCA, 2022). The major water-bearing units beneath the Proposed Action Area are the Upper Glacial, Magothy and Lloyd aquifers, listed in order from the ground surface downward. These three aquifers constitute a singular sole source aquifer (SSA). An SSA is defined by the EPA as an aquifer that supplies at least 50 percent of the drinking water for its service area and for which there are no reasonable available alternative drinking water sources (USEPA, 2021). The Magothy and Lloyd aquifers are separated by the Raritan Clay layer, which restricts flow between the two geologic units. The primary units from which water is drawn in the vicinity of the Proposed Action Area are the Upper Glacial and Magothy aquifers. In the Proposed Action Area, these unconsolidated water-bearing units comprise what is referred to by the United States Environmental Protection Agency (USEPA) as Long Island's "Sole Source Aquifer," which represents the only currently available source of drinking water in Suffolk and Nassau Counties and, therefore, must be protected to ensure its long-term quality and availability for future generations.

According to the *Suffolk County Comprehensive Water Resources Management Plan* (2015) the Proposed Action Area is also located within Groundwater Management Zone (GMZ) V. GMZ V is considered a deep recharge area, which contributes recharged water to a deep groundwater flow system that replenishes the quantity and preserves the quality of the long-term water supply.

Groundwater on Long Island is derived entirely from precipitation. Precipitation percolates through the soil profile as groundwater recharge, which descends through the upper unsaturated zone until it reaches strata that are saturated, defining an interface known as the groundwater table (or water table), below which lies the zone of saturation. The groundwater table lies at sea level where it intersects coastal waters along the north and south shores of the South Fork and rises in elevation toward the center of the South Fork to create a "lens" of potable drinking water. The high point of this parabola of mounded water is referred to as the groundwater divide, which separates generally northward flowing groundwater from generally southward flowing groundwater. The change in water table elevation over distance creates a hydraulic gradient (i.e., a sloping water table), which causes groundwater to flow laterally in a down-gradient direction under the influence of gravity.

As illustrated in **Figure 2-6**, based on U.S. Geological Survey (USGS) data, the depth to the groundwater table in the Proposed Action Area ranges from the ground surface where wetlands associated with the Long Pond system are present (in the vicinity of Station 3400) to a maximum of approximately 125 feet bgs in the area of Town Line Road (in the vicinity of Station 11000). Other areas of relatively shallow groundwater are in the area of the proposed cable route crossing of Wainscott NW Road (in the vicinity of Station 13400) and Stephen Hands Path (in the vicinity of Station 21100), where the depth to the water table is approximately 10 feet bgs (See **Figure 2-6**). It is noted that seasonal changes and fluctuations in precipitation rates can cause temporal variations in water table levels.

Figure 2-6 also illustrates the position of the groundwater divide in reference to the Proposed Action Area. As shown, the groundwater divide passes through the approximate midpoint of the northwest-to-southeast-trending cable route, such that the westerly portion of Proposed Action Area is in a portion of the aquifer that flows in a generally northward direction, while the easterly portion of Proposed Action Area is in a portion of the aquifer that flows in a generally southward direction.

The Geotechnical Report included the collection of data from nine soil borings within the Proposed Action Area, including measurement of groundwater level if encountered above the termination depth of each

soil boring. At the four locations where groundwater was encountered before the termination of the borehole (BH) – i.e., BH-1, just west of the Bridgehampton Substation (near Station 240±); BH-2 east of the Eastern Tiger Salamander pond and just northeast of Tower 982 (near Station 1600±); BH-3 in the previously disturbed area west of Widow Gavits Road just southeast of Tower 985 (near Station 3050±); and BH-9 just northwest of the Buell Substation (near Station 25960±) – subsurface water was recorded at depths ranging from approximately 9.7 to 42.4 feet below the ground surface. See **Appendix E** for the full Geotechnical Report. The Geotechnical Report notes that these groundwater level readings "were likely affected by water utilized to advance the boreholes." Given the soil conditions in these boreholes, it is likely that the water utilized during the drilling process did not infiltrate into the soil quickly and created the appearance of a perched groundwater condition. As a result, groundwater elevations from the boreholes is not an accurate indicator of actual groundwater depth, and the USGS data summarized above is likely more reflective of the depth to groundwater in the Proposed Action Area.

Groundwater Quality

The Proposed Action Area is located partially within SCWA Service Distribution Area #23 and also includes areas that are not served by SCWA. Public supply wells are routinely monitored by SCWA and Suffolk County Department of Health Services to ensure the continued delivery of potable drinking water to SCWA's customers. SCWA's annual 2021 Drinking Water Quality Report for the 2020 calendar year was obtained to review water quality monitoring results for Distribution Area #23 and determine the general status and quality of the water supply (see **Appendix G**). These data contain the results of tests conducted for over 100 different water quality parameters, including various inorganic constituents (IOCs), synthetic organic compounds, volatile organic compounds, disinfectants, disinfectant byproducts (i.e., resulting from chlorination), and pharmaceuticals and personal care products. These parameters were tested many times throughout 2020, resulting in thousands of individual monitoring results.

Of the water quality parameters that have been assigned a maximum contaminant level (MCL) by the USEPA, only iron, a naturally occurring IOC, was found to exceed its MCL for Distribution Area #23 during the 2020 calendar year. The MCL established for iron in drinking water is 300 parts per billion (ppb); and according to the 2020 data, the highest iron concentration in a sample of drinking water from Distribution Area #23 was 415 ppb, which moderately exceeds the MCL. The average iron concentration of the 191 samples taken from Distribution Area #23 in 2020 was 96 ppb, which is well below the MCL. The lowest iron concentration was "ND" or "non-detection," which indicates that the constituent was not present or was at concentrations so low that it could not be detected using contemporary water quality measurement techniques. High levels of iron mostly affect aesthetics, relating to discoloration, poor taste and/or staining of household fixtures, and can be readily treated and/or filtered to overcome these issues.

Nitrate, which is an inorganic compound of local concern at elevated levels with respect to both human health and environmental resources, was found to be consistently below the MCL of 10 parts per million (ppm) in 2020. The maximum nitrate concentration detected in the drinking water supply for Distribution Area #23 was 8.39 ppm, which is decreased from the highest measured value of 9.92 ppm in 2019. Moreover, the average nitrate level for Distribution Area #23, based on 265 samples taken in 2020, was 3.73 ppm, which is less than half of the drinking water standard. Again, the lowest recorded value was ND. Some potential sources of nitrate include fertilizers, sanitary system discharge, stormwater runoff, animal wastes and atmospheric deposition.

One well in Distribution Area #23 was found to have measurable concentrations of propane during testing in 2020. The propane results for the water in this well ranged from ND to a maximum of 3.80 ppb. Currently granular activated carbon treatment is being employed at the affected well for propane removal. Propane, normally a gas, can be compressed to a liquid, and is the main component of liquefied petroleum gas. Commonly used as a fuel, it is also used to manufacture other chemicals, such as refrigerants, solvents and aerosol propellants. At these levels, SCWA indicates that propane poses a minimal risk for health effects. New York State defines propane as an unregulated organic compound and assigns an MCL of 50 ppb; the highest measured concentration of 3.80 ppb for Distribution Area #23 in 2020 is well below this limit.

Groundwater quality is an important factor for the health of area surface waters (which receive continuous inflow from groundwater discharges) and of local residents (who rely on groundwater for potable supply). While a primary issue for local surface water quality has been nutrient loading from fertilizers and septic systems, human health concerns also pertain to the presence or potential presence of certain contaminants in the groundwater supply. There are two properties within or adjoining the Proposed Action Area that are listed New York State Superfund sites and where groundwater investigations have been completed; the Village of Sag Harbor Transfer Station (former Landfill) on the east side of Bridgehampton Sag Harbor Turnpike and the East Hampton Airport property.

The overall property identified as the Village of Sag Harbor Transfer Station site (DEC Site Code 152047) is located on the east side of Bridgehampton-Sag Harbor Turnpike and spans across the ROW to the west of Long Pond; however, the Transfer Station facility itself does not extend into the ROW and is confined to a portion of the Village-owned property located to the north of the ROW. All work will be entirely outside of the footprint of the Transfer Station facility itself.

Based on NYSDEC's Environmental Remediation Database and the NYSDEC Registry Site Classification Decision (1994), the portion of the Village of Sag Harbor Transfer Station property located to the north of the ROW was formerly used as an unlined municipal landfill from the 1950s until closure in 1972. Since the closure of the landfill, the site has been used as a transfer station (leased area to the Town of Southampton in the northern portion of the site), brush disposal area and impound yard (in the central portion of the property, located to the north of the ROW). A Phase I Investigation was completed in 1989 and a State Superfund Preliminary Site Assessment (PSA) was completed in March of 1994 to identify any on-site groundwater contamination migrating from the former landfill on the north side of the ROW and to characterize the nature of any such contamination specifically in connection with the alleged disposal of hazardous substances at the landfill. The groundwater investigation consisted of the installation and sampling of groundwater monitoring wells located upgradient and downgradient of the former landfill. The groundwater analytical results indicated that no pesticides or polychlorinated biphenyls (PCBs) were detected in any of the samples collected and that of the few volatile and semi-volatile organic compounds detected, none were found to be above their respective NYSDEC Class GA groundwater standards. NYSDEC noted minor exceedances of inorganic constituents consisting of iron, lead, manganese and sodium (typical leachate indicators) above their respective standards. Pursuant to the 1994 NYSDEC Classification Decision, the results of the investigations conducted at this site found no environmental issues associated with the disposal of hazardous waste. In consideration of these findings, NYSDEC removed the site from the New York State Registry of Inactive Hazardous Waste Disposal Sites in May 1995, indicating that no further action was required based on the information available at that time with regard to the reported solvent disposal (see **Appendix H**).

The East Hampton Airport (DEC Site Code 152250) is located adjacent to the south of the ROW in the hamlet of Wainscott. In 2019, the site was added to the New York State Registry of Inactive Hazardous Waste Disposal Sites due contaminants related to fire-fighting foam used for crash response/training and stored at the airport. Chemicals including perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) have been detected in on-site soil and groundwater and off-site private drinking water wells (see **Appendix H**). However, the affected area is located entirely to the south of East Hampton Airport, which is south (i.e., down-gradient) of the Proposed Action Area[15]. Therefore, this groundwater issue does not affect the aquifer beneath the Proposed Action Area.

2.2.2 Anticipated Impacts

The following sections analyze the anticipated effect of the Proposed Action on surface waters, wetlands and stormwater drainage (**Section 2.2.2.1**), flood zones (**Section 2.2.2.2**), and groundwater resources (**Section 2.2.2.3**).

2.2.2.1 Surface Waters, Wetlands, and Stormwater Drainage

As noted in **Section 2.2.1.1** and discussed more fully in **Section 2.3.1**, the westerly portion of the Proposed Action Area contains surface waters and wetlands and associated Eastern Tiger Salamander breeding habitat and buffer areas, through which segments of the proposed underground transmission cable will be installed. In consideration of the potential for the Proposed Action to affect these resources, installation of the underground transmission cable between the Bridgehampton Substation (Station 360±) and the east side of Widow Gavits Road (Station 3820±) will occur via HDD.

As discussed in **Section 1.4**, the use of HDD allows the transmission cable to be installed via subsurface drilling without causing any disturbance to the land surface along the cable route. In this way, impacts to surface waters and wetlands within the segment of the Proposed Action Area between the Bridgehampton Substation and Widow Gavits Road will be avoided, thereby effectively mitigating potential impacts that would otherwise be associated with the use of standard trenching methods in sensitive areas containing surface waters and wetlands. In contrast, the potential impacts associated with the portion of the cable being installed via trenching will occur in upland areas, which can readily and effectively be mitigated using standard erosion and sediment control techniques (see **Section 2.2.3**). A single manhole and HDD exit pit will be located within the previously disturbed area of the Long Pond Greenbelt, west of Widow Gavits Road. To facilitate this construction, the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road and a 0.34-acre area, inclusive of the existing access pathway, within the previously disturbed portion of the Long Pond Greenbelt will be temporarily stabilized with timber matting. The temporary installation of timber matting will provide a stabilized area for the setup of the HDD equipment (drill rig, excavator, frac-out tank and pump), manhole installation (crane, excavator) as well as cable splicing equipment. Silt fencing and perimeter erosion controls will be put in place prior to construction to minimize the transport of soil and debris during the construction period. Complying with the conditions of PSEG Long Island's NYSDEC General Wetlands permit (#1-9901-0011/00032) will minimize potential impacts to wetlands in proximity to the proposed construction activities.

[15] See East Hampton Airport Final Site Characterize Report (Nov. 30, ,2018), https://www.dec.ny.gov/data/DecDocs/152250/

The HDD installation method will utilize a drilling fluid to facilitate the advancement of the drill bit through the soil, which is a standard practice for such operations. Among other purposes, the drilling fluid is used to transport soil cuttings to the surface and to stabilize the borehole. The fluid also reduces drilling friction, cools and cleans the drill cutters, transmits hydraulic power to the drill bit, and performs the hydraulic excavation of the cuttings. The primary component of the drilling fluid used in HDD installations is water. A viscosifier, a naturally occurring bentonite clay, is added to the water to enhance the fluid performance. Because the drilling fluid consists of an inert bentonite clay-water mixture, there is no potential for the release of hazardous substances to the environment. However, the drilling fluid does contain fine-grained sediment, which potentially could affect surface waters and wetlands if inadvertently released to the environment.

While uncommon, a "frac-out" event may occur if drilling fluid escapes from the HDD drill hole through fractures in the soil. Significant frac-out events are not common, but they can occur if the downhole pressures exceed the restraining forces of the surrounding formation, particularly during the pilot hole drilling operations when the pressures are the highest. The HDD entry and exit locations are most vulnerable to such effects, but they can occur at any location along the drill path. During all HDD activities, best management practices will be utilized to prevent construction material, including debris and drill cuttings, from entering the waterway. To mitigate potential impacts associated with a frac-out event, a FCP will be prepared that establishes specific protocols to minimize the potential for any such release of drilling fluid and to minimize impacts if a release does occur. A typical FCP, which is provided in **Appendix I,** will be customized by the selected drilling contractor prior to the start of construction. The minimum elements of the FCP are summarized in **Section 2.2.3**. Personnel will continuously monitor operations during HDD activities to help control a frac-out event should one occur.

To further minimize the potential for impacts to water resources, drilling fluid will be recycled and reused to the degree practicable, thereby minimizing the quantity of spent drilling fluid that must be stored on-site while awaiting transport to a disposal location. Spent drilling fluid, along with entrained drill cuttings recovered from the HDD borehole, will be temporarily stored in portable frac tanks[16], which will be trucked from the site as necessary for disposal at a suitable, approved location in accordance with all applicable regulations. See **Section 2.2.3** for further details regarding this mitigation measure.

The HDD drilling operation is also expected to utilize Polywater® J Lubricant, or equivalent, to facilitate pulling the conduit through the borehole once drilling of the borehole has been completed. This product contains no hazardous components as defined under federal regulations and, therefore, like the drilling fluid discussed above, will not pose the potential for releasing hazardous substances into the environment. See **Appendix J** for the Safety Data Sheets (SDSs) for the cable and duct lubricant intended for use in the HDD installation under the Proposed Action.

Entry into the ROW will be necessary to monitor the progress of the HDD drill head, so that real-time adjustments can be made to steer the drill head along the necessary course. However, this will occur by traversing the site via walk-over (i.e., not involving the use of a vehicle to travel through sensitive areas) during the active drilling or by manually pre-installing a wireline which, in either case, will not involve a

[16] Frac tanks are named as such because their original use related to the storage of fracturing fluids at oil and gas wells.

major intrusion (i.e., would only involve walking into these areas) into the surface waters or wetlands along the segment of cable that will be installed using HDD.

A laydown area for the proposed HDD installation to the west of the Bridgehampton Substation will be necessary for temporary conduit staging in a portion of the ROW that includes surface waters and freshwater wetlands and associated Eastern Tiger Salamander breeding habitat and buffer areas. A maximum 1,600±-foot laydown area is required to enable the conduit to be fused prior to pullback through the borehole. Once pullback commences, it is necessary to continue this operation until completion – i.e., to advance the conduit through the borehole without a significant pause – in order to minimize the potential for collapse or other critical problems with the borehole. Therefore, it is not practical to stage the HDD process within a substantially shorter laydown area, as this would necessitate that the conduit pulling process be halted repeatedly to allow additional sections to be fused onto the end of the conduit. The use of a continuous pull, with the conduit already fused in advance, ensures the highest probability of a successful installation.

Typical conduit assembly utilizes a small, wheeled cart that fuses together the ends of the conduit sections. The wheeled cart is expected to be the only piece of equipment that will traverse the laydown area. Any pickup trucks that are required for support would utilize the existing access paths, which are maintained to the east and west of the wetland in the laydown area, while the laydown itself will pass along the south side of the ROW.

Prior to construction, timber mats will be placed in three locations to provide necessary stabilization for equipment and to protect sensitive areas: 1) in the conduit laydown area to the west of the Bridgehampton Substation; 2) at the HDD exit pit/underground manhole installation west of Widow Gavits Road (within the previously disturbed area of the Long Pond Greenbelt); and 3) at the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road (see Proposed Action Construction Plans, **Appendix D**). The timber mats will be removed upon the completion of construction, and any vegetated areas that have been disturbed will be restored in place with appropriate native shrubs and herbaceous plants. It is anticipated that the use of these mats will follow Best Management Practices that have been developed by the United States Army Corps of Engineers (USACE) to maximize their effectiveness and minimize potential impacts to resources within the conduit laydown area, as detailed in **Section 2.2.3**.

The time required to complete the conduit fusing operation is estimated at about four to five weeks. The full drilling operation would be expected to take two to four months. It remains to be determined whether conduit fusing will be completed prior to the initiation of the HDD drilling, or whether the two procedures can progress in parallel. In either case, as discussed above, it will be necessary for the HDD conduit to be assembled and ready for pulling immediately upon the completion of the HDD borehole, so that potential borehole problems can be kept to a minimum.

The Proposed Action will result in a de minimis increase in impervious surfaces within the ROW, comprising 14 manhole covers spaced regularly along the cable route. This will cause a negligible increase in stormwater runoff, which will readily infiltrate into the pervious soils along the ROW. Existing vegetated areas disturbed for the proposed construction activities will be restored in-place upon the completion of construction. This will include the 0.36± acre area of existing vegetation cleared to the north of the Bridgehampton Substation, which will be replanted with native herbaceous and/or shrub vegetation (see **Section 2.3.2**). The species selected for revegetation will enhance the retention and recharge of

stormwater, such that stormwater drainage will not be significantly impacted. Overall, the replanting/restoration plan will provide uptake of stormwater generated from the minimal addition of impervious surfaces associated with the manhole covers and will help to ensure that erosion is prevented.

The Proposed Action will temporarily expose soils during construction, which potentially could cause erosion and sediment transport. However, such impacts will be avoided through implementation of a site-specific SWPPP, which has been prepared for the Proposed Action – see **Appendix F**. The SWPPP includes an Erosion & Sediment Control Plan, which provides a comprehensive stormwater management strategy and a range of mitigation measures and best management practices, as discussed in **Section 2.1.3**.

Given the foregoing revegetation and erosion control measures, the Proposed Action will not increase the vulnerability of the area to long-term stormwater erosion during installation or operation of the new underground transmission cable. Proposed mitigation measures will ensure minimized impacts to surface waters, wetlands, and stormwater drainage (see **Section 2.3**). Therefore, implementation of the Proposed Action is not expected to result in significant adverse impacts on these resources.

2.2.2.2 Flood Zones

As discussed in **Section 2.2.1.2**, only a small area of the ROW, (approximately 100 feet in length within the overall 5.2±-mile span of the Proposed Action Area), is situated within the 100-year floodplain. Specifically, this area is a Flood Zone "A" (no base flood elevation determined), which means that it is subject to flooding of unspecified depth during the "base flood" or "100-year flood." However, the proposed underground transmission cable will be installed using HDD in this area; and the conduit containing the cable will be sealed to prevent water infiltration to ensure proper long-term functioning of the transmission line. Therefore, the Proposed Action will not cause or exacerbate flooding impacts and will not be susceptible to potential impacts due to a short segment of the cable being located in the floodplain.

2.2.2.3 Groundwater Resources

As discussed in **Section 2.2.1.3**, the Proposed Action Area is located within the South Fork SGPA. Therefore, the protection of groundwater resources in this area is critically important for ensuring the availability of the local potable water supply. The Proposed Action involves the installation of an underground transmission cable, which will not generate hazardous materials or otherwise entail land use activities that create a potential for adversely affecting groundwater quality. The cable conduit will be sealed and, in any case, the cable insulation within the conduit will not include oils or other potentially deleterious substances that could be released into the ground in the event of a cable failure. As discussed in **Section 2.2.1.3**, the drilling fluid and lubricant utilized in the HDD cable installation will not contain hazardous substances that could pose the potential for adversely affecting surface water quality. Similarly, this operation will not result in impacts to groundwater quality. While HDD activity will directly encounter the water table along the HDD route, it will not impact groundwater as no hazardous discharges will occur, and the drilling slurry is comprised of bentonite clay, which is inert and will not impact the quality of groundwater.

Portions of the Proposed Action Area containing existing vegetation that will be disturbed during cable installation will be restored with suitable native plantings upon the completion of construction (see **Section 2.3.2**). This replacement vegetation will consist of native species that are well-adapted to local conditions and will not require irrigation or treatment with landscaping chemicals or fertilizers; and, thereby, will not place an ongoing demand on groundwater resources for irrigation or contribute to the

loadings of nutrients and other chemicals to the aquifer. Additionally, the transmission cable and its appurtenances will operate without the need for water.

During HDD drilling, it is anticipated that water usage/demand will be approximately 15,000 gallons per day. This volume is an anticipated maximum, which will fluctuate based on the ability to recycle some of the water during the drilling process. It is expected that this water supply will be drawn over a period of two to four months from local hydrants or via the installation of a temporary, metered connection that would be removed at the completion of the Proposed Action, subject to the issuance of a permit by SCWA. Correspondence dated June 23, 2021, was submitted to SCWA seeking input regarding water availability for the use of SCWA water for the HDD drilling operation for the Proposed Action to the east of the Bridgehampton Substation and to identify any issues of concern to SCWA. A response was received from SCWA via email on July 21, 2021, indicating that the required water supply would be available, with a seasonal restriction. Specifically, SCWA stated that because of the high demand on the system during the months of June through September, water supply for construction of the Proposed Action can be accommodated only during the eight-month period between October and May. The Proposed Action will comply with this seasonal constraint. Follow-up correspondence dated November 4, 2021, was sent to SCWA to describe the addition of a second segment of HDD drilling under the LIRR near the east end of the Proposed Action Area and to inquire as to any changes to the prior information provided by SCWA. A response was received from SCWA via email on December 6, 2021, indicating that SCWA has no objections to supplying water for the Proposed Action on condition of the previously stated seasonal limitation and provided that the two HDD drilling operations be conducted in sequence and not concurrently, which is feasible from a construction perspective. Further coordination will occur with SCWA prior to the commencement of construction to finalize the details of the proposed water use, and to obtain a permit identifying the specific hydrant(s) or metered connection(s) to be used and other particulars of the approval. As noted above, SCWA water supply will only be needed for the two-to-four-month period of HDD drilling and will not be needed for the long-term operation of the proposed transmission cable. See **Appendix K** for copies of the relevant correspondence with SCWA.

A SWPPP has been prepared in accordance with the requirements of the NYSDEC SPDES General Permit for Discharges from Construction Activities. As a result, there is not a likelihood of flooding or on-site drainage issues during construction, as erosion and sediment controls (including silt fencing and a stabilized construction entrance) will be implemented, which will help to protect water resources while the Proposed Action Area is disturbed by construction.

The Proposed Action involves the placement of an underground transmission cable within an approximately five-foot deep trench over most of its 5.2±-mile length, with the exception of approximately 0.8 mile of HDD drilling that will occur in three locations (i.e., in two segments that includes freshwater wetlands near the westerly end of the cable route, and in a segment where the cable will be installed beneath the LIRR line near the easterly end of the route). Within the 4.4±-mile-long area proposed for trenching along the cable route, the water table is expected to be more than five feet below the ground surface, such that dewatering would not be required (see Geotechnical Report, **Appendix E**). The use of HDD in the area with shallow groundwater depths (including areas of freshwater wetlands and standing waters at the surface associated with Long Pond) provides a means of drilling through saturated ground without having to excavate, thereby obviating the need for dewatering, while also minimizing the disturbance of overlying surface water resources.

As discussed in **Section 2.1.2.1**, soils excavated during the trenching operation will be retained on-site during construction and reused as backfill during site restoration to the degree practicable. Thereby, given the permeable nature of the Upper Glacial deposits and surface soils in the Proposed Action Area, the native soils that will be reused within the disturbed areas will continue to promote groundwater recharge after completion of the Proposed Action.

As the Proposed Action Area is located to the north of East Hampton Airport and groundwater flow in this area is in a generally southward direction away from the Proposed Action Area, the aquifer directly beneath the Proposed Action Area is not expected to be affected by the PFOS and PFOA contamination that has impacted private wells in the southern Wainscott area. Construction of the HDD-installed segment of the Proposed Action will use SCWA water obtained from local hydrants or a separate metered connection (as determined by SCWA); therefore, this water will comply with state and federal drinking water standards, even though the water will be used to facilitate drilling along the conduit route beneath the surface waters and wetlands in the Long Pond system and beneath the LIRR line and will not be used for consumption. Wastewater generated during drilling activities, which cannot be reused will be collected in frac tanks, transported, and disposed at an approved disposal facility licensed to accept this type of waste. As noted above, after construction has been completed, the Proposed Action will not place a demand on the aquifer or SCWA, as no water supply will be required for the cable operation or for the restored vegetation.

As discussed above, the Proposed Action has been designed, through the inclusion of various mitigation measures, to minimize potential impacts to groundwater resources, as discussed in **Section 2.2.3**. Therefore, implementation of the Proposed Action is not expected to result in significant adverse impacts on these resources.

2.2.3 Proposed Mitigation

Based on the assessment of potential impacts with respect to surface waters, wetlands, stormwater drainage, flood zones, and groundwater resources, and in consideration of the available mitigation techniques proposed, no significant adverse impacts on these important resources will occur from construction or operation of the Proposed Action.

The following is a summary of measures that are included in the Proposed Action to avoid or minimize adverse environmental impacts to water resources.

- Except for a de minimis increase in impervious surface area due to 14 new manhole covers, the Proposed Action will retain existing pervious surface areas, with areas of disturbed vegetation being restored with native plant species. This will result in a negligible increase in stormwater runoff generated within the ROW, which will continue to be retained on-site, and will readily infiltrate into the site's pervious soils.
- The Proposed Action will comply with the SCWA's seasonal constraints, which will limit water supply for the HDD drilling operation to the eight months of the year between October and May. Follow-up coordination will occur with SCWA prior to the commencement of construction to finalize the details of the proposed water use, and to obtain a permit identifying the specific hydrant(s) or separate metered connection(s) to be used and other particulars of the approval. The Proposed Action will also comply with SCWA's requirement that the three HDD drilling operations (i.e., to the east of the Bridgehampton Substation and beneath the LIRR near the east end of the Proposed Action Area) be conducted in sequence and not concurrently, to limit daily water usage.

- The use of native plant species for revegetation in disturbed areas will avoid the need for irrigation, and the completed transmission cable and appurtenances will operate without water consumption. Therefore, operation of the Proposed Action will not place a demand on local potable water supplies.
- Revegetation with native species will also avoid the need to use fertilizers, pesticides and other chemical treatments, thereby protecting the quality of surface water and groundwater resources.
- A SWPPP, including an associated Sediment and Erosion Control Plan, has been prepared for the Proposed Action, which will be implemented during construction to avoid or mitigate potential impacts related to stormwater runoff. The following is a summary of key provisions of the SWPPP (see **Appendix F** for the full SWPPP):
  - All contractors working on the Proposed Action must comply with the requirements of the SWPPP and perform their operations in strict conformance with the SPDES Permit. All contractors performing earth-disturbing activities (e.g., clearing, grading, excavating, etc.) will be required to sign a Contractor's Certification acknowledging the SWPPP and agreeing to comply with its terms and conditions.
  - Temporary soil erosion and sediment control measures will be implemented in accordance with the SWPPP prior to initiating and soil-disturbing activity.
  - Erosion and sediment control measures shall be maintained until final stabilization is achieved on the site.
  - A temporary filter berm shall be provided wherever a swale does not discharge to a protected catch basin within or near the work area. The filter berm shall be installed prior to disturbance within the area tributary to the swale.
  - Wherever conflicts arise with respect to previously placed erosion and sediment control measures, appropriate modifications shall be made to maintain regulatory compliance.
  - Excavated soils shall be stockpiled within the specified limits of disturbance. Silt fencing shall be installed at the perimeter of the stockpiles.
  - Throughout the construction sequence, accumulated sediment shall be removed from silt fences, check dams, inlet protection and other erosion control devices, as necessary to maintain intended functionality.
  - Stabilized construction access will be used at any point where traffic will be entering and leaving the construction site to or from a public ROW, or where surface conditions change from unpaved to paved. This access shall be comprised of a stabilized pad of aggregate underlain with geotextile. The stabilized construction access thickness shall be constantly monitored and maintained to ensure its functionality. All sediment deposited on paved roadways will be removed and returned to the construction site as soon as practicable; however, in any case, such action shall occur no later than the conclusion of the work shift in which the sediment deposit on paved roadways occurs.
  - Sediment barriers (i.e., compost filter socks and/or silt fencing) shall be used for perimeter control of sediment and water-borne pollutants on and around construction activities. Sediment barriers shall be installed in the following areas, as necessary:
    - Along the downhill edge of all disturbed areas (excluding trenching in paved areas)
    - Along the top of slope or top of bank of drainage ditches, channels, swales, etc.
    - Along the toe of all cut slopes and fill slopes in the construction area
    - Along the edge of construction areas with slopes that lead into environmentally sensitive areas
    - Surrounding the base of all soil/sediment stockpiles.
  - Storm drain inlet protection shall be provided for all inlets that potentially could receive drainage from the area of disturbance in the Proposed Action Area, in order to reduce flow

velocities and reduce erosion, and filter out sediment from site-generated runoff. This protection shall consist of a temporary barrier with low permeability, installed around inlet openings to detain and temporarily pond sediment-laden runoff, allowing deposition of suspended solids prior to stormwater entry to the storm drain system. Filter sock check dams are an additional measure that may be utilized as appropriate. A filter berm may be used at the downstream end of swales to trap sediment prior to runoff leaving the Proposed Action Area.

- Geotextile filter bags shall be used as appropriate. These are portable devices through which sediment laden water is pumped, thereby trapping, and retaining sediment prior to its discharge to surface waters or storm drain inlets. These devices may also be used to filter water pumped from any area of ponding or wetness that may occur due to soil limitations. Filter bags shall be located a minimum of 50 feet from wetlands, streams, or other surface waters.
- To achieve soil stabilization within the limits of construction, cover material as specified in the restoration plans can be placed in disturbed areas, along with grass, mulch, straw, geotextiles, trees, rock, or shrubs, as appropriate. Vegetative cover serves to reduce the erosion potential by absorbing the energy of raindrops, promoting infiltration in-lieu-of runoff, and reducing runoff velocity. Temporary stabilization measures will be initiated as soon as practicable in portions of the site where construction activities have temporarily ceased. In roadway areas, stabilization shall include placement of temporary pavement, RCA, crushed rock or metal plating. Landscaped areas, if encountered and disturbed, shall be restored to align with pre-construction conditions immediately following backfill. Temporary seeding shall be implemented to protect areas where final grading is complete, when preparing for any seasonal work shutdown or to provide cover when permanent seeding is likely to fail due to midsummer heat and/or drought.
- Seeding shall provide uniform application of seed to the area and shall result in good soil-to-seed contact. Temporary seeding areas shall be mulched with hay or straw at two tons per acre. Mulch anchoring shall be performed where wind or areas of concentrated water flow are of concern. Wood fiber hydro-mulch or other sprayable product approved for erosion control (e.g., nylon web or mesh) may be used if applied according to manufacturer's specification.
- All areas disturbed during installation of the Proposed Action shall be stabilized as soon as practicable and appropriate; however, in any case, such action shall occur no later than the end of the work shift in which site disturbance occurs.
- The Proposed Action shall seek to limit damage to existing vegetation to the extent practicable. Measures to protect vegetation throughout the Proposed Action Area can include the following:
    - Clearly mark construction limits to exclude equipment
    - Field-identify and mark trees and other significant vegetation to be protected
    - Avoid spills of petroleum products and other contaminants
    - Obstructive and broken branches shall be properly pruned
    - Where heavy compaction is anticipated over the roots of trees and shrubs, a three-to-four-inch layer of undecayed wood chips or two inches of No. 2 washed, crushed gravel shall be applied.

- Coverage under PSEG Long Island's NYSDEC General Wetlands permit (#1-9901-0011/00032), which includes authorization for activities under Article 24 jurisdiction, as well as a permit from the USACE will be required for the proposed cable routing through the wetlands associated with Long Pond along the ROW segment to the east of Bridgehampton-Sag Harbor Turnpike, and for

cable conduit laydown operations in the wetlands along the ROW to the west of the Bridgehampton Substation. This permitting process will ensure that potential impacts to surface waters and wetlands are mitigated to the extent practicable.

- Coverage under PSEG Long Island's NYSDEC General Wetlands permit (#1-9901-0011/00032) also ensures that NYSDEC water quality certification is obtained, thereby assuring compliance with New York State water quality standards.
- To avoid impacts to the freshwater wetlands associated with Long Pond along the ROW segment to the east of Bridgehampton-Sag Harbor Turnpike, the Proposed Action will utilize HDD in this area, which will avoid disturbing the ground surface to install the proposed transmission cable.
- Monitoring the progress of the HDD drill head will occur via walk-over or a wireline (i.e., not involving the use of a vehicle to travel through sensitive areas), which are relatively benign methods that will not significantly impact surface waters and wetlands in the area of HDD installation.
- The HDD installation will utilize a drilling fluid consisting of water obtained from the SCWA and inert materials (e.g., naturally occurring bentonite clay), while a similarly innocuous lubricant will be used to facilitate the pulling of the HDD conduit through the HDD borehole. These methods will not pose the potential for releasing hazardous substances into the environment.
- The HDD operation will recycle the water and drilling fluid to the extent practicable. Specialized equipment to perform such recycling is standard for use in HDD installations. Wastewater generated during drilling activities, which cannot be reused, will be collected in frac tanks, transported, and disposed of at an approved disposal facility licensed to accept this type of waste. This is beneficial not only to avoid or minimize environmental impacts, but also to reduce the costs associated with the transport and proper disposal of spent drilling fluid.
- As noted above, the drilling fluid used in the HDD installation for the Proposed Action will consist of inert, non-hazardous materials (i.e., natural bentonite clay mixed with potable water), which will not pose the potential for hazardous substance impacts on the environment. However, the fine particulate matter suspended in the drilling fluid could potentially adversely affect surface waters and wetlands if there is an inadvertent release from the HDD drilling hole. Therefore, an FCP will be utilized, which establishes specific protocols to minimize the potential for any such release of drilling fluid and to minimize impacts if a release does occur. A typical FCP is provided in **Appendix I**, which will be customized by the selected drilling contractor. However, the FCP will include the following primary elements at a minimum:
  - HDD will be conducted in a manner to prevent inadvertent releases of drilling fluid, using procedures and measures specified in the FCP. The FCP also details the measures to be taken if a release occurs despite prevention efforts.
  - The contractor shall:
    - Utilize best method HDD practices to prevent frac-outs
    - Provide for the timely detection of frac-outs
    - Implement an organized, timely, and "minimum-impact" response in the event of a frac-out.
  - HDD activities shall be continuously monitored through:
    - Visual inspection along the drill path, fluid return pit and surface of nearby water bodies and wetlands for evidence of a drilling fluid release
    - Observation and documentation of drilling fluid pressures using HDD instrumentation
    - Observation and documentation of drilling fluid recirculation volumes
    - Documentation of all drilling fluid products used.

- Suitable FCP training shall be provided to all construction field crew members involved in the HDD operation, including effective frac-out prevention and timely response.
- The HDD borehole path shall be monitored throughout the installation process.
- Although the HDD operation has been designed to minimize the potential for frac-out impacts, a specific protocol is established to minimize impacts in the event of a frac-out event.
- At a minimum, the following frac-out containment, response, and clean-up equipment shall be readily available on-site during the HDD operation: hay bales, silt fencing, sandbags, plastic sheeting, turbidity barriers, hand shovels and hand buckets, soft-bristled push brooms, squeegees, potable pumps and sufficient length of hose, drilling fluid storage tanks, standby boat (if warranted by water depths), containment booms, earthmoving equipment, vacuum truck, and generator.
- Consultation shall occur with the governing regulatory agencies to ensure that any frac-out event is properly addressed in accordance with applicable regulations and standards.

- To minimize disturbance of the freshwater wetlands in the conduit laydown area along the ROW to the west of the Bridgehampton Substation, equipment operations shall be limited to a small, wheeled cart which shall be used to fuse the conduit sections. Any pickup trucks required for support in the conduit laydown area shall utilize the existing access roads, which are maintained to the east and west of the wetland.
- To mitigate potential impacts to freshwater wetlands in the conduit laydown area along the ROW to the west of the Bridgehampton Substation and for the HDD exit pit/underground manhole installation within the previously disturbed area of the Long Pond Greenbelt west of Widow Gavits Road, timber mats shall temporarily be installed during the construction period. The requirements for these mats and/or other suitable mitigation measures ultimately will be determined by the USACE and NYSDEC, to be specified as conditions of the Incidental Take Permit for the Proposed Action (with any additional conditions as may be identified in the USACE permit). Best Management Practices established by the USACE (March 2016) will be followed (see **Appendix L**), including:
  - The following protocols shall apply to installation:
    - Mats shall be in good condition to ensure proper installation, use and removal.
    - Mats shall be cleaned of any residual soil, invasive plant species seed stock or plant material prior to placement.
    - No heavy equipment is anticipated to be necessary in wetlands. Heavy equipment operated in wetland adjacent areas other than fixed equipment (drill rigs, fixed cranes, etc.) shall not be stored, maintained, fueled, or repaired in regulated wetland adjacent areas unless the equipment is broken down and cannot be easily removed.
    - An adequate supply of spill containment equipment shall be maintained on site.
    - Construction mats shall not be dragged into position.
    - Woody vegetation (trees, shrubs, etc.) shall be cut at or above ground level, and not uprooted, in order to prevent disruption to the wetland soil structure and to allow stump sprouts to revegetate the work area.
    - Where feasible, mats shall be placed in a location that minimizes the amount needed for the wetlands crossing.
    - Impacts to wetland areas shall be minimized during installation, use, and removal.
    - Adequate erosion and sediment controls shall be installed at approaches to mats to promote a smooth transition to, and minimize sediment tracking onto, swamp mats.
    - In most cases, mats shall be placed along the travel area so that the individual boards are resting perpendicular to the direction of traffic. No gaps should exist between

mats. Mats should be installed far enough on either side of the resource area to rest on firm ground.
- Standard construction mat best management practice details shall be provided to work crews – see **Appendix L**.

- The following protocols shall apply to the temporary HDD Laydown area west of the Bridgehampton Substation for minimal areas of wetland/stream channel crossings:
  - At "dry" crossings where no flow is present or anticipated during construction, the mats may be placed directly onto the ground in order to prevent excessive rutting, provided stream banks and bottoms are not adversely altered.
  - Construction mats may be used as a temporary bridge over a stream to allow vehicles access to the work site. Small sections of mat are placed within and along the stream parallel to the flow of water. Mats may then be placed perpendicular to the stream, resting on top of the initial construction mat supports. It may be necessary to place additional reinforcement for extra stability and to minimize the amount of sediment that could fall between the spaces of each timber.
  - In areas where wildlife passage or migration is a consideration, mats may be installed in accordance with the diagram "Typical Stream Crossing with Swamp Mats" – see **Appendix L**.
  - Mats shall not be placed so that they restrict the natural flow of the stream.
  - The number of stream/wetland crossings shall be minimized. Where feasible, the crossing site should be located where the stream channel is narrow for the shortest possible clear span and where stream banks are stable and well defined.
  - More than one layer of mats may be necessary in areas that are inundated or have deep organic wetland soils.
- The following protocols shall apply to maintenance:
  - Matted wetland crossings shall be monitored to assure correct functioning of the mats.
  - Mats shall be inspected after use, looking for any defects or structural problems.
  - Mats that become covered with soils or construction debris shall be cleaned and the materials removed and disposed in an approved, upland location. The material shall not be scraped and shoveled into the resource area.
  - Mats that become imbedded must be reset or layered to prevent mud from covering them or water passing over them.
- The following protocols shall apply to removal:
  - Matting shall be removed by "backing" out of the site, removing mats one at a time. Any rutting or significant indentations identified during mat removal shall be regraded immediately, taking care not to compact soils.
  - Mats shall be cleaned before transport to another wetland location to remove soil and any invasive plant species seed stock or plant material.
  - Mats shall be cleaned of soil and any invasive plant species seed stock or plant material before reuse of the mats at another location.
  - Cleaning methods may include, but are not limited to, shaking, or dropping mats in a controlled manner with a piece of machinery to knock off attached soil and debris, spraying with water or air, and sweeping.
  - Crossings shall be inspected following mat removal to determine the level of restoration required.

- Construction materials that pose a potential contamination threat (e.g., petroleum products and hazardous materials) shall be managed to minimize exposure to stormwater. Such materials shall

be kept in secure containers and properly labeled. All storage containers (including frac tanks) and motorized/mechanical equipment containing such materials (including generators) shall have secondary containment.

- Hazardous materials shall be used, stored, transported, and disposed in the manner specified by the manufacturer and by applicable regulations. Contractors and subcontractors shall be made aware of this requirement and shall alert site personnel of this requirement.
- Copies of SDSs shall be maintained on-site for hazardous materials.
- Solid and liquid wastes shall be managed and disposed properly, and in accordance with applicable State and Federal requirements. Construction and demolition waste shall be separated from soils, and both shall be disposed at an approved disposal facility. All other wastes shall be disposed separately. Waste material shall be collected and stored in secure containers and removed from the site. Waste containers shall be inspected regularly. No solid or liquid wastes shall be disposed (e.g., buried or poured) on-site. Excess construction materials, supplies or debris shall be inspected at the end of each work shift and managed or disposed the same day or as soon as reasonably possible.
- Contractor(s) and subcontractor(s) shall comply with applicable regulations regarding portable toilets. Each contractor and subcontractor shall provide wastewater collection facilities for its crews at the site throughout construction activities. Sanitary facilities shall not be placed near drainage courses or in low areas and shall be positioned so they are secure and cannot be tipped over. Sanitary facilities shall be serviced regularly.
- To compensate for the potential effects of the Proposed Action on surface waters and wetlands that comprise Eastern Tiger Salamander habitat and buffer areas, mitigation will be provided to enhance this habitat, thereby providing a net conservation benefit to the species. Currently, it is proposed that approximately 0.39 acre of sub-optimal habitat on the east side of Bridgehampton-Sag Harbor Turnpike be restored to more suitable native habitat. This proposal is subject to further review and, ultimately, approval by NYSDEC. PSEG Long Island has committed to the restoration of habitat within the 535-foot buffer of the known Eastern Tiger Salamander breeding pond upon completion of construction, resulting in no permanent loss of habitat. See **Section 2.3** for a more detailed discussion of potential impacts and mitigation with respect to this aspect of Proposed Action Area water resources.

2.3 Ecology

2.3.1 Existing Conditions

2.2.3.1 Vegetation

The Proposed Action Area is predominantly comprised of vegetated utility ROW that is bisected by a dirt path. Areas of natural vegetation exist throughout the majority of the Proposed Action Area. Adjacent contiguous vegetation in the area can generally be found along the western and central portions of the Proposed Action Area, while residential areas abut the ROW in the easterly end of the Proposed Action Area.

PSEG Long Island conducted six ecological investigations on January 8, March 11, May 8, June 24 and August 5 of 2019 and on April 23, 2021. Qualifications of PSEG Long Island staff that conducted the investigation are included in **Appendix M**. Meander surveys were conducted to determine overall habitat composition and quality. Habitat classifications are defined by the NYSDEC classifications outlined in Ecological Communities of New York State (Edinger, 2014). The habitats encountered within the Proposed Action Area can best be described as successional shrubland, successional old field, coastal plain pond,

coastal plain pond shore, red maple-hardwood swamp, coastal oak-heath forest, pitch pine-oak forest, successional southern hardwood forest, coastal oak-hickory forest, brushy cleared lands, mowed roadside/pathway, mowed lawn/mowed lawn with trees, and bare soil. The Heritage Program Element Ranks are also provided for each habitat type. The definition of each rank is provided in **Appendix N**. Heritage Element Ranks categorize each habitat type on both a state and global level. Generally, the lower the number, the rarer a habitat is. A habitat map of the Proposed Action Area is provided in **Figure 2-7** and **Table 2.5** which presents the quantity of each habitat encountered. Additional unvegetated areas are defined as developed lands and consist of paved roadways and the existing Bridgehampton and Buell Substations.

Table 2.5: Existing Habitat Quantities

Habitat Type	Existing Coverage (acres)
Successional Shrubland	13.76
Successional Old Field	8.44
Coastal Plain Pond	0.36
Coastal Plain Pond Shore	0.28
Red Maple-Hardwood Swamp	0.23
Coastal Oak-Heath Forest	3.95
Pitch Pine-Oak Forest	0.55
Successional Southern Hardwood Forest	0.351
Coastal Oak-Hickory Forest	1.67
Brushy Cleared Land	0.59
Mowed Roadside/Pathway	2.66
Mowed Lawn/ Mowed Lawn with Trees	0.29
Unvegetated	**9.77**
Bare Soil	6.75
Roadway	1.26
Substations	1.76
TOTAL	**43.06**

The majority of the ROW undergoes routine maintenance tree trimming and mowing programs to help maintain the clearances required for the safe operation of the existing overhead transmission cables. Due largely to these maintenance activities, the ROW is comprised predominately of successional shrubland

and successional old field. **Edinger** (2014) describes successional shrubland as "*a shrubland that occurs on sites that have been cleared (for farming, logging, development, etc.) or otherwise disturbed. This community has at least 50% cover of shrubs. Characteristic shrubs include gray dogwood (Cornus racemosa), eastern red cedar (Juniperus virginiana), raspberries (Rubus spp.), serviceberries (Amelanchier spp.), choke-cherry (Prunus virginiana), wild plum (Prunus americana), sumac (Rhus glabra, R. typhina), nanny-berry (Viburnum lentago), and arrowwood (Viburnum dentatum var. lucidum). Non-native invasive shrubs include hawthornes (Crataegus spp.), multiflora rose (Rosa multiflora), Russian and autumn olive (Elaeagnus angustifolia, E. umbellata), buckthorns (Rhamnus cathartica, Frangula alnus), and shrubby honeysuckles (Lonicera tatarica, L. morrowii, L. maacckii).* Characteristic birds with varying abundance include gray catbird (*Dumetella caroliniensis*), brown thrasher (*Toxostoma rufum)*, blue-winged warbler (*Vermivora pinus*), golden-winged warbler (*V. chrysotera)*, chestnut-sided warbler (*Dendroica pensylvanica*), yellow-breasted chat (*Icteria virens*), eastern towhee (*Pipilo erythrophthalmus*), field sparrow (*Spizella pusilla*), song sparrow (*Melospiza melodia*), and indigo bunting (*Passerina cyanea*) (Levine 1998).*"* Successional shrublands have a conservation rank of G5 S5, indicating that they are demonstrably secure both globally and at the state level. The predominant shrub species occurring in these areas within the Proposed Action Area are eastern red cedar, mountain laurel, and scrub oak.

Successional old field is described as **Edinger** (2014) as "*a meadow dominated by forbs and grasses that occurs on sites that have been cleared and plowed (for farming or development), and then abandoned. Fields that are mowed at an interval (e.g., less than once per year) that favors the reproduction of characteristic successional old field species are included here. Characteristic herbs include goldenrods (Solidago altissima, S. nemoralis, S. rugosa, S. juncea, S. canadensis, and Euthamia graminifolia), bluegrasses (Poa pratensis, P. compressa), timothy (Phleum pratense), quackgrass (Elymus repens), smooth brome (Bromus inermis), sweet vernal grass (Anthoxanthum odoratum), orchard grass (Dactylis glomerata), common chickweed (Cerastium arvense), common evening primrose (Oenothera biennis), old-field cinquefoil (Potentilla simplex), calico aster (Sympyotrichum lateriflorum var. lateriflorum), New England aster (Sympyotrichum novae-angliae), wild strawberry (Fragaria virginiana), Queen-Anne's-lace (Daucus carota), ragweed (Ambrosia artemisiifolia), hawkweeds (Hieracium spp.), dandelion (Taraxacum officinale), and ox-tongue (Picris hieracioides). Little bluestem (Schizachyrium scoparium) may be present in some examples but is more characteristic of successional northern sandplain grassland. Shrubs may be present, but collectively they have less than 50% cover in the community. Characteristic shrubs include gray dogwood (Cornus racemosa), silky dogwood (C. amomum), arrowwood (Viburnum dentatum var. lucidum), raspberries (Rubus spp.), sumac (Rhus typhina, R. glabra), and eastern red cedar (Juniperus virginiana). Characteristic butterflies include black swallowtail (Papilio polyxenes), orange sulphur (Colias eurytheme), eastern tailed blue (Everes comyntas), and copper (Lycaena phlaeas). Characteristic birds include field sparrow (Spizella pusilla), savannah sparrow (Passerculus sandwichensis), and American goldfinch (Carduelis tristis). Characteristic mammals include meadow vole (Microtus pennsylvanicus) and woodchuck (Marmota monax) (D. Küntsler pers. comm.).*" Successional old fields have a conservation rank of G5 S5, indicating that they are demonstrably secure both globally and at the state level. This habitat occurrence is the direct result of the vegetation management of the existing ROW and is typically directly abutted by forested lands. This habitat type is predominately found between Widow Gavits Road and Townline Road and between Wainscott Northwest Road and Stephen Hands Path. Dominant species include little bluestem, Indian grass, solidago species and Pennsylvania sedge.

Edinger (2014), defines coastal plain pond as "*the aquatic community of the permanently flooded portion of a coastal plain pond with seasonally and annually fluctuating water levels. These are shallow, groundwater-fed ponds that occur in kettleholes or shallow depressions in the outwash plains south of the terminal moraines of Long Island, and New England. A series of coastal plain ponds are often hydrologically connected, either by groundwater, or sometimes by surface flow in a small coastal plain stream. Water is typically acidic, darkly stained, and has low transparency. However, coastal plain ponds in adjacent states typically have high transparency (P. Swain pers. comm.). The substrate is typically sand to muck. Aquatic vegetation may be abundant; characteristic plants include water-shield (Brasenia schreberi), white water-lily (Nymphaea odorata), bayonet-rush (Juncus militaris), Robbins spikerush (Eleocharis robbinsii), bladderworts (Utricularia purpurea, U. fibrosa), water milfoil (Myriophyllum humile), naiad (Najas flexilis), waterweed (Elodea spp.), pondweed (Potamogeton oakesianus), pipewort (Eriocaulon aquaticum), brown-fruited rush (Juncus pelocarpus), golden-pert (Gratiola aurea), water bulrush (Schoenoplectus subterminalis), Small's yellow-eyed-grass (Xyris smalliana), horse-tail spikerush (Eleocharis equisetoides), and various peat mosses (Sphagnum torreyanum, S. lescurii, S. cuspidatum, and S. macrophyllum). See coastal plain pond shore for pond margins dominated by emergent vegetation after water drawdown. Characteristic fishes include chain pickerel (Esox niger), banded sunfish (Enneacanthus obesus), and eastern mudminnow (Umbra pygmaea). Some coastal plain ponds are breeding ponds for tiger salamander (Ambystoma tigrinum). Other characteristic fauna may include painted turtle (Chrysemys picta), wood duck (Aix sponsa), and muskrat (Ondatra zibethicus)."* Coastal plain ponds have a global conservation rank of G3G4 indicating that they are between rare throughout the range and apparently secure globally, and a state conservation rank of S2 indicating there are 6 to 20 occurrences in New York. Habitats with this classification are vulnerable to disappearing whether due to rarity or other outside factors. Coastal Plain ponds are found within the Long Pond Greenbelt between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road.

Coastal plain pond shore is identified as *"the gently sloping shore of a coastal plain pond with seasonally and annually fluctuating water levels. The substrate is sandy, gravelly, or mucky. Vegetative cover at any point varies seasonally and annually with the water levels. In dry years when water levels are low and the substrate is exposed, there is a dense growth of annual sedges, grasses, and herbs. Submerged and floating-leaved aquatic plants, such as fragrant waterlily (Nymphaea odorata) and pondweeds (Potamogeton spp.), may become "stranded" on the exposed shore. In wet years when the water level is high and the substrate is flooded, vegetation is sparse, and only a few emergents and floating-leaved aquatics are apparent. A description of the aquatic component is included under the coastal plain pond community. The vegetation of this pond shore community can change dramatically from one year to the next depending on fluctuations in groundwater levels. Coastal plain pond shores on Long Island can be divided into four distinct zones following the proposed classification by Zaremba and Lamont (1993): 1. The upper wetland shrub thicket zone is treated as either pine barrens shrub swamp or the coastal variant of highbush blueberry bog thicket. This zone may also grade into red maple-blackgum swamp, coastal plain Atlantic white cedar swamp, or, in pond shores with steeper slopes, pitch pine-oak forest. 2. The upper, low herbaceous fringe zone is a narrow band of vegetation with peaty substrate mixed with sand. The dominant plants of this zone are peat moss (Sphagnum spp.), yellow-eyed grass (Xyris difformis), narrow-leaved goldenrod (Euthamia caroliniana), bluejoint grass (Calamagrostis canadensis), clubmosses (Lycopodiella inundata, L. appressa). Other plants of this zone include fascicled false foxglove (Agalinis fasciculata), Walter's sedge (Carex striata), sundews (Drosera intermedia, D. filiformis), creeping St. John's-wort (Hypericum adpressum), slender blue-flag (Iris prismatica), redroot (Lachnanthes caroliniana),*

Nuttall's lobelia (Lobelia nuttallii), water-horehound (Lycopus amplectens), panic grasses (Dichanthelium meridional, D. wrightianum, Panicum verrucosum), and large cranberry (Vaccinium macrocarpon). Occasionally, scattered seedlings of Atlantic white cedar (Chamaecyparis thyoides), red maple (Acer rubrum), and blackgum (Nyssa sylvatica) may be found in this zone. 3. The sandy exposed pond bottom zone is often very sandy and dominated by annual species. This zone may be extremely wide at ponds with very gradual pond bottom slopes. The dominant plants of this zone are beakrushes (Rhynchospora capitellata, R. nitens) and nutrush (Scleria reticularis). Other species of this zone include yellow-eyed grass (Xyris difformis), Canadian St. John's-wort (Hypericum canadense), rushes (Juncus pelocarpus, J. canadensis), rose coreopsis (Coreopsis rosea), spikerushes (Eleocharis melanocarpa, E. tuberculosa), umbrella-grass (Fuirena pumila), ludwigia (Ludwigia sphaerocarpa), bald-rush (Rhynchospora scirpoides), white beakrush (Rhynchospora alba), Virginia meadow-beauty (Rhexia virginica), marsh St. John's-wort (Triadenum virginicum), bladderwort (Utricularia subulata). 4. The organic exposed pond bottom zone is more frequently flooded than the sandy zone, hence has a greater accumulation of organics. The dominant plants of this zone can be extremely variable from year to year depending on the degree of flooding. In high water years, annual species that cannot germinate underwater are usually absent and submerged and floating-leaved aquatic plants are more abundant. In contrast, annual species tend to flourish in low water years and the aquatic species become less prevalent. The dominant plants of this zone are bald-rush (Rhynchospora scirpoides), pipewort (Eriocaulon aquaticum), spikerushes (Eleocharis obtusa, E. olivacea), and gratiola (Gratiola aurea). Other species of this zone include twigrush (Cladium mariscoides), Robbin's spikerush (Eleocharis robbinsii), bayonet rush (Juncus militaris), mermaid-weed (Proserpinaca pectinata), beaked rushes (Rhynchospora macrostachya, R. inundata), quill-leaf arrowhead (Sagittaria teres), bladderworts (Utricularia juncea, U. striata, U. purpurea), yellow-eyed grasses (Xyris smalliana, X. torta)." Coastal plain pond shores have a global conservation rank of G3G4 indicating that they are between rare throughout the range and apparently secure globally, and a state conservation rank of S2 indicating there are 6 to 20 occurrences in New York. Habitats with this classification are vulnerable to disappearing whether due to rarity or other outside factors. This habitat type is found along the edges of the coastal plain ponds within the Long Pond Greenbelt. These pond shores feature a well-defined shrub zone extending to the waterline; dominant species observed in these areas include sweet pepper bush, swamp azalea, and highbush blueberry.

Edinger (2014) defines red maple-hardwood swamp as *"a hardwood swamp that occurs in poorly drained depressions or basins, usually on inorganic soil, but occasionally on muck or shallow peat, that is typically acidic to circumneutral. This is a broadly defined community with several regional and edaphic variants. The hydrology varies from permanently saturated to the surface to seasonally flooded/wet with hummocks and hollows. In any one stand red maple (Acer rubrum) is either the only canopy dominant, or it is codominant with one or more hardwoods including ashes (Fraxinus pennsylvanica, F. nigra, and F. americana), elms (Ulmus americana and U. rubra), and yellow birch (Betula alleghaniensis). Other trees with low percent cover include butternut (Juglans cinerea), bitternut hickory (Carya cordiformis), blackgum (Nyssa sylvatica), American hornbeam (Carpinus caroliniana), swamp white oak (Quercus bicolor), and white pine (Pinus strobus). The trunks of maples are typically single-trunked unlike those of floodplain forests with multiple trunks. The shrub layer is usually well-developed and may be quite dense. Characteristic shrubs are winterberry (Ilex verticillata), spicebush (Lindera benzoin), alders (Alnus incana ssp. rugosa and A. serrulata), viburnums (Viburnum dentatum var. lucidum, V. nudum var. cassinoides), highbush blueberry (Vaccinium corymbosum), common elderberry (Sambucus nigra ssp. canadensis), and various shrubby dogwoods (Cornus sericea, C. racemosa, and C. amomum). Swamp azalea (Rhododendron*

viscosum) is more common in southern examples, and poison sumac (Toxicodendron vernix) and black ash are more common in mineral-rich examples with slightly higher pH. The herbaceous layer may be quite diverse and is often dominated by ferns, including sensitive fern (Onoclea sensibilis), cinnamon fern (Osmunda cinnamomea), royal fern (O. regalis), and marsh fern (Thelypteris palustris), with much lesser amounts of crested wood fern (Dryopteris cristata), and spinulose wood fern (Dryopteris carthusiana). Characteristic herbs include skunk cabbage (Symplocarpus foetidus), white hellebore (Veratrum viride), sedges (Carex stricta, C. lacustris, and C. intumescens), jewelweed (Impatiens capensis), false nettle (Boehmeria cylindrica), arrow arum (Peltandra virginica), tall meadow rue (Thalictrum pubescens), and marsh marigold (Caltha palustris). Open patches within the swamp may contain other herbs characteristic of shallow emergent marsh. Examples of wetland fauna that occur in the glaciated northeast red maple-hardwood swamps include wood duck (Aix sponosa), American black duck (Anas rubripes), northern waterthrush (Seiurus noveboracensis), beaver (Castor canadensis), river otter (Lutra canadensis), and mink (Mustela vison). These swamps provide breeding habitat for many wetland-dependent species, such as northern spring peeper (Pseudacris crucifer crucifer), American toad (Bufo americanus americanus), wood frog (Rana sylvatica), and spotted salamander (Ambystoma maculatum) (Golet et al. 1993)." This habitat has a global rank of G5 indicating that it is demonstrably secure globally, and a state rank of S4S5, indicating that it is also secure within the state. Red-maple hardwood swamps occur west of the Bridgehampton Substation and within the Long Pond Greenbelt. These habitats were dominated by red maple and sweet pepper bush.

Coastal oak-heath forest is defined by **Edinger** (2014) as *"a large patch to matrix hardwood forest of low diversity that typically occurs on dry, well-drained, sandy soils of glacial outwash plains or moraines of the coastal plain. The forest is usually codominated by two or more species of oaks: scarlet oak (Quercus coccinea), white oak (Q. alba) and black oak (Q. velutina). Chestnut oak (Quercus montana) is also a common associate. Pitch pine (Pinus rigida), sassafras (Sassafras albidum), and other tree species typically have very low cover in the canopy. American chestnut (Castanea dentata) may have been a common associate in these forests prior to the chestnut blight; chestnut sprouts are still found in some stands. The shrub layer is well-developed typically with a low nearly continuous cover of dwarf heaths such as lowbush blueberries (Vaccinium pallidum, V. angustifolium) and black huckleberry (Gaylussacia baccata). The herbaceous layer is very sparse; characteristic species are bracken fern (Pteridium aquilinum var. latiusculum), wintergreen (Gaultheria procumbens), and Pennsylvania sedge (Carex pensylvanica). Herb diversity is greatest in natural and artificial openings with species such as frostweed (Helianthemum canadense), false-foxglove (Aureolaria spp.), bearberry (Arctostaphylos uvaursi), goat's-rue (Tephrosia virginiana), bush-clovers (Lespedeza spp.), and pinweeds (Lechea spp.). This community can occur with several types of barrens and woodland communities as part of the broadly defined ecosystem known as the Pine Barrens."* This habitat type has a global conservation rank of G4 indicating that it is apparently secure globally, but may be rare in the periphery of its range, and a S3 state conservation status indicating it is vulnerable to disappearing within the State but not currently imperiled. Codominant species seen in these areas were white oak, scarlet oak and black oak. Consistent with the description above, the understory in this habitat within the Proposed Action Area is dominated by lowbush blueberry and black huckleberry. This habitat type is predominately found to the west of Townline Road. Much of this habitat within the Proposed Action area is generally of lower quality and has a higher number of invasive species and evidence of previous disturbances. The dominant species encountered were dwarf heaths (lowbush blueberry and black huckleberry), scarlet oak, and white oak.

Pitch pine-oak forest is encountered in the central portions of the Proposed Action Area. This habitat type is described by **Edinger** (2014) as "*a mixed forest that typically occurs on well-drained, sandy soils of glacial outwash plains or moraines; it also occurs on thin, rocky soils of ridgetops. The dominant trees are pitch pine (Pinus rigida) mixed with one or more of the following oaks: scarlet oak (Quercus coccinea), white oak (Q. alba), red oak (Q. rubra), or black oak (Q. velutina). The relative proportions of pines and oaks are quite variable within this community type. Examples can range from having widely spaced pines that are often emergent above the oak canopy to a nearly pure stand of pines with only a few widely spaced oak trees. The shrub layer is well-developed with scattered clumps of scrub oak (Quercus ilicifolia) and a nearly continuous cover of low heath shrubs such as lowbush blueberries (Vaccinium pallidum, V. angustifolium) and black huckleberry (Gaylussacia baccata). The herbaceous layer is relatively sparse; characteristic species are bracken fern (Pteridium aquilinum var. latiusculum), wintergreen (Gaultheria procumbens), and Pennsylvania sedge (Carex pensylvanica). Characteristic birds with varying abundance include eastern towhee (Pipilo erythrophthalmus), common yellowthroat (Geothlypis trichas), field sparrow (Spizella pusilla), prairie warbler (Dendroica discolor), pine warbler (Dendroica pinus), and blue jay (Cyanocitta cristata).*" Pitch pine-oak forests have a global conservation rank of G4G5 and S4, indicating that it is apparently secure at both the global and state level. This habitat was noted directly east of Wainscott Northwest Road and predominately along the edges of the ROW east of Stephen Hands Path. These areas exhibited a sharp increase in the dominance of pitch pine when compared to the habitats of the Proposed Action Area directly west of these locations. Dominant species encountered include pitch pine, red oak, lowbush blueberry, and black huckleberry.

Two relatively small patches of successional southern hardwood forest habitat are located within the Proposed Action Area. Described by **Edinger** (2014) as *"a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. Characteristic trees and shrubs include any of the following: American elms (Ulmus americana), slippery elm (Ulmus rubra), white ash (Fraxinus americana), red maples (Acer rubrum), box elders (Acer negundo), silver maple (Acer saccharinum), sassafrass (Sassafras albidum), gray birch (Betula populifolia), hawthorns (Crataegus spp.), eastern red cedar (Juniperus virginiana), and choke-cherries (Prunus virginiana). Certain introduced species are commonly found in successional forests, including black locust (Robinia pseudo-acacia), tree-of-heaven (Ailanthus altissima), and buckthorn (Rhamnus cathartica). Any of these may be dominant or codominant in a successional southern hardwood forest."* Successional southern hardwoods have a conservation rank of G5 S5, indicating that they are demonstrably secure both globally and at the state level. These occurrences are of very poor quality habitat predominantly comprised of invasive species including tree-of-heaven, Japanese knotweed, and multiflora rose.

Edinger (2014) defines Coastal Oak-Hickory forests as "*a hardwood forest with oaks (Quercus spp.) and hickories (Carya spp.) codominant that occurs in dry, well-drained, loamy sand of knolls, upper slopes, or south-facing slopes of glacial moraines of the coastal plain. The forest is usually codominated by two or more species of oaks, usually white oak (Q. alba), black oak (Quercus velutina) and chestnut oak (Q. montana). Scarlet oak (Quercus coccinea) is also a common associate. Mixed with the oaks are one or more of the following hickories: pignut (Carya glabra), mockernut (C. alba), and sweet pignut (C. ovalis). These hickories can range from nearly pure stands to as little as about 25% cover. There is typically a subcanopy stratum of small trees and tall shrubs including flowering dogwood (Cornus florida) and highbush blueberry (Vaccinium corymbosum). The shrub layer and groundlayer flora may be diverse. Common low shrubs include maple-leaf viburnum (Viburnum acerifolium), lowbush blueberries (Vaccinium*

angustifolium, V. pallidum) and black huckleberry (Gaylussacia baccata). Characteristic groundlayer herbs are Swan's sedge (Carex swanii), panic grass (Panicum dichotomum), poverty grass (Danthonia spicata) cow-wheat (Melampyrum lineare), spotted wintergreen (Chimaphila maculata), rattlesnake weed (Hieracium venosum), white wood aster (Eurybia divaricata), false Solomon's seal (Maianthemum racemosum), Pennsylvania sedge (Carex pensylvanica), and silver-rod (Solidago bicolor). Other herbs include Solomon's-seal (Polygonatum biflorum) and Canada mayflower (Maianthemum canadense) (David Küntsler pers. comm.)" Coastal oak-heath forest has a conservation rank of G4 S3 indicating a globally secure rank and some threats present to the habitat type on a state level. Patches of Coastal Oak- Heath Forest are noted towards the eastern portions of the Proposed Action Area. The habitat surrounding the Buell Substation is of particularly low quality as it is dominated by invasive such as garlic mustard, Japanese honeysuckle, multiflora rose, and black locust.

Lands best categorized as brushy cleared lands are located in proximity to both the Bridgehampton and Buell Substations. **Edinger** (2014) describes these areas as "*a former forest, woodland, or shrubland that has been clearcut or cleared by brush-hog. The cut stumps of trees and shrubs are evident and usually common. There may be a lot of woody debris such as branches and slashings from trees that were logged. Vegetation is patchy, with scattered herbs, shrubs, and tree saplings. The amount of vegetative cover probably depends on soil fertility and the length of time since the land was cleared.*" This habitat type is an unranked cultural habitat. This habitat is of low abundance within the Proposed Action area and comprises less than one percent of the total Proposed Action area. These areas are of generally low quality and are comprised of a high number of invasive species including Japanese knotweed, multiflora rose, and mugwort.

Mowed roadside/pathway by **Edinger** (2014) as *"a narrow strip of mowed vegetation along the side of a road, or a mowed pathway through taller vegetation (e.g., meadows, old fields, woodlands, forests), or along utility right-of-way corridors (e.g., power lines, telephone lines, gas pipelines). The vegetation in these mowed strips and paths may be dominated by grasses, sedges, and rushes; or it may be dominated by forbs, vines, and low shrubs that can tolerate infrequent mowing."* This habitat type is an unranked cultural habitat.

Mowed Lawn and Mowed Lawn with trees are found within the eastern portions of the Proposed Action Area and are described as **Edinger** (2014) as follows: "*residential, recreational, or commercial land, or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing and broadleaf herbicide application" and "residential, recreational, or commercial land in which the groundcover is dominated by clipped grasses and forbs, and it is shaded by at least 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing and broadleaf herbicide application."* This habitat type is an unranked cultural habitat. This habitat type is largely present in the conduit laydown area of the Proposed Action located west of Bridgehampton Sag Harbor Turnpike. Small portions of mowed lawn and mowed lawn with trees are also present within the eastern portion of the Proposed Action Area, west of Stephan Hands Path, and surrounding the industrial area and Buell Substation near Cove Hollow Road.

Unvegetated areas also are present throughout the Proposed Action Area. The existing access path is present throughout the area and is comprised of bare soils, which is predominately comprised of sand. As

discussed in **Section 3.2**, various trails intersect the Proposed Action Area and contribute to the continued presence of bare soil areas. The Bridgehampton Substation and the Buell Substation remain unvegetated and have a dolomite base. In addition, the Proposed Action Area is bisected by five (5) paved roadways that are included in the unvegetated areas within the Proposed Action Area.

A list of vegetation observed by PSEG Long Island staff during the six ecological investigations conducted on January 8, March 11, May 8, June 24 and August 5 during 2019 and on April 23, 2021 is presented in **Table 2.6.**

Table 2.6 Vegetation Species

Common Name	Scientific Name
Herbaceous	
common yarrow	*Achillea millefolium*
bearberry	*Arctostaphylos uvaursi*
garlic mustard	*Alliaria petiolata* *
hog peanut	*Amphicarpaea bracteata*
big bluestem	*Andropogon gerardi*
broom sedge	*Andropogon virginicus*
sweet vernal grass	*Anthoxanthum odoratum* *
rock cress sp.	*Arabidopsis lyrata*
mugwort	*Artemisia vulgaris* *
Blunt leaved milkweed	*Asclepias amplexicaulis*
swamp milkweed	*Asclepias incarnata*
common milkweed	*Asclepias syriaca*
butterfly weed	*Asclepias tuberosa*
wild indigo	*Baptisia tinctoria*
Pennsylvania sedge	*Carex pensylvanica*
spotted knapweed	*Centaurea stoebe* *
mouse ear chickweed	*Cerastium fontanum* *
partridge pea	*Chamaecrista fasciculata*
threadstem	*Cyperus lupulinus ssp. Macilentus*
poverty grass	*Danthonia spicata*
Deptford pink	*Dianthus armeria* *
deer tongue grass	*Dichanthelium clandestinum*
buttonweed	*Diodia teres*
purple love grass	*Eragrostis spectabilis*
cypress spurge	*Euphorbia cyparissias* *
common flat-topped goldenrod	*Euthamia graminifolia*
wild strawberry	*Fragaria virginiana*
Goats rue	*Galega officinalis* *
cleavers	*Galium aparine*

Common Name	Scientific Name
woodland sunflower	*Helianthus divaricatus*
common hackweed	*Hieracium lachenalii* *
orange grass	*Hypericum gentianoides*
Canada St. John's wort	*Hypericum perforatum* *
path rush	*Juncus tenuis*
dwarf dandelion	*Krigia sp.*
wild lettuce	*Lactuca sp.*
narrow-leaved pinweed	*Lechea tenuifolia [t]*
hairy bushclover	*Lespedeza hirta*
bushclover sp.	*Lespedeza sp.*
privet sp.	*Ligustrum sp.* *
blue toadflax	*Linaria Canadensis*
butter-and-eggs	*Linaria vulgaris* *
whorled loosestrife	*Lysimachia quadrifolia*
cow wheat	*Melampyrum lineare*
indian pipe	*Monotropa uniflora*
wood sorrel	*Oxalis stricta*
switchgrass	*Panicum virgatum*
sickle-leaved golden aster	*Pityopsis falcate*
bamboo	*Pleioblastus sp *.*
Spreading dogbane	*Pocynum androsaemifolium*
bitter milkwort	*Polygala polygama*
common cinquefoil	*Potentilla simplex*
eastern bracken fern	*Pteridium aquilinum ssp. Latiusculum*
Japanese knotweed	*Reynoutria japonica* *
common blackberry	*Rubus allegheniensis*
bristly dewberry	*Rubus hispidu*
bouncing bet	*Saponaria officinalis* *
little bluestem	*Schizachyrium scoparium*
white campion	*Silene latifolia* *
narrowed-leaved blue-eyed grass	*Sisyrinchium angustifolium*
sweet goldenrod	*Solidago odora*
horse nettle	*Solanum carolinense*
goldenrod	*Solidago sp.*
indian grass	*Sorghastrum nutans*
purpletop	*Tridens flavus*
common mullein	*Verbascum Thapsus* *
black swallowwort	*Vincetoxicum nigrum* *
primrose-leaved violet	*Viola primulifolia var. primulifolia [t]* *

Common Name	Scientific Name
ovate leaved violet	*Viola sagittata*
Shrubs	
bearberry	*Arctostaphylos uva-ursi*
common or jap barberry	*Berberis vulgaris* *
sweet pepperbush	*Clethra alnifolia*
sweet fern	*Comptonia peregrina*
autumn olive	*Elaeagnus umbellate* *
wintergreen	*Gaultheria procumbens*
huckleberry sp.	*Gaylussacia*
dangleberry	*Gaylussacia frondosa*
Inkberry	*Ilex glabra*
mountain laurel	*Kalmia latifolia*
bayberry	*Myrica pensylvanica*
scrub oak	*Quercus ilicifolia*
swamp azalea	*Rhododendron viscosum*
winged sumac	*Rhus copallinum*
pasture rose	*Rosa carolina*
wineberry	*Rubus phoenicolasius* *
lowbush blueberry	*Vaccinium angustifolium*
highbush blueberry	*Vaccinium corymbosum*
Trees	
Norway maple	*Acer platanoides* *
red maple	*Acer rubrum*
tree of heaven	*Ailanthus altissima* *
gray birch	*Betula populifolia*
pignut hickory	*Carya glabra*
shargbark hickory	*Carya ovata*
hickory sp.	*Carya sp.*
mockernut hickory	*Carya tomentosa*
southern catalpa	*Catalpa bignonioides* *
flowering dogwood	*Cornus florida*
american beech	*Fagus grandifolia*
american holly	*Ilex opaca*
eastern red cedar	*Juniperus virginiana*
blackgum	*Nyssa sylvatica*
princess tree	*Paulownia tomentosa* *
pitch pine	*Pinus rigida*
black cherry	*Prunus serotina*

Common Name	Scientific Name
white oak	*Quercus alba*
scarlet oak	*Quercus coccinea*
northern red oak	*Quercus rubra*
black oak	*Quercus velutina*
black locust	*Robinia pseudoacacia* *
willow sp.	*Salix sp.*
sassafras	*Sassafras albidum*
Vines	
porcelain berry	*Ampelopsis glandulosa* *
Oriental bittersweet	*Celastrus orbiculata* *
Virginia creeper	*Parthenocissus quinquefolia*
mile-a-minute	*Persicaria perfoliata* *
common greenbrier	*Smilax rotundifolia*
poinson ivy	*Toxicodendron radicans*
grape	*Vitis sp.*
wisteria	*wisteria sp.*
multiflora rose	*Rosa multiflora* *

[t] = NYS Threatened status

* = Invasive

Two threatened plant species were encountered during the meander surveys; narrow-leaved pinweed (*Lechea tenuifolia*) and primrose-leaved violet (*Viola primulifolia*). Both species are located within the maintained portions of the ROW between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road. Further information regarding these species are provided in **Section 2.3.3.3**.

2.2.3.2 Wildlife

PSEG Long Island also conducted six ecological investigations on January 8, March 11, May 8, June 24 and August 5 of 2019 and on April 23, 2021. Few wildlife species were observed on site, although it is expected that a number of species common to wooded, grassy, and suburban habitats would utilize the habitats on-site.

During field investigation PSEG Long Island staff encountered few mammal species. Adult and juvenile raccoons and white tailed deer were observed in the Proposed Action Area. Based on habitats recorded on site the following small mammals would also be anticipated to utilize the site: muskrat, Norway rat, house mouse, meadow vole, Virginia opossum, red fox, Eastern gray squirrel and various species of bats. **Table 2.7** provides a list of species observed or expected to utilize the Proposed Action Area.

Table 2.7: Mammal Species List

Common Name	Scientific Name
Virginia Opossum	*Didelphis virginiana*
Big Brown Bat	*Eptesicus fuscus*
Flying Squirrel	*Glaucomys volans*
Eastern Red Bat	*Lasiurus borrelis*
Hoary Bat	*Lasiurus cinereus*
Silver-haired Bat	*Lasyionicterius noctivagans*
Woodchuck	*Marmota monax*
Eastern Meadow Vole	*Microtus pennsylvanicus*
House mouse	*Mus musclus*
Little Brown Bat	*Myotis lucifugus*
White-tailed deer	*Odocoileus virginianus* *
Common Muskrat	*Ondatra zibethicus*
Tri-colored Bat	*Perimyotis subflavus*
White-footed Mouse	*Peromyscus leucopus*
Raccoon	*Procyon lotor* *
Norway Rat	*Rattus norvegicus*
Eastern Mole	*Scalopus aquaticus*
Eastern Gray Squirrel	*Sciurus carolinensis*
Masked Shrew	*Sorex cinereus*
Eastern cottontail	*Sylvilagus floridanus*
Eastern Chipmunk	*Tamias striatus*
Red Fox	*Vulpes vulpes*

* - Species observed within the Proposed Action Area

As described in **Section 2.2.3.1** above, the Proposed Action Area is comprised of various habitat types including multiple freshwater wetlands, open grassy areas and forested spaces. Therefore, a variety of migratory and resident avian species would be expected to utilize the Proposed Action Area for nesting, breeding, feeding, migrating and over-wintering. During ecological investigations conducted by PSEG Long Island staff, the following 18 avian species were encountered: Red-Tailed Hawk, Wild Turkey, Northern

Cardinal, Bald Eagle, Blue Jay, Mallard, European Starling, Red-Winged Blackbird, White-Breasted Nuthatch, Tufted Titmouse, Great Blue Heron, Turkey Vulture, Downy Woodpecker, Barn Swallow, American Robin, Gray Catbird, Carolina Wren, and the Eastern Bluebird.

The Breeding Bird Atlas (BBA) is a detailed inventory of the breeding birds within the State of New York and provides a public data set of species observations. The BBA divided the state into 25 square kilometer survey blocks and reported observations recorded between 2000 and 2005. The Proposed Action extends across 3 BBA blocks with a total of 99 species observed (New York State Breeding Bird Atlas, 2000). A copy of the BBA for the three relevant blocks is provided as **Appendix O**. While many of the species on the BBA would be expected to utilize the Proposed Action Area, those that require habitats not encountered within the Proposed Action Area are not anticipated to utilize the area. A list of bird species observed on or expected to utilize the Proposed Action Area is provided as **Table 2.8**.

Table 2.8: Avian Species List

Common name	Scientific Name
Red-Winged Blackbird	*Agelaius phoeniceus* *
Wood Duck	*Aix sponsa*
Blue-Winged Teal	*Anas discors*
Mallard	*Anas platyrhynchos* *
American Black Duck	*Anas rubripes*
Gadwall	*Anas strepera*
Ruby-Throated Hummingbird	*Archilochus colubris*
Great Egret	*Ardea alba*
Great Blue Heron	*Ardea herodias*
Tufted Titmouse	*Baeolophus bicolor* *
Cedar Waxwing	*Bombycilla cedrorum*
Canada Goose	*Branta canadensis*
Great Horned Owl	*Bubo virginianus*
Red-Tailed Hawk	*Buteo jamaicensis* *
Broad-Winged Hawk	*Buteo platypterus*
Green Heron	*Butorides virescens*
Chuck-Will's-Widow	*Caprimulgus carolinensis*
Whip-Poor-Will	*Caprimulgus vociferous [sc]*
Northern Cardinal	*Cardinalis cardinalis**
House Finch	*Carpodacus mexicanus*
Turkey Vulture	*Cathartes aura*
Hermit Thrush	*Catharus guttatus*
Brown Creeper	*Certhia americana*
Chimney Swift	*Chaetura pelagica*
Killdeer	*Charadrius vociferus*

Common name	Scientific Name
Marsh Wren	*Cistothorus palustris*
Yellow-Billed Cuckoo	*Coccyzus americanus*
Black-Billed Cuckoo	*Coccyzus erythropthalmus*
Northern Flicker	*Colaptes auratus*
Northern Bobwhite	*Colinus virginianus*
Rock Pigeon	*Columba livia*
Eastern Wood-Pewee	*Contopus virens*
American Crow	*Corvus brachyrhynchos*
Fish Crow	*Corvus ossifragus*
Blue Jay	*Cyanocitta cristata* *
Mute Swan	*Cygnus olor*
Prairie Warbler	*Dendroica discolor*
Yellow Warbler	*Dendroica petechia*
Pine Warbler	*Dendroica pinus*
Downy Woodpecker	*Dryobates pubescens* *
Gray Catbird	*Dumetella carolinensis* *
Willow Flycatcher	*Empidonax traillii*
American Kestrel	*Falco sparverius*
Common Yellowthroat	*Geothlypis trichas*
Bald Eagle	*Haliaeetus leucocephalus* *
Barn Swallow	*Hirundo rustica* *
Wood Thrush	*Hylocichla mustelina*
Baltimore Oriole	*Icterus galbula*
Orchard Oriole	*Icterus spurius*
Belted Kingfisher	*Megaceryle alcyon*
Eastern Screech-Owl	*Megascops asio*
Red-Bellied Woodpecker	*Melanerpes carolinus*
Wild Turkey	*Meleagris gallopavo* *
Swamp Sparrow	*Melospiza georgiana*
Song Sparrow	*Melospiza melodia*
Northern Mockingbird	*Mimus polyglottos*
Black-And-White Warbler	*Mniotilta varia*
Brown-Headed Cowbird	*Molothrus ater*
Great Crested Flycatcher	*Myiarchus crinitus*
Black-Crowned Night-Heron	*Nycticorax*
Osprey	*Pandion haliaetus [sc]*
House Sparrow	*Passer domesticus*

Common name	Scientific Name
Savannah Sparrow	*Passerculus sandwichensis*
Indigo Bunting	*Passerina cyanea*
Double-Crested Cormorant	*Phalacrocorax auritus*
Ring-Necked Pheasant	*Phasianus colchicus*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Eastern Towhee	*Pipilo erythrophthalmus*
Scarlet Tanager	*Piranga olivacea*
Summer Tanager	*Piranga rubra*
Black-Capped Chickadee	*Poecile atricapillus*
Blue-Gray Gnatcatcher	*Polioptila caerulea*
Sora	*Porzana carolina*
Purple Martin	*Progne subis*
Common Grackle	*Quiscalus quiscula*
Virginia Rail	*Rallus limicola*
Bank Swallow	*Riparia riparia*
Eastern Phoebe	*Sayornis phoebe*
American Woodcock	*Scolopax minor*
Ovenbird	*Seiurus aurocapilla*
Eastern Bluebird	*Sialia sialis* *
White-Breasted Nuthatch	*Sitta carolinensis* *
American Goldfinch	*Spinus tristis*
Chipping Sparrow	*Spizella passerina*
Field Sparrow	*Spizella pusilla*
Northern Rough-Winged Swallow	*Stelgidopteryx serripennis*
Eastern Meadowlark	*Sturnella magna*
European Starling	*Sturnus vulgaris* *
Tree Swallow	*Tachycineta bicolor*
Carolina Wren	*Thryothorus ludovicianus* *
Brown Thrasher	*Toxostoma rufum*
House Wren	*Troglodytes aedon*
American Robin	*Turdus migratorius* *
Eastern Kingbird	*Tyrannus tyrannus*
Blue-Winged Warbler	*Vermivora pinus*
Yellow-Throated Vireo	*Vireo flavifrons*
Warbling Vireo	*Vireo gilvus*
White-Eyed Vireo	*Vireo griseus*

Common name	Scientific Name
Red-Eyed Vireo	*Vireo olivaceus*
Mourning Dove	*Zenaida macroura*

[e] = NYS Endangered status
[t] = NYS Threatened status
[sc] = NYS Special Concern
* - Observed by PSEG Long Island during meander survey

It is anticipated that the diversity of habitats within the Proposed Action Area would support a variety of reptile and amphibian species. Three reptile and amphibian species were noted within the Proposed Action Area during field surveys conducted by PSEG Long Island; eastern box turtle, ribbon snake, and the green frog. From 1990 to 1999 the NYSDEC undertook the Herp Atlas Project which documented the distribution of reptiles and amphibians within the State. Distribution (**NYSDEC, 2007**). Additional species not seen on site but that may utilize the Proposed Action Area are noted in **Table 2.9.**

Table 2.9: Reptile and Amphibian Species List

Common Name	Scientific Name
Amphibians	
Spotted Salamander	*Ambystoma maculatum*
Marbled Salamander	*Ambystoma opacum [sc]*
Eastern Tiger Salamander	*Ambystoma tigrinum [e]*
Fowler's Toad	*Bufo fowleri*
Gray Treefrog	*Hyla versicolor*
Red-Spotted Newt	*Notophthalmus v. viridescens*
Northern Red-Backed Salamander	*Plethodon c. cinereus*
Northern Spring Peeper	*Pseudacris crucifer*
Bullfrog	*Rana catesbeiana*
Green Frog	*Rana clamitans melanota **
Wood Frog	*Rana sylvatica*
Eastern Spadefoot Toad	*Scaphiopus holbrookii [sc]*
Reptiles	
Common Snapping Turtle	*Chelydra s. serpentina*
Painted Turtle	*Chrysemys picta*

Common Name	Scientific Name
Spotted Turtle	*Clemmys guttata*
Northern Black Racer	*Coluber c. constrictor*
Northern Ringneck Snake	*Diadophis punctatus edwardsii*
Eastern Hognose Snake	*Heterodon platirhinos [sc]*
Eastern Milk Snake	*Lampropeltis t. triangulum*
Common Musk Turtle	*Sternotherus odoratus*
Eastern Box Turtle	*Terrapene c. Carolina *[sc]*
Eastern Ribbon Snake	*Thamnophis sauritus **
Eastern Garter Snake	*Thamnophis sirtalis*
Red-eared Slider	*Trachemys scripta elegans*

[e] = NYS Endangered status
[t] = NYS Threatened status
[sc] = NYS Special Concern
* - Observed by PSEG Long Island during meander survey

2.2.3.3 Rare, Threatened or Endangered Species

The New York Natural Heritage Program (NYNHP) maintains records of observations of rare, threatened and endangered species and communities reported within the State. PSEG Long Island contacted NYNHP to determine if any records of rare, threatened or endangered species or communities are present within the Proposed Action Area. Correspondence with NYNHP is included as **Appendix P**. NYNHP reported the presence of eight animal species and eight plant species listed as rare, threatened or endangered in New York State as being reported within or in the vicinity of the Proposed Action Area. Additionally, three communities of high quality occurrence, rare, or uncommon communities were noted as being within or within the vicinity of the Proposed Action Area. See **Table 2.10** for a complete list of species.

Table 2.10: Rare, Threatened, or Endangered Species List

Common Name	Scientific Name	NYS Status
Animals		
Eastern Tiger Salamander	*Ambystoma tigrinum*	*Endangered*
Martha's Pennant	*Celithemis martha*	*Unlisted*
New England Bluet	*Enallagma laterale*	*Unlisted*
Scarlet Bluet	*Enallagma pictum*	*Threatened*
Pine Barrens Bluet	*Enallagma recurvatum*	*Threatened*
Coastal Barrens Buckmoth	*Hemileuca maia spp. 5*	*Special Concern*
Northern Long-eared Bat	*Myotis septentrionalis*	*Threatened*
Aureolaria Seed Borer	*Pyrrhia aurantiago*	*Unlisted*
Plants		
Small White Snakeroot	*Ageratina aromatica*	Endangered
Rose Coreopsis	*Coreopsis rosea*	Rare
Knotted Spike Rush	*Eleocharis equisetoides*	Threatened
Long-tubercled Spike Rush	*Eleocharis tuberculosa*	Threatened
Creeping St. John's Wort	*Hypericum adpressum*	Threatened
Velvety Bush Clover	*Lespedeza stuevei*	Threatened
Globe-fruited Ludwigia	*Ludwigia sphaerocarpa*	Threatened
Long-beaked Beak Sedge	*Rhynchospora scirpoides*	Rare
Communities		
Coastal Oak-Heath Forest	-	Uncommon Community
Coastal Plain Pond Shore	-	Rare Community
Pitch Pine-Oak Forest	-	High Quality Occurrence

Eastern Tiger Salamander

Eastern Tiger Salamanders (*Ambystoma tigrinum*) are a pond-breeding, burrowing salamander that utilizes permanent or seasonal ponds and surrounding terrestrial habitat for breeding and burrowing (Levy 2001; Gibbs et al. 2007; Madison and Titus 2009). The species utilizes forested habitats, preferably comprised of deciduous and mixed pine-deciduous species that feature a dense shrub understory for

migration (NYNHP 2021a). Ponds utilized for breeding typically feature surrounding forested areas but remain open to sunlight. These ponds usually have limited to no predatory fish or feature shallow areas, which adults can utilize during breeding to avoid predation (NYNHP 2021a: Madison and Farrand 1998). Within the State, Tiger Salamanders are only found on Long Island and consist of 48 known populations within 124 breeding locations (NYNHP 2021a). The NYSDEC reports that tiger salamanders face threats due to over-development and urbanization, disturbance and introduction/expansion of predatory species in to breeding ponds, degradation of upland habitat from development and off-road vehicles, and fragmentation of habitat (NYSDEC 2010; NYNHP 2021a).

The NYNHP reported two documented occurrences of the New York State listed endangered Tiger Salamander directly within the Proposed Action Area; one is located approximately 840 feet east of Bridgehampton-Sag Harbor Turnpike, immediately to the east of the Bridgehampton Substation; and a second area is located to the west of the Bridgehampton Substation within the temporary conduit laydown area. Additional Tiger Salamander breeding ponds and reported occurrences are located in the vicinity of the Proposed Action however they occur more than 535 feet from any disturbance related to the Proposed Action. The NYSDEC regulates activities within 535 feet and 1,000 feet of known Tiger Salamander breeding ponds. Furthermore, NYSDEC works to preserve 100% of all upland forest habitat within 535 feet of the known breeding ponds. NYSDEC permit requirements are discussed in **Section 2.3.2.3** below.

Martha's Pennant, New England Bluet, Scarlet Bluet, Pine Barrens Bluet

The Martha's Pennant, New England Bluet, Scarlet Bluet and Pine Barrens Bluet are all flying insects that belong to the taxonomic order Odonata. These species share many life history qualities and will utilize vegetated ponds and lakes with many of them preferring the characteristics of acidic ponds typically associated with Coastal Plain Ponds (Nikula et al. 2003; NYNHP 2021b; NYNHP 2021c, NYNHP 2021d). All of these species have aquatic larvae and require freshwater ponds/lakes for successful breeding. In addition to the ponds themselves, many of the species named above utilize the surrounding shoreline, nearby forested roads, clearings and open fields for foraging (Nikula et al. 2003). Habitats consistent with the life history requirements of these species occur within the Long Pond Greenbelt on the east side of Bridgehampton-Sag Harbor Turnpike and associated with the wetlands located to the west of the Bridgehampton Substation.

The Martha's Pennant, New England Bluet, Scarlet Bluet and Pine Barrens Bluet face a variety of conservation threats predominately related to degradation of existing habitats (NYSDEC 2005). Degradation can occur in a variety of ways including but not limited to chemical contamination, filling, eutrophication and nutrient loading, changes in hydrology, and changes in dissolved oxygen concentrations, and development near their habitats (NYSDEC 2005).

Coastal Barrens Buckmoth

The Coastal Barrens Buckmoth has been reported in the vicinity of the East Hampton Airport. This moth utilizes pitch pine-scrub oak barrens and is restricted within the State to 18 occurrences on Long Island (NYNHP 2010e). This species commonly flies during the day between September and October (Nelson 2007). Females typically deposit their eggs around the twigs of the scrub oak and other shrubby oak species (Nelson 2007). Scrub oak is present within the Proposed Action area north of the East Hampton Airport.

Northern Long-eared Bat

NYNHP reports records of summer occurrences of the species within 0.25 miles of the Proposed Action. The Northern long-eared bat is a medium sized bat, which can be distinguished from similar species by its long ears (USFWS 2015). During the winter, this species utilizes hibernacula; hibernacula are typically abandoned mines or caves that offer consistent, cool temperatures with high humidity (USFWS 2013). During summer months individuals of this species commonly utilize mature interior forests and typically avoid edge habitats (NYNHP 2021f) often roosting during the day in dead or live trees under loose bark, or in cavities and crevices, and sometimes return to caves as night roosts (USFWS 2013).

The largest threat to this species is white-nose syndrome (NYNHP 2021f). This syndrome is caused by a fungus that interrupts hibernations and can lead to the bats burning through necessary fat reserves. In addition, the fungus can cause dehydration, and damage to the wing membrane leading to premature death (NYNHP 2021f, USFWS 2013). NYNHP also noted that the removal of occupied roost trees may pose a threat to this species.

Habitat for this species is present surrounding the Proposed Action Area and along the western portions of the Proposed Action Area.

Coastal Plain Pond Plant Species

Small White Snakeroot, rose coreopsis, knotted spike rush, long-turbecled spike rush, creeping St. John's wort, globe-fruit ludwigia, and long-beaked beak sedge are rare, threatened or endangered plant species that have been documented as occurring in or surrounding Long Pond and Deer Drink pond. Most of these species would prefer the sandy and mucky habitats the coastal plain pond shore provides. Knotted spike rush was reported within 2 feet of water near the center of the pond. While none of these species were encountered during site investigations conducted by PSEG Long Island, suitable habitat does occur within the Proposed Action Area. More specifically, coastal plain pond and coastal plain pond shore are found in the western portions of the Proposed Action Area.

Velvety Bushclover

This perennial is mainly found within disturbed openings surrounded by a mix of grasses and flowers within a variety of pitch pine/oak dominated dry, upland habitats (NYNHP 2021g). This plant features a single simple stem or a simple stem that is branched towards the top of the stem. Small purple flowers appear between mid-July and mid-September with fruiting occurring through early November (NYNHP 2021g). NYNHP reported an occurrence of this species about 50 yards from the Proposed Action Area within an established hiking path. No velvety bushclover was encountered during the site investigations conducted by PSEG Long Island.

2.2.3.4 Wetlands

Freshwater wetlands are intrinsically valuable ecological communities that are generally areas of high biodiversity and largely more productive habitats that upland counterparts. As such, they receive protection on the Federal, State and local levels. The United States Fish and Wildlife Service (USFWS) is tasked with providing the public information on the Nation's wetlands. The agencies provide the publicly available NWI that provides details on the distribution and characteristics of wetlands throughout the United States. Regionally, the NYSDEC catalogs regulated freshwater and tidal wetlands throughout the State. As shown in **Figure 2-3**, the NWI and NYSDEC cataloged multiple freshwater wetlands within the Proposed Action Area.

Freshwater wetlands are found within the westernmost portions of the Proposed Action Area; specifically, west of Widow Gavits Road in the Town of Southampton. Freshwater wetlands and surface waters associated with Long Pond are present within the 4,000± foot segment of the proposed underground transmission cable route immediately to the east of the Bridgehampton Substation; and a second area of freshwater wetlands and surface waters associated with Great Swamp is present to the west of Bridgehampton Substation within the temporary conduit laydown area. **Figure 2-3** depicts all NYSDEC and NWI freshwater wetlands within the vicinity of the Proposed Action Area. These wetlands are regulated by the NYSDEC under Article 24 and are identified as freshwater wetlands SA-27, SA-3 and SA-4.

Freshwater wetland SA-3 includes the two wetlands that directly intersect the location of the underground cable and wetlands north of the Proposed Action within the Long Pond Greenbelt. These wetlands are of high quality and exhibit a high occurrence of native species. Freshwater wetland SA-4 includes wetlands located on the south side on the Proposed Action area within the Long Pond Greenbelt and are also considered to be high quality habitat occurrences. Freshwater wetland SA-27 is located to the east side of the Bridgehampton Substation. This wetland is generally of high quality, however, greater signs of disturbance and use were observed including maintained pathways along the southern side of the wetland.

The Long Pond wetland complex is an interconnected chain of coastal plain ponds that extends from Sagaponack Inlet north to Sag Harbor. The ponds are groundwater fed and feature generally sloping shorelines. As the depth of the ponds fluctuate the variability of the exposed shorelines supports a wide array of species (USFWS Undated). The USFWS recognizes the greenbelt as a "priority wetland" under the federal Emergency Wetland Resources Act. The Long Pond Greenbelt is also recognized as a "Priority Site for Biodiversity" by the NYNHP and the Nature Conservancy. As illustrated in **Figure 2-3**, two areas of surface waters and freshwaters wetlands within the Long Pond Greenbelt directly intersect the Proposed Action Area. The underground cable will be installed beneath these surface waters via HDD.

A singular freshwater wetland intersects the HDD conduit laydown area to the west of the Bridgehampton Substation. This wetland is part of the larger Great Swamp wetland complex. Great Swamp features a series of freshwater wetlands that stretch from Bridgehampton-Sag Harbor Turnpike to the east and Brick Kiln Road to the west. The collection of freshwater wetlands comprising the Great Swamp are largely categorized as Red Maple Hardwood swamps and vernal ponds, which are surrounded by a mix of pitch pine-oak forest and coastal oak heath forest.

2.3.2 Anticipated Impacts

The impacts to the ecological resources of the Proposed Action Area are generally a direct result of the clearing of natural vegetation, human activities and associated wildlife stressors. These anticipated impacts are further detailed below.

2.3.2.1 Vegetation

The majority of the Proposed Action Area is maintained as a utility ROW consisting of successional growth vegetation resulting from mowing and tree trimming maintenance activities as well as established dirt paths. The expected changes in habitat quantities of the overall Proposed Action Area are listed in **Table 2.11** and would be the direct result of the construction phase of the Proposed Action. At the completion of construction, all but a negligible amount of disturbed areas would be revegetated. The only increase in permanently unvegetated/impervious areas will be from the underground manhole covers. Though the

removal of some vegetation within the Proposed Action Area during construction is expected to result in a change in the characteristics of the habitats on site, the underground cable will not result in the permanent loss of vegetated areas. As a result, the site will continue to provide natural habitat.

Table 2.11: Existing and Proposed Habitat Quantities

Habitat Type	Existing Conditions		Proposed Action		Change (Acres)
	Coverage (Acres)	Percent	Coverage (Acres)	Percent	
Successional Shrubland	13.76	31.96	7.68	17.84	-6.08
Successional Old Field	8.44	19.60	15.4	35.76	+6.96
Coastal Plain Pond	0.36	0.84	0.36	0.84	0
Coastal Plain Pond Shore	0.28	0.65	0.28	0.65	0
Red Maple-Hardwood Swamp	0.23	0.53	0.23	0.53	0
Coastal Oak-Heath Forest	3.95	9.17	3.56	8.27	-0.39
Pitch Pine-Oak Forest	0.55	1.28	0.53	1.23	-0.02
Successional Southern Hardwood Forest	0.51	1.18	0.48	1.11	-0.03
Coastal Oak-Hickory Forest	1.67	3.88	1.36	3.16	-0.31
Brushy Cleared Land	0.59	1.37	0.33	0.77	-0.26
Mowed Roadside/Pathway	2.66	6.18	2.66	6.18	0
Mowed Lawn/ Mowed Lawn with Trees	0.29	0.67	0.42	0.98	+0.13
Unvegetated	**9.77**	**22.69**	**9.77**	**22.69**	**0**
Bare Soil	6.75	15.68	6.75	15.68	0
Roadway	1.26	2.93	1.26	2.93	0
Substations	1.76	4.09	1.76	4.09	0
TOTAL	**43.06**	**100**	**43.06**	**100**	**0**

2.3.2.2 Wildlife

As stated in **Table 2.11,** a total of 19.95 acres of existing natural vegetation are anticipated to remain undisturbed within the Proposed Action Area. Although there will be a temporary reduction of 12.63 acres of natural areas during construction, these areas will be restored upon the completion of construction activities. With the exception of the 154 square feet (SF) of manhole covers, no permanent changes from vegetated areas to impervious areas will occur and as a result, long term impacts to wildlife are not anticipated.

Most of the species that utilize the Proposed Action Area are those that are somewhat tolerant of human activity. While it is expected that wildlife will be temporarily displaced during the construction phase of the Proposed Action, no displacement of wildlife will result from operation of the underground cable. This may lead to an increase in abundance of wildlife populations in nearby and adjacent lands during the construction phase of the Proposed Action. Wildlife that is mobile is expected to migrate to adjacent suitable habitat during construction but will return to the Proposed Action Area upon the completion of construction.

Competition both within the species and across other species already utilizing the resources of the adjacent suitable habitat may result in a net decrease in population size for some species. While a significant portion of the existing habitat will remain, site-specific populations may decrease from the temporary loss of successional habitat which certain species may prefer. If a population decrease is experienced, it will only be temporary in nature, as populations will likely rebound following the return of the Proposed Action Area to its pre-existing condition. No significant adverse impacts to wildlife populations are anticipated to result from construction or operation of the Proposed Action.

2.3.2.3 Rare, Threatened or Endangered Species

As discussed in **Section 2.2.3.3** above, the NYNHP identified the occurrence of eight animal and eight plants identified as rare, threatened or endangered species within the vicinity of the Proposed Action Area.

The narrow leaved pinweed and primrose-leaved violet were observed within the maintained portions of the ROW between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road. A single occurrence of each species was noted and no larger populations of these threatened species were observed. As cable will be installed via HDD within previously disturbed areas within the Long Pond Greenbelt and no disturbance to vegetation is anticipated in this area, the Proposed Action will have no impact on these species.

Although no permanent loss of habitat will occur, select clearing of 0.31 acres of habitat and grading of 0.11 acres of habitat on the north side of the Bridgehampton Substation will occur within 535 feet of a known Eastern Tiger Salamander breeding pond and therefore may lead to the incidental take of individuals of this species. The NYSDEC has been contacted to provide additional guidance regarding potential impacts to the species. Kevin Jennings of the NYSDEC and PSEG Long Island staff have attended multiple meetings to review the potential impacts resulting from the Proposed Action and to discuss appropriate mitigation for those impacts.

NYSDEC is tasked with regulating the incidental take of rare, threatened, and endangered species through 6 NYCRR Part 182. 6 NYCRR Part 182.11 states:

> "*The department may, at its discretion, issue a permit that authorizes the incidental take of a species listed as endangered or threatened in this Part. An incidental take permit shall include an endangered or threatened species mitigation plan … that the department has determined will result in a net conservation benefit to the listed species and which has been approved by the department*."

A net conservation benefit is defined as enhancement or contribution that will benefit the affected species' habitat to a greater degree than if the Proposed Action were not undertaken. As stated above, PSEG Long Island staff has conducted multiple meetings with NYSDEC personnel to determine appropriate mitigation that would constitute a net conservation benefit to the Eastern Tiger Salamander. Given that all disturbed areas within 535 feet of the known breeding pond will be restored and existing unsuitable/degraded habitat will be restored to a more suitable state, the requirement for a net conservation benefit to the species will be satisfied. An application for an Incidental Take permit will be submitted to NYSDEC prior to construction, which will include restoration plans. The restoration which has been proposed and reviewed with NYSDEC is discussed below.

Upon completion of construction, PSEG Long Island will restore all habitat within the 535-foot buffer of the known breeding pond resulting in no permanent loss of habitat. In addition to restoring the cleared and graded area on the north side of the Bridgehampton Substation, and in order to provide a net conservation benefit to the species, approximately 0.39 acres of sub-optimal habitat on the east side of Bridgehampton-Sag Harbor Turnpike will be restored to more suitable native habitat as depicted in **Figure 2-8**. Currently, the area features a high number of invasive species and large piles of debris, which include concrete blocks and scrap metals that currently make the area unsuitable for Eastern Tiger Salamander burrowing activities. Specifically, three areas of degraded habitat have been identified: a 0.11 acre (5,022 SF) stand of the invasive tree-of-heaven (*Ailanthus* altissima) directly north of the ROW, a 0.06 acre (2,543 SF) area of concrete rubble and non-parent soils that directly intersects the ROW, and a 0.22 acre (9,403 SF) area of concrete rubble that extends south from the ROW. All refuse will be removed from the degraded habitat identified above, characterized and disposed of in accordance with applicable federal and state regulations. Invasive species will be identified and removed and replaced with native tree, shrub, and herbaceous species. Native species to be utilized will include a mix of suitable oak species (red oak, white oak, and/or scarlet oak), dwarf heath species, mountain laurel, and warm season grasses. As a result of this proposed mitigation, these three areas will become more suitable tiger salamander habitat.

The 0.39-acre area to be restored is located on a parcel owned by the Village of Sag Harbor. PSEG Long Island discussed restoration of this area with the Village on November 11, 2021 and the Village indicated it would be amenable to the request. PSEG Long Island will obtain the necessary agreements to conduct the restoration work on Village property upon finalization of the restoration plans. Correspondence reflecting the discussion with the Village is provided as **Appendix Q**.

Given that the construction methodology has been designed to avoid impacts to Eastern Tiger Salamanders to the maximum extent practicable, and that the impacts associated with the temporary loss of habitat will be mitigated through comprehensive habitat restoration, no permanent impacts to the species are anticipated to occur.

The Proposed Action will have no significant impacts to the pennent and bluet species identified by the NYNHP. These species utilize coastal plain ponds and coastal plain pond shorelines for breeding and foraging. HDD will be utilized for installation of the cable in areas where suitable habitat occurs within the

Proposed Action Area. No trenching or ground disturbance will occur within the coastal plain ponds or their associated shorelines. A single manhole will be installed within the Long Pond Greenbelt, however disturbance will be confined to previously disturbed dirt paths which occur more than 100 feet from the shoreline of the coastal plain ponds. Therefore, no significant adverse impacts to the rare, threatened or endangered plants identified as potentially occurring within this area will occur.

Seven of the rare, threatened or endangered plant species identified by the NYNHP occur in habitats consistent with coastal plain ponds and coastal plain pond shorelines. As depicted in **Figure 2-7,** this habitat type occurs in the western portion of the Proposed Action Area. In these areas the underground cable will be installed via HDD. As a result, no trenching or ground disturbance will occur within the coastal plain ponds or their associated shorelines. A single manhole will be installed within the Long Pond Greenbelt, however disturbance will be confined to previously disturbed dirt paths and will occur more than 100 feet from the shoreline of the coastal plain ponds. Therefore, there will be no anticipated impacts to the rare, threatened or endangered plants identified as potentially occurring within this area.

Velvety bushclover was not identified onsite during the ecological surveys conducted by PSEG Long Island. Disturbance will be limited to the established ROW and will not impact the known occurrence of the species on the neighboring lands. No impacts to this species will occur as a result of the Proposed Action.

2.3.2.4 Wetlands

The Proposed Action will install the proposed underground transmission cable directly beneath the two identified freshwater wetlands within the Long Pond Greenbelt via HDD. As discussed in **Section 2.2**, a "frac-out" may occur if drilling fluid escapes the HDD drill hole. To mitigate potential impacts associated with a frac-out event, a FCP will be prepared that establishes specific protocols to minimize the potential for any such release of drilling fluid and to minimize impacts if a release does occur. As such, there are no anticipated impacts to turbidity or surface conditions of the ponds. Furthermore, there are no anticipated ground disturbances within 150 feet of the delineated boundaries of the wetlands. A single manhole will be installed within the previously disturbed dirt path on the east side of Long Pond within the ROW. There will be no change in habitat type or quality surrounding the wetland.

During construction, the temporary HDD conduit laydown area will extend across the south side of the freshwater wetland within the ROW located west of the Bridgehampton Substation. No ground disturbance is proposed within this area.

Given the lack of disturbance to wetlands or regulated adjacent areas as a result of the proposed installation methods for the cable, and the FCP, which will be implemented should a frac out occur during drilling activities, no significant adverse impacts to wetlands will occur as a result of the Proposed Action.

2.3.3 Proposed Mitigation

- Disturbance will be minimized to the maximum extent practicable as a result of the construction installation methods utilized and the minimization of the access path to the maximum extent practicable.
- Disturbance to wetlands associated with the Long Pond Greenbelt are avoided through the use of the HDD construction methodology.
- With the exception of the minimal area occupied by manhole covers all disturbed areas will be restored with appropriate native plant species.

- All disturbed areas within 535 feet of known Eastern Tiger Salamander breeding ponds will be restored with appropriate native species; additional areas on the east side of Bridgehampton-Sag Harbor turnpike will be cleared of unsuitable materials and invasive species and restored with native species to improve overall habitat suitability.
- No known invasive species will be utilized for restoration activities. Specifically, species listed in 6 NYCRR Part 575 will not be utilized.
- Timber mats will be used along the portion of the HDD conduit laydown area that crosses the freshwater wetland located west of the Bridgehampton Substation.
- A FCP will be implemented by the contractor during drilling operations should a frac-out occur.
- No debris, fill, sand, gravel or other materials will be placed within 150 feet of a wetland.

3.0 Human Environmental Resources

3.1 Cultural Resources

The Cultural Resources section considers the potential of the Proposed Action to affect cultural resources. This analysis has been completed in accordance with SEQRA and Section 14.09 of the New York State Historic Preservation Act.

Cultural resources are officially recognized cultural resources, including National Historic Landmarks (NHLs), resources listed in the National Register of Historic Places (NRHP), resources listed in the New York State Register of Historic Places (State Register), resources determined eligible for listing in the NRHP or the State Register, and locally designated resources. Such resources could consist of archaeological sites, buildings, structures, or objects considered significant in the history, architecture, archaeology, or culture of the nation, state, or locality. Known or previously inventoried historic resources were identified and considered in this section of the DEIS, along with potential historic resources. Potential historic resources consist of cultural resources that appear to meet the NRHP or State Register eligibility criteria or the criteria for local designation.

Methodology

To assess the potential for the Proposed Action to result in impacts to significant cultural resources, the Proposed Action's area of disturbance as shown in **Appendix D** was utilized. Thereafter, research and a survey were completed to identify cultural resources that may be present in the impact area, including archaeological and architectural resources. If present in the impact area, such resources would require evaluation for historic significance using the NRHP, State Register, and local designation criteria presented below. Then, an assessment could be made about the potential for the Proposed Action to result in impacts to cultural resources, including any resources considered historic resources for the purpose of SEQRA and Section 14.09 of the New York State Historic Preservation Act.

National Register of Historic Places (NRHP) Evaluation Criteria

The NRHP is the nation's inventory of known historic resources administered by the National Parks Service (NPS). The NRHP includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. The NRHP criteria and associated definitions are outlined in the National Register Bulletin, "How to Apply the National Register Criteria for Evaluation (NPS 1997)". The following is a summary of that bulletin.

Properties (structures, sites, buildings, districts, and objects) more than 50 years of age can be listed in the NRHP provided they meet one of the evaluation criteria described below; however, properties less than 50 years of age that are of exceptional significance or are contributors to a district, that also meet the evaluation criteria, can be included in the NRHP. The NRHP uses four criteria under which a property can be considered significant for listing:

A. Properties associated with events that have made a significant contribution to the broad patterns of our American history;

B. Properties associated with the lives of persons significant in our American past;

C. Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that

represent a significant and distinguishable entity whose components may lack individual distinction; and/or

D. Properties that have yielded or may likely yield information important in prehistory or history.

Properties can be listed individually or as contributors to a historic district.

In addition to meeting one of the evaluation criteria, a property must also retain integrity to convey that significance. Although the evaluation of integrity is sometimes subjective, it must always be grounded in an understanding of the property's physical features and how they relate to its significance. The NRHP recognizes seven aspects of integrity, which are listed below:

- *Location:* The place where the historic property was constructed or the place where the historic event occurred.
- *Design:* The combination of elements that create the form, plan, space, structure, and style of a property.
- *Setting:* The physical environment of a historic property.
- *Materials:* The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
- *Workmanship:* The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
- *Feeling:* A property's expression of the aesthetic or historic sense of a particular period of time.
- *Association:* The direct link between an important historic event or person and a historic property.

New York State Register of Historic Places (State Register) Evaluation Criteria

The criteria for listing in the State Register are located in New York Codes, Rules, and Regulations Title 9, Section 427.3 of the New York State Historic Preservation Act. The criteria are listed below:

a. The quality of significance in American history, architecture, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

    1. That are associated with events that have made a significant contribution to the broad patterns of our American history; or
    2. That are associated with the lives of persons significant in our American past; or
    3. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
    4. That have yielded, or may be likely to yield, information important in prehistory or history.

b. Special Considerations.

Ordinarily, cemeteries, birthplaces, or graves of historic figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered eligible for the State Register. However, such properties will qualify if they are integral parts of districts that do meet the criteria or if they fall within the following categories:

1. A religious property deriving primary significance from architectural or artistic distinction or historical importance;
2. A building or structure removed from its original location, but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with an historic person or event;
3. A birthplace or grave of an historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life;
4. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events;
5. A reconstructed building, when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived;
6. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or
7. A property achieving significance within the past 50 years if it is of exceptional importance.

Archaeological Resources

Archaeological resources are the physical remains of past human activity. These resources may be visible on the surface but are often located below ground. Archaeological sites may date to the precontact or the historic periods and may contain significant features, such as burials, midden (i.e., domestic waste) deposits, hearths, storage pits, foundation remains, and shaft features related to wells, cisterns, and privies. Impacts to these types of cultural resources are considered when a project includes ground disturbance. Ground disturbance has the potential to impact known or previously identified archaeological resources, as well as archaeological resources which may be present within an area subject to future construction.

Description of the Archaeological Resources Study Area

The archaeological resources study area, which included a one mile buffer around the Area of Potential Effects (APE), includes the entire area that could be subjected to ground disturbance in association with the Proposed Action. The archaeological resources study area considers the maximum horizontal and vertical extent of ground disturbing activities associated with the Proposed Action (excluding restoration

areas) and measures approximately 17.99 acres (7.28 hectares). The study area or APE is shown on an aerial photograph in **Figure 3-1.** Such disturbances include the installation of the new underground cable, new manholes, potential stabilization activities, vegetation clearing, and grading. Approximately 4,000 linear feet of the proposed cable extending east from the Bridgehampton Substation to the west side of Widow Gavits Road will be installed via HDD with a single manhole installed within a previously disturbed area west of Widow Gavits Road. Approximately 845 linear feet of the cable located west of Cove Hollow Road and beneath the LIRR will also be installed via HDD. The remaining portions of the cable will be installed via trenching methods and the trench may measure up to approximately four feet in width. These disturbances will occur within a corridor measuring approximately 5.20 miles in length and between 15 feet and 50 feet in width. The APE includes both the HDD and trenching areas, and also considers an equipment laydown area that occupies 0.90 acre area adjacent to the Bridgehampton Substation. Vertical impacts associated with the Proposed Action will vary in depth from surface impacts for vegetation clearing to deeper excavations for the installation of the cable via trenching and HDD methods.

Architectural Resources

Architectural resources typically consist of elements of the built environment that are 50 years or older in age. These types of resources are generally visible at the surface and may consist of buildings, such as residential, commercial, agricultural, or industrial buildings; structures, including bridges, dams, highways, and railroad grades; and objects, such as boundary markers, and mileposts (NPS 1997). Impacts to these types of cultural resources can include both direct physical impacts (e.g., demolition, alteration, or damage from construction on nearby sites) and indirect contextual impacts, such as the isolation of a property from its surrounding environment or the introduction of visual, audible, or atmospheric elements that are out of character with a property or that alter its setting.

Description of the Architectural Resources Study Area

The architectural resources study area, which included a one mile buffer around the APE, shown in **Figure 3-1**, is meant to account for proposed construction activities that could physically alter architectural resources or be close enough to architectural resources to cause physical damage or account for potential visual or contextual impacts. The architectural resources study area considers the maximum horizontal and vertical extent of ground disturbing activities associated with the Proposed Action (excluding restoration activities) and measures approximately 17.99 acres (7.28 hectares). In the case of the Proposed Action, all construction is proposed underground, and does not introduce any above-ground elements. As such, the Proposed Action does not include changes to the existing visual or contextual setting. For those areas subject to construction impacts, the proposed underground cable will be installed via trenching and HDD. The trenching is anticipated to measure up to about four feet in width at the ground surface, while the HDD impacts are located entirely within the subsurface. These construction impact areas are located within a corridor measuring approximately 5.20 miles in length and ranging between 15 feet and 50 feet in width. In addition, the architectural resources study area considers an equipment laydown area that occupies a 0.90 acre area adjacent to the Bridgehampton Substation.

3.1.1 Existing Conditions

3.1.1.1 Historic Overview[17]

The Proposed Action lies within the eastern portion of Long Island in the Atlantic Coastal Lowland physiographic province. The area is part of the Monmouth Group, Matawan Group, and Magothy Formation of Coastal Plain Deposits. This bedrock is formed from silty clay, glauconitic sandy clay, sand, and gravel. New York State was subjected to glaciation multiple times and the glacial deposits on Long Island were derived mostly from the Late Wisconsinan glaciation, from approximately 28,000 to 21,750 years ago.

3.1.1.2 Precontact Period

Long Island is situated in a strategic location at the confluence of the Hudson River and other rivers between New England and the Mid-Atlantic and it has been inhabited for at least 12,000 years. While some archaeological information has been lost due to sustained and often intensive development on Long Island, much has been learned about the people who lived there over time. To discuss the cultural sequence of Long Island, archaeologists use six general periods, though many different names have been applied to local traditions and cultural complexes. These general time periods are as follows:

- Paleoindian
- Archaic
- Transitional
- Woodland
- Contact
- Historic

Included in these general periods are several sub-periods, which are divided based on the presence or absence of certain types of artifacts or features at archaeological sites. These attributes and notable site names are summarized in the table below, along with a brief summary of the major cultural periods in Long Island (see **Table 3.1**). The table begins with the earliest occupation and concludes immediately before modern times.

[17] The Historic Overview is adapted from *Phase I Investigation of Proposed Bridgehampton to Buell New 69kV Underground Cable, Suffolk County, New York*. Prepared by PaleoWest for GEI Consultants, Inc., P.C. on behalf of PSEG Long Island. PaleoWest Technical Report 21-253. September 2021.

Table 3.1: Culture History of Long Island, New York[18]

Temporal Unit	Time Span (Years Before Present)	Culture or Tradition	Attributes and Site Names
Paleoindian	~12,000?-10,000	Clovis	Lanceolate (sometimes fluted) projectile points
Early Archaic	10,000-8,000	-----	Corner and side notched projectile points, groundstone implements
Middle Archaic	8,000-6,000	Laurentian	Stony Brook I Garvie Point
Late Archaic	6,000-3,700	Laurentian	Sylvan Lake Garvie Point II Wading River Hematite, Steatite Vessels
Transitional	3,700-2,700	Orient	Baxter Solecki Jamesport Orient #2 Orient #1 Stony Brook II Sugar Loaf Hill
Early Woodland	2,700-2,000	Adena	Middlesex Denning Point Adena Plain Ceramics
Middle Woodland	2,000-1,000	Windsor	Windsor North Beach Matinecock Point
Late Woodland	1,000-400	Windsor/East River	Shantok Fort Corchaug Pantigo Niantic Clasons Point Old Field Sebonac
Contact	400-300	Canarsie, Matinecock, Merrick, Rockaway	Wampum, European Trade Goods
Historic	300-100	Euro-American	-----

3.1.1.3 Historic Period

The lands that would become Suffolk County were purchased from the Native Americans in the mid-17th century by settlers primarily from England. Many of these purchases were overseen by Wyandanch, a

[18] Table 3.1 is adapted from Table 1: Culture History of Long Island, New York included in PaleoWest 2021.

sachem of the Montaukett Indians. The eastern end of Long Island was initially settled in 1653 as an independent colony; however, it was subsequently incorporated into the colony of Connecticut in 1662 and became part of the colony of New York in 1664 when the Dutch ceded control of their colony to the British. The Battle of Long Island took place on August 27, 1776 and the Island was occupied by the British army until their evacuation in 1783.

The Proposed Action is located within the Towns of Southampton and East Hampton. Permanent settlement of Southampton and East Hampton by the English began in 1640, when a group of colonists from Lynn, Massachusetts landed at North Sea. The English colonists carried a warrant from the Earl of Sterling granting them about 64-square miles of land, stretching from Shinnecock to Sagaponack.

Interaction between the Native American and Euro-American populations was marked by agreements, and later conflicts, concerning land use. Documents dating to as early as the late-17th century illustrate agreements with local Native Americans about the use of the land for their dwelling and agricultural purposes in exchange for agricultural goods, while the settlers claimed portions of the land for feeding and pasturage, timber, stone, and other uses.

While agriculture provided the subsistence base for the settlers, coastal resources like waterfowl, fish, and shellfish were also heavily utilized. Whaling played a vital role in the economy of the early Hamptons area and the value of whale oil and bone as trade goods generated the local industry, which was active from 1640 until the mid-19th century.

Most of eastern Long Island was affected by British occupation during the American Revolution. Wharves, vessels, and naval stores were commandeered or destroyed in Suffolk County to halt American shipping and the British fleet stationed in Gardiners Bay was provisioned with East Hampton crops, wood, and livestock, seriously depleting local resources. Pre-war economic patterns gradually resumed during the early-19th century due to waterborne trade.

Around 1870, the Sag Harbor branch of the LIRR was constructed north of Montauk Highway. The coming of the railroad greatly facilitated the movement of New York City residents to country retreats and marked the start of a thriving summer tourist industry on the south shore of Suffolk County. The railroad fostered the development of the Hamptons as a summer resort and soon summer cottages and hotels lined the streets and shores of the community. The establishment of golf clubs, private clubs, bathing stations, and large estates continued until World War I.

Following the war, Suffolk County experienced another real estate boom, especially in outlying areas. Growth slowed dramatically during the 1930s and 1940s with the Great Depression and World War II, but the second half of the 20th century witnessed renewed economic growth, especially in the 1950s and the 1990s. Today, the Hamptons host thriving vacation and summer home industries.

3.1.1.4 Archaeological Resources

The New York Cultural Resource Information System (NY CRIS) was consulted to determine the presence or absence of known and previously recorded archaeological resources. Based on information available from NY CRIS, no State Historic Preservation Office/Office of Parks, Recreation, and Historic Preservation (SHPO/OPRHP) archaeological resources are present in the study area. However, the study area traverses two Archaeological Sensitive Areas and two New York State (NYS) Museum Areas, including NYS Museum Areas 4928 (No Name) and 5531 (Long Pond) (NY CRIS 2021). Archaeologically sensitive areas are buffer

areas that are a specified distance around archaeological sites that SHPO/OPRHP has inventoried. Museum areas are archaeological areas that the NYS Museum has inventoried. The NRHP status of the NYS Museum Areas are currently "undetermined" and the details of these resources are summarized below in **Table 3.2**.

Table 3.2: Previously Recorded Archaeological Resources Located in the Study Area

Resource Number	Resource Name	Resource Type	NRHP Eligibility	Location in the Study Area
NYS Museum Area 4928	No Name	Precontact/Prehistoric: Traces of occupation identified in a 1922 publication.	Undetermined	Western Portion of the Study Area
NYS Museum Area 5531	Long Pond	Precontact/Prehistoric: Unidentified site type with small quartz chips reported in 1899 and 1926.	Undetermined	Western Portion of the Study Area

Consultation was initiated with SHPO/OPRHP in early April 2021 and a response was received via letter on April 14, 2021. In the response letter, included as **Appendix R**, SHPO/OPRHP indicated that a Phase IA Literature Search and Sensitivity Assessment Survey was warranted because portions of the Proposed Action Area were located in archaeologically sensitive areas (SHPO/OPRHP 2021). These areas are found in the western and central portion of the study area as shown in **Figure 3-2**. The Phase IA investigation was intended to identify previously recorded archaeological sites and other cultural resources within or near the Proposed Action, to assess the archaeological sensitivity of the Proposed Action Area, to document previous ground disturbance, and to make recommendations regarding the potential need for Phase IB subsurface archaeological testing.

Three SHPO/OPRHP archaeological resources are known within one mile of the study area, including the Long Pond Archaeological Site (10309.000208), the A. Edwards Historic Site (10309.000300), and the J. Edwards Site (10309.000302) (NY CRIS 2021; PaleoWest 2021). Three additional NYS Museum Areas are also located within one mile of the study area and these resources consist of NYS Museum Areas 4910, 4912, and 4924. Finally, one NYS Museum Site identified as Round Pond is located within one mile of the study area (NYS Museum Site 5534) (NY CRIS 2021). The details of these previously documented resources are summarized below in **Table 3.3**.

Table 3.3: Previously Recorded Archaeological Resources Located Within One-Mile of the Study Area

Resource Number	Resource Name	Resource Type	NRHP Eligibility	Distance from the Study Area
10309.000208	Long Pond Archaeological Site	Precontact/Prehistoric: Flakes (chipped stone) and two projectile points found 4 to 9-inches (10.2 to 22.9-centimeters) below the ground surface.	Undetermined	250 Feet
10309.000300	A. Edwards Historic Site	Historic: Site has yielded more than 900 historic period artifacts, including glass, ceramics, food remains, and coal.	Undetermined	0.26 Mile
10309.000302	J. Edwards Site	Historic: Site that includes artifacts dating to the mid-19th century.	Undetermined	0.82 Mile
NYS Museum Area 4910	No Name	The general location of a village reported in 1922.	Undetermined	0.40 Mile
NYS Museum Area 4912	Sachem's Hole	A ceremonial place identified as an "Indian Ceremonial Place".	Undetermined	0.15 Mile
NYS Museum Area 4924	No Name	Traces of occupation reported in 1922.	Undetermined	0.80 Mile
NYS Museum Site 5534	Round Pond	A possible camp/village	Undetermined	0.90 Mile

PaleoWest was contracted on behalf of PSEG Long Island to conduct Phase IA and IB archaeological investigations, PaleoWest completed a Phase IA investigation in April and May 2021. Development has occurred in the area since the late nineteenth century. PaleoWest concurs with SHPO/OPRHP that most of the ground disturbances associated with the Proposed Action will occur within soils characterized by extensive prior disturbance, with no archaeological potential. Prior disturbances result mostly from the original development of the overhead ROW. In addition, much of the study area had limited archaeological sensitivity due to an excessive distance from permanent water. However, and in accordance with the SHPO/OPRHP comments, portions of the study area fell within soils lacking evidence of extensive prior disturbance and in locations with high archaeological sensitivity as shown in **Figure 3-2**. These portions of the study area were recommended for Phase IB testing. The areas recommended for Phase IB testing

included the entirety of the study area found within the Archaeological Sensitive Areas, including approximately 2.67 linear miles of the study area. The Phase IB testing was completed on a total of 5.79 acres (2.34 hectares) (PaleoWest 2021).

The Phase IB subsurface archaeological testing was completed by PaleoWest in July and August 2021. During the fieldwork, archaeologists completed a pedestrian survey at one meter transect intervals (maximum) and plotted 276 shovel test pits (STPs). The locations of the STPs are shown in **Figure 3-3**. The STPs were completed at 15 meter maximum intervals, measured 30 centimeters in diameter, and extended up to one meter in depth. All excavated soils were passed through ¼-inch screen to facilitate the recovery of artifacts. Of the 276 plotted STPs, 257 were excavated and 19 were not completed due to the presence of standing water, slopes, road construction, and/or buried utilities. As a result of the fieldwork, no cultural materials were encountered during the Phase IB testing and as such, the study area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources.

The archaeological survey and resultant technical report were completed in accordance with the guidelines outlined in *Phase I Archaeological Report Format Requirements* issued by SHPO (SHPO 2005) and *Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State* prepared by the New York Archaeological Council (NYAC 1994). The report is included as **Appendix S**.

3.1.1.5 Architectural Resources

There are no previously recorded architectural resources located in the study area (NY CRIS 2021; PaleoWest 2021). In addition, no buildings or structures are located in the study area with the exception of the existing transmission towers found within the LIPA owned and/or controlled overhead ROW. A total of 88 known architectural resources are located within one mile of the study area and the majority of these resources are situated more than 0.50 mile east of the APE. Of the 88 known architectural resources, 11 are located within 0.50 mile of the study area. These resources include one NRHP listed Historic District (Buell Lane Historic District), three resources that are considered eligible for the NRHP, six resources that are not eligible for the NRHP, and one resource that has undetermined eligibility (PaleoWest 2021). The closest resources are situated within approximately 100 feet of the study area and include the National Grid East Hampton Generating Station (10303.000842), the Railroad Bridge over Sag Harbor Turnpike (10303.000861), and the Railroad Bridge over Cove Hollow Road (10303.000862). These sites and associated structures are listed as not eligible for the NRHP in the NY CRIS (NY CRIS 2021; PaleoWest 2021). The closest resources that have undetermined NRHP eligibility, are considered eligible for the NRHP, or are listed in the NRHP are located at least 0.23 mile from the study area. The details of the previously recorded architectural resources located within 0.50 mile of the study area are summarized below in **Table 3.4**.

Table 3.4: Previously Recorded Architectural Resources Located Within 0.50-Mile of the Study Area[19]

Resource Number	Resource Name	Resource Type	NRHP Eligibility	Distance from the Study Area
10303.000807	East Hampton High School	Historic	Not Eligible	0.40 Mile
10303.000825	Town of East Hampton Airport	Historic	Undetermined	0.48 Mile
10303.000842	National Grid East Hampton Generating Station	Historic	Not Eligible	Adjacent to the Study Area
10303.000857	84 Sag Harbor Turnpike	Historic	Not Eligible	0.10 Mile
10303.000858	Newton Lane Historic District	Historic	Eligible	0.39 Mile
10303.000860	Railroad Bridge over Stephen Hands Path	Historic	Not Eligible	0.27 Mile
10303.000861	Railroad Bridge over Sag Harbor Turnpike	Historic	Not Eligible	Adjacent to the Study Area
10303.000862	Railroad Bridge over Cove Hollow Road	Historic	Not Eligible	Adjacent to the Study Area
10372.000237	Geus Residence	Historic	Eligible	0.24 Mile
10372.000238	Dayton Residence	Historic	Eligible	0.23 Mile
90NR01935	Buells Lane Historic District	Historic	Listed in the NRHP	0.30 Mile

3.1.2 Anticipated Impacts

3.1.2.1 Archaeological Resources

No previously recorded SHPO/OPRHP Archaeology Sites are located in the study area and the study area traverses two Archaeological Sensitive Areas and two NYS Museum Areas (NYS Museum Areas 4928 and 5531). A Phase IA investigation was completed for the entirety of the study area and Phase IB testing was completed for those portions of the study area exhibiting high archaeological sensitivity. These areas included the Archaeological Sensitive Areas identified in the NY CRIS, including the locations of NYS Museum Areas 4928 and 5531. No cultural materials were encountered during the Phase IB testing and as such, the study area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources (PaleoWest 2021). Thus, no NRHP or State Register listed or eligible resources or locally designated archaeological resources will be impacted by the Proposed Action. For these reasons, the Proposed Action will not result in impacts archaeological resources,

[19] Table 3.4 is adapted from Table 3: Building Districts within One Mile of the Project APE and Table 4: Cultural Resources within One Mile of the Project APE included in PaleoWest 2021.

including any archaeological resources that could be considered historic resources pursuant to SEQRA and Section 14.09 of the New York State Historic Preservation Act.

3.1.2.2 Architectural Resources

There are no previously recorded architectural resources located in the study area and no buildings or structures are present in the study area. The only structures located in the study area are the existing transmission towers found within the LIPA owned and/or controlled overhead ROW (NY CRIS 2021; PaleoWest 2021). Thus, no NRHP or State Register listed or eligible resources or locally designated architectural resources will be directly impacted by the Proposed Action. The closest known architectural resources that have undetermined NRHP eligibility, are considered eligible for the NRHP, or are listed in the NRHP are located more than 0.23 miles from the study. Additionally, the Proposed Action will not introduce any changes to the existing viewshed or cultural context, as the Proposed Action is underground. For these reasons, no NRHP or State Register listed or eligible resources or locally designated architectural resources will be indirectly impacted by the Proposed Action. Thus, the Proposed Action will not directly or indirectly impact architectural resources, including any architectural resources that could be considered historic resources pursuant to SEQRA and Section 14.09 of the New York State Historic Preservation Act.

3.1.3 Proposed Mitigation

The Proposed Action is not expected to result in impacts to cultural resources. Specifically, the Proposed Action will not impact known historic resources or potential historic resources. As such, no mitigation is proposed for cultural or historic resources.

3.2 Open Space and Recreation

Open space and recreational resources include areas of land that the public utilizes for active or passive recreational activities. This section identifies those resources adjacent to or within the Proposed Action Area, analyzes potential impacts on the resources as a result of the Proposed Action, and any potential mitigation required.

3.2.1 Existing Conditions

Five public and private recreational areas are located adjacent to or within the Proposed Action Area. In addition, a variety of trails are located in the undeveloped open space areas that adjoin the Proposed Action Area. **Figure 3-4** illustrates the approximate location of each of the resources and known trails, which are further described below.

Open Space and Recreational Areas

Great Swamp – This area, also known as Brick Kiln Woods, is located to the west of the westernmost conduit laydown area associated with the Proposed Action. Great Swamp is considered of high ecological value and is relatively undisturbed (Town of Southampton Community Preservation Project Plan, 2006). Several trails are located within this area and serve as key linkage points to other trail systems (Town of Southampton Community Preservation Project Plan, 2006). Hiking and birdwatching are common activities that occur in this area, in addition to hunting.

Spring Farm – Spring Farm is a private hunting club located north and west of the Bridgehampton Substation. As of April 2022, the property no longer serves for hunting of fowl, but may be utilized as

private open space. Only the conduit laydown area (approximately 1,600 linear feet) required during construction to facilitate the HDD will be located within the ROW that transverses Spring Farm.

Long Pond Greenbelt – The Long Pond Greenbelt is an interconnected chain of coastal plain ponds, red-maple hardwood swamps, and upland forested habitats that provide valuable habitat for a wide range of species that is accessible through a system of interconnected trails for use by hikers. The greenbelt is over 6 miles in length and encompasses over 1,900 acres, which is held in both public and private ownership. Recreational uses include hiking, birdwatching, and non-motorized water sports on Long Pond. The Long Pond Greenbelt Nature Center offers information on the greenbelt, a library of nature books, and hosts various meetings related to the greenbelt. The portion of the Proposed Action within the ROW between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road is located within the Long Pond Greenbelt. However, as this portion of the Proposed Action will be installed via HDD only a 0.34acre area within the previously disturbed area, inclusive of the access roadway, will be disturbed within the Long Pond Greenbelt.

Sagaponack Woods – Sagaponack Woods encompasses a collection of publicly preserved undeveloped parcels generally located east of Sagg Road extending east to the shared border of the Town of Southampton and the Town of East Hampton. Sagaponack Woods contains a variety of hiking trails that connect to preserved areas and trails to both the east and west. Paumanock Path, which is a 125 mile hiking trail from Rocky Point to Montauk, traverses this section of open space. Approximately 3,870 linear feet of the Proposed Action traverses Sagaponack Woods.

Buckskill Preserve – The Buckskill Preserve is jointly owned by the Town of East Hampton and Suffolk County, and encompasses over 300 acres of open space. The preserve contains trails for hikers and mountain bikers and is located on the west side of Stephen Hands Path. Approximately 7,610 linear feet of the Proposed Action traverses the Buckskill Preserve.

3.2.2 Anticipated Impacts

Temporary impacts to the identified open space and recreational resources along the Proposed Action route are anticipated to be a direct result of construction activities. Upon the completion of construction, all stabilization will be removed and graded areas will be returned to pre-construction conditions to the maximum extent practicable. All trail crossings will be restored to maintain connectivity within the trail systems and disturbed vegetated areas will be restored with appropriate native species. Additionally, no permanent impacts to these resources will result from operation of the underground cable. No impacts to Great Swamp will occur as this area of open space is located outside of the Proposed Action Area.

Access and use of the ROW within Spring Farm will be restricted during construction activities. If necessary, a temporary bridge will be constructed over the conduit in the laydown area to allow for perpendicular access across the ROW. Conduits will also be placed to the edge of any access paths that are located parallel to the ROW to the maximum extent practicable to allow for continued vehicle access when construction activities are not occurring.

During construction, including cable drilling activities and manhole construction, access to the trail and kayak launch on the east side of the Long Pond Greenbelt will be temporarily precluded. Construction will occur within an approximately 0.34-acre area of previously disturbed lands within the Long Pond Greenbelt. This total is inclusive of the existing access road from Widow Gavits road that will be utilized during construction. Access to the Long Pond Greenbelt from this access road at Widow Gavits Road will

be temporarily restricted for the duration of construction. No other access points to the Long Pond Greenbelt will be restricted by construction. Construction in this area is anticipated to take between three and five months to complete. In order to ensure public safety, access to this area will be completely restricted to the public. As a result, a temporary impact to the use and enjoyment of the open space in the Long Pond Greenbelt will result from construction activities. Mitigation of this anticipated impact to the use of the Long Pond Greenbelt will include ensuring construction in this area occurs in the off-season months, November through March, when use of the area is reduced from peak use during the growing season. Specific mitigations are discussed in **Section 3.2.3**. Upon completion of construction, disturbed areas will be reseeded with native species, and public access to the Long Pond Greenbelt will be fully restored.

Impacts to the remaining open space areas east of Widow Gavits Road along the Proposed Action route are also anticipated as a result of construction activities. Trail areas intersecting the ROW may be temporarily restricted during construction activities. It is anticipated that any one section along the ROW will have access restricted for no more than one week during trenching activities, and one additional week during manhole installation activities. Once all construction activities are complete, no restriction to any trails or open space areas will remain along the Proposed Action route.

3.2.3 Proposed Mitigation

- If necessary, provide temporary bridges for existing access road crossings perpendicular to the ROW within Spring Farm to allow for continued vehicle access.
- Place conduit on the edge of any access roadways located parallel to and within the ROW to allow for vehicle access to the maximum extent practicable.
- Conduct construction activities within the Long Pond Greenbelt during the off-season months, November through March, when a reduction in typical use of the greenbelt occurs.
- Utilize rolling access restrictions (i.e., only close areas which are actively undergoing construction) on areas along the Proposed Action route to ensure that restrictions to trails are minimized to the maximum extent practicable.
- Enhanced outreach program to inform residents and other stakeholder groups about the construction schedule.
- Notice of anticipated trail crossing closures will be listed on the Proposed Action website.
- Remove all access restrictions upon the completion of construction activities to ensure no permanent loss of the use of open space or recreational resources occurs.

3.3 Critical Environmental Areas

CEAs are defined under subdivision 6 NYCRR 617.14(g) of the State Environmental Quality Review regulations. As described by the NYSDEC, “Critical Environmental Areas (CEAs) are areas in the state which have been designated by a local or state agency to recognize a specific geographical area with one or more of the following characteristics:

- A feature that is a benefit or threat to human health;
- An exceptional or unique natural setting;
- An exceptional or unique social, historic, archaeological, recreational, or educational value; or
- An inherent ecological, geological, or hydrological sensitivity to change that maybe adversely affected by any physical disturbance.”

This section identifies CEA's that intersect with the Proposed Action Area and analyzes impacts of the Proposed Action on those CEA's.

3.3.1 Existing Conditions

The Proposed Action is located within five CEA's, four of which are recognized as CEAs as defined by 6 NYCRR 617.14(g) of the State Environmental Quality Review regulations and one of which is designated by the Town of Southampton. CEA's that intersect the Proposed Action are illustrated on **Figure 3-5**. A list of each CEA and its reason for designation is provided below.

South Fork Special Groundwater Protection Area (located in the Town of Southampton and Town of East Hampton) – This CEA was designated by the Long Island Regional Planning Board on March 19, 1993 in order to protect groundwater.

Aquifer Protection Overlay District (located in the Town of Southampton) – This CEA was designated by the Town of Southampton on June 20, 1983 to preserve the water quality of the area.

Long Pond Greenbelt (located in the Town of Southampton) – This CEA was designated by Suffolk County on February 10, 1988 as it was recognized as a benefit to human health and to protect drinking water.

Water Recharge Overlay District (located in the Town of East Hampton) – This CEA was designated by the Town of East Hampton on February 12, 1988 to protect groundwater and drinking water.

Town of Southampton Freshwater Wetlands (located in the Town of Southampton) – This CEA is designated as per the Town of Southampton Town Code. It includes all freshwater wetlands within the town subject to Article 24 of the Environmental Conservation Law (ECL). The designation was added to Town Code on May 8, 1990.

In general, all of the CEA's in which the Proposed Action intersects are for the protection of groundwater/drinking water or surface waters. **Section 2.2** describes groundwater quality and impacts on groundwater in more detail. **Section 3.3.2** below identifies the impacts the Proposed Action will have on the areas designated as CEA's.

3.3.2 Anticipated Impacts

The Proposed Action is not anticipated to significantly impact the resources associated with the CEA designations, as the Proposed Action has been designed to minimize impacts to both groundwater and surface water. As described in **Section 2.2**, the use of HDD to install the cable in proximity to surface waters results in no disturbance to the surface waters or land adjacent to it, thereby protecting the surface waters from loose sediment that would otherwise occur with trenching activities.

Impacts to groundwater along the route are also minimized through the type of construction activities utilized and the preventative measures employed during construction. As described in **Section 2.2**, the HDD drilling activities utilize a drilling slurry that is inert and non-toxic and will not impact the quality of groundwater. Further, no water will be withdrawn or discharged along the Proposed Action route. Water necessary for drilling operations will be provided through a connection to the existing SCWA system. As discussed in **Section 2.2**, the HDD operation will recycle the water and drilling fluid to the extent practicable. Wastewater generated during drilling activities which cannot be reused will be collected in frac tanks, transported, and disposed of at an approved disposal facility licensed to accept

this type of waste. In the event of a frac out during drilling activities, a FCP will be in place to ensure that any inadvertent release is appropriately contained in a timely fashion (see **Section 2.2**). Given the measures employed to protect both groundwater and surface water, and the mitigation employed in the event a frac out should occur, both groundwater and surface water will be protected to the maximum extent practicable and therefore no significant impacts to the CEA's will result from the Proposed Action.

3.3.3 Proposed Mitigation

- Use of HDD in the vicinity of wetlands to avoid surface disturbance.
- Use of public water supply for HDD activities to avoid the need for the installation of temporary well points.
- Use of inert materials for the HDD drilling slurry to ensure HDD activities will not affect groundwater quality.
- Employment of a FCP to contain any inadvertent release of drill fluids in a timely manner.

3.4 Noise

3.4.1 Existing Conditions

The Proposed Action Route consists of a 5.2 mile path primarily within the existing ROW located in the Towns of Southampton and East Hampton, Suffolk County, New York. The Proposed Action Route will connect the existing Bridgehampton Substation located along Bridgehampton-Sag Harbor Turnpike, and the existing Buell Substation located at 18 Cove Hollow Road, East Hampton, New York. As shown in **Figure 3-6**, land uses along the route include undeveloped woodlands, residential neighborhoods, and commercial uses. A mix of commercial and electric facilities land uses are located near the eastern end of the Proposed Action route. The eastern quarter of the route also includes a single-family residential neighborhood. The center part of the route is adjacent to woodland, and the western part of the route is adjacent to woodland and low-density residential land uses. The eastern and western end of the Proposed Action route are comprised of existing electric substations.

PS&S Engineering, PC (PS&S) performed a Sound Impact Evaluation and Assessment (the "Assessment") for the construction of the Proposed Action to assess potential sound-level impacts at receptors in the vicinity of the Proposed Action Area. The Assessment included measuring ambient noise conditions and is included as **Appendix T**.

Ambient sound level readings along the Proposed Action Area were obtained and existing sound sources potentially influencing the area were noted. Existing sound levels were measured at eleven locations along the Proposed Action Area on June 10, 2021. All monitoring locations are shown in **Figure 3-7**. These locations were selected to assess the existing sound levels at locations along the Proposed Action Route near sensitive receptors and near specific noise generating activities. For the purposes of this analysis, sensitive receptors are residential and/or commercial/industrial uses.

An additional monitoring location was chosen to assess the potential sound level impact to wildlife in proximity to the Proposed Action Route. Five monitoring locations, Locations 1, 2, 3, 9, and 10 were selected to coincide with the proposed HDD entry and exit pits.

Descriptions of the eleven monitoring locations are as follows:

Monitoring Location 1: Located approximately 90 feet from the existing Bridgehampton Substation that is currently in-use and will remain in-use under the Proposed Action, on the west side of Bridgehampton-Sag Harbor Turnpike, as shown in **Figure 3-6** and **Figure 3-7**. This location will be the site of an HDD entry pit. The nearest residential sensitive receptors are located approximately 770 feet to the south and approximately 910 feet to the north. The site of the Sag Harbor landfill and the Sag Harbor Village impound lot are industrial uses which are located to the east of the monitoring location and have been identified as the nearest receptors for the HDD work location north of the Bridgehampton Substation. Additionally, the Long Pond Greenbelt is located to the east of the monitoring location, on the east side of Bridgehampton-Sag Harbor Turnpike.

Monitoring Location 2: Located within the previously disturbed area of the ROW within the Long Pond Greenbelt at the location of the HDD exit pit. The nearest residential sensitive receptor is a vacant residential structure approximately 180 feet south of the monitoring location. Additional residential sensitive receptors are located on the east side of Widow Gavits Road; the nearest occupied residential structure is approximately 470 feet east of the monitoring location. As discussed in **Section 2.0** and **Section 3.2**, the Long Pond Greenbelt is utilized recreationally for hiking, birdwatching, and non-motorized water sports on Long Pond and is comprised of significant natural resources.

Monitoring Location 3: Located on the east side of Widow Gavits Road within the ROW at the location of the HDD entry pit. The nearest residential sensitive receptor is a residential property located approximately 140 feet south of the monitoring location. Additional residential properties are located to the north, south and east of this monitoring location off Widow Gavits Road and Sagg Road. These properties are located a minimum of 380 feet from the monitoring location.

Monitoring Location 4: Located on the east side of Sagg Road. The Proposed Action at this location includes the installation of an underground manhole and the installation of the underground cable via open trench. Residential properties abut the ROW and structures are located a minimum of approximately 125 feet from the ROW in this area.

Monitoring Location 5: This monitoring location is located approximately 4,100 feet west of Wainscott Northwest Road. The Proposed Action at this location includes the installation of an underground manhole and the installation of the underground cable via open trench. The nearest sensitive receptor is the East Hampton Indoor Tennis Club which includes outdoor tennis courts located a minimum of 330 feet south of the ROW. Commercial use structures are also located north of the ROW and are approximately 800 feet from the monitoring location and approximately 480 feet from the ROW at their closest locations.

Monitoring Location 6: Located on the east side of Stephen Hand Path and the west side of Buckskill Road. The Proposed Action at this location includes the installation of an underground manhole and the installation of the underground cable via open trench Sensitive residential receptors are located to the north, south and east of this monitoring location. A residential sensitive receptor abuts the ROW to the south approximately 25 feet south of the existing ROW. As shown in **Figure 3-6** the predominant land use surrounding the ROW transitions from open space to residential and commercial uses.

Monitoring Location 7: Located approximately 1,000 feet east of Buckskill Road, this location features sensitive residential receptors to the north and south of the existing ROW. The nearest residential structure is located approximately 110 feet south of the ROW.

Monitoring Location 8: Located approximately 2,000 feet east of Buckskill Road, the Proposed Action at this location includes the installation of the underground cable via open trench. This location features sensitive residential receptors to the north and south of the existing ROW. The LIRR tracks run nearly parallel to this location and are located approximately 260 feet to the south with residential properties separating the LIRR from the ROW. The nearest residential structure is located approximately 65 feet north of this location.

Monitoring Location 9: Located approximately 1,950 feet west of Cove Hollow Road, this location will be the location of the HDD exit pit for installation of the underground cable beneath the LIRR. This monitoring location is in proximity to sensitive residential receptors as well as the LIRR and. The nearest residential sensitive receptor is located approximately 160 feet north of this location. The LIRR tracks directly abut the ROW to the south.

Monitoring Location 10: Located approximately 1,450 feet west of Cove Hollow Road, this location is the nearest residential sensitive receptor to the HDD entry pit on the south side of the LIRR. Industrial use receptors are located approximately 400 feet east and commercial sensitive receptors are located approximately 315 feet north, on the north side of the LIRR tracks.

Monitoring Location 11: Located approximately 2,250 feet west of Wainscott Northwest Road, this location was selected as a sensitive receptor for wildlife. This location is surrounded by undeveloped, forested lands that provide large swaths of habitat for wildlife. See **Section 2.3** for complete discussion of wildlife potentially utilizing the ROW within this area.

All 11 locations were monitored during daytime (7 AM – 10 PM) periods. Additionally, as one night of work may be required at each of the HDD pits for conduit pullback, Locations 1, 2, and 3 were also monitored during nighttime (10 PM-7 AM) periods. One night of work at Locations 9 and 10 may also be required. Daytime levels at Locations 1, 2, and 3 measured between 52 and 58 dBA. Measured daytime levels at Locations 9 and 10 were measured between 47 and 50 dBA and found to be similar to those of Locations 1, 2, and 3. Furthermore, the dominant land uses surrounding these locations are largely residential. However, based on a comparison of daytime levels and land uses, it can be assumed that nighttime ambient conditions in these locations will be consistent with those measured in Locations 1, 2 and 3. Thus, nighttime ambient levels were not recorded at those locations.

The existing measured total sound levels varied between 47 dBA and 58 dBA during daytime hours, and between 47 dBA and 50 dBA during nighttime hours. **Table 3.5** depicts the existing sound levels at each of the monitoring locations along the Proposed Action Route.

Table 3.5: Ambient Noise Measurements

MONITORING LOCATION ID	MONITORING LOCATION DESCRIPTION	MEASURED DAYTIME TOTAL SOUND LEVELS (dBA)	MEASURED NIGHTIME TOTAL SOUND LEVELS (dBA)
1	Bridgehampton Substation-Bridgehampton-Sag Harbor Turnpike HDD Entry Pit #1	58	48
2	Adjacent to 279 Widow Gavits Road HDD Exit Pit #2	52	47
3	Adjacent to 212 Widow Gavits Road HDD Entry Pit #2	53	50
4	East of Sagg Road, adjacent to 1114 Sagg Road	52	Not measured
5	Adjacent to East Hampton Indoor Tennis	49	Not measured
6	Between Stephen Hands Path and Buckskill Road Adjacent to 215 Canary Road	56	Not measured
7	Adjacent to 17 Blue Jay Way	48	Not measured
8	Adjacent to 39 Blue Jay Way	51	Not measured
9	Adjacent to 31 Surrey Court HDD Exit Pit #3	50	Not measured
10	Adjacent to 24 Horseshoe Drive	47	Not measured
11 (Wooded Habitat)	South of 11 Highview Drive	51	Not measured

The major sound-level influences along the Proposed Action Route were from wildlife (birds and insects), local vehicular traffic, construction/maintenance work at nearby properties, as well as contributions from non-anthropogenic sources such as wind rustling nearby leaves. Airplane and helicopter traffic from East Hampton Airport also generated irregular, significant increases in noise levels (up to 76 dBA) which were excluded from total sound results.

NYSDEC guidelines, detailed in *Assessing and Mitigating Noise Impacts,* states that while operational noise is regulated, "it is not the intention of this guidance to require guidance to require decibel limits to be established for operations where such limits are not required by regulation," including construction noise. However, NYSDEC presents Best Management Practices (BMPs) for noise generators. BMPs include limiting work times to normal work hours and coordinating with the local residents about the date and duration of work near given sensitive receptors, as well as increasing setback distance from a given receptor or enclosing equipment in buildings.

3.4.2 Anticipated Impacts

No long-term increase in ambient sound levels is anticipated once the Proposed Action is completed and operational, as the Proposed Action does not include sound generating equipment or facilities. Construction phase activities will cause a temporary increase in ambient sound levels along the entire route. Sound propagation modelling of construction phase activities was performed, and documented in the Assessment (October 2021), provided as **Appendix T**. Modeling was undertaken to project expected sound levels during the construction phase based on the specific activities and equipment that will be undertaken and utilized during construction. Construction activity using open trench installation will generate intermittent and transient noise along the entire segment of open trenching, while HDD activities will cause an increase in sound levels primarily at the entry and exit pits. Locations 1, 2, 3, 9, and 10 are locations where HDD installation methods will be utilized and are noted with an "*" in **Table 3.6** below; Location 4 through 8 and Location 11 are locations where open trench installation methods will be utilized. The modeled total sound levels represent the worst-case scenarios anticipated at the nearest sensitive receptor with all construction equipment operating simultaneously.

Table 3.6: Summary of Modeled Sound Levels Generated by Construction

MONITORING LOCATION ID	SENSITIVE RECEPTOR	APPROX. DISTANCE FROM MONITORING LOCATION (feet)	MONITORING LOCATION DESCRIPTION	TOTAL DAYTIME MODELED SOUND LEVELS AT NEAREST SENSITIVE RECEPTOR (dBA)	MEASURED DAYTIME TOTAL SOUND LEVELS (dBA)	TOTAL NIGHTIME MODELED SOUND LEVELS FOR 24-HOUR HDD PERIOD AT NEAREST SENSITIVE RECEPTOR (dBA)	NIGHTTIME MEASUSURED AMBIENT TOTAL SOUND LEVELS (dBA)
1*	Sag Harbor Impound Lot (Industrial)	350	Bridgehampton Substation-Bridgehampton-Sag Harbor Turnpike HDD Entry Pit #1	80.3	58	80.3	48
2*	Residential	470	Adjacent to 279 Widow Gavits Road HDD Exit Pit #2	75.9	52	75.8	47
3*	Residential	140	Adjacent to 212 Widow Gavits Road HDD Entry Pit #2	89.7	53	89.7	50
4	Residential	125	East of Sagg Road, adjacent to 1114 Sagg Road	78.8	52	Not measured	Not measured

MONITORING LOCATION ID	SENSITIVE RECEPTOR	APPROX. DISTANCE FROM MONITORING LOCATION (feet)	MONITORING LOCATION DESCRIPTION	TOTAL DAYTIME MODELED SOUND LEVELS AT NEAREST SENSITIVE RECEPTOR (dBA)	MEASURED DAYTIME TOTAL SOUND LEVELS (dBA)	TOTAL NIGHTIME MODELED SOUND LEVELS FOR 24-HOUR HDD PERIOD AT NEAREST SENSITIVE RECEPTOR (dBA)	NIGHTTIME MEASUSURED AMBIENT TOTAL SOUND LEVELS (dBA)
5	East Hampton Indoor Tennis Club (Recreational)	330	Adjacent to East Hampton Indoor Tennis	60.7	49	Not measured	Not measured
6	Residential	25	Between Stephen Hands Path and Buckskill Road Adjacent to 215 Canary Road	84.5	56	Not measured	Not measured
7	Residential	110	Adjacent to 17 Blue Jay Way	83.2	48	Not measured	Not measured
8	Residential	65	Adjacent to 39 Blue Jay Way	85.1	51	Not measured	Not measured
9*	Residential	160	Adjacent to 31 Surrey Court HDD Exit Pit #3	70.8	50	Not measured	Not measured
10*	Residential	0	Adjacent to 24 Horseshoe Drive	75.3	47	Not measured	Not measured
11 (Wooded Habitat)	Open Space	50	South of 11 Highview Drive	88.0	51	Not measured	Not measured

*- Indicates HDD installation methodology

Based on manufacturer specifications and NYSDEC guidelines, open trench installation work can be expected to produce sound levels of 86 dBA at 50 feet from the source. Manhole placement activities will utilize an additional piece of equipment (mobile crane) that operates at approximately the same decibel level as the trenching equipment; therefore, the additive noise effect of the additional equipment will result in an increase of 2 dBA around the manholes, or 88 dBA at 50 feet.

The sound levels attributable to the Proposed Action were modelled based on the existing ambient sound levels. The calculated total sound level was used to analyze the impact to surrounding land uses. As shown

on **Table 3.6**, sound levels at residences near the construction activity will increase from the existing range of 48 to 51 dBA, to 71 to 85 dBA.

The NYSDEC document entitled "Assessing and Mitigating Noise Impacts", revision date February 2, 2001, provides guidance regarding the assessment and significance of sound level increases and shows a sound source of 80 to 90 dBA has an associated human response of "annoying" to "very annoying". As recommended in the NYSDEC guidance document, this level of noise warrants utilization of mitigation to reduce the effects during construction. Section C of the NYSDEC guidance document entitled "Mitigation-Best Management Practices (BMP) for Reducing Noise" includes a listing of various noise abatement techniques for reducing frequency and duration of sound, as well as reducing sound pressure levels at the receptors. Each of the noise abatement techniques listed in the NYSDEC guidance document were reviewed for utilization during the construction phase, and appropriate mitigation selected for use during construction is discussed in **Section 3.4.3**.

The construction phase requires use of specific equipment for excavation and installation of the facilities, and alternative equipment and techniques are not available or practicable. As the Proposed Action is located predominantly within an existing ROW to minimize overall disturbance of the Proposed Action the activities cannot be relocated to an area that is further removed from residences and other receptors.

At each location, the increase in noise levels will occur only for the limited period of time during construction activities. Typical trenching activities can progress at a rate of approximately 200 feet per day when occurring on paved surfaces and approximately 300-500 feet per day when occurring within the unpaved ROW. As such, portions of the Proposed Action where only trenching occurs are expected to experience transient periods of the worst-case modeled noise conditions for a single day before noise conditions will begin to attenuate as trenching activities progress along the ROW. Receptors in proximity to manhole construction may experience up to a week of increased noise during construction between the hours of 7 AM to 7 PM. Noise generation sources from trenching construction are mobile and will operate along the existing linear ROW. As a result, noise barriers are not practicable for implementation during trenching construction.

As described in the Assessment, HDD work can be expected to produce sound levels of 99 dBA at 50 feet from the source. Overnight work will be required for a maximum of one 24-hour period at each of the HDD locations. Overnight work will be required for the pull through of the conduit through the HDD borehole. Once the pull through activity begins, it must continue until completion; stopping the pull through at nightfall and re-commencing the work in the morning would pose a significant risk that jeopardizes the overall success of the HDD. The remainder of the HDD activities would occur during standard construction hours, between 7 AM and 7 PM.

In order to reduce the noise level generated by HDD activities, flexible noise control mats or acoustic barriers (e.g., EchoBarriers) will be deployed to reduce construction related noise impacts resulting from the HDD. Acoustic barriers will be added to stationary equipment as applicable and affixed to the front of temporary construction fencing surrounding HDD locations to the maximum extent practicable. As discussed in the Assessment included as **Appendix T,** an 8-foot acoustical barrier and a 16-foot acoustical barrier were considered. When an 8-foot-high layer of acoustical barriers is in place, modeled results show a reduction in projected noise levels ranging from 0 dBA to 6 dBA. When a 16-foot-high layer of acoustical barriers is in place, modeled results show a reduction in projected noise levels ranging from 2 dB to 8 dBA. It was determined that given the unique topography of the area and location of sensitive receptors in

relation to HDD sites, the 16-foot acoustical barrier would offer the greatest benefit in terms of noise attenuation. In order to achieve the 16-foot-high barrier, acoustic mats will be stacked in rows of two. Use of the barriers ensures the sound levels experienced in the vicinity of the HDD locations are attenuated and minimized to the maximum extent practicable. As shown on **Table 3.7**, which reflects the inclusion of the noise attenuation barriers, sound levels at sensitive receptors near the HDD construction activity, will increase from the existing range of 48 to 58 dBA, to 68 to 83 dBA. If HDD activities are left unmitigated, modeled sound levels at sensitive receptors range from 70.8 to 89.7 dBA.

Table 3.7 Summary of Modeled Sound Levels Generated by HDD Construction with Mitigation

MONITORING LOCATION ID	SENSITIVE RECEPTOR	APPROX. DISTANCE FROM MONITORING LOCATION (feet)	MONITORING LOCATION DESCRIPTION	TOTAL MODELED SOUND LEVELS AT NEAREST SENSITIVE RECEPTOR (dBA)	TOTAL MODELED SOUND LEVELS AT NEAREST SENSITIVE RECEPTOR WITH ACOUSTICAL BARRIERS (dBA)	MEASURED DAYTIME TOTAL SOUND LEVELS (dBA)	MEASURED NIGHTIME TOTAL SOUND LEVELS (dBA)
1	Sag Harbor Impound Lot (Industrial)	350	Bridgehampton Substation-Bridgehampton-Sag Harbor Turnpike HDD Entry Pit #1	80.3	74.4	58	48
2	Residential	470	Adjacent to 279 Widow Gavits Road HDD Exit Pit #2	75.9	67.9	52	47
3	Residential	140	Adjacent to 212 Widow Gavits Road HDD Entry Pit #2	89.7	82.9	53	50
9	Residential	160	Adjacent to 31 Surrey Court HDD Exit Pit #3	70.8	62.8	50	Not measured
10	Residential	0	Adjacent to 24 Horseshoe Drive	75.3	72.9	47	Not measured

3.4.3 Proposed Mitigation

The NYSDEC "Assessing and Mitigating Noise Impacts" guidance document includes techniques to reduce noise frequency and impulse noise at the source, reduce noise duration, and reduce noise sound pressure levels. The following BMP's will be utilized to mitigate the effects of increased noise during the construction phase of the Proposed Action.

- With the exception of HDD conduit pull-through anticipated to require a maximum of 1 x 24-hour work-day, all work activities will occur between 7 AM and 7 PM.

- Flexible noise control covers or acoustic barriers to be installed on 16-foot-high fencing will be utilized on stationary HDD machinery and recycler/reclaimer to the maximum extent practicable.
- All equipment will be regularly maintained.
- Conduct an enhanced outreach program to coordinate potential scheduling adjustments where possible and inform residents about the construction schedule and resultant increase in noise levels.

3.5 Coastal Zone

3.5.1 Existing Conditions

Pursuant to the Coastal Zone Management Act of 1972, the State developed and adopted the Waterfront Revitalization of Coastal Areas and Inland Waterways Law (Executive Law, Article 42). Article 42 defines the coastal area boundary, provides a basis for coordinating State actions affecting the coastal area and designates the New York State Department of State (NYSDOS) as the administering agency. The Coastal Management Program (CMP) outlines 44 coastal polices that provide the framework for decision-making to which agencies must adhere.

As show in **Figure 3-8**, the portion of the Proposed Action located in the Long Pond Greenbelt, and lying between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road, and the portion of the Proposed Action between Widow Gavits Road and Sagg Road is within the State designated coastal area boundary.

3.5.2 Anticipated Impacts

As a portion of the Proposed Action is located within the coastal area, and requires both state and federal approvals, a Federal Consistency Assessment Form (FCAF) was completed. The purpose of the FCAF is to assist with ensuring the Proposed Action is consistent with the policies outlined in the CMP. The completed FCAF and associated policy discussion will be sent to the NYSDOS to determine coastal consistency concurrence prior to the commencement of construction of the Proposed Action. The FCAF and accompanying policy analysis is included as **Appendix U**. Per the responses to the FCAF, fourteen of the forty-four CMP policies are potentially applicable to the Proposed Action and are described below.

Fish and Wildlife Policies

Policy 7 — *Significant coastal fish and wildlife habitats will be protected, preserved, and, where practical, restored so as to maintain their viability as habitats.*

Policy 9 — *Expand recreational use of fish and wildlife resources in coastal areas by increasing access to existing resources, supplementing existing stocks, and developing new resources.*

Policy 10 — *Further develop commercial finfish, shellfish and crustacean resources in the coastal area by encouraging the construction of new, or improvement of existing on-shore commercial fishing facilities, increasing marketing of the State's seafood products, maintaining adequate stocks, and expanding aquaculture facilities.*

These policies address the protection of significant coastal fish and wildlife habitat (SCFWH), recreational use of fish and wildlife resources, and commercial fishing resources within the coastal zone. Within New

York State there are 257 designated SCFWHs including marshes, wetlands, old fields, grasslands and woodlands and forests. The Proposed Action is located within the Long Pond Greenbelt SCFWH, which was designated on March 15, 1987. As shown in **Figure 3-8**, within the Proposed Action Area, the SCFWH extends from approximately 330 feet east of Bridgehampton-Sag Harbor Turnpike east approximately 105 feet east of Widow Gavits Road. As discussed in **Section 2.3**, the Long Pond Greenbelt is an interconnected chain of coastal plain ponds, red-maple hardwood swamps, and upland forested habitats that provide valuable habitat for a wide range of species.

Due to the sensitivity of the habitat within the SCFWH, care was taken during the design phase of the Proposed Action to limit disturbance within this area to the maximum extent practicable. The subsurface cable will be installed via HDD between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road to mitigate the aboveground impacts associated with trenching installation methods and to maintain the integrity of the habitat present in this area. In addition, temporary timber mats, in lieu of RCA, will be installed within the existing access pathway from Widow Gavits Road west for stabilization of machinery. As stated in **Section 2.2.2**, a FCP will be implemented to mitigate potential impacts from a "frac out" event that could involve an inadvertent release of drilling fluids during the HDD. A single manhole will be installed within the Long Pond Greenbelt, however, it will be located within the previously disturbed areas and will not result in the loss of any SCFWH.

The HDD exit pit and open trench installation on the east side of Widow Gavits Road will also be located within the Long Pond Greenbelt SCFWH. The entirety of this portion of the ROW has undergone previous disturbance related to the installation of the existing overhead transmission lines and undergoes regular mowing and tree trim activities. An unvegetated access path on the south side of the ROW diverges into two unvegetated access paths that run along the north side and south side of the length of the ROW and exit to Sagg Road on the north side of the ROW. The habitat in this area is generally of lower quality than that found within the portion of the SCFWH on the west side of Widow Gavits Road and there are no wetlands associated with the Long Pond Greenbelt on the east side of Widow Gavits Road. The Proposed Action intends to limit the disturbance within this area to the maximum extent practicable, however clearing, grading, and stabilization will be required to facilitate construction. As shown in the Proposed Action Construction Plans provided as **Appendix D**, a 0.3 acre area on the east side of Widow Gavits Road, within the ROW, will be graded and temporarily stabilized with RCA to facilitate the staging of the HDD equipment. Due to the natural slope of the topography, timber mats are not a feasible alternative for construction in this area. Additionally, a 15-foot-wide vehicle disturbance path will extend from the stabilized area east along the ROW to Sagg Road. No grading will occur along this path. The Proposed Action will temporarily expose soils during construction for the installation of the underground cable, clearing and grading, and the use of the HDD drill rig, which could increase the magnitude of stormwater runoff, and induce increased stormwater erosion and sediment transport, which could impact on-site or nearby surface waters and/or the underlying groundwater. Such impacts will be avoided or minimized through implementation of the site-specific SWPPP. See **Section 2.2** for a discussion of water resources. All RCA stabilization will be removed upon the completion of construction and graded areas will be returned to their pre-existing grades to the maximum extent practicable. The disturbed areas will be revegetated with appropriate native species.

Given the lack of disturbance to wetlands as a result of the proposed installation methods for the cable, the location of the manhole and HDD setup within the previously disturbed areas, and the FCP plan which will be implemented should a frac out occur during drilling activities, no significant adverse impacts to

SCFWH will occur as a result of the Proposed Action. The Proposed Action is consistent with the goals outlined in Policy 7 and will preserve the habitats of the SCFWH.

Construction will occur within an approximately 0.34 acre area of previously disturbed lands within the Long Pond Greenbelt. This total is inclusive of the existing access road from Widow Gavits road that will be utilized during construction. Access to the Long Pond Greenbelt from this access road at Widow Gavits Road will be temporarily restricted for the duration of construction. Due to the location of the construction activities, access to the east side of the Long Pond Greenbelt, including select trails and the kayak launch, will be temporarily restricted during construction. Construction of the manhole in this area, in addition to receiving the cable from the drill activities, is anticipated to take between three and five months to complete. In order to ensure public safety, access to this 0.34 acre area will be completely restricted to the public. As a result, a temporary impact to the recreational use and enjoyment of the fish and wildlife resource will result from limited access during construction activities. To mitigate impact to recreational use of coastal fish and wildlife resources, construction activities will take place during off-season months, November through March. Access to the remainder of the coastal area, not immediately within the construction area, will not be impacted. Upon completion of construction, access to the Long Pond Greenbelt will be fully restored. The Proposed Action will not supplement existing stocks or develop new recreational fish and wildlife dependent uses with the coastal zone. The Proposed Action will have no permanent impact to access to recreational use of fish and wildlife resources. The Proposed Action does not contemplate changes, enhancements, or permanent restrictions to park access and as a result, the Policy does not apply.

The Proposed Action is not located near any commercial fishing facilities and the site is not proposed for on-shore commercial fishing facilities nor has any such facility been contemplated at the site. No fish stocking or aquaculture activities are proposed in association with the Proposed Action. The subsurface portion would be compatible with the existing uses adjacent to and within the Proposed Action area. Accordingly, the Proposed Action would not result in impacts to commercial fishing activities and the Action is consistent with these policies. The Proposed Action does not contemplate changes or enhancements to commercial fishing facilities and as a result, the Policy does not apply.

Flooding and Erosion Hazard Policies

Policy 11	*Buildings and other structures will be sited in the coastal area so as to minimize damage to property and the endangering of human lives caused by flooding and erosion.*
Policy 12	*Activities or development in the coastal area will be undertaken so as to minimize damage to natural resources and property from flooding and erosion by protecting natural protective features including beaches, dunes, barrier islands and bluffs.*
Policy 17	*Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.*

Policies 11, 12, and 17 are designed to address potential impacts to flooding and erosion within the coastal zone. Policy 12 seeks to ensure that activities undertaken within the coastal area minimize damage to natural resources and properties from flooding and erosion through the protection of natural features.

The Proposed Action will temporarily expose soils during construction, which could increase stormwater erosion and sediment transport (See **Section 2.2**). Such impacts will be avoided or minimized through implementation of the site-specific SWPPP and therefore are not anticipated to damage property or endanger human lives. Consistent with Policy 11, No buildings are proposed as part of the Proposed Action and all structures within the coastal area will be located subsurface. As such, no impact on properties or human lives are anticipated.

As discussed above, the Proposed Action has been designed to limit disturbance to the maximum extent practicable to maintain the integrity of the habitat and protective features in this area. Approximately 3,300 feet of the underground cable within the coastal zone will be installed via HDD in order to mitigate disturbance associated with trenching installation methodologies. A shorter, approximate 750-foot segment, extending east of Widow Gavits Road will be installed via open trench methodology. A single manhole will be installed within the Long Pond Greenbelt, however, it will be located within the previously disturbed area and will not result in the loss of or impact to any natural protective features. All RCA stabilization will be removed upon the completion of construction and graded areas will be returned to their pre-existing grades to the maximum extent practicable. The disturbed areas will be revegetated with appropriate native species.

The Proposed Action includes the installation of underground transmission cable and manholes that will remain in-place. The structures will not have an impact on properties, or endanger human lives due to flooding events and erosion. Furthermore, the Proposed Action has been designed to limit disturbance within the coastal area to the maximum extent practicable. A single manhole will be placed within a previously disturbed area on the west side on Long Pond. With the exception of the minimal area occupied by manhole cover, the Proposed Action will not alter the habitat or land use within the coastal area.

Policy 17 seeks the use of non-structural measures to minimize damage to natural resources and property, including use of setbacks, vegetative plantings, reshaping bluffs, and flood-proofing buildings above the base flood level. The Proposed Action does not utilize structural measures for flood and erosion protection. Therefore, the Proposed Action is consistent with the outlined policy.

Public Access Policies

Policy 19 — *Protect, maintain, and increase the level and types of access to public water related recreation resources and facilities.*

Policy 20 — *Access to the publicly-owned foreshore and to lands immediately adjacent to the foreshore or the water's edge that are publicly-owned shall be provided and it shall be provided in a manner compatible with adjoining uses.*

Policy 19 seeks to protect, maintain and increase the access to public water related resources. Policy 20 seeks to ensure that access to publicly owned foreshore and lands adjacent to the foreshore are maintained. As discussed in **Section 3.2.2,** during construction, access to the east side of the Long Pond Greenbelt, including the kayak launch, will be temporarily restricted. Construction of the manhole in this area in addition to receiving the cable from the drill activities is anticipated to take between three and five months to complete. In order to ensure public safety, access to this area will be completely restricted to the public. As a result, a temporary impact to public access of the open space will result from construction activities. To mitigate impact to public access, construction activities will take place during

off-season months. Upon completion of construction, access to the Long Pond Greenbelt will be fully restored. The Proposed Action will have no permanent impact to access to public water-related recreation resources and facilities.

Historic and Scenic Resources Policies

Policy 24 *Prevent impairment of scenic resources of statewide significance.*

Policy 24 is intended to preserve historic and scenic resources within the coastal area. The Long Pond Greenbelt has been identified as a locally significant scenic resource as it provides a unique, high quality landscape. Temporary impairment of the scenic qualities of this area may be experienced during the construction portion of the Proposed Action. In order to ensure public safety, access to the areas of the Long Pond Greenbelt directly surrounding the location of the proposed underground manhole and HDD activities will be restricted due to construction equipment that will be present for three to five months. No clearing or grading is proposed within the Long Pond Greenbelt. Timber mats will be utilized for temporary stabilization and will be removed upon the completion of construction. Upon completion of construction, all structures, with the exception of the minimal area occupied by manhole covers, will be located subsurface. As such, no permanent impairment of scenic resources is anticipated.

Emergency and Ice Management Policies

Policy 27 *Decisions on the siting and construction of major energy facilities in the coastal area will be based on public energy needs, compatibility of such facilities with the environment, and the facility's need for a shorefront location.*

Policy 27 states that siting major energy facilities in the coastal area will be based on public energy needs and compatibility of such facilities with the environment. As discussed in **Section 1.1.2,** the Public Need for the Proposed Action relates to LIPA's objective of providing safe and reliable electric service to the eastern end of Long Island and is part of a portfolio of projects that have been selected which meet the anticipated T&D System needs until at least 2030.

The Proposed Action has been designed to be installed below-grade predominately beneath the existing ROW, which bisects the coastal area within and adjacent to the Long Pond Greenbelt. The Proposed Action will not expand the ROW within the coastal area and, with the exception of the minimal area occupied by manhole covers, will not alter the habitat or land use within the coastal area.

Water and Air Resources Policies

Policy 30 *Municipal, industrial, and commercial discharge of pollutants, including but not limited to, toxic and hazardous substances, into coastal waters will conform to State and National water quality standards.*

Policy 38 *The quality and quantity of surface water and groundwater supplies will be conserved and protected, particularly where such waters constitute the primary or sole source of water supply.*

Policy 40 *Effluent discharged from major steam electric generating and industrial facilities into coastal waters will not be unduly injurious to fish and wildlife and shall conform to State water quality standards.*

Policies 30 and 38 seek to ensure that municipal, industrial and commercial discharges of pollutants conform to State and National water quality standards and to conserve quality and quantity of surface water and groundwater supplies. The Proposed Action does not include the discharge of any pollutants to coastal waters. To facilitate the HDD, drilling fluid, commonly a naturally occurring bentonite clay is mixed with water. While not considered to be hazardous or toxic, as stated in **Section 2.2.2**, a FCP will be implemented to mitigate potential impacts from a "frac out" event that could involve the escape of drilling fluids into coastal waters during the HDD. Water usage/demand for the HDD will be approximately 15,000 gallons per day. It is expected that local hydrants will be utilized to meet this demand; no well-point will be created and surface waters will not be used to meet this need. Follow-up coordination will occur with SCWA prior to the commencement of construction to finalize the details of the proposed water use. See **Section 2.2** for a discussion of impacts to groundwater and surface water.

The Proposed Action will temporarily expose soils during construction for the installation of the underground cable, clearing and grading, and the use of the HDD drill rig, which could increase the magnitude of stormwater runoff, and induce increased stormwater erosion and sediment transport, which could impact on-site or nearby surface waters and/or the underlying groundwater. Such impacts will be avoided or minimized through implementation of the site-specific SWPPP. See **Section 2.2** for a discussion of water resources.

Given the FCP which will be implemented should a frac out occur during drilling activities, the implementation of a site-specific SWPPP, and the lack of disturbance to wetlands or regulated adjacent areas as a result of the proposed installation methods for the cable, no significant adverse impacts to the quality or quantity of groundwater or surface waters will occur as a result of the Proposed Action.

Policy 40 refers to effluent discharge from major steam electric generating and industrial facilities. After a review of the policy indicated by the FCAF it was determined that this policy does not apply to the Proposed Action.

Wetlands Policy

Policy 44 *Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.*

The Proposed Action will install the underground transmission cable directly beneath the two identified freshwater wetlands within the coastal area via HDD. As such, there are no anticipated impacts to turbidity or surface conditions of the ponds. A single manhole will be installed within the previously disturbed dirt path on the east side of Long Pond within the ROW. There will be no change in habitat type or quality surrounding the wetland.

As previously discussed in the coastal zone *Fish and Wildlife Policies, Flooding and Erosion Hazard Policies*, and *Water and Air Resources Policies* discussions above, to mitigate potential impacts associated with a frac out events, a FCP will be prepared and the potential increase in stormwater erosion and sediment transport, which could impact freshwater wetlands and/or the underlying groundwater will be avoided or minimized through implementation of the site-specific SWPPP. See **Section 2.2** for a discussion of water resources.

Given the lack of disturbance to wetlands or regulated adjacent areas as a result of the proposed installation methods, the frac out response plan, and the implementation of a site specific SWPPP, no significant adverse impacts to wetlands will occur as a result of the Proposed Action.

3.5.3 Proposed Mitigation

- Disturbance to coastal zone associated with the Long Pond Greenbelt is avoided through the use of the HDD construction methodology to limit ground disturbance created by the use of trenching methodologies and the minimization of the disturbance areas to the maximum extent practicable.
- With the exception of the minimal area occupied by manhole covers for the singular manhole and the existing maintained access pathway, no above-ground structures will be sited in the coastal zone.
- All disturbed areas will be restored with appropriate native plant species.
- Timber mats in lieu of RCA will be installed for stabilization within the existing access pathway from Widow Gavits Road and for stabilization of machinery within the Long Pond Greenbelt.
- A FCP will be implemented by the contractor during drilling operations should a frac out occur.
- A site specific SWPPP will be implemented to mitigate potential impacts to stormwater resulting from temporarily exposed soils during construction.
- No debris, fill, sand, gravel or other materials will be placed within 150 feet of a wetland.
- Construction will occur during the off-season to mitigate the impact of access to recreation within the coastal zone.

4.0 Other Required Sections

4.1 Construction-Related Impacts

Impacts related to construction may include: noise, erosion and sedimentation, dust and vehicle/truck activity, and traffic. Construction impacts are short term, intermittent in nature, largely contained on site, and will cease when construction is completed. **Section 1.4** provides a full description of the control measures that will be implemented during construction to mitigate these potential impacts. As stated in **Section 1.4**, the overall construction period is projected to be approximately 18 months and to be completed in a single phase. Storing and staging of the construction equipment will occur within the established ROW of the Proposed Action Area. No storage or staging will occur on public roadways. Construction activities will typically occur Monday through Friday from 7:00 AM to 7:00 PM. Occasional Saturday work may be required. A maximum of 1 night of work will be required for a continuous pull through of the longer HDD conduit segment underneath the west side of the Long Pong Greenbelt. Simultaneous construction of the stabilized construction access path, the underground cable, and manhole installation could potentially occur.

As discussed in **Section 3.4**, with respect to noise, construction activities will be predominately limited to between the hours of 7:00 AM and 7:00 PM. Construction activity using open trench installation will generate intermittent and transient noise along the entire segment of open trenching, while HDD activities will cause an increase in sound levels primarily at the entry and exit pits. As discussed in the Assessment included as **Appendix T**, a model which included the use of 16-foot acoustical barriers for the HDD work estimated that a reduction in projected noise levels ranging from 2 dBA to 8 dBA at sensitive receptors nearest to the entry and exit pits will occur. Use of the barriers ensures the sound levels experienced in the vicinity of the HDD locations are attenuated and minimized to the maximum extent practicable. In addition to maintaining regular construction hours, PSEG Long Island will conduct an enhanced outreach program to coordinate potential scheduling adjustments where possible and inform residents about the construction schedule and resultant increase in noise levels.

Erosion control will be managed by erosion and sedimentation control measures and adherence to the site-specific SWPPP, including an erosion control plan prepared in accordance with the New York State Standards and Specifications for Erosion and Sediment Control (Blue Book). Erosion and sedimentation control measures such as silt fencing, inlet protection, slope stabilization measures, and other best management practices will be utilized to minimize erosion, dust and runoff during construction. Dust control, which includes the use of watering trucks and limiting the areas of disturbance undergoing grading activities, will reduce the potential for fugitive dust generation. Construction vehicle and truck activity will be intermittent and dispersed. Limiting hours of operation to between 7:00 AM and 7:00 PM and the use of dust control measures will assist in minimizing potential impacts (see **Section 1.4**).

As further described in **Section 2.1**, there are existing slopes within the Proposed Action Area that exceed 18%. As such, grading will be necessary to create a construction access roadway in order to achieve the 7% slope required for the safe operation of the required construction machinery (i.e., crane). Impacts associated with destabilization of soils during construction have been minimized through the preparation of a detailed grading plan to ensure that the construction access roadway can maintain the above-mentioned 7% slope. Further details regarding steep slopes are provided in **Section 2.1**.

The use of timber matting was analyzed as an alternative to the use of RCA for construction access road stabilization. Due to the significant steep slopes and undulating topography in the ROW, use of timber

matting was not determined to be feasible for the entire length of the access road. However, as discussed in **Section 1.0**, timber matting will be utilized in the most sensitive area for the installation of the manhole within the Long Pond Greenbelt and to protect a small portion of the wetland located west of the Bridgehampton Substation during laydown activities.

PSEG Long Island engaged KAG Engineering, PLLC to conduct a Traffic Impact Evaluation and Assessment for the Proposed Action; the assessment is included as **Appendix V.** The Proposed Action route crosses seven paved and named roadways as shown in **Table 4.1**. Temporary work zone traffic controls will be required for various construction activities including trenching of the underground cables, manhole construction, and cable pull through when these activities directly intersect or are within proximity to the roadways listed in **Table 4.1**.

Table 4.1: Proposed Action Roadway Crossings

ROAD	NYSDOT CLASSIFICATION	POSTED SPEED LIMIT	AVERAGE ANNUAL DAILY TRAFFIC*	ROADWAY CONFIGURATION	CABLE INTALLATION METHOD
CR79 (Bridgehampton-Sag Harbor Turnpike)	Principal Arterial Other	35	7,806	2-Lane, 2-Way	HDD
Widow Gavits Road	Local	None Posted	N/A	2-Lane, 2-Way	HDD
Sagg Road	Minor Arterial	25	2,355	2-Lane, 2-Way	Open Trench
Wainscott Northwest Road	Minor Arterial	30	1,110	2-Lane, 2-Way	Open Trench
Stephen Hands Path	Minor Arterial	30	6,556	2-Lane, 2-Way	Open Trench
Buckskill Road	Local	30	817	2-Lane, 2-Way	Open Trench
Cove Hollow Road	Local	30	2,277	2-Lane, 2-Way	Open Trench

*Average Annual Daily Traffic (AADT) is the total volume of vehicular traffic for a year divided by 365 days. All traffic volume information was provided by New York State Department of Transportation (NYSDOT).

When working within roadways, approximately 200 feet of trench can be installed daily. Roadways will generally remain open with reduced lanes and traffic controls during active construction. At the end of the workday, the trench is typically closed and temporary asphalt or steel plates are placed, allowing the roadway to remain fully opened until the subsequent workday. Maintenance and Protection of Traffic (MPT) signage will be placed on the roadway to alert the traveling public of trucks entering and exiting. MPT signage will be placed on the roadway both in both travel directions approaching the construction entrance and exits. Signs will be placed based on the posted speed limit and as detailed in NYSDOT 619-11, Table 619-4 Advance Warning Sign Spacing (see **Appendix V**). In all areas where the construction activities will occur within a lane of the roadway, the MPT will follow the NYSDOT 619-60 specification entitled “Flagging Operation 2-Lane 2-Way Roadway Standard Detail”, which typically consists of closing the roadway in one direction and using an Alternating, One Way Traffic MPT scheme with flaggers to move vehicles around the approximately 200 foot-long work area. When construction will occur within the center of the roadway, the roadway will be closed and the MPT will follow the NYSDOT 619-66 specification entitled “Road Closure with Off Site Detour 2-Lane, 2-Way Roadway.” It is anticipated that

this configuration will be required for trenching activities across Sagg Road, Wainscott Northwest Road, Stephen Hands Path, Buckskill Road, and Cove Hollow Road.

All of the roadways in which work will occur are maintained by the local municipality with the exception of Bridgehampton-Sag Harbor Turnpike (CR79) which is a county road. PSEG Long Island will coordinate with all municipalities prior to any work commencing to ensure that traffic safety standards are met. Further, any work occurring within the portion of the ROW owned by the LIRR will include a permit and coordination with the LIRR to ensure construction can safely be conducted in this area.

4.2 Cumulative Impacts

The guiding principles and specific requirements of SEQRA are established in the implementing regulations at 6 NYCRR Part 617. According to the SEQR Handbook, cumulative impacts occur when multiple actions affect the same resource(s) or from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions. The SEQRA Handbook also states that cumulative impacts "must be assessed when actions are proposed, or can be foreseen as likely, to take place simultaneously or sequentially in a way that the combined impacts may be significant."

The South Fork T&D System has been the subject of continuous studies due to existing and forecasted electric load growth in the area. This area has been growing in terms of electrical demand at an average rate of 2.4% since 2009. The average annual forecasted net electric load growth for that area for the next 10 years is approximately 2% per year. The anticipated load growth will result in various thermal and voltage constraints on this portion of the T&D System resulting in the need for transmission and distribution improvement projects in order to provide reliable electric service. As discussed in **Section 1.1.1**, improvements have been selected which meet the anticipated T&D System needs through at least 2030. However, even with these improvements, the Proposed Action is required to satisfy the forecasted electrical load.

The Proposed Action is intended to relieve contingency potential overload conditions and minimize outage risk, while also supporting future forecasted load growth. As indicated throughout this DEIS, the Proposed Action is not expected to result in adverse cumulative impacts based on project planning and design, low impact utility installation techniques such as HDD, use of an existing maintained utility ROW, minimization of areas of disturbance, and other mitigation strategies described in this DEIS.

The Proposed Action will have beneficial impacts to the T&D System and the surrounding community within the eastern portion of Suffolk County with its many residential, commercial, and institutional uses, through improved reliability and resiliency. The Proposed Action will serve to accommodate potential new growth associated with proposed local development projects by providing for future load growth and increased system reliability on the eastern end of Long Island. Once constructed, the potential long term traffic impacts, and incremental air quality and noise impacts associated with the Proposed Action are expected to be minimal and fall within the future baseline condition levels analyzed within the preceding chapters of this DEIS. The amount of unvegetated/impervious areas will have a negligible increase at the completion of construction of the Proposed Action (limited to the addition of the underground manhole covers) and the underground cable will not result in the permanent loss of vegetated areas as all disturbed vegetated areas during construction will be restored with a mix of appropriate native species. To the maximum extent practicable, all graded areas will be returned to pre-construction conditions upon the completion of construction. As such, there are no significant long term impacts to topography anticipated.

No significant long term adverse impacts to wildlife populations are anticipated to result from construction or operation of the Proposed Action. Overall, the Proposed Action will generate only a small number of vehicle trips once constructed (limited to periodic maintenance activities) and therefore will not significantly impact traffic circulation, will not involve any stationary sources of air emissions or noise, and will not result in permanent losses to sensitive natural resources. Therefore, the Proposed Action will not result in long term cumulative adverse impacts on traffic, air quality, and noise.

As discussed in **Section 1.0**, construction of the Proposed Action is anticipated to begin in July of 2024 with an in-service date of June 2025. The duration of construction for the Proposed Action is estimated to be 18 months and will mainly occur within the existing maintained utility ROW and existing substations. It is estimated that construction activities within the ROW could progress at approximately 400-500 feet of underground cable installation per day, therefore site disturbance and utility installation at interval locations are anticipated to be of short duration as work progresses along the 5.2-mile project corridor. Short term construction related impacts are discussed in **Section 4.1** and include:

- Temporary increases in construction vehicle activity along local roadways and within the project corridor
- Temporary soil disturbance, removal of vegetation, and disturbance to wildlife habitats (including temporary loss of tiger salamander habitat) from select clearing and grading associated with the installation of the construction access road and within the Bridgehampton and Buell Substation properties
- Localized noise and vibration from construction vehicles and equipment
- The use of water and wastewater generation from the HDD drilling activities
- Temporary traffic impacts due to lane closures during installation of the underground transmission cable at five roadway crossings including Sagg Road, Wainscott Northwest Road, Stephen Hands Path, Buckskill Road, and Cove Hollow Road.

Temporary cumulative construction impacts could occur if additional projects have construction timetables overlapping or reasonably close to those anticipated for the Proposed Action, or if projects are located within physical proximity to the Proposed Action. The following projects are anticipated to be under construction either preceding, at the same time as, or closely following the Proposed Action construction period and include upgrades to the Bridgehampton and Buell Substations. Approximate locations of these projects are depicted in **Figure 4-1**. These projects are proposed to meet the electrical needs of the South Fork through the year 2030. The projects and relevant information are as follows:

- Bridgehampton Substation New 33 Mega-Volt Amperes (MVA) Bank & Switchgear (anticipated completion June 2023): Install a new third 33 MVA –13 kV distribution bank, 1/2 lineup switchgear, two gas-insulated switchgear (GIS) double breaker assemblies and replace a 69 kV overhead bypass with a 69 kV underground cable at the Bridgehampton Substation. This project involves minimal disturbances within the existing substation and previously disturbed areas in proximity to the substation and will not overlap with construction activities associated with the Proposed Action.

- Bridgehampton 2 Feeders Conversion and Reconductoring (C&R) Project (anticipated completion June 2023): Install two new distribution (13.2 kV) exit feeders from new distribution switchgear fed by new 33 MVA third bank at the Bridgehampton Substation. Both underground exit feeders will be installed to connect to existing overhead infrastructure to relieve other feeders that are reaching

their capacity. One feeder will supply Sag Harbor and the second feeder will supply the Wainscott and Sagaponack areas. This project involves minimal disturbances within and proximate to the existing substation, within previously disturbed areas in proximity to the substation, and within public roadways and will not overlap with construction activities associated with the Proposed Action.

- Buell 23 kV Conversion to 33 kV (anticipated overall completion May 2023): Convert the 23 kV portion of the Buell Substation to 33 kV. This project involves minimal disturbances within and proximate to the existing substation and will not overlap with construction activities associated with the Proposed Action.
- Canal – Deerfield Double Circuit Reconfiguration (anticipated completion June 2026): Utilize a recently deactivated overhead circuit to create a fourth source from the Canal Substation to better support the South Fork load to the east. This project involves disturbances within an existing substation and improvements to the overhead circuit that is not located in proximity to the Proposed Action; however, construction periods are anticipated to overlap.
- Culloden Point 23 kV Conversion to 33 kV (anticipated completion June 2022): Convert the Culloden Point Substation to upgrade its voltage from 23 kV to 33 kV. This project involves minimal disturbances within and proximate to an existing substation and will not overlap with construction activities associated with the Proposed Action.
- East Hampton 23 kV Conversion to 33 kV (anticipated completion May 2024): Convert the 23 kV portion of the East Hampton Substation to 33 kV. This project involves minimal disturbances within and proximate to the existing substation and is not anticipated to overlap with construction activities associated with the Proposed Action.
- Hero 23 kV Conversion to 33 kV (anticipated completion December 2023): Convert the Hero Substation to upgrade its voltage from 23 kV to 33 kV. This project involves minimal disturbances within and proximate to an existing substation and will not overlap with construction activities associated with the Proposed Action.
- Hither Hills 23 kV Conversion to 33 kV (anticipated completion December 2024): Convert the Hither Hills Substation to upgrade its voltage from 23 kV to 33 kV. This project involves minimal disturbances within and proximate to an existing substation that is not located in proximity to the Proposed Action; however, construction periods are anticipated to overlap.
- South Fork Wind Farm Interconnect at East Hampton Substation (anticipated completion April 2023): This LIPA-selected offshore wind project being developed by Orsted and Eversource will interconnect to the East Hampton Substation. Certain modifications must be made to the East Hampton Substation in order to accomplish this. This project involves minimal disturbances within and proximate to the existing substation and is not anticipated to overlap with construction activities associated with the Proposed Action.
- Southampton – Deerfield New 138 kV Circuit (anticipated completion June 2028): Construct a new 138 kV cable between Deerfield and Southampton Substations. While this project is not located in proximity to the Proposed Action, the construction periods are anticipated to overlap.

- Transmission Lines 23 kV to 33 kV Conversion (anticipated completion May 2022): Inspect the 23 kV transmission circuits East of Buell to confirm that they meet 33 kV construction standards and upgrade them as needed. This project involves minimal disturbances within and proximate to existing substations, and within public roadways and ROWs, and is not anticipated to overlap with construction activities associated with the Proposed Action.

As noted above, the majority of the anticipated projects will occur within or in close proximity to the improved/previously disturbed areas located at existing substations, within public roadways or ROWs, and would not likely involve extensive land disturbances or construction related impacts. Work associated with the above identified planned projects within the Bridgehampton, East Hampton and Buell Substations (which overlaps with the construction area associated with the Proposed Action) will be limited to the previously disturbed areas associated with each substation and would be completed prior to the anticipated construction activities associated with the Proposed Action. As the construction periods for projects in proximity to each other are not anticipated to overlap, there are no anticipated cumulative noise impacts. Projects that are not located in close proximity may have construction periods that overlap, however, the distance between these projects is such that increases in noise will not be additive. These projects are minor in terms of construction disturbances and are not anticipated to cumulatively result in significant adverse impacts. Only two projects (the Canal – Deerfield Double Circuit Reconfiguration and the Southampton – Deerfield New 138 kV Circuit) are anticipated to have overlapping construction periods; however, these projects are not located in physical proximity to the Proposed Action and as such, are not anticipated to result in cumulative construction related impacts. No temporary power outages would be required for customers within the service area as a result of construction activities associated with the above-described planned projects.

Combined with the Proposed Action, these future projects will yield cumulative benefits to the eastern end of Long Island by accommodating anticipated growth and development in the region, as well as providing reliable electric service to existing customers. These future projects along with the Proposed Action will mitigate customer outages, enhance the capability of the South Fork T&D System to meet system needs.

As documented in the Traffic Impact Evaluation and Assessment (see **Appendix V**), impacts to traffic are minimized along the project corridor due to the limited need for disturbance within roadways and use of appropriate MPT plans. Should construction of any local transportation or development projects occur in the immediate vicinity of and concurrently with the Proposed Action, careful coordination between the projects, including notifications and correspondence through PSEG Long Island External Affairs and the local jurisdiction will mitigate any cumulative construction impacts, which are anticipated to be minimal as outlined in **Section 4.1**.

4.3 Adverse Impacts that Cannot be Avoided

As detailed in **Sections 2** and **3**, the Proposed Action will not result in significant adverse impacts based on the mitigation techniques proposed in this DEIS. As described in **Sections 2** and **3**, several potential construction-related impacts, as well as potential long term impacts, have been minimized or avoided through incorporation of mitigation measures into the project design. Nonetheless, unavoidable adverse impacts may occur as a result of the Proposed Action. Such impacts are those that cannot be fully avoided or mitigated by applying reasonable mitigation methods and techniques. Construction impacts will be temporary and mitigated to the maximum extent practicable.

Identified unavoidable impacts that will or may still occur as a result of the Proposed Action, despite proposed impact prevention and mitigation methods, are as follows:

- Temporary land use and community character-related impacts from increased noise, vibration and dust associated with construction activities;
- Temporary soil disturbance from select clearing and grading north of the Bridgehampton Substation, which will be revegetated/landscaped with suitable native species after construction. This would result in temporary loss of suitable habitat within 535 feet of a known tiger salamander breeding pond; however, PSEG Long Island has committed to restoring any disturbed habitat within the 535 foot pond buffer upon completion of construction, resulting in no permanent loss of habitat;
- Grading of slopes to allow for a crane to access proposed manhole locations and operate within the Proposed Action Area, including temporary placement of RCA to stabilize portions of the Proposed Action route to allow machinery access for construction. All RCA will be removed upon the completion of construction and grades will be returned to pre-existing conditions to the maximum extent practicable;
- Ground disturbances associated with the installation of the new underground cable, new manholes and potential stabilization activities; however, PSEG Long Island has committed to restoring disturbed areas with appropriate native species upon completion of construction;
- Temporary increase in construction vehicle activity along local roadways and within the project corridor;
- Temporary localized noise and vibration from construction vehicles and equipment;
- Traffic impacts due to lane closures during installation of the underground transmission cable. Trenching within roadway crossings will require closing the roadway in one direction and using an Alternating, One Way Traffic MPT scheme with flaggers to direct vehicles around the work area. Short term traffic disruptions from temporary lane closures will be mitigated using administrative controls, such as publicly displayed notifications and correspondence through PSEG Long Island External Affairs, engineering controls, such as road construction plates (to bridge roadway openings) and will be addressed in the applicable local road opening traffic permit requirements. When working within roadways, at the end of the workday, the trench is typically closed, and temporary asphalt or steel plates are placed, so that the roadway can remain fully opened until the subsequent workday. Roadway lane closures for each roadway crossing are only anticipated to occur over a two-day period, including one day for trench installation and one day for final paving;
- Small increase in worker vehicular traffic on nearby roadways;
- Drilling activities will require the use of water for the creation of the slurry necessary to stabilize the borehole. Water will be provided via access to a hydrant, permission for which will be obtained from the SCWA. During installation of the HDD segment of the proposed underground transmission cable, it is anticipated that water usage/demand will be approximately 15,000 gallons per day, which will be recycled for reuse during the construction process to the maximum extent practicable;

- Wastewater generated during drilling activities which cannot be reused will be collected in slurry tanks, transported, and disposed of at an approved disposal facility licensed to accept this type of waste;
- Minor localized air quality impacts such as fugitive dust emissions from earth movement and temporary and intermittent minor releases of air contaminants from construction equipment;
- Site-specific populations of plants and animals may decrease from the temporary loss of successional habitat which certain species may prefer. If a population decrease is experienced, it will only be temporary in nature, as populations will rebound following the return of the Proposed Action Area to its pre-existing state; and
- Temporary removal of small areas of plant and animal habitat.

These impacts are all considered short term unavoidable impacts. Upon completion of proposed construction activities, wildlife that migrated from the Proposed Action Area seeking refuge are expected to return. As discussed in **Sections 2** and **3**, the amount of unvegetated/impervious areas resulting from the Proposed Action will have a negligible increase at the completion of construction (limited to the addition of the underground manhole covers). The underground cable will not result in the permanent loss of vegetated areas. Native plant species that provide food and shelter to wildlife will be utilized in the landscaped and revegetated areas and are expected to provide some habitat for some species. The Proposed Action includes the installation of the proposed underground transmission cable directly beneath the two identified freshwater wetlands within the Long Pond Greenbelt via HDD. Due to the use of this installation method, there are no anticipated ground disturbances within 150 feet of the delineated boundaries of the wetlands and no anticipated impacts to turbidity or surface conditions of the ponds.

All potential significant adverse environmental impacts will be mitigated to the maximum extent practicable. Natural and human resources will not be significantly adversely affected by operation of the Proposed Action. Moreover, significant long term adverse impacts will be avoided or mitigated to the maximum extent practicable through various mitigation measures incorporated into the project.

Therefore, potential adverse impacts associated with the Proposed Action will be due to construction activities, not utility operations, and such impacts will be temporary, unavoidable and mitigated to the maximum extent practicable.

4.4 Irreversible and Irretrievable Commitment of Resources

This subsection is intended to identify those natural and human resources discussed in **Sections 2** and **3** that will be consumed, converted or otherwise made unavailable for future use as a result of the Proposed Action. There are a number of resources, both natural and man-made, that will be utilized in the construction and operation of the Proposed Action. These resources include raw materials used in construction and manufacturer of the proposed components (e.g., wood, copper, aluminum, concrete, plastics, etc.), and energy used for construction, operation and maintenance including nonrenewable fossil fuels (i.e., diesel fuel, gasoline, and motor oil needed to operate tools and heavy equipment during site preparation and construction activities). These resources and materials are considered irretrievably committed as their reuse for some purpose other than the Proposed Action will be lost.

The Proposed Action will not require a significant commitment of vegetative cover or plant or animal habitat. As discussed in **Section 2.3**, most of the Proposed Action Area is comprised of a utility ROW

consisting of successional growth that is maintained by periodic mowing and tree trimming, as well as established dirt paths. Although the temporary clearing of some vegetation within the Proposed Action Area during construction is expected to result in a change in the characteristics of the habitats on site, installation of the underground cable will not cause any permanent loss of vegetated areas. All disturbed vegetated areas will be restored with appropriate native plant species. With the exception of the minimal area occupied by manhole covers, no impervious surfaces will remain post-construction. As a result, the site will continue to provide natural habitat for wildlife.

Construction materials will include but not necessarily be limited to metal (e.g., copper, aluminum, steel), concrete, and plastic for the underground transmission cable. Timber mats will be installed for construction access to facilitate the placement of a single underground manhole and for the use of the HDD drill rig, excavator, slurry tank and pump and have the potential to be reused for future projects. Drilling activities will require the use of water for the creation of the slurry necessary to stabilize the borehole. It is anticipated that water usage/demand will be approximately 15,000 gallons per day. This volume is an anticipated maximum, which will fluctuate given the ability to recycle some of the water during the drilling process. It is proposed that the required temporary stabilization of the construction access roadway be provided using RCA, placed atop geotextile fabric. All RCA will be removed at the completion of construction. The method used for RCA recovery and removal will serve to mitigate the potential impacts associated with the construction process.

4.5 Effects on the Use and Conservation of Energy Resources

The South Fork T&D System of eastern Long Island has been the subject of continuous studies due to the experienced and forecasted electric load growth in the area. As a result of the anticipated increase in demand on the T&D System, an RFP was issued in 2015 for the solicitation of resources to be located on the South Fork of Long Island in order to defer and/or eliminate the need to move forward with an extensive transmission expansion plan that would otherwise be required to meet the anticipated T&D System needs. With a growing effort to bring cleaner power to Long Island, many of the proposals received in response to the RFP incorporated renewable energy sources and methodologies as a solution. Some of the technologies that were offered included batteries, solar, fuel cells, thermal storage, and offshore wind. Upon qualitative and quantitative review of all the proposals received, the RFP selection team recommended a portfolio of projects that included transmission, battery energy storage, load reduction measures, temporary generators and offshore wind to meet the electric load needs of the South Fork to at least year 2030.

Many of the initiatives contained in the selected portfolio have been installed and are currently in-service. Examples of these already installed projects include:

Transmission System Enhancements:

- Canal to Southampton New Transmission Cable – in-service 2019
- Wildwood to Riverhead Upgrade Transmission Line – in-service 2021
- Riverhead to Canal New Transmission Cable – in-service 2021

Non-Wire Alternatives:

- AEG Load Reduction Program – 8 Megawatts – in-service; phased in over 3 years

- East Hampton and Montauk Battery Storage – 10 Megawatts – in-service 2018
- Emergency Generation – Up to 8 Megawatts as Needed – in-service from 2017 to 2023

In addition to the above initiatives that have been completed, significant work has been completed and is planned to continue at seven substations in preparation for conversion from 23 kV to 33 kV.

As previously noted, the Proposed Action will contribute to the development of a robust and adaptable transmission and distribution grid that will ultimately help to facilitate the integration of renewable technologies consistent with New York's CES, which is designed to fight climate change, reduce harmful air pollution, and ensure a diverse and reliable low carbon energy supply, as well as the Climate Leadership and Community Protection Act, which aims to achieve 100 percent zero-emission energy by 2040.

4.6 Growth-Inducing Aspects

"Growth-inducing aspects" generally refers to the long term secondary impacts of a project that either directly or indirectly trigger further development in areas outside of the project area that would not result without the project. Secondary impacts may include physical growth of a development, population increases in the surrounding community, increases in economic growth, and/or social or cultural expansion. Projects that add substantial new land use, new residents or new employment could result in additional similar development or development of supportive uses (e.g., additional businesses to serve new residential uses). Actions that introduce or greatly expand infrastructure capacity (e.g., sewer or water infrastructure) may also induce growth.

LIPA has initiated several projects throughout Long Island that are similar to the Proposed Action to respond to growing energy demand. The South Fork T&D System of eastern Long Island has been the subject of continuous studies due to the experienced and forecasted electric load growth in the area. This area has been growing in terms of electrical demand at an average rate of 2.4% since 2009. The average annual forecasted net electric load growth for that area for the next 10 years is approximately 2%. The anticipated load growth will result in various thermal and voltage constraints in the area resulting in the need for various transmission improvement projects in order to provide reliable electric service to existing and future customers.

It is expected that the full-time residential population and overall development will increase within the entire East End, with or without the Proposed Action. This growth will undoubtedly create an additional demand on infrastructure, notably energy supply. As discussed in **Section 1.1,** the average annual forecasted net electric load growth for that area for the next 10 years is approximately 2% per year. Improvements, including the Proposed Action, have been selected which meet the anticipated T&D System needs and demand until at least 2030. As such, the Proposed Action will not induce new growth in the area. Instead, the new infrastructure will serve to support those new uses that are expected to occur in the future with or without the Proposed Action. It should be noted that the amount of future development on the East End is controlled by local municipalities under current and future zoning. Three alternative routes are considered and analyzed in this DEIS, which would have the same effect on future growth as the Proposed Action. As such, the Proposed Action is not anticipated to significantly increase development in the area. Furthermore, the need for implementation of the Proposed Action has been demonstrated in **Section 1** of this DEIS.

5.0 Alternatives

Overview

This chapter of the DEIS discusses and analyzes alternatives to the Proposed Action, as identified in the Final Scope promulgated by the Lead Agency, dated June 30, 2021. The SEQRA regulations, at 6 NYCRR §617.8(d)(5), require the analysis of alternatives identified during scoping, specifically calling for the Final Scope to identify "the reasonable alternatives to be considered."

The Final Scope identified five Alternatives to be analyzed in this DEIS. These Alternatives are summarized as follows (collectively, the "Alternatives"):

1. Alternative 1 – No-Action: Scenario where the existing facilities remain in place with no improvements, and the Proposed Action does not proceed. Under the SEQRA regulations, at 6 NYCRR §617.9(b)(5)(v), this alternative "should evaluate the adverse or beneficial site changes that are likely to occur in the reasonably foreseeable future, in the absence of the proposed action." "No action" is the only alternative that is explicitly required to be analyzed.

2. Alternative 2 – Northern Underground Route: This alternative considers a new 69 -kV Circuit installed underground from the Bridgehampton Substation north along Bridgehampton-Sag Harbor Turnpike, through Sag Harbor, and then south along East Hampton-Sag Harbor Turnpike to the Buell Substation. This new circuit would be installed underground via trenching within the existing road ROW and would follow the route of an existing LIPA circuit (see **Figure 5-1**).

3. Alternative 3 – Southern Underground Route: This alternative considers a new 69 -kV Circuit installed underground from the Bridgehampton Substation south along Bridgehampton-Sag Harbor Turnpike, east along Montauk Highway, and then north to the Buell Substation on East Hampton-Sag Harbor Turnpike. This new circuit would be installed underground via trenching within the existing road ROW and would follow the route of an existing LIPA circuit (see **Figure 5-2**).

4. Alternative 4 – Northern Hybrid Route: This alternative considers a new 69 -kV Circuit installed using overhead installation from the Bridgehampton Substation north to Sag Harbor, then underground installation via trenching within the Village, and then south to the Buell Substation via overhead installation (same route as Alternative 2, see **Figure 5-3**).

5. Alternative 5 – Overhead Route within LIPA Easement/ROW: This alternative would replace the existing Bridgehampton to Buell and Bridgehampton to East Hampton 69 kV Double Circuit by removing the 53 existing towers within the ROW (along the same route as the Proposed Action) and installing two new overhead lines on steel poles (approximately 134 steel poles, in two lines of 67 poles, with each pole at a height of approximately 60 feet above grade). See **Figure 5-4**.

The evaluation of alternatives presented below addresses each environmental parameter that was examined for the Proposed Action in **Sections 2** and **3**of this DEIS: i.e., soils and topography, water resources, ecology, cultural resources, open space and recreation, critical environmental areas, noise and construction (including traffic) impacts. This chapter also considers visual/aesthetic resources, which was

not identified in the Final Scope for the Proposed Action since the cable will be installed underground within a LIPA ROW, and therefore will not have significant visual impacts. Although visual/aesthetic resources will not be affected by the No-Action alternative because there will be no change from existing conditions, this is not the case for the other alternatives. Alternative 4, in particular, includes overhead wire installation on utility poles along a majority of the length of the northerly alternate route.

Analysis of Alternatives Under SEQR

In accordance with the requirements of SEQRA, at 6 NYCRR §617.8(d), the scoping process for the Proposed Action included the opportunity for public participation. Comments received regarding the Draft Scope were taken into consideration by the Lead Agency in preparing the Final Scope, which serves as the outline for the DEIS. Review of this DEIS, once accepted as complete by the Lead Agency, will involve additional opportunity for public participation, whereby all substantive comments received on the DEIS will require response in the Final EIS (FEIS). Upon completion by the Lead Agency, the FEIS will be circulated for consideration by other Involved Agencies and interested parties. The FEIS, including the DEIS incorporated by reference, will serve as the basis for the SEQRA Findings Statement, which is required to be prepared by each Involved Agency. The Findings Statement(s) will provide the environmental basis for agency decision-making.

The Draft Scope for this DEIS, dated May 4, 2021, was issued for public review and comment, including the publication of the requisite notice in the May 12, 2021 edition of NYSDEC's Environmental Notice Bulletin (ENB). The Draft Scope was also posted on PSEG Long Island's web site. While input was received during public scoping on certain aspects of the Proposed Action, no comments were received regarding the alternatives that were outlined in the Draft Scope. Therefore, the content of the Final Scope was unchanged from the Draft Scope with respect to the alternatives that are to be addressed here.

The SEQRA regulations provide important guidance to understanding the purpose of the evaluation of alternatives in an EIS. 6 NYCRR §617.11(d)(5) requires the Lead Agency and other Involved Agencies to:

> *certify that consistent with social, economic and other essential considerations from among the reasonable alternatives available, the action is one that avoids or minimizes adverse environmental impacts to the maximum extent practicable, and that adverse environmental impacts will be avoided or minimized to the maximum extent practicable by incorporating as conditions to the decision those mitigative measures that were identified as practicable.*

Therefore, decision-making for any action that is subject to a SEQRA EIS process has an essential nexus to the evaluation of alternatives. This evaluation assists the agency in meeting its obligation to certify that the action it is about to undertake "avoids or minimizes adverse environmental impacts to the maximum extent practicable," specifically in comparison to "reasonable alternatives." In brief, the goal of a DEIS' analysis of alternatives is to provide a means for the Lead Agency to determine whether there are other reasonable and feasible ways to accomplish its objectives in a manner that reduces environmental impacts.

The Proposed Action has been developed to a high degree of detail, including field investigations and engineering analyses. This is necessary to ensure that the Proposed Action is worth pursuing, is truly feasible from a technical perspective, and is cost effective. In contrast, information for the construction alternatives examined in this DEIS (i.e., Alternatives 2 through 5) was developed for the purpose of

evaluating whether any such alternative is likely to meet the objectives of the Proposed Action while eliminating or reducing any impacts that have been identified for the Proposed Action, and while also avoiding additional adverse impacts that would not result from the Proposed Action. Therefore, this assessment of alternatives is based on currently available conceptual information which, in this case, is sufficient to formulate a preliminary concept for circuit routing and general methods of construction that are typically used for such projects. This level of alternatives analysis is sufficient to complete the necessary comparison to the Proposed Action, for the purpose under SEQR of allowing a determination to be made as whether one or more of the alternatives may result in decreased impacts which would identify them as potentially preferable to the Proposed Action. In the end, these comparative impact evaluations for the alternatives will be used in the SEQRA Findings Statement, which will balance same with "social, economic and other essential considerations" in arriving at a decision.

In order to review the economics of the Proposed Action and the Alternatives, cost estimates for both the Proposed Action and the Alternatives were generated. Cost estimates were generated utilizing industry standards for the level of detail available for the Proposed Action and each Alternative. Distances, estimated quantities of known major components, current labor rates, and contingency factors were utilized in generating each estimate. The cost estimate for the Proposed Action is $45.5 million. The cost estimate for each Alternative is provided in the description in the following sections.

5.1 Alternative 1 – No-Action

Under this scenario, the existing overhead electrical transmission facilities in the LIPA easement between the Bridgehampton and Buell Substations would remain in place and would continue to operate with no improvements, and the Proposed Action would not be undertaken. There is no cost associated with the No-Action Alternative.

Alternative 1 Constraints

As discussed in **Section 1.1** of this DEIS, the Proposed Action is necessary to address transmission constraints resulting from projected increased load demands from customers on the South Fork of Long Island. Without the Proposed Action, the resulting benefits to ensure system reliability would not be realized, and the system would become increasingly vulnerable to electrical outages and other adverse outcomes that ultimately would have significant adverse impacts on South Fork communities. Therefore, while the No-Action alternative would avoid any potential impacts that may be associated with the Proposed Action, and would similarly avoid potential impacts associated with the construction of Alternatives 2 through 5, the alternative of taking no action is not considered feasible or reasonable as it would fail to meet the objectives of the sponsor of the Proposed Action. Furthermore, as discussed below in **Sections 5.1.1** through **5.1.9**, the Proposed Action will implement a range of measures directed at avoiding or mitigating potential impacts, thereby minimizing any apparent environmental advantages of maintaining the status quo under the No-Action Alternative, while also providing the necessary public benefits that will result from meeting the sponsor's objectives by undertaking the Proposed Action.

5.1.1 Soils and Topography

The No-Action alternative would retain existing conditions in the Proposed Action Area, thereby avoiding disturbance to soils and topography in this area. However, the Proposed Action is necessary to ensure the reliability of the electrical system on the South Fork, and includes comprehensive measures, as set forth in the SWPPP, to avoid or minimize potential impacts that may result from topographic modifications and soil disturbance during construction to the degree practicable. Moreover, upon completion of construction of the Proposed Action, topography will be returned as near as feasible to pre-construction conditions and all disturbed areas will be restored with appropriate plantings, such that the susceptibility of the Proposed Action Area to erosion and similar impacts will not be increased during operation in comparison to a continuation of existing conditions under the No-Action alternative.

5.1.2 Water Resources

The No-Action alternative would retain existing conditions in the Proposed Action Area, thereby avoiding impacts to water resources in this area. However, the Proposed Action is necessary to ensure the reliability of the electrical system on the South Fork and would avoid or minimize impacts to water resources to the degree practicable. In particular, operation of the Proposed Action once construction has been completed will not consume water, and the underground cable conduit will be sealed, will not contain hazardous substances and will not pose the potential for harmful discharges to groundwater or surface waters; and, thereby, the Proposed Action will avoid long-term impacts to water resources.

During construction of the Proposed Action, HDD will be employed for installation along the segment of the cable route containing surface waters (i.e., the wetlands associated with Long Pond), thereby avoiding land surface disturbance and associated impacts to these resources. A FCP will be implemented to mitigate impacts to water resources that could result from a potential frac-out event. In order to minimize the volume of water used in the HDD drilling operation, this water will be recycled to the extent practicable; and the SCWA has indicated the availability of water supply to support the HDD drilling operation, subject to seasonal constraints with which the Proposed Action will comply.

Although the Proposed Action includes land disturbance during construction within regulated Eastern Tiger Salamander buffer areas, a mitigation plan has been developed in cooperation with NYSDEC to compensate for any potential impacts that may result from construction activities in these buffer areas. This mitigation plan involves enhancements to upgrade sub-optimal Eastern Tiger Salamander habitat conditions within a 0.39-acre area on a parcel owned by the Village of Sag Harbor, located to the immediate northeast of the Bridgehampton Substation, on the opposite side of Bridgehampton-Sag Harbor Turnpike. NYSDEC and the Village have indicated they are amenable to this concept; and PSEG Long Island will obtain the necessary agreements to conduct the restoration work on Village property upon finalization of the restoration plans. Ultimately, NYSDEC will use its discretionary, regulatory authority to confirm that the Proposed Action is designed and implemented in a manner that avoids impacts to water resources where practicable and includes suitable measures to mitigate any potential construction-related impacts; this includes Freshwater Wetlands permitting, an Incidental Take permit for activities in the designated buffer zones for the State-endangered Eastern Tiger Salamander, and a water quality certification pursuant to the federal Clean Water Act.

5.1.3 Ecology

The No-Action alternative would retain existing conditions in the Proposed Action Area, thereby avoiding impacts to ecological resources in this area. However, the Proposed Action is necessary to ensure the reliability of the electrical system on the South Fork and will avoid or minimize ecological impacts to the degree practicable. In particular, operation of the Proposed Action upon the completion of construction will not result in any continuing potential for ecological impacts, as the proposed cable will be buried underground, and the cable conduit will be sealed and does not contain any hazardous materials that could potentially escape to the environment. Furthermore, there will only be a negligible area of permanent land surface change (i.e., approximately 154-square foot increase in impervious surface cover) due to installation of manholes in the Proposed Action Area.

HDD will be used to install the cable through the most ecologically sensitive portion of the Proposed Action Area (i.e., the wetlands associated with Long Pond), thereby avoiding land surface disturbance and potential for construction-related impacts in this area. As such, there are no anticipated impacts to turbidity or surface conditions of the ponds. Furthermore, there are no anticipated ground disturbances within 150 feet of the delineated boundaries of the wetlands. A single manhole will be installed within the previously disturbed dirt path on the east side of Long Pond within the ROW. There will be no change in habitat type or quality surrounding the wetland. Furthermore, a FCP will be implemented to address incidental impacts related to a potential frac-out event during the HDD conduit installation.

NYSDEC approval under the State Freshwater Wetlands program will be needed for all activities within designated wetlands and their 100-foot buffer area, and an Incidental Take permit will be required for proposed land disturbance during construction within regulated buffers around Eastern Tiger Salamander ponds. In order to mitigate for potential impacts and to provide a net conservation benefit to the Eastern Tiger Salamanders species, approximately 0.39 acre of sub-optimal habitat on the east side of Bridgehampton-Sag Harbor Turnpike will be restored to more suitable native habitat as described in **Section 2.3.3**. This mitigation plan has been developed in cooperation with NYSDEC and will be subject to further review by NYSDEC and finalized for NYSDEC approval based on any further input received. Within the proposed conduit laydown area to the west of the Bridgehampton Substation, timber mats will be deployed to minimize impacts to the small area of wetlands that will be traversed in this segment of the ROW. Additionally, the timber mats will be utilized for the HDD exit pit/underground manhole installation within the previously disturbed area of the Long Pond Greenbelt and the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road. These areas will be restored as necessary upon the completion of the HDD conduit installation such that no permanent impacts will result.

The Proposed Action requires clearing of existing vegetation and grading within the ROW east of Widow Gavits Road and at the substations for connection of the cable to the substations and to construct a temporary access road and areas of stabilization for HDD activities as depicted on the Proposed Action Construction Plans, prepared by Nelson & Pope located in **Appendix D**. The remainder of the area to be cleared is comprised of the area encompassed by the trench for the conduit, which will be four feet in width, and the areas excavated for the installation of the manholes. In total, 18.78 acres of clearing and grading are required during construction activities associated with the Proposed Action. Upon completion of construction, all disturbed vegetated areas will be restored with a mix of appropriate native species. Although there will be a temporary reduction in natural areas during construction, no permanent changes from vegetated areas to impervious areas will occur, other than a negligible (154±-square foot) increase

in impervious surface cover due to installation of manholes. As a result, long-term impacts to wildlife are not anticipated.

Besides the Eastern Tiger Salamander, NYNHP records indicate the occurrence of seven animals and eight plants identified as rare, threatened or endangered species within the vicinity of the Proposed Action Area. However, as discussed in **Section 2.3**, one of the identified plant species (Velvety Bush Clover) was not identified on-site during field survey of the Proposed Action Area. Although the other seven identified plant species (Small White Snakeroot, Rose Coreopsis, Knotted Spike Rush, Long-tubercled Spike Rush, Creeping St. John's Wort, Globe-fruited Ludwigia, and Long-beaked Beak Sedge) occur in habitats consistent with coastal plain ponds and coastal plain pond shorelines that are present in the Proposed Action Area, ground disturbance of these habitats will be avoided through the use of HDD conduit installation.

Among the seven animals other than Eastern Tiger Salamander identified by NYNHP as rare, threatened or endangered within the vicinity of the Proposed Action Area, four species (Martha's Pennant, New England Bluet, Scarlet Bluet, and Pine Barrens Bluet) are associated with the same coastal plain pond/ shoreline habitats discussed above that will not be disturbed under the Proposed Action due to the use of HDD. The Coastal Barrens Buckmoth has been reported in the vicinity of the East Hampton Airport and is not known to be present in the Proposed Action Area. NYNHP reports records of summer occurrences of Northern Long-eared Bat within 0.25 mile of the Proposed Action Area. Therefore, as potential habitat may be present, field survey will be required to determine whether this species actually occurs on-site and potentially would be impacted by the Proposed Action; and, as necessary, mitigation would be undertaken in consultation with NYSDEC, possibly including limiting any tree removal to the winter season.

5.1.4 Cultural Resources

The No-Action alternative would retain existing conditions in the Proposed Action Area, thereby avoiding impacts to cultural resources in this area. However, as discussed in **Section 3.1**, Phase IB testing performed as part of the DEIS investigation indicates that the Proposed Action Area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources; and, furthermore, no previously recorded architectural resources are located in the Proposed Action Area, nor are there any buildings or structures in this area except for the existing transmission towers. Therefore, the Proposed Action will also result in no impacts to cultural resources.

5.1.5 Open Space and Recreation

The No-Action alternative would retain existing conditions in the Proposed Action Area, thereby avoiding impacts to open space and recreational resources in this area. Although the Proposed Action will occur in an area containing open space/recreational resources, this action is necessary to ensure the reliability of the electrical system on the South Fork, and measures will be implemented to avoid or minimize impacts to the degree practicable, including:

- Providing temporary bridges for existing access road crossings perpendicular to the LIPA ROW within Spring Farm to allow for continued vehicle access.
- Placing conduit on the edge of any access roadways located parallel to and within the LIPA ROW to allow for vehicle access to the maximum extent practicable.

- Conducting construction activities within the portion of the Proposed Action Area within the Long Pond Greenbelt during the winter months when a reduction in typical use of the greenbelt occurs.
- Utilizing rolling access restrictions (i.e., only close areas which are actively undergoing construction) in areas along the Proposed Action route to ensure that restrictions on access to trails is minimized to the maximum extent practicable.
- Removing all access restrictions upon the completion of construction activities to ensure no permanent loss of the use of open space or recreational resources occurs.

5.1.6 Critical Environmental Areas

The No-Action alternative would retain existing conditions in the Proposed Action Area, thereby avoiding impacts to CEAs in this area. These CEAs – i.e., South Fork SGPA, Aquifer Protection Overlay District, Long Pond Greenbelt, Water Recharge Overlay District, and Town of Southampton Freshwater Wetlands – generally have been established for the protection of groundwater/drinking water or surface waters. However, as discussed in **Section 5.1.2**, the Proposed Action is necessary to ensure the reliability of the electrical system on the South Fork, and will avoid or minimize impacts to water resources, as well as the designated CEAs encompassing these resources, to the degree practicable. To summarize:

- Operation of the Proposed Action will not consume water; water supply used during construction will be recycled to the degree practicable, and seasonal constraints specified by SCWA will be adhered to.
- The underground cable conduit will be sealed, will not contain hazardous substances, and will not pose the potential for harmful discharges to groundwater or surface waters.
- HDD conduit installation will be employed during construction though an area along the proposed cable route containing surface water features associated with Long Pond.
- A FCP will be implemented to mitigate impacts to water resources that could result from a potential frac-out event.
- Timber matting will be used in the conduit laydown area to the west of the Bridgehampton Substation and for the HDD exit pit/underground manhole installation west of Widow Gavits Road (within the previously disturbed area of the Long Pond Greenbelt) and the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road.
- A mitigation plan has been developed in cooperation with NYSDEC to compensate for any potential impacts that may result from construction activities in Eastern Tiger Salamander buffer areas. The plan includes revegetation of disturbed areas within 535 feet of a known tiger salamander breeding pond, and restoration of 0.39 acres of sub-optimal habitat tiger salamander breeding habitat.

5.1.7 Noise

The No-Action alternative would retain existing conditions in the Proposed Action Area, thereby avoiding noise impacts. However, the Proposed Action is necessary to ensure the reliability of the electrical system on the South Fork, generally is not located near sensitive noise receptors, and will avoid or minimize noise impacts to the degree practicable. In particular, operation of the Proposed Action once construction has been completed will not entail any continuing potential for noise impacts, as no permanent sound-generating equipment or facilities will be installed. Potential temporary noise impacts during construction will be minimized through the use of BMPs pursuant to NYSDEC guidance, including:

- Limiting daily work activities to the period between 7:00 AM and 7:00 PM, with the exception of HDD conduit pull-through anticipated to require a maximum of one 24-hour workday.
- Utilizing flexible noise control covers or acoustic barriers on stationary HDD machinery to the maximum extent practicable; at a minimum, the recycler/reclaimer will utilize a noise control cover or dampening pads (see **Section 3.4.3)**.
- Regularly maintaining all equipment.
- Undertaking enhanced outreach to coordinate potential scheduling adjustments where possible and inform residents about the construction schedule and resultant increase in noise levels.

5.1.8 Visual/Aesthetic Resources

The No-Action alternative would retain existing conditions in the Proposed Action Area, thereby avoiding impacts to visual and aesthetic resources in this area. The Proposed Action will avoid visual/aesthetic impacts since the cable installation will be entirely underground within an existing utility easement between the two electrical substations, and areas disturbed by the proposed construction within this easement will be restored with a mix of appropriate native species. The only evidence of the Proposed Action that will be visible at the surface upon the completion of restoration are 14 manholes that will be installed along the entire 5.2±-mile route, or an average of one manhole every 2,000± feet. Given the presence of the existing lattice towers and overhead wires along the LIPA easement which will be retained under the Proposed Action, the additional manholes will not represent a significant visual/aesthetic impact.

5.1.9 Construction Impacts

As discussed in the preceding subsections within **Section 5.1**, the No-Action alternative would retain existing conditions in the Proposed Action Area, thereby avoiding potential construction impacts with respect to the range of environmental parameters (soils and topography, water resources, ecology, cultural resources, open space and recreation, critical environmental areas, and noise) that are analyzed in **Chapters 2** and **3** of this DEIS, while also avoiding the costs associated with capital construction for the Proposed Action and Alternatives 2 through 5 as discussed below. The Proposed Action is necessary to ensure the reliability of the electrical system on the South Fork, will avoid impacts where feasible and will provide mitigation to minimize potential construction-related impacts to the degree practicable. These mitigation measures include, but are not limited to: implementation of a SWPPP and FCP during construction, restoration of disturbed areas as near as feasible to pre-construction conditions, removal of stabilization installed for construction access and restoration of these areas to pre-construction conditions to the degree practicable, use of HDD for installation of the cable within the segment of the route through the wetlands in the area of Long Pond, recycling of water used in the HDD drilling operation, use of timber mats in the conduit laydown area to the west of the Bridgehampton Substation, Eastern Tiger Salamander habitat enhancement, use of noise control covers or dampening pads on stationary HDD machinery during construction, implementation of an Alternating, One Way Traffic MPT scheme with flaggers to direct vehicles around the work areas within roadways, and restoration of the area proposed for regrading to the north of the Bridgehampton Substation.

5.2 Alternative 2 – Northern Underground Route

This alternative involves the installation of a new 69 -kV circuit along an underground route extending northward from the Bridgehampton Substation, through downtown Sag Harbor Village, and then southward to the Buell Substation. As indicated previously, this new circuit would follow the route of an existing 69 kV LIPA electrical circuit. More specifically, this alternative cable route generally would:

- Exit the Bridgehampton Substation in an eastbound direction, to County Road 79 (Bridgehampton-Sag Harbor Turnpike)
- Proceed northward within the roadway ROW of County Road 79 (which becomes Main Street within the Village of Sag Harbor, to the north of the intersection with Hildreth Street), to the intersection of Jermain Avenue
- Turn eastward along the Jermain Avenue ROW, which follows the southern edge of Otter Pond
- Continue northeast within the Jermain Avenue ROW, while crossing Suffolk Street, Madison Street and Division Street, to the intersection with New York State Route 114 (NYS Route 114, known as Hampton Street within the Village of Sag Harbor)
- Turn southeastward onto the NYS Route 114 ROW
- Continue southeastward within the NYS Route 114 ROW (which becomes East Hampton-Sag Harbor Turnpike outside the Village, to the southeast of the intersection with Lincoln Street), passing beneath the overpass for the LIRR Montauk Line
- Turn back westward on the south side of the LIRR Montauk line overpass to connect to the Buell Substation.

The total length of the above-described cable route is approximately 8.06 miles, which is about 55 percent longer than the 5.2±-mile route for the Proposed Action. See **Figure 5-1** for a map of the general routing for this alternative. The cost estimate for this alternative is $78.6 million.

As noted previously, although the general routing for this alternative underground cable is defined by the roadway ROW path described above, site-specific details are not available (i.e., which side of the road ROW the installations would be done, extent of utility conflicts, etc.). A more detailed route can only be determined through extensive subsurface investigations in the field along the entire route to identify existing utilities (e.g., electric, gas, water, and sewer) and other impediments that are currently in-place which would dictate the specifics of the route. These details would determine the precise location of the new cable within the ROW by identifying which side of the roadway is less constrained by existing utility lines, where roadway crossings are necessary to avoid constrained areas, where intersection traversals should occur, and similar construction constraints. Therefore, the analysis of potential impacts utilizes assumptions about construction methods and conditions that are likely to be encountered based on PSEG Long Island's extensive experience with similar projects. These assumptions also account for typical regulatory constraints, especially restrictions that are normally requested by agencies with jurisdiction over local roadways and consider issues that usually arise when construction is conducted in such settings, particularly related to project impacts on neighboring property owners.

Alternative 2 Constraints

While Alternative 2 follows an established LIPA underground cable route along major roadways, the presence of two underground cables (13 kV and 69 kV) in a single roadway causes engineering constraints in order to maintain the minimum recommended separation distance between parallel electrical cables to ensure the optimal performance of both cables. More specifically, within the roadway ROW route for Alternative 2, there is an existing underground 69 kV transmission cable along East Hampton-Sag Harbor Turnpike extending from the Buell Substation into the Village of Sag Harbor, as well as a short underground segment of underground distribution cable at the intersection of Main Street and Brick Kiln Road/Jermain Avenue. There is also a segment of existing underground distribution cable along East Hampton-Sag Harbor Turnpike between Stephen Hands Path and the Buell Substation. In order to site another underground cable along this route, engineering constraints, including minimum cable separation distances must be utilized to determine the ultimate location of the cable. When designing a cable location in consideration of engineering constraints, the resultant design may require cable installation to occur in areas of higher environmental sensitivity, which would result in an increased potential for impacts as compared to situations where there is greater flexibility in siting new cables because existing cables are not present. Other existing utilities also may create circumstances where a new underground electrical cable must be placed in an area that is not optimal for the avoidance of potential impacts (i.e., wetland adjacent areas, sensitive habitat areas, etc.).

The separation standard used for parallel, underground electrical transmission cables is a minimum of 15 feet. If cables are placed in closer proximity, they start to "de-rate" each other due to heat generation during electrical transmission, which adversely affects the capacity of each cable. Therefore, when planning a new cable route, it is best engineering practice to avoid collocation along roadways with existing cables so as to optimize the performance of both the existing and new cables. Based on preliminary layout considerations, the spatial constraints along the Alternative 2 route likely would require placement of the new cable within 15 feet of the existing cable at least along a portion of the project length. Installing new underground cables in proximity to existing underground cables also poses the potential for physical damage to the existing cable, as well as other underground utilities, during excavation. These construction-related impacts associated with Alternative 2 (i.e., potential for diminished cable performance due to proximate placement of parallel cables and potential damage to existing underground utilities during installation) are not an issue for the Proposed Action, which will place the new cable within a LIPA easement that does not contain an existing underground cable or other underground utilities.

The full length of cable under Alternative 2 would be installed via trenching, except that a trenchless installation method may be needed to place the short section of cable beneath the LIRR bridge over East Hampton-Sag Harbor Turnpike near the Buell Substation due to the low clearance of that bridge. The cable trench for this alternative would be three-to-four feet wide and five-to-six feet deep (i.e., approximately the same dimensions as the trenching for the Proposed Action, depending on the depth of existing utilities), while maintaining the required minimum cover of 42 inches.

As with the Proposed Action, Alternative 2 would require the installation of manholes to segment the underground cable. With a total length of 8.06± miles and a typical manhole spacing of 2,000-to-2,500 feet, it is estimated that between 17 and 21 manholes would be needed, all of which would be placed within the roadway ROWs. Based on typical spatial constraints within roadway ROW construction areas and the required disturbance dimensions for the manhole vault (50-foot width and 200-foot length under

the Proposed Action), it can be anticipated that full roadway closures would be needed, requiring traffic detours, during manhole installation.

Construction staging would be fairly limited within the roadway ROW on a day-to-day basis. Generally, construction materials would have to be stored at an off-site location and brought in small quantities to the specific location where work is occurring, with the conduit and other materials being staged along the side of the road in the immediate work area. The contractor would be responsible for the means-and-methods of installation, including staging, subject to PSEG Long Island guidelines. However, given that construction would take place within the public roadway ROW adjacent to active land development, it is not clear to what degree it would be feasible to leave equipment and materials in place at the end of each work shift. Temporary restoration would occur at the end of each work shift, and permanent paving restoration would typically occur along the entire route upon completion of the project. In contrast, this means of increasing construction efficiency, whereby the next shift can commence quickly from the previous stopping point without a significant effort for daily setup, generally will not be a problem with the Proposed Action which will be undertaken on the land within the LIPA easement and not along the frontage of active land development.

The estimated, best-case duration of construction for Alternative 2 is 18± months. However, seasonal limitations would be anticipated in order to minimize impacts to the Village of Sag Harbor and other developed areas along the route, particularly during summer operations. Since alternative follows arterial roadways which serve as the two primary routes to and from the Village, it can be anticipated that the impact of such seasonal constraints on the project construction timeline would likely be significant, extending well beyond the minimum estimate of 18 months.

Construction of Alternative 2 would also entail a significant increase in cost, estimated at $79 million, or approximately 72 percent more than the estimated $46 million cost estimated for the Proposed Action.

As discussed in detail in **Sections 5.2.1** through **5.2.9**, below, Alternative 2 would result in an increase in the expected magnitude of potential construction impacts to existing land uses along the roadway ROWs serving as the cable route, including some impacts that are likely to be unavoidable and highly disruptive to the community. In contrast, the Proposed Action enjoys the benefit of almost entirely avoiding these types of impacts because the cable route will be confined to a utility easement along which there is limited adjacent development. Although the Proposed Action entails potential impacts to certain environmental resources within the utility easement, many of these same potential impacts would also apply under Alternative 2. Furthermore, effective measures will be implemented under the Proposed Action to avoid or mitigate any such potential impacts to the extent practicable, and all such impacts will be limited to the construction period and will be eliminated at the completion of construction activities.

5.2.1 Soils and Topography

Alternative 2 would result in an approximate 83 percent increase in the length of trenching – i.e., 8.06± miles, as compared to 4.4± miles for the Proposed Action (not counting the HDD segments). However, the Proposed Action will involve additional soil disturbance in the area to the north of the Bridgehampton Substation to provide a level working area for the HDD drill and associated equipment, and along the ROW to create the necessary gradients of 7 percent or less to accommodate heavy construction equipment for the installation of manholes. The route for Alternative 2, which follows public roadways, generally has

relatively little topographic relief and would involve more limited soil disturbance outside the area for trenching and manhole installation. On this basis, the net potential effect on soils and topography would be similar for the two scenarios, given the longer route for Alternative 2 and the wider area of disturbance associated with the temporary construction access road required for the Proposed Action. Furthermore, as with the Proposed Action, Alternative 2 would be required to include the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport; and both cable routing scenarios would include a plan for site restoration upon the completion of construction, which would mitigate the potential for erosion and sediment transport during long-term operation.

Whereas the Proposed Action will occur within a ROW that presently contains electrical transmission facilities in the form of the existing double 69 kV overhead circuit and lacks other development, Alternative 2 would route the proposed cable along public roadways, which adjoin areas of significant land development, particularly within the Village of Sag Harbor. Therefore, any incidental erosion that may occur under Alternative 2 would be more likely to impact existing land development, while any such effects associated with the Proposed Action would primarily occur in undeveloped natural areas. Although some ecological resources (e.g., wetlands/ buffer areas, and Eastern Tiger Salamander habitat/buffer areas) are situated within and adjacent to the Proposed Action Area, the use of HDD for cable installation will avoid potential impacts to these resources that would be associated with standard trenching methods; and the SWPPP for the Proposed Action is designed to minimize the potential for significant adverse impacts due to potential erosion and sediment transport. Furthermore, Alternative 2 includes a short segment of the cable route that would be installed via trenching adjacent to Otter Pond and freshwater wetlands associated with Ligonee Brook and Rattlesnake Creek in the Village of Sag Harbor and Northwest Creek just south of the Village boundary (see **Figure 5-1**), where there would be a potential for natural resource impacts. As with the Proposed Action, mitigation would be provided in the form of suitable erosion and sediment control measures and applicable wetland permits.

Because of the relatively low topographic relief and existing paved roadways present along the cable route for Alternative 2, it is not expected that ground surface stabilization would be needed to facilitate construction access as will occur under the Proposed Action. However, the Proposed Action will implement a post-construction restoration plan that will remove stabilization materials (i.e., RCA) and return the Proposed Action Area to pre-construction conditions to the degree practicable, thereby mitigating any effect of such construction stabilization on soils and topography.

5.2.2 Water Resources

Alternative 2 would route the proposed 69 kV circuit along public roadways, the majority of which do not contain or adjoin surface water resources. However, this route does include short sections of trenching within the ROW adjacent to Otter Pond and wetlands associated with Ligonee Brook and Rattlesnake Creek in the Village of Sag Harbor and Northwest Creek just south of the Village boundary, where there would be a potential for natural resource impacts (see **Figure 5-5**). The use of trenching in proximity to the wetland areas is in contrast to the Proposed Action, which will avoid disturbance of the wetlands along its cable route (i.e., in the area of Long Pond) by using HDD conduit installation. The Proposed Action also includes the temporary use of the ROW to the west of the Bridgehampton Substation during construction for conduit laydown, which also contains freshwater wetlands and buffers. However, timber matting will

be used in this laydown area in proximity to the wetlands to minimize impacts, and the area will be restored as necessary upon the completion of construction.

As noted previously, Alternative 2 would be implemented entirely by standard trenching, with the possible exception of a short section at the LIRR crossing on East Hampton-Sag Harbor Turnpike. Therefore, this alternative would not require water supply during construction, as will be necessary for the Proposed Action. Neither scenario entails water consumption during operation. In order to minimize the volume of water used for the HDD operation, the Proposed Action will recycle this water to the extent practicable; and the SCWA has indicated the availability of water supply to support the HDD drilling operation, subject to seasonal constraints with which the Proposed Action will comply. Furthermore, the Proposed Action includes a FCP, which will be implemented to mitigate impacts to water resources that could result from a potential frac-out event.

The underground cable installation area for Alternative 2, situated within roadway ROWs, does not contain Eastern Tiger Salamander breeding ponds and is not known to be located within the regulated 535-foot or 1,000-foot buffers around such ponds. Preliminary input received from NYSDEC's Natural Heritage Program indicates that the presence of Eastern Tiger Salamander has been documented in the Bridgehampton-Sag Harbor Turnpike area, but it is not specified whether this includes the segment of the Turnpike along the route for Alternative 2 between the Bridgehampton Substation and the Village of Sag Harbor. If this alternative were actually selected for construction, consultation with NYSDEC would occur to definitively determine whether Eastern Tiger Salamander habitat would be affected and, if so, what measures would be necessary to avoid or mitigate significant impacts.

Although the Proposed Action includes land disturbance during construction within regulated Eastern Tiger Salamander buffer areas, a mitigation plan has been developed in cooperation with NYSDEC to compensate for any potential impacts that may result from construction activities in these buffer areas. This mitigation plan involves enhancements to upgrade sub-optimal Eastern Tiger Salamander habitat conditions within a 0.39-acre area on a parcel owned by the Village of Sag Harbor, located to the immediate northeast of the Bridgehampton Substation, on the opposite side of Bridgehampton-Sag Harbor Turnpike. NYSDEC and the Village have indicated they are amenable to this concept; and PSEG Long Island will obtain the necessary agreements to conduct the restoration work on Village property upon finalization of the restoration plans. Ultimately, NYSDEC will use its discretionary, regulatory authority to confirm that the Proposed Action is designed and implemented in a manner that avoids impacts to water resources where practicable and includes suitable measures to mitigate any potential construction-related impacts; this includes Freshwater Wetlands permitting, an Incidental Take permit for activities in the designated buffer zones for the State-endangered Eastern Tiger Salamander, and a water quality certification.

As depicted in **Figure 5-6**, small segments of the cable route for Alternative 2 would lie within the 100-year floodplain, including the area of Ligonee Brook in the westerly portion of Village of Sag Harbor and the area of Rattlesnake Creek along the east side of East Hampton-Sag Harbor Turnpike just south of the Village. The extent of construction in the floodplain that would occur under this alternative is somewhat greater than will occur with the Proposed Action, for which only a small segment of the cable route is located in the 100-year floodplain. However, in both cases the conduit containing the cable would be sealed to prevent water infiltration to ensure proper long-term functioning of the transmission line and, therefore, would not be susceptible to potential impacts due to location in the floodplain.

5.2.3 Ecology

Preliminary input received from NYSDEC's Natural Heritage Program indicates that the presence of Eastern Tiger Salamander has been documented in the Bridgehampton-Sag Harbor Turnpike area, but it is not specified whether this includes the segment of the Turnpike along the route for Alternative 2 between the Bridgehampton Substation and the Village of Sag Harbor. If this alternative were actually selected for construction, consultation with NYSDEC would occur to definitively determine whether Eastern Tiger Salamander habitat would be affected and, if so, what measures would be necessary to avoid or mitigate significant impacts. As with the Proposed Action, potential impacts related to construction activities under Alternative 2 would be mitigated through the implementation of a SWPPP and post-construction restoration, at a minimum.

In comparison to Alternative 2, HDD will be used to install the cable through the most ecologically sensitive portion of the Proposed Action Area (i.e., the wetlands associated with Long Pond), thereby avoiding land surface disturbance and potential for construction-related impacts in this area. As such, there are no anticipated impacts to turbidity or surface conditions of the ponds and there are no anticipated ground disturbances within 150 feet of the delineated boundaries of the wetlands. A single manhole will be installed within the previously disturbed dirt path on the east side of Long Pond within the ROW. There will be no change in habitat type or quality surrounding the wetland under the Proposed Action. Ground disturbances are anticipated within 150 feet of wetland areas (see **Section 5.2.3**) for Alternative 2, although such disturbances are anticipated mainly within previously disturbed roadway ROWs. Any necessary disturbances within the regulated wetland adjacent area would be designed and implemented in a manner that avoids impacts to water resources where practicable during site layout and design, including suitable measures to mitigate any potential construction-related impacts and would include necessary Freshwater Wetlands permitting.

The Proposed Action requires clearing of existing vegetation and grading within the ROW east of Widow Gavits Road and at the substations to construct a temporary access road and areas of stabilization for HDD and manhole installation activities, as well as to allow for trenching along the ROW for installation of the conduit. In total, 18.78 acres of clearing and grading are required during construction activities associated with the Proposed Action. As described previously, the exact location of the cable installation under Alternative 2 would need to be determined based on detailed investigation of existing utilities, spatial constraints requiring separation from the existing cable along the road and similar constraints. Therefore, the extent of required clearing within the existing roadway ROW for Alternative 2 is not known. However, given the disturbed nature of the existing roadway ROWs, the required clearing for Alternative 2 is anticipated to be less than the clearing required under the Proposed Action. The Proposed Action will implement a site restoration plan using native vegetation species, which will mitigate potential impacts associated with land disturbance during construction, such that there will be no long-term ecological impacts associated with the Proposed Action. Appropriate site restoration would also occur under Alternative 2, although the affected project area would be located within roadway ROWs which generally are not believed to have important ecological value (except for the wetland areas identified above).

Besides the Eastern Tiger Salamander, NYNHP records indicate the occurrence of seven animals and eight plants identified as rare, threatened or endangered species within the vicinity of the Proposed Action Area. However, as discussed in **Section 5.1.3**, most of these species either are not known to be present

within the Proposed Action Area or are confined to the portion of the Proposed Action Area in which ground disturbance will be avoided through the use of HDD. The Northern Long-eared Bat is the only NYNHP-identified species that may be located within the portion of the Proposed Action Area that will be disturbed during cable installation, which will necessitate a field survey to determine whether this species is actually present on-site and potentially could be impacted by the Proposed Action, with mitigation implemented in consultation with NYSDEC as necessary, possibly including limiting any tree removal to the winter season.

In addition to specifying that the Eastern Tiger Salamander has been documented in the vicinity of Bridgehampton-Sag Harbor Turnpike as discussed previously, NYNHP records indicate that certain other rare, threatened or endangered species have been documented in the vicinity of the route for Alternative 2 (see **Appendix W**), including:

- Northern Long-eared Bat in the vicinity of Hampton Street
- Bald Eagle, Hessel's Hairstreak (butterfly), Scarlet Bluet (dragonfly/ damselfly), and Pine Barrens Bluet (dragonfly/ damselfly) in the vicinity of Bridgehampton-Sag Harbor Turnpike; as with Eastern Tiger Salamander, it is not clear whether these records pertain to the segment of the turnpike to the north of the Bridgehampton Substation along the route for Alternative 2
- New England Bluet, Comet Darner, Atlantic Bluet, Mantled Baskettail, Spatterdock Darner and Martha's Pennant (all dragonflies/ damselflies), and Small White Snakeroot (plant) in the vicinity of Sag Harbor Ponds to the east of Bridgehampton-Sag Harbor Turnpike.

Field surveys would be necessary to determine the actual occurrence of rare, threatened or endangered species along the roadway ROWs that comprise the circuit route for Alternative 2 to assess the potential for impacts to these species once the specific circuit route has been defined, and to determine the need for mitigation as appropriate in consultation with NYSDEC.

5.2.4 Cultural Resources

As discussed in **Section 3.1**, Phase IB testing performed as part of the DEIS investigation indicates that the Proposed Action Area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources. Furthermore, no previously recorded architectural resources are located in the Proposed Action Area, nor are there any buildings or structures in this area except for the existing transmission towers. Although Alternative 2 similarly is not expected to contain significant archaeological resources as it comprises a previously disturbed roadway ROW, review of information available on NY CRIS reveals that much of this route traverses an area of archaeological sensitivity, and there are numerous adjacent National/State-listed historic resources, particularly within the Village of Sag Harbor. Therefore, further investigation would be advisable to assess whether this alternative would pose the potential for significant impacts to architectural resources or historic buildings/structures along the project roadways or in adjacent areas.

5.2.5 Open Space and Recreation

Alternative 2 would place the transmission cable underground within roadway ROWs, which do not comprise open space/recreation resources. To the degree that trenching within this ROW may interrupt access to adjacent areas containing such resources, coordination with the respective owners and/or

operators would be necessary to minimize impacts in a similar manner as pertains to Spring Farm and Long Pond Greenbelt under the Proposed Action.

The LIPA ROW in which the Proposed Action will be undertaken contains recreational resources, including Spring Farm, Long Pond Greenbelt and other trails, and a kayak launch on the east side of the Long Pond Greenbelt. Although these recreational resources will be temporarily impacted during construction of the Proposed Action, measures will be implemented to minimize such impacts. These mitigation measures include limiting construction to periods when the affected resources experience their lowest activity levels (i.e., the winter season for Long Pond Greenbelt and the kayak launch), maintaining perpendicular access across the conduit laydown area to the west of the Bridgehampton Substation with a temporary bridge as necessary, staging conduits to the edge of access paths to allow continued vehicle access, limiting other access restrictions during construction to the minimum duration necessary to complete the work, and restoring areas of disturbance within the Proposed Action Area upon the completion of construction. Once all construction activities are complete, no restriction to any trails or open space areas will remain along the Proposed Action route.

5.2.6 Critical Environmental Areas

The CEAs in which the Proposed Action Area is located – i.e., South Fork SGPA, Aquifer Protection Overlay District, Long Pond Greenbelt, Water Recharge Overlay District, and Town of Southampton Freshwater Wetlands – generally have been established for the protection of groundwater/drinking water or surface waters. As depicted in **Figure 5-7** and **Figure 5-8**, the cable route for Alternative 2 would also traverse or adjoin these same CEAs. Alternative 2 would similarly be designed to minimize potential impacts to these resources, through the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport; and both cable routing scenarios would include a plan for site restoration upon the completion of construction, which would mitigate the potential for erosion and sediment transport during long-term operation.

To the degree that the Proposed Action involves construction methods that pose the potential for impacts to water resources that are not associated with Alternative 2, measures are included in the Proposed Action to avoid or mitigate such impacts, including:

- Operation of the Proposed Action will not consume water; water supply used during construction will be recycled to the degree practicable, and seasonal constraints specified by SCWA will be adhered to.
- HDD will be employed during construction though an area along the proposed cable route containing surface water features associated with Long Pond.
- A FCP will be implemented to mitigate impacts to water resources that could result from a potential frac-out event.
- Timber matting will be used in the conduit laydown area to the west of the Bridgehampton Substation and for the HDD exit pit/underground manhole installation west of Widow Gavits Road (within the previously disturbed area of the Long Pond Greenbelt) and the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road.
- A mitigation plan has been developed in cooperation with NYSDEC to compensate for any potential impacts that may result from construction activities in Eastern Tiger Salamander buffer areas.

5.2.7 Noise

As compared to the Proposed Action, Alternative 2 would involve a greater length of trenching, along roadway ROWs that generally lie in closer proximity to residential land uses and other sensitive noise receptors and, therefore, will likely pose a greater potential for noise impacts. Construction activity using open trench installation will generate noise along the entire segment of open trenching, while HDD activities will cause an increase in sound levels at the entry and exit pits (associated with use of the drill and installation of manholes). However, both cable routing scenarios would include a requirement for the use of BMPs pursuant to NYSDEC guidance to minimize noise generation during construction, to the degree practicable, including use of flexible noise control covers or acoustic barriers on stationary HDD machinery under the Proposed Action. Neither scenario would entail operational noise impacts as there would be no permanent sound-generating equipment or facilities.

5.2.8 Visual/Aesthetic Resources

Upon completion, both Alternative 2 and the Proposed Action would place the new 69 kV circuit underground, such that significant long-term visual impacts would not result in either case.

Because the construction of Alternative 2 would occur along public roadways, it would be readily visible during the construction period to travelers on these roadways, as well as residents and other occupants of adjacent properties. The appearance of construction equipment and materials, and associated activities, could be viewed as detracting from the aesthetic characteristics of these roadways, although such effects would be temporary and localized to the specific areas that are undergoing active construction at any given time, and would be eliminated upon site restoration at the completion of construction. In contrast, construction of the Proposed Action will be undertaken within a utility easement that is not similarly frequented by the general public and is generally well screened from surrounding areas by dense woodland vegetation; and, therefore, will affect fewer viewers and to a lesser degree. Additionally, construction of the Proposed Action will have less direct effect on the community since, as compared to Alternative 2, there is little active development adjacent to the LIPA ROW – see further discussion in **Section 5.2.9**, below.

5.2.9 Construction Impacts

As discussed previously, Alternative 2 would involve construction along public roadways. More specifically, the cable route in this scenario would involve cable installation within the ROW of a Suffolk County Road 79 (Bridgehampton-Sag Harbor Turnpike) between the Bridgehampton Substation and the downtown area of the Village of Sag Harbor, the ROW of local roadways through the downtown area of the Village, and the ROW of a New York State roadway (Route 114: Hampton Street/East Hampton-Sag Harbor Turnpike) between downtown Sag Harbor and the Buell Substation. The lands along these ROWs are occupied by various types of development, containing fairly dense mixed-use development in downtown Sag Harbor. Because of this land use setting, Alternative 2 would entail a greater potential for construction impacts to the community in comparison to the placement of the transmission cable within a LIPA ROW under the Proposed Action. In fact, the majority of the 8.06-mile route for this alternative adjoins active residential and other land uses, including:

- A short segment of roadway containing minimal development within the area of Bridgehampton along Bridgehampton-Sag Harbor Turnpike extending north from the Bridgehampton Substation, south of the Southampton Recycling Center, and a 0.9±-mile-long segment of this roadway that is

mostly developed with residences interspersed with businesses northward to the Village of Sag Harbor line

- The approximately two-mile-long segment of roadway ROWs through the Village of Sag Harbor, containing fairly dense mixed-use development, including the core of the Village's downtown
- An approximately five-mile-long segment of the roadway within the area of Wainscott and Northwest Harbor along East Hampton-Sag Harbor Turnpike extending south to the Buell Substation, containing areas that are mostly developed with residences and other interspersed uses (e.g., commercial uses), along with some areas of open space, agriculture or other sparse development.

In contrast to the existing land use setting summarized above for Alternative 2, the ROW that will serve as the cable route for the Proposed Action is almost entirely adjacent to vacant lands. The only exceptions are an approximately 3,000-foot-long segment of the ROW to the east of Stephen Hands Path, along which only approximately 20 residences adjoin the ROW, as well as a few residences adjacent to the ROW at the Widow Gavits Road and Sagg Road crossings.

Beyond the increased impacts associated with the difference in land use setting discussed above, additional considerations that would also exacerbate the magnitude of construction impact caused by Alternative 2, compared to the Proposed Action, include:

- The total length of the cable trenching is about 83 percent longer for this alternative.

- The overall duration of construction would likely be longer, due to various factors that include complex routing caused by existing utilities, more constrained work areas, limited ability for on-site construction staging, and the likely need to clear the active work area at the end of each work shift and undertake setup at the start of each ensuing shift in order to maintain safety in areas that are readily accessible to the public. Additional delays would be expected as a result of seasonal constraints to minimize disruption during the period of increased local activity during the warmer months.

- One lane of traffic closures would be expected in many areas during active trenching. An effort would be made to maintain two-way traffic flow during construction to the degree practicable through the use of traffic cones and appropriate signage to temporarily shift traffic away from the work area. It is anticipated, however, that in many locations, one of the two lanes of traffic along the adjacent roadway would have to be closed during active trenching to provide sufficient space for the work, requiring the use of a flag crew to alternate traffic flow direction along the single open lane. All such modifications to normal traffic flow would be identified and regulated through road-opening permits obtained from the respective roadway jurisdiction agency (i.e., State, County, or local municipality).

- Driveway access to adjacent properties may be temporarily affected by trenching operations. Short term traffic disruptions from temporary lane closures would be mitigated using administrative controls, such as publicly displayed notifications and correspondence through PSEG Long Island External Affairs, engineering controls, such as road construction plates (to span open roadway excavations) and would be addressed in the applicable local road opening traffic

permit requirements to ensure that access can be maintained to the extent practicable during construction.

- Any open trenching would be backfilled and temporary pavement restoration would occur at the end of each shift, which would place the roadway back into two-lane operations in the off-hour period. Permanent pavement restoration along the entire cable route typically would await completion of the project. Construction impacts usually would directly affect any given property along the cable route for a maximum of only a few days before moving further along the ROW to the next property.

- This alternative would require the installation of approximately 17 to 21 manholes, for which it is anticipated that full roadway closures would be needed, requiring traffic detours.

5.3 Alternative 3 – Southern Underground Route

This alternative involves the installation of a new 69 -kV circuit along an underground route extending southward from the Bridgehampton Substation, eastward along Montauk Highway, and then northward to the Buell Substation. This alternative cable route would also follow the route of an existing underground 69 kV LIPA electrical circuit, generally would:

- Exit the Bridgehampton Substation in an eastbound direction
- Proceed southward within the ROW along County Road 79 (Bridgehampton-Sag Harbor Turnpike)
- Continue southward along the County Road 79 ROW through the at-grade crossing of the LIRR Montauk Branch, and then cross Narrow Lane, to the intersection of Montauk Highway in Downtown Bridgehampton
- Turn eastward onto the Montauk Highway ROW, and continue eastward while crossing Sagg Road, Townline Road/Sayre's Path and Wainscott-Northwest Road, while also passing proximate to the upper reaches of Georgica Pond, to Cove Hollow Road
- Turn northward onto the Cove Hollow Road ROW
- Continue northward along the Cove Hollow Road ROW to a point south of the overpass for the LIRR Montauk line
- Turn westward to connect to the Buell Substation

The total length of the above-described cable route is approximately 7.45 miles, which is about 43 percent longer than the 5.2±-mile route for the Proposed Action. See **Figure 5-2** for a map of the general routing for this alternative. The cost estimate for this Alternative is $84.7 million.

To a large degree, this alternative is analogous to Alternative 2, discussed in **Section 5.2**, although at about 7 percent shorter overall length, but still significantly longer than the Proposed Action. Similarly, although the general cable routing along roadway ROWs is described above, site-specific details are not available. As such, practical assumptions are made to perform a meaningful assessment of impacts.

Alternative 3 Constraints

As with Alternative 2, Alternative 3 follows an established LIPA cable route along major roadways, and the same significant engineering constraint applies regarding the requirement for maintaining the minimum recommended separation distance between parallel electrical cables to ensure the optimal performance

of both cables. Within the roadway ROW route for Alternative 3, there is an existing 69 kV underground transmission cable along Bridgehampton-Sag Harbor Turnpike extending from the Bridgehampton Substation south to Scuttle Hole Road, as well as a segment of underground distribution cable along Montauk Highway between Wainscott Stone Road and Stephen Hands Path. There is also a segment of existing underground distribution cable along Cove Hollow Road south of the Buell Substation. The engineering constraints for minimum separation distance associated with the presence of existing underground electrical cables along the route of a new proposed cable may require cable installation to occur in areas of higher environmental sensitivity which would result in an increased potential for impacts as compared to situations where there is greater flexibility in siting because existing cables are not present. Other existing utilities also may create circumstances where a new underground electrical cable must be placed in an area that is not optimal for the avoidance of potential impacts. As with Alternative 2, the full length of cable under Alternative 3 would be installed via trenching; except that a trenchless installation method would likely be needed to place the short section of cable beneath the LIRR at-grade crossing at Bridgehampton-Sag Harbor Turnpike about one-half mile north of the intersection at Montauk Highway. The same trench dimensions would apply to Alternative 3 as described above in **Section 5.2** for Alternative 2, which are comparable to the Proposed Action. Similarly, it is anticipated that temporary single-lane roadway closures would be needed in many locations during active trenching (resulting in alternating travel on the single open lane, controlled by a flag crew), with temporary full roadway closures (and associated traffic detours) during the installation of manhole vaults. The estimated number of manhole vaults required would be between 16 and 20 along the 7.45±-mile cable route. Temporary restoration would occur at the end of each work shift, and permanent paving restoration would typically occur along the entire route upon completion of the project. Direct construction impacts to individual properties would generally be limited to a maximum of a few days. As previously discussed for the northern underground route under Alternative 2 (see **Section 5.2**), the southern underground route under Alternative 3 would involve a potential for diminished cable performance due to proximate placement of parallel cables, as well as potential damage to existing underground utilities during installation, issues which will not impact the Proposed Action. The presence of existing underground utilities along the cable route for Alternative 3 also may result in the new electrical cable being placed in an area that is not optimal for the avoidance of potential impacts. This includes wetland adjacent areas, sensitive habitats and similar resource areas, potentially involving the area of Slate Pond on Bridgehampton-Sag Harbor Turnpike and Georgica Pond on Montauk Highway – see further discussion below in **Sections 5.3.2** and **5.3.3**.

The duration of construction for Alternative 3 is estimated at about 20 to 24 months, which is substantially longer than would be expected for Alternative 2 due to even more concerns regarding the scheduling effect of anticipated closures on a State highway (Montauk Highway), that provides the main roadway access to and from the entire Town of East Hampton, especially during the seasonal summer peak. This may include the need for nighttime work and limitations on the daily duration of construction activities in accordance with State requirements, including implementation of MPT procedures. Since this underground cable alternative follows arterial roadways and the primary route east/west highway, it can be anticipated that seasonal constraints may cause additional construction duration delays and extend the anticipated project construction timeline.

Construction of Alterative 3 would entail a significant increase in cost, estimated at $85 million, or approximately 85 percent more than the estimated $46 million cost of the Proposed Action.

As discussed in detail in **Sections 5.3.1** through **5.3.9**, below, Alternative 3 would result in a significant increase in the expected magnitude of potential construction impacts to existing land uses along the roadway ROWs serving as the cable route, including some impacts that are likely to be unavoidable and highly disruptive to the community for the duration of the construction period. In contrast, the Proposed Action almost entirely avoids these types of impacts because the cable route will be confined to a utility easement along where there is limited adjacent development. Although the Proposed Action entails potential impacts to certain environmental resources within the utility ROW, some of these same potential impacts would also apply under Alternative 3. Furthermore, effective measures will be implemented under the Proposed Action to avoid or mitigate any such potential impacts to the extent practicable, and all such impacts will be limited to the construction period and will be eliminated at the completion of construction activities.

5.3.1 Soils and Topography

Alternative 3 would result in an approximate 69 percent increase in the length of trenching – i.e., 7.45± miles, as compared to 4.4± miles for the Proposed Action (not counting the HDD segments). However, the Proposed Action will involve additional soil disturbance, in the area to the north of the Bridgehampton Substation and along the ROW, to attain the desired grades for equipment operation and access during construction. The route for Alternative 3, which follows public roadways, generally has relatively little topographic relief and would involve more limited soil disturbance outside the area for trenching and manhole installation. On this basis, the net potential effect on soils and topography when considered together would be similar for the two scenarios, given the longer route for Alternative 3 and the wider area of disturbance associated with the temporary construction access road for the Proposed Action. Furthermore, as with the Proposed Action, Alternative 3 would be required to include the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport; and both cable routing scenarios would include a plan for site restoration upon the completion of construction, which would mitigate the potential for erosion and sediment transport during long-term operation.

In contrast to the Proposed Action, which would occur within a LIPA ROW that presently contains overhead electrical transmission facilities and lacks other development, Alternative 3 would be similar to Alternative 2 in routing the proposed cable along public roadways, which adjoin areas of significant land development, particularly in downtown Bridgehampton and along Montauk Highway. Therefore, any incidental erosion that may occur under Alternative 3 would be more likely to impact land development, while any such effects associated with the Proposed Action would primarily occur on undeveloped ROW. Although some ecologically sensitive resources (e.g., wetlands/buffer areas, and Eastern Tiger Salamander habitat/buffer areas) are situated within and adjacent to the Proposed Action Area, the use of HDD for cable installation will avoid potential impacts to these resources that would be associated with standard trenching methods; and the SWPPP is designed to minimize the potential for significant adverse impacts due to potential erosion and sediment transport. Furthermore, Alternative 3 includes short segments of the cable route that would be installed via trenching adjacent to freshwater wetlands located south of the Bridgehampton Substation, Slate Pond (adjacent to the Bridgehampton Children's Museum) and associated wetlands on the east side of Bridgehampton-Sag Harbor Turnpike (adjacent to the South Fork Natural History Museum & Nature Center), and tidal and freshwater wetlands associated with the upper reaches of Georgica Pond, where there would be a potential for natural resource impacts (see **Figure 5-**

2). Although, as with the Proposed Action, mitigation would be provided in the form of suitable erosion and sediment control measures and necessary protective measures prescribed in wetland permitting.

Because of the relatively low topographic relief and presence of existing paved roadways along the cable route for Alternative 3, it is not expected that ground surface stabilization would be needed to facilitate construction access as will occur under the Proposed Action. However, the Proposed Action will implement a post-construction restoration plan that will remove stabilization materials (i.e., RCA) and return the Proposed Action Area to pre-construction conditions to the degree practicable, thereby mitigating any effect of such construction stabilization on soils and topography.

5.3.2 Water Resources

Alternative 3 would route the proposed 69 kV circuit along public roadways, which mostly do not contain or adjoin surface water resources. However, this route would include short segments of trenching adjacent to freshwater wetlands located south of the Bridgehampton Substation, Slate Pond (adjacent to the Bridgehampton Children's Museum) and associated wetlands on the east side of Bridgehampton-Sag Harbor Turnpike (adjacent to the South Fork Natural History Museum & Nature Center), and tidal and freshwater wetlands associated with the upper reaches of Georgica Pond, where there would be a potential for natural resource impacts (see **Figure 5-9**). The engineering constraints for minimum separation distance associated with the presence of existing underground electrical cables along the route of a new proposed cable may require cable installation to occur in areas of higher environmental sensitivity which would result in an increased potential for impacts as compared to situations where there is greater flexibility in siting because existing cables are not present. Other existing utilities also may create circumstances where a new underground electrical cable must be placed in an area that is not optimal for the avoidance of potential impacts. The use of trenching in this area is in contrast to the Proposed Action, which will avoid disturbance of the wetlands along its cable route (i.e., in the area of Long Pond) by using HDD conduit installation. The Proposed Action also includes the use of the ROW to the west of the Bridgehampton Substation temporarily during construction for conduit laydown, which also contains freshwater wetlands and buffers (See **Section 1.3.1**). Timber matting will be used in this laydown area in proximity to wetlands to minimize impacts, and the area will be restored as necessary upon the completion of construction. Additionally, timber mats will be utilized for the HDD exit pit/underground manhole installation (within the previously disturbed area of the Long Pond Greenbelt) and the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road to minimize impacts.

As noted previously, Alternative 3 would be implemented entirely by standard trenching, with the exception of the LIRR at-grade crossing on Bridgehampton-Sag Harbor Turnpike where a trenchless installation method likely would be needed. This alternative would not require water supply during construction, as will be necessary for the Proposed Action; and neither scenario entails water consumption during operation. In order to minimize the volume of water used for the HDD operation, the Proposed Action will recycle this water to the extent practicable; and the SCWA has indicated the availability of water supply to support the HDD drilling operation, subject to seasonal constraints. Furthermore, the Proposed Action includes a FCP, which will be implemented to mitigate impacts to water resources that could result from a potential frac-out event.

Although the Proposed Action includes land disturbance during construction within regulated Eastern Tiger Salamander buffer areas, a mitigation plan has been developed in cooperation with NYSDEC to compensate for any potential impacts that may result from construction activities in these buffer areas.

This mitigation plan involves enhancements to upgrade sub-optimal Eastern Tiger Salamander habitat conditions within a 0.39-acre area on a parcel owned by the Village of Sag Harbor, located to the immediate northeast of the Bridgehampton Substation, on the opposite side of Bridgehampton-Sag Harbor Turnpike. NYSDEC and the Village have indicated they are amenable to this concept; and PSEG Long Island will obtain the necessary agreements to conduct the restoration work on Village property upon finalization of the restoration plans. Ultimately, NYSDEC will use its discretionary, regulatory authority to ensure that the Proposed Action is designed and implemented in a manner that avoids impacts to water resources where practicable and includes suitable measures to mitigate any potential construction-related impacts; this includes Freshwater Wetlands permitting, an Incidental Take permit for activities in the designated buffer zones for the State-endangered Eastern Tiger Salamander, and a water quality certification.

Although the underground cable installation area for Alternative 3 is situated within roadway ROWs, it adjoins a known breeding pond for Eastern Tiger Salamanders according to preliminary input received from NYSDEC's Natural Heritage Program. If this alternative were actually selected for construction, consultation with NYSDEC would occur to determine the degree to which Eastern Tiger Salamander habitat would be affected and what measures would be necessary to avoid or mitigate significant impacts, similar to the Proposed Action. There is potential for an Incidental Take permit to be required by the NYSDEC for this Alternative.

As depicted in **Figure 5-10**, portions of the cable route for Alternative 3 would lie within the 100-year floodplain, including the area of Georgica Pond along Montauk Highway in the Town of East Hampton. The extent of construction in the floodplain that would occur under this alternative is somewhat greater than will occur with the Proposed Action, for which only a small segment of the cable route is located in the 100-year floodplain. However, in both cases the conduit containing the cable would be sealed to prevent water infiltration to ensure proper long-term functioning of the transmission line and, therefore, would not be susceptible to potential impacts due to location in the floodplain.

5.3.3 Ecology

As noted above, the underground cable installation area for Alternative 3 adjoins a known breeding pond for Eastern Tiger Salamanders. Therefore, construction under this alternative would require consultation with NYSDEC to determine the degree to which habitat for this species would be affected and what measures would be necessary to avoid or mitigate significant impacts. As with the Proposed Action, potential impacts related to construction activities would be mitigated through the implementation of a SWPPP and post-construction restoration, and potentially Eastern Tiger Salamander habitat enhancement if any impacts to this species were identified.

HDD will be used to install the cable through the most ecologically sensitive portion of the Proposed Action Area (i.e., the wetlands associated with Long Pond), thereby avoiding land surface disturbance and potential for construction-related impacts in this area. As such, there are no anticipated impacts to turbidity or surface conditions of the ponds and there are no anticipated ground disturbances within 150 feet of the delineated boundaries of the wetlands under the Proposed Action. A single manhole will be installed within the previously disturbed dirt path on the east side of Long Pond within the ROW and there will be no change in habitat type or quality surrounding the wetland. Ground disturbances are anticipated within 150 feet of wetland areas for Alternative 3, although such disturbances are anticipated mainly within previously disturbed roadway ROWs. Any necessary disturbances within the regulated wetland

adjacent area would be designed and implemented in a manner that avoids impacts to water resources where practicable during site layout and design, including suitable measures to mitigate any potential construction-related impacts and necessary Freshwater Wetlands permitting.

The Proposed Action requires clearing of existing vegetation and grading within the ROW east of Widow Gavits Road and at the substations to construct a temporary access road and areas of stabilization for HDD and manhole installation activities, as well as to allow for trenching along the ROW for installation of the conduit. In total, 18.78 acres of clearing and grading are required during construction activities associated with the Proposed Action. As described previously, the exact location of the cable installation under Alternative 3 would need to be determined based on detailed investigation of existing utilities, spatial constraints requiring separation from the existing cable along the road and similar constraints. Therefore, the extent of required clearing within the existing roadway ROW for Alternative 3 is not known. However, given the disturbed nature of the existing roadway ROWs, the required clearing for Alternative 3 is anticipated to be less than the clearing required under the Proposed Action.

The Proposed Action will implement a site restoration plan using native vegetation species, which will mitigate potential impacts associated with land disturbance during construction, such that there will be no long-term ecological impacts associated with the Proposed Action. Appropriate site restoration would also occur under Alternative 3, although the affected project area would comprise roadway ROWs which generally are not believed to have important ecological value (except for the portions of Bridgehampton-Sag Harbor Turnpike and Montauk Highway that adjoin the wetland areas described above in **Section 5.3.2**), and potentially other areas that have not been inventoried).

Besides the Eastern Tiger Salamander, NYNHP records indicate the occurrence of seven animals and eight plants identified as rare, threatened or endangered species within the vicinity of the Proposed Action Area. However, as discussed in **Section 5.1.3**, most of these species either are not known to be present within the Proposed Action Area or are confined to the portion of the Proposed Action Area in which ground disturbance will be avoided through the use of HDD. The Northern Long-eared Bat is the only other NYNHP-identified species that may be located within the portion of the Proposed Action Area that will be disturbed during cable installation, which will necessitate a field survey to determine whether this species is actually present on-site and potentially could be impacted by the Proposed Action, with mitigation implemented in consultation with NYSDEC as necessary, possibly including limiting any tree removal to the winter season.

In addition to specifying that the Eastern Tiger Salamander has been documented in the vicinity of Bridgehampton-Sag Harbor Turnpike as discussed previously, NYNHP records indicate that certain other rare, threatened or endangered species have been documented in the vicinity of the route for Alternative 3 (see **Appendix W**), including:

- Bald Eagle, Hessel's Hairstreak (butterfly), Scarlet Bluet (dragonfly/ damselfly), and Pine Barrens Bluet (dragonfly/ damselfly) in the vicinity of Bridgehampton-Sag Harbor Turnpike and Montauk Highway
- Creeping St. John's Wort, Narrow-leafed Bush Clover, Toothcup, and Cut-leaved Evening Primrose (all plants) in the vicinity of Slate Pond to the west of Bridgehampton-Sag Harbor Turnpike

Although the actual occurrence of rare, threatened or endangered species along the roadway ROWs that comprise the circuit route for Alternative 3 appears less likely than within the utility ROW for the Proposed Action, it would still be necessary to undertake a field survey to assess the potential for impacts to these species under Alternative 3 once the specific circuit route has been defined, and to determine the need for mitigation as appropriate in consultation with NYSDEC.

5.3.4 Cultural Resources

As discussed in **Section 3.1**, Phase IB testing performed as part of the DEIS investigation indicates that the Proposed Action Area does not appear to contain artifacts or features associated with recorded resources or previously unknown archaeological resources. Furthermore, no previously recorded architectural resources are located in the Proposed Action Area, nor are there any buildings or structures in this area except for the existing transmission towers. Although the cable route for Alternative 3 is not expected to contain significant archaeological resources as it comprises a previously disturbed roadway ROW, review of information available on NY CRIS reveals that much of this route traverses an area of archaeological sensitivity, and there are National/State-listed historic resources along Bridgehampton-Sag Harbor Turnpike and Montauk Highway. Therefore, further investigation would be advisable to assess whether this alternative would pose the potential for significant impacts to architectural resources or historic buildings/structures along the project roadways or in adjacent areas.

5.3.5 Open Space and Recreation

Alternative 3 would place the transmission cable underground within roadway ROWs, which do not comprise open space/recreation resources. To the degree that trenching within this ROW may interrupt access to adjacent areas containing such resources, coordination with the respective owners and/or operators would be necessary to minimize impacts in a similar manner as pertains to Spring Farm and Long Pond Greenbelt under the Proposed Action.

The LIPA ROW in which the Proposed Action will be undertaken contains recreational resources, including Spring Farm, Long Pond Greenbelt and other trails, and a kayak launch on the east side of the Long Pond Greenbelt. Although these recreational resources will be temporarily impacted during construction of the Proposed Action, measures will be implemented to minimize such impacts. These mitigation measures include limiting construction to periods when the affected resources experience their lowest activity levels (i.e., the winter season for Long Pond Greenbelt and the kayak launch), maintaining perpendicular access across the conduit laydown area to the west of the Bridgehampton Substation with a temporary bridge as necessary, staging conduits to the edge of access paths to allow continued vehicle access, limiting other access restrictions during construction to the minimum duration necessary to complete the work, and restoring areas of disturbance within the Proposed Action Area upon the completion of construction. Once all construction activities are complete, no restriction to any trails or open space areas will remain along the Proposed Action route.

5.3.6 Critical Environmental Areas

The CEAs in which the Proposed Action Area is located – i.e., South Fork SGPA, Aquifer Protection Overlay District, Long Pond Greenbelt, Water Recharge Overlay District, and Town of Southampton Freshwater Wetlands – generally have been established for the protection of groundwater/drinking water or surface waters. As depicted in **Figure 5-11** and **Figure 5-12**, the cable route for Alternative 3 would also traverse or adjoin these same CEAs. Alternative 3 would similarly be designed to minimize potential impacts to

these resources, through the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport; and both cable routing scenarios would include a plan for site restoration upon the completion of construction, which would mitigate the potential for erosion and sediment transport during long-term operation.

To the degree that the Proposed Action involves construction methods that pose the potential for impacts to water resources that are not associated with Alternative 3, measures are included in the Proposed Action to avoid or mitigate such impacts, including:

- Operation of the Proposed Action will not consume water; water supply used during construction will be recycled to the degree practicable, and seasonal constraints specified by SCWA will be adhered to.
- HDD will be employed during construction though an area along the proposed cable route containing surface water features associated with Long Pond.
- A FCP will be implemented to mitigate impacts to water resources that could result from a potential frac-out event.
- Timber matting will be used in the conduit laydown area to the west of the Bridgehampton Substation and for the HDD exit pit/underground manhole installation west of Widow Gavits Road (within the previously disturbed area of the Long Pond Greenbelt) and the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road.
- A mitigation plan has been developed in cooperation with NYSDEC to compensate for any potential impacts that may result from construction activities in Eastern Tiger Salamander buffer areas.

5.3.7 Noise

As compared to the Proposed Action, Alternative 3 involves a greater length of trenching, along roadway ROWs that generally lie in closer proximity to residential land uses and other sensitive noise receptors and, therefore, may pose a somewhat greater potential for noise impacts. Construction activity using open trench installation will generate noise along the entire segment of open trenching, while trenchless installation methods will cause an increase in sound levels at the HDD entry and exit pits (associated with use of the drill) and installation of manholes. However, both cable routing scenarios would include a requirement for the use of BMPs pursuant to NYSDEC guidance to minimize noise generation during construction, to the degree practicable, including use of flexible noise control covers or acoustic barriers on stationary HDD machinery under the Proposed Action. Neither scenario would entail operational noise impacts as there would be no permanent sound-generating equipment or facilities.

5.3.8 Visual/Aesthetic Resources

Upon completion, both Alternative 3 and the Proposed Action would place the new 69 kV circuit underground, such that significant long term visual impacts would not result in either case.

Because the construction of Alternative 3 would occur along public roadways, it would be readily visible to travelers on these roadways, as well as residents and other occupants of adjacent properties. The appearance of construction equipment and materials, and associated activities, could be viewed as detracting from the aesthetic characteristics of these roadways, although such effects would be temporary and localized to the specific areas that are undergoing active construction at any given time,

and would be eliminated upon site restoration at the completion of construction. In contrast, construction of the Proposed Action will be undertaken within a utility ROW that is not similarly frequented by the general public and is generally well screened from surrounded areas by dense woodland vegetation, and, therefore, will affect fewer viewers.

5.3.9 Construction Impacts

As discussed previously, Alternative 3 would involve construction along public roadways. More specifically, the cable route in this scenario would involve placement mostly within the ROW of New York State roadways (Montauk Highway and East Hampton-Sag Harbor Turnpike), as well as a County roadway (Bridgehampton-Sag Harbor Turnpike) and a local roadway (Cove Hollow Road). The lands along these ROWs are occupied by various types of development, including a relatively high density, mixed-use area in downtown Bridgehampton around the intersection of Montauk Highway and Bridgehampton-Sag Harbor Turnpike and within the Village of East Hampton in the eastern portion of the route. Because of this land use setting, Alternative 3 would entail a greater potential for construction impacts to the community in comparison to the placement of the transmission cable within a LIPA ROW under the Proposed Action. In fact, the majority of the 7.45±-mile route for this alternative adjoins active residential and other land uses, including:

- A short segment of roadway bordered by open space within the area of Bridgehampton along Bridgehampton-Sag Harbor Turnpike extending south from the Bridgehampton Substation, and a 1.4±-mile-long segment of this roadway that is mostly developed with residences interspersed with open space southward to the LIRR
- A 0.5± mile segment of Bridgehampton-Sag Harbor Turnpike in downtown Bridgehampton, south of the LIRRR, containing fairly dense, mixed-use development
- An approximately five-mile segment of Montauk Highway extending from Bridgehampton, through Wainscot, containing mostly residential uses with scattered commercial, institutional and agricultural uses; and continuing eastward through the Village of East Hampton, where the land use density generally increases, primarily with residential uses, and a mix of commercial and other uses
- A 0.6±-mile segment along Cove Hollow Road extending north to the Buell Substation, in the Village of East Hampton, which is mostly developed with residences and other interspersed uses.

In contrast to the existing land use setting summarized above for Alternative 3, the ROW that will serve as the cable route for the Proposed Action is almost entirely adjacent to vacant lands. The only exceptions are an approximately 3,000-foot-long segment of the ROW to the east of Stephen Hands Path, along which only about 20 residences adjoin the ROW, as well as a few residences adjacent to the ROW at the Widow Gavits Road and Sagg Road crossings. Furthermore, construction activities under Alternative 3 would occur along the frontage of the affected residences and other uses, which would be more intrusive than would be the case for the Proposed Action in which these activities will behind the rear yards of the few residences that adjoin the LIPA easement.

As compared to the Proposed Action, Alternative 3 would be expected to entail an increased magnitude of most construction impacts due to various factors, beyond those associated with the difference in land use setting discussed above. Similar to Alternative 2, these impacts include:

- The total length of the cable trenching is about 69 percent longer for this alternative than for the Proposed Action.
- The overall duration of construction would be longer, due to various factors that include complex routing caused by existing utilities, more constrained work areas, limited ability for on-site construction staging, and the likely need to clear the active work area at the end of each shift and undertake setup at the start of the next shift in order to maintain safety in areas that are readily accessible to the public; and it can be expected that additional delays would result due to seasonal constraints that are likely to be requested by the roadway jurisdiction agencies for the main roadway access to and from the entire Town of East Hampton (i.e., Montauk Highway) and the two primary routes to and from the Village of Sag Harbor (i.e., Bridgehampton-Sag Harbor Turnpike and East Hampton-Sag Harbor Turnpike).
- One lane of traffic closures would be expected in many areas during active trenching.
- Driveway access to adjacent properties may be temporarily affected by trenching operations.
- Any open trenching would be backfilled and temporary pavement restoration would occur at the end of each shift, which would place the roadway back into two-lane operations in the off-hour period. Permanent pavement restoration along the entire cable route typically would await completion of the project. Construction impacts usually would directly affect any given property along the cable route for a maximum of only a few days before moving further along the ROW to the next property.
- This Alternative would require the installation of approximately 16 to 20 manholes, for which it is be anticipated that full roadway closures would be needed, requiring traffic detours.
- This Alternative would likely require less vegetative clearing than that of the Proposed Action due to the location of this Alternative being located primarily along existing roadways.

5.4 Alternative 4 – Northern Hybrid (Underground/Overhead) Route

This alternative would place a combination new underground/overhead 69 -kV circuit along the same 8.06±-mile route as Alternative 2, extending northward from the Bridgehampton Substation, through downtown Sag Harbor Village, and then southward to the Buell Substation. As depicted in **Figure 5-3**, the circuit in Alternative 4 would begin by exiting the Bridgehampton Substation overhead, go underground upon entering into the southwestern area of the Village, re-emerge overhead upon leaving the southeastern area of the Village and continue overhead to the Buell Substation. More specifically, this alternative would entail:

- Replacement of 40 existing distribution poles along Bridgehampton-Sag Harbor Turnpike between the Bridgehampton Substation and the Sag Harbor Village line. The new poles would be 85 feet in length, with 15 feet of embedment (i.e., 70 feet in height above-grade), and would be fitted with both transmission and underbuilt distribution cables, necessitating the increase in pole height. The existing poles to be replaced include:
    - 32 poles at 40 feet in height
    - 8 poles at 45 feet in height
- Replacement of 148 existing distribution poles along East Hampton-Sag Harbor Turnpike. Again, the new poles would be 85 feet in length, with 15 feet of embedment (i.e., 70 feet in height above-grade), and would be fitted with both transmission and underbuilt distribution cables. The existing poles to be replaced include:

  - 1 pole at 30 feet in height
  - 58 poles at 35 feet in height
  - 85 poles at 40 feet in height
  - 4 poles at 45 feet in height
- Addition of 12 new poles along the segment of East Hampton-Sag Harbor Turnpike between Merchant's Path/Swamp Road and Edwards Hole Road where, unlike the two sections described above, there are no existing distribution poles. The new poles would be 75 feet in length with 15 feet of embedment (i.e., 60 feet in height above-grade).
- As indicated previously, the underground segment of transmission cable for this alternative would correspond to the route through the Village of Sag Harbor under Alternative 2, spanning approximately 10,000 linear feet.

Alternative 4 Constraints

The underground transmission segment for Alternative 4 would be subject to the same conditions and constraints that pertain to Alternative 2 in terms of construction within a busy roadway ROW. This includes the anticipated need for single-lane roadway closures in many locations during active trenching within the Village of Sag Harbor (resulting in alternating travel on the single open lane, controlled by a flag crew). Additionally, as with the Proposed Action and Alternatives 2 and 3, Alternative 4 would require the installation of manholes to segment the underground portion of the cable route. These manholes would be needed within the 10,000±-foot trenching section which, at a spacing of 2,000 to 2,500 feet, and would result in approximately 4 to 5 manholes, all of which would be placed within the roadway ROWs. As with Alternatives 2 and 3, it can be anticipated that full roadway closures would be needed, requiring traffic detours, during the installation of these manholes. In contrast, construction of the Proposed Action, conducted within a LIPA ROW, would not disrupt traffic flow during trenching and manhole installation.

Alternative 4 is the only scenario that involves standard overhead installation of the proposed transmission line via utility poles along public roadways. In general, field investigations for siting determinations are greatly simplified for overhead routing as compared to underground installation since existing utility considerations are only relevant in the limited area of pole placement rather than along the entire route, and there is greater flexibility to adjust pole placement to avoid locations with complex existing subsurface facilities. Because of these factors, an overhead installation typically progresses more rapidly per unit length than occurs with trenching. However, given that trenching would still be used for the most densely developed portion of the route through the Village of Sag Harbor, it is estimated that the construction of Alternative 4 would not result in a significant time savings from the 18-month best-case scenario for a fully underground installation along the same northerly route under Alternative 2, with the likelihood that seasonal limitations would constrain summer work and prolong the duration of construction in either case.

Construction of Alterative 4 would entail a cost estimated at $46.2 million, approximately the same as the estimated cost of the Proposed Action.

As discussed in detail in **Sections 5.4.1** through **5.4.9**, below, Alternative 4 would result in potential, visual/aesthetic impacts along the main roadways leading to and from the Village of Sag Harbor due to the installation of 70-foot utility poles to replace 188 existing poles that range in height from 30 to 45 feet, as well as the possible addition of 12 new poles at 60 feet in height in an area that currently lacks overhead utilities. Additionally, similar to Alternative 2, Alternative 4 would entail underground cable

installation through the Village of Sag Harbor, which would be expected to result in significant construction impacts to existing land uses along the roadway ROWs in which the cable would be placed, including some impacts that are likely to be unavoidable and highly disruptive to the community. In contrast, the Proposed Action enjoys the benefit of almost entirely avoiding these types of impacts because the cable installation will be solely underground and will follow a route that is confined to a utility ROW along which there is limited adjacent development. Although the Proposed Action entails potential impacts to certain environmental resources within the utility ROW, many of these same potential impacts would also apply under Alternative 4, particularly along the segment of underground installation through the Village of Sag Harbor. Furthermore, effective measures will be implemented under the Proposed Action to avoid or mitigate any such potential impacts to the extent practicable, and all such impacts will be limited to the construction period and will be eliminated at the completion of construction activities.

5.4.1 Soils and Topography

Overhead installation would significantly reduce project-related effects on soils and topography along the majority of the Alternative 4 project route, as land disturbance would be limited to the drill holes for individual poles, rather than a continuous trench that is required for the majority of the cable route for the Proposed Action (i.e., except for the HDD segments). However, Alternative 4 includes trenching for the 10,000 linear feet segment of the cable route within the Village of Sag Harbor, which would expose soils in that area to potential erosion in the same manner as will occur under the Proposed Action. For Alternative 4, any such potential erosion would be mitigated with the implementation of suitable measures in an Erosion and Sediment Control Plan, as has been developed for the Proposed Action. The Proposed Action also includes a plan for site restoration upon the completion of construction, which will mitigate the potential for erosion and sediment transport during long-term operation, as is expected to occur under Alternative 4.

5.4.2 Water Resources

Alternative 4 would route the proposed 69 kV circuit along public roadways, which mostly do not contain or adjoin surface water resources. However, this route includes a short section of Otter Pond and freshwater wetlands associated with Ligonee Brook and Rattlesnake Creek in the Village of Sag Harbor and Northwest Creek just south of the Village boundary (see **Figure 5-13**) where trenching (within the Village) or pole installation (outside the Village) would occur within road ROWs; which may include temporary construction disturbances within wetland adjacent areas. Under the Proposed Action, disturbance of the wetlands along the cable route (i.e., in the area of Long Pond) will be avoided by using HDD conduit installation. The Proposed Action also includes the use of the easement area to the west of the Bridgehampton Substation temporarily during construction for conduit laydown, which also contains freshwater wetlands and buffers. Timber matting will be used in this laydown area to minimize impacts, and the area will be restored as necessary upon the completion of construction. Additionally, timber mats will be utilized for the HDD exit pit/underground manhole installation (within the previously disturbed area of the Long Pond Greenbelt) and the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road to minimize impacts. Finally, implementation of a SWPPP will prevent adverse impacts to water resources.

Similar to the other construction alternatives that do not utilize HDD for cable installation, Alternative 4 would not require water supply during construction, as will be necessary for the Proposed Action; and none of these scenarios entail water consumption during operation. However, in order to minimize the

volume of water used for the HDD operation, the Proposed Action will recycle this water to the extent practicable; and the SCWA has indicated the availability of water supply to support the HDD drilling operation, subject to seasonal constraints with which the Proposed Action will comply. Furthermore, the Proposed Action includes a FCP, which will be implemented to mitigate impacts to water resources that could result from a potential frac-out event.

Although the Proposed Action includes land disturbance during construction within regulated Eastern Tiger Salamander breeding pond buffer areas, a mitigation plan has been developed in cooperation with NYSDEC to compensate for any potential impacts that may result from construction activities in these buffer areas. This mitigation plan involves enhancements to upgrade sub-optimal Eastern Tiger Salamander habitat conditions within a 0.39-acre area on a parcel owned by the Village of Sag Harbor, located to the immediate northeast of the Bridgehampton Substation, on the opposite side of Bridgehampton-Sag Harbor Turnpike. NYSDEC and the Village have indicated they are amenable to this concept; and PSEG Long Island will obtain the necessary agreements to conduct the restoration work on Village property upon finalization of the restoration plans. Ultimately, NYSDEC will use its discretionary, regulatory authority to ensure that the Proposed Action is designed and implemented in a manner that avoids impacts to water resources where practicable and includes suitable measures to mitigate any potential construction-related impacts; this includes Freshwater Wetlands permitting, an Incidental Take permit for activities in the designated buffer zones for the State-endangered Eastern Tiger Salamander, and a water quality certification.

The cable installation area for Alternative 4 would be situated within the same roadway ROWs as Alternative 2, which do not contain Eastern Tiger Salamander breeding ponds and are not known to be located within the regulated 535-foot or 1,000-foot buffers around such ponds. Preliminary input received from NYSDEC's Natural Heritage Program indicates that the presence of Eastern Tiger Salamander has been documented in the Bridgehampton-Sag Harbor Turnpike area, but it is not specified whether this includes the segment of the Turnpike along the route for Alternative 4 between the Bridgehampton Substation and the Village of Sag Harbor. If this alternative were actually selected for construction, consultation with NYSDEC would occur to definitively determine whether Eastern Tiger Salamander habitat would be affected and, if so, what measures would be necessary to avoid or mitigate significant impacts.

As depicted in **Figure 5-14**, portions of the circuit route for Alternative 4 would lie within the 100-year floodplain, including the area of Ligonee Brook in the westerly portion of Village of Sag Harbor, where installation would be via trenching; pole installation would occur in the area of Rattlesnake Creek along the east side of East Hampton-Sag Harbor Turnpike just south of the Village. The extent of construction in the floodplain under this alternative is somewhat greater than will occur with the Proposed Action, for which only a small segment of the cable route is located in the 100-year floodplain. However, in both cases the conduit containing the cable would be sealed to prevent water infiltration to ensure proper long-term functioning of the transmission line and, therefore, would not be susceptible to potential impacts due to location in the floodplain.

5.4.3 Ecology

Although the hybrid circuit installation area for Alternative 4 is not known to contain Eastern Tiger Salamander habitat, construction under this scenario would be expected to include consultation with NYSDEC to confirm this preliminary information. As with the Proposed Action, potential impacts related

to construction activities under Alternative 4 would be mitigated through the implementation of a SWPPP and post-construction restoration, at a minimum.

As noted above, HDD will be used to install the cable through the most ecologically sensitive portion of the Proposed Action Area (i.e., the wetlands associated with Long Pond), thereby avoiding land surface disturbance and potential for construction-related impacts in this area. As such, there are no anticipated impacts to turbidity or surface conditions of the ponds and there are no anticipated ground disturbances within 150 feet of the delineated boundaries of the wetlands under the Proposed Action. A single manhole will be installed within the previously disturbed dirt path on the east side of Long Pond within the ROW and there will be no change in habitat type or quality surrounding the wetland. Ground disturbances are anticipated within 150 feet of wetland areas for Alternative 4 (see **Section 5.4.3**), although such disturbances are anticipated mainly within previously disturbed roadway ROWs and limited to the areas of pole placement rather than along the entire route for the portions of the project subject to overhead installations. Any necessary disturbances within the regulated wetland adjacent area would be designed and implemented in a manner that avoids impacts to water resources where practicable during site layout and design, including suitable measures to mitigate any potential construction-related impacts and necessary Freshwater Wetlands permitting.

The Proposed Action requires clearing of existing vegetation and grading within the ROW east of Widow Gavits Road and at the substations to construct a temporary access road and areas of stabilization for HDD and manhole installation activities, as well as to allow for trenching along the ROW for installation of the conduit. In total, 18.78 acres of clearing and grading are required during construction activities associated with the Proposed Action. As described previously, the exact location of the cable installation under Alternative 4 would need to be determined based on detailed investigation of existing utilities, spatial constraints requiring separation from the existing cable along the road and similar constraints. Therefore, the extent of required clearing within the existing roadway ROW for Alternative 4 is not known. However, given the disturbed nature of the existing roadway ROWs and limited area of disturbance associated with overhead pole placements/greater flexibility to adjust pole placement to avoid significant vegetated area, the required clearing for Alternative 4 is anticipated to be less than the clearing required under the Proposed Action.

The Proposed Action will implement a site restoration plan using native vegetation species, which will mitigate potential impacts associated with land disturbance during construction, such that there will be no long-term ecological impacts associated with the Proposed Action. Appropriate site restoration would also occur under the hybrid (underground/overhead) installation for Alternative 4, similar to the fully underground scenario along the same route in Alternative 2. The project area affected by Alternative 4 would comprise roadway ROWs which generally are not believed to have important ecological value (except for the wetland areas adjoining the roadways in Sag Harbor and just south of the Village boundaries, and potentially other areas that have not been inventoried).

Besides the Eastern Tiger Salamander, NYNHP records indicate the occurrence of seven animals and eight plants identified as rare, threatened or endangered species within the vicinity of the Proposed Action Area. However, as discussed in **Section 5.1.3**, most of these species either are not known to be present within the Proposed Action Area or are confined to the portion of the Proposed Action Area in which ground disturbance will be avoided through the use of HDD. The Northern Long-eared Bat is the only other NYNHP-identified species that may be located within the portion of the Proposed Action Area that will be

disturbed during cable installation, which will necessitate a field survey to determine whether this species is actually present on-site and potentially could be impacted by the Proposed Action, with mitigation implemented in consultation with NYSDEC as necessary, possibly including limiting any tree removal to the winter season.

As discussed in **Section 5.2** above, the Eastern Tiger Salamander has been documented in the vicinity of Bridgehampton-Sag Harbor Turnpike on the route that is proposed for Alternatives 2 and 4. NYNHP records indicate that certain other rare, threatened or endangered species have been documented in the vicinity of the route for Alternative 4 (see **Appendix W**), including:

- Northern Long-eared Bat in the vicinity of Hampton Street
- Bald Eagle, Hessel's Hairstreak (butterfly), Scarlet Bluet (dragonfly/ damselfly), and Pine Barrens Bluet (dragonfly/ damselfly) in the vicinity of Bridgehampton-Sag Harbor Turnpike; as with Eastern Tiger Salamander, it is not clear whether these records pertain to the segment of the turnpike to the north of the Bridgehampton Substation along the route for Alternative 4
- New England Bluet, Comet Darner, Atlantic Bluet, Mantled Baskettail, Spatterdock Darner and Martha's Pennant (all dragonflies/ damselflies), and Small White Snakeroot (plant) in the vicinity of Sag Harbor Ponds to the east of Bridgehampton-Sag Harbor Turnpike.

Although the actual occurrence of rare, threatened or endangered species along the roadway ROWs that comprise the circuit route for Alternative 4 appears less likely than within the utility ROW for the Proposed Action, it would still be necessary to undertake a field survey to assess the potential for impacts to these species under Alternative 4 once the specific circuit route has been defined, and to determine the need for mitigation as appropriate in consultation with NYSDEC.

5.4.4 Cultural Resources

As discussed in **Section 5.2.4**, similar to the Proposed Action, the northerly circuit route that applies to both Alternative 2 and Alternative 4 is not expected to contain significant archaeological resources as this project area comprises a previously disturbed roadway ROW. However, review of information available on NY CRIS reveals much of this route traverses an area of archaeological sensitivity, and there are numerous adjacent National/State-listed historic resources, particularly within the Village of Sag Harbor. Therefore, further investigation would be needed to assess whether the use of this alternative route would pose the potential for significant impacts to architectural resources or historic buildings/structures along the project roadways or in adjacent areas.

5.4.5 Open Space and Recreation

The use of overhead installation on transmission poles along the northerly circuit route in Alternative 4 would reduce the potential for conflicts with open space and recreation resources during construction as compared to fully underground installation via trenching along this route under Alternative 2 and with trenching in the LIPA ROW under the Proposed Action. However, the replacement of approximately 200 poles of 60-70 feet in height above grade from poles that are currently 30 – 45 feet in height above grade poses the potential for visual impacts on open space/recreation resources, as well as other land uses, along the Bridgehampton-Sag Harbor Turnpike and East Hampton-Sag Harbor Turnpike legs of the route for Alternative 4 (see discussion regarding Visual/Aesthetic Resources in **Section 5.4.8**, below).

5.4.6 Critical Environmental Areas

The CEAs in which the Proposed Action Area is located – i.e., South Fork SGPA, Aquifer Protection Overlay District, Long Pond Greenbelt, Water Recharge Overlay District, and Town of Southampton Freshwater Wetlands – generally have been established for the protection of groundwater/drinking water or surface waters. As depicted in **Figure 5-15** and **Figure 5-16**, the circuit route for Alternative 4 would also traverse or adjoin these same CEAs, although the use of overhead installation on transmission poles along the portion of the route outside the Village of Sag Harbor in Alternative 4 would reduce the extent of ground disturbance and the associated potential for impacts to water resources as compared to fully underground installation via trenching along this route under Alternative 2 and with trenching in the LIPA ROW under the Proposed Action. However, all of these scenarios would be designed to minimize potential impacts to these resources, through the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport; and both circuit routes would include a plan for site restoration upon the completion of construction, which would mitigate the potential for erosion and sediment transport during long-term operation.

To the degree that the Proposed Action involves construction methods that pose the potential for impacts to water resources that are not associated with Alternative 4, measures are included in the Proposed Action to avoid or mitigate such impacts, including:

- Operation of the Proposed Action will not consume water; water supply used during construction will be recycled to the degree practicable, and seasonal constraints specified by SCWA will be adhered to.
- HDD will be employed during construction though an area along the proposed cable route containing surface water features associated with Long Pond.
- A FCP will be implemented to mitigate impacts to water resources that could result from a potential frac-out event.
- Timber matting will be used in the conduit laydown area to the west of the Bridgehampton Substation and for the HDD exit pit/underground manhole installation west of Widow Gavits Road (within the previously disturbed area of the Long Pond Greenbelt) and the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road.
- A mitigation plan has been developed in cooperation with NYSDEC to compensate for any potential impacts that may result from construction activities in Eastern Tiger Salamander breeding pond buffer areas.

5.4.7 Noise

As compared to the trenching and HDD drilling under the Proposed Action, the more limited land disturbance involved in the use of poles for overhead installation along most of the route for Alternative 4 would be expected to decrease the overall magnitude of noise generation during construction. However, this would be offset by the fact that Alternative 4 would occur along roadway ROWs that generally lie in closer proximity to residential land uses and other sensitive noise receptors. Both Alternative 4 and the Proposed Action would include a requirement for the use of BMPs pursuant to NYSDEC guidance to minimize noise generation during construction, to the degree practicable; and neither scenario would entail operational noise impacts as there would be no permanent sound-generating equipment or facilities.

5.4.8 Visual/Aesthetic Resources

Alternative 4 primarily would involve the installation of an overhead circuit along the same northerly route as for Alternative 2, with a 10,000±-linear foot underground section through the Village of Sag Harbor. Although Alternative 4 would involve the replacement of existing poles at most locations (i.e., 188 of the 200 total poles that would be required), the new poles would be significantly taller (at 70 feet in height above grade) than the ones to be removed to accommodate both transmission and distribution. Specifically: 12 poles would be increased in height by 25 feet (from 45 feet); 117 poles would be increased in height by 30 feet (from 40 feet); 58 poles would be increased in height by 35 feet (from 35 feet); and 1 pole would be increased in height by 40 feet (from 30 feet). An additional 12 poles, at 60 feet in height, would be newly installed in an area, along a segment of East Hampton-Sag Harbor Turnpike, which currently lacks overhead electrical lines.

Given the increases in height and number of poles, a visual impact may occur from the overhead portion of this Alternative. It is expected that in order to mitigate the visual impact, only wood poles would be utilized for the overhead portion of the route. However, the height increase and density of the poles may result in a noticeable change to the character of the corridor. Therefore, although an overhead installation, in lieu of the proposed underground circuit, would meet the objectives of the sponsor of the Proposed Action, this is not considered to be a preferred alternative due to the potential perceived visual and community character impacts.

5.4.9 Construction Impacts

This alternative would involve the same potential for construction impacts as discussed in **Section 5.2.9** with respect to Alternative 2 for the 10,000±-linear foot segment of the route that would remain underground through the Village of Sag Harbor, including: potential disruption of adjacent development due to trench excavation and other construction activities; one lane of traffic closures in many areas during active trenching; and full roadway closures, requiring traffic detours, during manhole installation.

The remaining 6.17±-mile overhead portion of the 8.06±-mile circuit route under this alternative would see a reduced potential for construction-related impacts as compared to the fully underground version of the northerly route under Alternative 2 due to the limited land disturbance associated with pole installation.

5.5 Alternative 5 – Overhead Route within LIPA Easement

As illustrated in **Figure 5-5**, this alternative would install a new overhead 69 kV double circuit to replace the existing overhead 69 kV double circuit within the LIPA easement between the Bridgehampton and Buell Substations. Alternative 5 would not be an in-kind replacement of existing infrastructure. The two existing circuits in the Proposed Action Area are not independent, such that the loss of power in either circuit, whether intentional (e.g., for scheduled maintenance or repairs) or not (e.g., resulting from storm impacts), also incapacitates the other circuit. Alternative 5 would rectify this condition by providing an additional independent 69 kV circuit. This would facilitate the ability for maintenance and repairs, as well as emergency response, while also addressing the transmission constraints resulting from projected increased load demands from customers on the South Fork of Long Island which are the basis of the public purpose and need for the Proposed Action.

The existing circuits in the LIPA easement are carried by overhead lines on 53 existing steel towers between the Bridgehampton and Buell Substations. Alternative 5 would remove these towers and would separate the two circuits onto two separate lines of new steel poles. The existing towers are not capable of providing the separation distance between the existing circuits and new circuit necessary to achieve the intended purpose of the two pole lines within the ROW and, therefore, cannot accommodate the new independent transmission lines envisioned under Alternative 5.

A minimum of 134 new steel poles (67 poles in each of the two lines, with a spacing of approximately 400 feet along the 5.12±-mile circuit route) would be required under Alternative 5. The wires would be specified to match the ampacity of the proposed underground cable. The poles would be 80 feet tall, with 15 feet of embedment (i.e., 65 feet above-grade, which is about the same height as the existing towers).

The two lines of new poles installed under Alternative 5 would occupy essentially the entire width of the LIPA easement, to provide the required minimum separation distance between the transmission lines to allow for independent circuits and optimal performance. This design consideration would necessitate clearing of essentially the entire width of the easement (approximately 36 acres). Additionally, since the two overhead circuits in Alternative 5 would run along the edges of the existing ROW, trees outside the ROW for a distance of approximately 50 feet would need to be removed in order to provide and maintain the required safety clearances. Trees with their trunks located outside this buffer area would have to be trimmed as necessary to eliminate any encroachment of branches into the buffer (approximately 62 acres of additional clearing along the route). Additional easement agreements would have to be negotiated with the affected property owners to provide the necessary access for vegetative maintenance within the expanded easement area, which would significantly complicate the overall approval process and increase the likelihood that the work would not be able to proceed in a timely manner, or that this alternative would not be viable at all.

It is anticipated that construction of this alternative would commence with the installation of the first new circuit, proceeding with removal of the two existing circuits and towers, and then completing the installation of the second new circuit. A work zone radius of approximately 30 to 40 feet would be needed around each pole, within which equipment would be staged. Similar to the Proposed Action, stabilization would be required for construction access (i.e., both to deliver the new poles to the installation locations and to remove the disassembled towers); however, the temporary construction access road would need to be extended between the Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road (approximately 3,400± linear feet) which is proposed for HDD under the Proposed Action. This section of the LIPA easement area includes areas of sensitive wetlands and adjacent buffers associated with the Long Pond, a known Eastern Tiger Salamander pond, and generally steeper gradients that would require significant grading to establish the 7 percent maximum grade necessary for equipment access. The process involved in setting each individual pole would be similar to manhole installation under Proposed Action, requiring the use of a crane. Additionally, concrete footings would be necessary for the pole line, which would necessitate the use of cement trucks in addition to the crane. This process would be repeated 134 times for the poles to be installed under Alternative 5, instead of only 14 times for the manholes to be installed under the Proposed Action; and, as noted above, the area of vegetative clearing would extend outside the existing ROW for a distance of approximately 50 feet to provide the necessary safety clearances from the new circuits. The estimated best-case scenario for the duration of construction of Alternative 5 is approximately 20 months.

Construction of Alterative 5 would cost approximately $56.1 million, which is approximately 22% more than the cost of the Proposed Action.

Alternative 5 Constraints

As discussed in detail in **Sections 5.5.1** through **5.5.9**, below, Alternative 5 would result in significant, unavoidable impacts to ecological resources along the same utility easement that is the site of the Proposed Action. These impacts would result from the need to access areas containing ponds, wetlands and associated habitats in the vicinity of Long Pond for the purpose of installing two parallel lines of poles for overhead circuit installation and to remove the existing towers. Additionally, the overall area of disturbance and extent of grading would be significantly increased under Alternative 5. Grading would be much more extensive under Alternative 5 to allow for heavy equipment access to install 67 pairs of poles at regular intervals along the entire length of the easement; whereas heavy equipment access is needed only for the installation of 14 manholes under the Proposed Action. In addition to the more extensive area of disturbance, and associated impacts to vegetation, within the existing easement under Alternative 5, this scenario would also include the trimming and removal of trees for a distance of approximately 50 feet beyond the north and south sides of the existing easement to provide the necessary clearances for the paired lines of poles; and these clearances would have to be maintained in perpetuity to meet operational requirements. The challenge of successfully negotiating the necessary easement expansion with the affected property owners along the length of the existing easement is a major additional constraint that would likely significantly hinder the implementation of Alternative 5, if not make this scenario entirely infeasible. It is also expected that the poles that would be installed under Alternative 5 would be more visible for viewers within the ROW, such as the users of the trails in this area, as well as from the various public roadways that intersect the ROW. Although the Proposed Action entails potential impacts to certain environmental resources within the utility easement, the magnitude of these same impacts generally would be significantly increased under Alternative 5, as discussed in **Sections 5.5.1** through **5.5.9**, below. Furthermore, effective measures will be implemented under the Proposed Action to avoid or mitigate any such potential impacts to the extent practicable, and all such impacts will be limited to the construction period and will be eliminated at the completion of construction activities.

5.5.1 Soils and Topography

Alternative 5 would entail limited excavation to create 15-foot-deep drill holes for the estimated 134 individual transmission poles required along the 5.2±-mile circuit route within the LIPA easement. However, as noted above, this design alternative would necessitate the removal of vegetation within essentially the entire width of the easement to create the necessary clearances, thereby entailing a larger area of disturbance and increasing the potential for erosion and sediment transport as compared to the Proposed Action.

Direct soil excavation would be necessary under Alternative 5 to install poles within the wetland area associated with Long Pond, and additional disturbance would occur to provide for equipment access to deliver the poles to this area, as well as remove the existing towers. Under the Proposed Action, ground disturbance in the 3,400±-foot segment of the cable route in the vicinity of Long Pond will be avoided with the use of HDD with the exception of the area where the manhole will be installed, whereas the installation of approximately 16 poles (i.e., two sets of 8 poles each spaced at 400± feet) would occur in this area under Alternative 5. This section of the LIPA easement area includes areas of steep and undulating topography (including grade changes of 25-45 feet on the east and west sides of the known Eastern Tiger Salamander pond in this area – see ROW profiles on the Proposed Action Construction Plans,

Appendix D) that would require significant fill and grading to establish a temporary construction access roadway with the 7 percent maximum grade necessary to accommodate the movement of construction equipment (including crane access) and materials. Given the limited width of the ROW, temporary sheeting and/or retaining walls would be anticipated to be necessary along the north and south perimeters of the ROW to contain the necessary fill needed for a temporary access road and work zone areas around the poles in these locations. The exact extent of additional grading and fill material for establishment of a temporary access road between Bridgehampton-Sag Harbor Turnpike and Widow Gavits Road would depend on the design and location of the proposed poles. However, given the existing topographic conditions, it is anticipated that the necessary cut and fill volumes would be significantly greater than the Proposed Action given the steep and undulating topography in this area.

Similar to the Proposed Action, Alternative 5 would include a post-construction restoration plan to remove stabilization materials and return the area to pre-construction conditions to the degree practicable, thereby mitigating the effect of such construction stabilization on soils and topography. Furthermore, as with the Proposed Action, Alternative 5 would be required to include the implementation of a SWPPP, thereby providing a comprehensive program of measures to minimize impacts related to erosion and sediment transport. However, the area of clearing and subsequent restoration under Alternative 5 is estimated to be approximately 98 acres of the ROW and a buffer area surrounding the ROW, compared to 18.78 acres under the Proposed Action; and, as noted above, the magnitude of cut and fill for the temporary construction access roadway is expected to be significantly greater under Alternative 5 due to the need for equipment operations in the area that will undergo cable installation via HDD in the Proposed Action. Therefore, Alternative 5 poses a substantially increased potential for impacts related to soils and topography than is the case for the Proposed Action.

5.5.2 Water Resources

Alternative 5 would route a new double 69 kV overhead circuit along the LIPA easement between the Bridgehampton and Buell Substations, which includes wetlands associated with Long Pond (see **Figure 5-17**). As noted above, this alternative would include the installation of approximately 16 poles in a 3,400±-foot segment of the cable route in the area of Long Pond; whereas disturbance within this area (with the exception of the single manhole to be installed) will be avoided under the Proposed Action by using HDD conduit installation. This section of the LIPA easement area includes areas of steep and undulating topography (including grade changes of 25-45 feet on the east and west sides of the known Eastern Tiger Salamander pond in this area – see ROW profiles on the Proposed Action Construction Plans, **Appendix D**), which would require significant fill, clearing and grading to establish the 7 percent maximum grade necessary to accommodate the movement of construction equipment (including crane access) and materials. The area of clearing and subsequent restoration under Alternative 5 is estimated to be approximately 98 acres, compared to 18.78 acres under the Proposed Action. It is noted that Alternative 5 would not require the use of the ROW to the west of the Bridgehampton Substation temporarily during construction for conduit laydown, which is included in the Proposed Action. However, any potential impacts to freshwater wetlands and buffers in the conduit laydown area will be mitigated under the Proposed Action with the use of timber matting, and the area will be restored as necessary upon the completion of construction.

Alternative 5 would not require water supply during construction, as will be necessary for the Proposed Action; and neither scenario entails water consumption during operation. However, in order to minimize the volume of water used for the HDD operation, the Proposed Action will recycle this water to the extent

practicable; and the SCWA has indicated the availability of water supply to support the HDD drilling operation, subject to seasonal constraints with which the Proposed Action will comply. Furthermore, the Proposed Action includes a FCP, which will be implemented to mitigate impacts to water resources that could result from a potential frac-out event.

Alternative 5 would follow the same route for overhead wire installation that will occur with the underground cable to be installed for the Proposed Action; however, the installation of poles required for the Alternative 5 overhead installation would involve significant land disturbance within regulated Eastern Tiger Salamander habitat and regulated wetland areas, as depicted in **Figure 5.17**. The Proposed Action will avoid disturbance of the Eastern Tiger Salamander pond and surrounding buffers to the east of Bridgehampton-Sag Harbor Turnpike through the use of HDD with the exception of a single manhole and HDD exit pit within a previously disturbed area west of Widow Gavits Road. Disturbance for this manhole will include the associated construction footprint and access road along an existing dirt path, which would be located at the outer edge of the 1,000-foot buffer area. Timber mats will be utilized for the HDD exit pit/underground manhole installation and the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road to minimize impacts.

Alternative 5 would require the installation of a continuous, double line of 134 poles (two lines of 67 poles each) along the 5.2±-mile route between the Bridgehampton and Buell Substations. Therefore, it is estimated that Alternative 5 would require the installation of approximately 16 poles (two lines of 8 poles each) along the 3,400±-foot segment of the LIPA easement where HDD conduit installation is proposed under the Proposed Action. Given existing topography in this area as discussed in **Section 5.5.1**, the extent of disturbance anticipated for construction of the temporary, stabilized construction roadway to accommodate the heavy equipment needed to transport and install the poles for this alternative would be significantly greater than the Proposed Action. Additionally, the construction access road would also need to be extended east from Sagg Road to Wainscott Northwest Road to allow for crane access to install poles (i.e., areas noted as “vehicle disturbance path” under the Proposed Action would need to be installed as temporary access roads and stabilized with RCA to allow for construction of Alternative 5 – see Proposed Action Construction Plans, **Appendix D**).

Additional clearing would be necessary in proximity to wetland areas under Alternative 5 for both the construction and extension of the temporary access road for pole installations and to establish and maintain the necessary vegetation clearances required for the two lines of poles. The area of clearing under Alternative 5 is estimated to be approximately of 36 acres within the easement area plus an additional 62 acres necessary for vegetation clearance adjacent to the easement area, most of which will result in a permanent change to the surrounding habitat, compared to 18.78 acres under the Proposed Action, which will be temporary and restored to pre-construction conditions upon the completion of the cable installation. Alternative 5 is anticipated to result in greater potential impacts to wetland areas and greater temporary loss of suitable habitat within 535 feet of a known Eastern Tiger Salamander breeding pond. Additionally, permanent loss of suitable habitat within 535 feet of the Eastern Tiger Salamander breeding pond would occur as a direct result of the placement of the poles within that radius. In contrast, the Proposed Action only results in a temporary loss of suitable habitat due to conduit laydown activities, which would not occur under Alternative 5. However, in total, the Proposed Action significantly reduces potential impacts, both temporary and permanent, to the Long Pond wetland areas and the known Eastern Tiger Salamander breeding pond; and, therefore is the preferred option with respect to water resources.

As depicted in **Figure 5-18**, a short segment of the circuit route for Alternative 5 would lie within the 100-year floodplain, in the area of Long Pond. However, as this alternative would involve overhead wire installation on poles, minimal if any effect would result from construction in the floodplain. Under the Proposed Action, which would traverse this same area within the 100-year floodplain, the conduit containing the cable will be sealed to prevent water infiltration to ensure proper long-term functioning of the transmission line and, therefore, will not be susceptible to potential impacts due to location in the floodplain.

5.5.3 Ecology

As noted above, this overhead routing alternative would require a significant increase in the extent of disturbance (clearing and grading) within the LIPA easement between the Bridgehampton and Buell Substations than will occur under the Proposed Action, which would magnify the overall impacts to habitat within the easement. Alternative 5 would entail substantial ground disturbance in the area of Long Pond for the installation of transmission poles, which would pose the potential for directly impacting the ecological resources in this area. In contrast, the Proposed Action will avoid such impacts with the use of HDD to run a 3,400±-foot segment of the cable underneath the easement in the vicinity of Long Pond, thereby avoiding land surface disturbance and potential for construction-related impacts in this area. As such, there are no anticipated impacts to turbidity or surface conditions of the ponds and there are no anticipated ground disturbances within 150 feet of the delineated boundaries of the wetlands under the Proposed Action. Under the Proposed Action, a single manhole will be installed within the previously disturbed dirt path on the east side of Long Pond within the ROW, which will not change the habitat type or quality surrounding the wetland.

As discussed above in **Section 5.5.2**, the extent of disturbance anticipated for construction of the temporary construction roadway to accommodate the heavy equipment needed to transport and install the poles and remove the existing towers for Alternative 5 would be significantly greater than for the Proposed Action. This is largely attributed to the need to extend the construction access road east from Bridgehampton-Sag Harbor Turnpike to Widow Gavits Road, and east from Sagg Road to Wainscott Northwest Road to allow for crane and cement truck access to install poles. Additional clearing would be necessary in proximity to the Long Pond wetland areas under Alternative 5 for both the construction and extension of the temporary access road for pole installations and to establish and maintain the necessary vegetation clearances required for the two lines of poles (an anticipated increase from 18.78 acres under the Proposed Action to approximately 36 acres under Alternative 5). Detailed design for Alternative 5 would be needed to minimize impacts resulting from the pole locations and construction access road. Alternative 5 would also result in impacts to trees outside the existing easement, for a distance of approximately 50 feet resulting in approximately 62 acres of additional clearing, to provide the necessary safety clearances for the two new circuits that would be installed along the edges of the easement; whereas disturbance under the Proposed Action will be confined within the existing easement. Both scenarios would include the implementation of a SWPPP, post-construction restoration, and Eastern Tiger Salamander habitat enhancement and wetland mitigation restoration activities as described previously; however, the much more extensive disturbance associated with Alternative 5 would result in a significant increase in the potential for temporary and permanent impacts.

As compared to the Proposed Action, implementation of Alternative 5 would result in the need for a more extensive site restoration plan to compensate for the greatly increased impacts to ecological resources. Impacts to ecological resources under this Alternative include the permanent loss of habitat resulting from

the installation of utility pole foundations and clearing required to maintain transmission line clearances. Additionally, ongoing periodic disturbance would be required to provide access to the new towers for maintenance activities as part of the overhead alternative along the entire route of the LIPA ROW due to logistical issues accessing the new tower locations, including through the ecologically sensitive areas associated within the Long Pond Greenbelt.

Disturbance in the most sensitive areas of the Long Pond Greenbelt for construction access will be avoided by using HDD conduit installation under the Proposed Action. Although restoration with native species would occur under both scenarios, a significantly lesser disturbance to sensitive ecological communities will occur under the Proposed Action than what would be realized under implementation of Alternative 5.

In total, the Proposed Action significantly reduces potential impacts to the Long Pond wetland areas and known Eastern Tiger Salamander breeding pond, therefore is the preferred option with respect to ecological resources.

Besides the Eastern Tiger Salamander, NYNHP records indicate the occurrence of seven animals and eight plants identified as rare, threatened or endangered species within the vicinity of the Proposed Action Area. As discussed in **Section 5.1.3**, one of the identified plant species (Velvety Bush Clover) was not identified on-site during field survey of the Proposed Action Area. The other seven identified plant species (Small White Snakeroot, Rose Coreopsis, Knotted Spike Rush, Long-tubercled Spike Rush, Creeping St. John's Wort, Globe-fruited Ludwigia, and Long-beaked Beak Sedge) occur in habitats consistent with coastal plain ponds and coastal plain pond shorelines that are present in the western portion of the proposed cable route in which ground disturbance will be avoided under the Proposed Action through the use of HDD conduit installation. In contrast, this habitat area would see significant disturbance (clearing and grading) for pole installation under Alternative 5, which would pose the potential for impacts to NYNHP-identified plant species that may be present in this area.

Among the seven animals other than Eastern Tiger Salamander identified as rare, threatened or endangered within the vicinity of the LIPA ROW, it does not appear that the Coastal Barrens Buckmoth would be impacted by either Alternative 5 or the Proposed Action, as this species has been reported in the vicinity of the East Hampton Airport and is not known to be present within the LIPA ROW. However, four species (Martha's Pennant, New England Bluet, Scarlet Bluet, and Pine Barrens Bluet) are associated with the same coastal plain pond/ shoreline habitats that would be disturbed for pole installation under Alternative 5 but will not be disturbed under the Proposed Action due to the use of HDD, posing a significantly increased potential for impacts under the alternative development scenario.

NYNHP reports records of summer occurrences of Northern Long-eared Bat within 0.25 mile of the Proposed Action Area. Therefore, since Alternative 5 would result in more extensive disturbance within the LIPA ROW than will occur for the Proposed Action, the alternative of circuit installation on poles in the ROW poses an increased potential for impacting this bat species. However, as with the Proposed Action, field survey would be needed under Alternative 5 to determine whether the Northern Long-eared Bat is actually present on-site and the degree to which it would be impacted, and also to identify any measures that would be needed to mitigate such impacts, in consultation with NYSDEC.

5.5.4 Cultural Resources

As discussed in **Section 3.1**, Phase IB testing performed as part of the DEIS investigation indicates that the Proposed Action Area, which also comprises the project area for Alternative 5, does not appear to contain

artifacts or features associated with recorded resources or previously unknown archaeological resources; and, furthermore, no previously recorded architectural resources are located in this area, nor are there any buildings or structures except for the existing transmission towers.

5.5.5 Open Space and Recreation

As compared to the Proposed Action, Alternative 5 would involve more extensive site preparation for construction vehicle access, which may increase the potential for impacts to open space and recreation resources. On the other hand, Alternative 5 would not require the use of the conduit laydown area located within the open space associated with Spring Farm, to the west of the Bridgehampton Substation, which is needed for the Proposed Action. Similar to the Proposed Action, coordination would be needed with the respective owners and/or operators of the affected open space/recreation lands to minimize impacts under Alternative 5.

5.5.6 Critical Environmental Areas

Alternative 5 would occur within the same LIPA ROW as will be used for the Proposed Action, thereby posing a potential for affecting the same CEAs, as depicted in **Figure 5-19** and **Figure 5-20**, which generally have been established for the protection of groundwater/drinking water or surface waters; although Alternative 5 would entail additional impacts to trees for a distance of about 50 feet outside the existing easement to provide the necessary safety clearances (approximately 62 acres of additional clearing). In both cases, potential impacts to these resources would be addressed through the implementation of a SWPPP, thereby providing a comprehensive program of measures intended to minimize impacts related to erosion and sediment transport; and both scenarios would also include a plan for site restoration upon the completion of construction to mitigate the potential for erosion and sediment transport during long-term operation. However, as discussed previously, Alternative 5 would involve more extensive site preparation for construction vehicle access; and although this project scenario would not require the use of the conduit laydown area to the west of the Bridgehampton Substation which is needed for the Proposed Action, the overall effect would be significantly increased potential for impacts to water resources and the associated CEAs.

To the degree that the Proposed Action involves construction methods that pose the potential for impacts to water resources that are not associated with Alternative 5, measures are included in the Proposed Action to avoid or mitigate such impacts, including:

- Operation of the Proposed Action will not consume water; water supply used during construction will be recycled to the degree practicable, and seasonal constraints specified by SCWA will be adhered to.
- HDD will be employed during construction though an area along the proposed cable route containing surface water features associated with Long Pond.
- A FCP will be implemented to mitigate impacts to water resources that could result from a potential frac-out event.
- Timber matting will be used in the conduit laydown area to the west of the Bridgehampton Substation and for the HDD exit pit/underground manhole installation west of Widow Gavits Road (within the previously disturbed area of the Long Pond Greenbelt) and the existing dirt access path entering the Long Pond Greenbelt from Widow Gavits Road.

- A mitigation plan has been developed in cooperation with NYSDEC to compensate for any potential impacts that may result from construction activities in Eastern Tiger Salamander buffer areas (this measure may also be required for Alternative 5).

5.5.7 Noise

As compared to the Proposed Action, Alternative 5 would involve more extensive site preparation for construction vehicle access; although once the access road is in-place, the installation of poles under Alternative 5 would be expected to be less intensive than the trenching and HDD drilling under the Proposed Action. Therefore, it is not clear whether either scenario would result in a significantly greater magnitude of noise generation. However, in both cases, impacts would be minimized by the fact that there are few sensitive noise receptors proximate to the LIPA easement, and both would have a requirement for the use of BMPs pursuant to NYSDEC guidance to minimize noise generation during construction, to the degree practicable; and neither scenario would result in operational noise impacts as no permanent sound-generating equipment or facilities would be installed.

5.5.8 Visual/Aesthetic Resources

Alternative 5 would involve the installation of the double line of transmission poles and overhead wires within the LIPA easement between the Bridgehampton and Buell Substations, to replace the existing single line of lattice transmission towers and pair of overhead wires that will be retained under the Proposed Action. No new equipment will be visible within the easement under the Proposed Action, as the new 69 kV circuit will be buried underground along its entire length.

The top height of transmission structures would be approximately the same height as the existing lattice transmission towers to be retained under the Proposed Action, at about 65 feet above-grade, for the new double line of poles that would be installed under Alternative 5. Visual impacts associated with Alternative 5 include a noticeable increase in cleared area from publicly accessible areas (including trails and road crossings with the ROW), an increase in density of poles, and a potential increase in the contrast of steel poles with the existing weathered lattice towers. Overall, Alternative 5 would likely have a greater visual impact to the public than that experienced under the Proposed Action, which will place the transmission circuit entirely underground. Importantly, it is noted that the existing towers have limited visibility to the general public, primarily at roadway crossings along the LIPA easement, including Bridgehampton-Sag Harbor Turnpike, Widow Gavits Road, Sagg Road, Wainscott Northwest Road, Stephen Hands Path, and Bushkill Road. Due to the presence of dense woodland vegetation throughout the area, available views of the existing towers at these locations are constrained to narrow corridors at the roadway crossings; and in many cases these views are at least partially screened by low vegetation within the easement.

The existing towers generally are placed centrally along the ROW, whereas Alternative 5 would place the poles along the edges of the ROW to achieve the necessary separation distance between the circuits. Thus, as compared to the existing lattice towers, the poles in Alternative 5 would be closer to, and more visible from land uses adjacent to the ROW, including residential neighborhoods to the east of Stephen Hands Path in the easterly portion of the Proposed Action Area. Additionally, as noted previously, the entire width of the LIPA ROW would have to be cleared in addition to a 40 to 50-foot buffer distance on either side of the existing easement, which will also require tree clearing, and land acquisition or land access rights, to accommodate the two lines of transmission poles in Alternative 5. The clearing would remove existing screening vegetation within the ROW and would need to be maintained in perpetuity.

Alternative 5 would also involve the installation of 67 pairs of new poles, as compared to the 53 existing towers that would be retained under the Proposed Action.

Based on the foregoing, it is expected that the poles that would be installed under Alternative 5 would be more visible for viewers within the ROW, such as the users of the trails in this area, as well as from the various public roadways that intersect the ROW.

5.5.9 Construction Impacts

Alternative 5 would occur along the same route as the Proposed Action (i.e., along the LIPA easement between the Bridgehampton and Buell Substations). Although common mitigation measures in both cases would include implementation of a SWPPP during construction, replanting of disturbed vegetated areas, and removal of stabilization for construction access and restoration of these areas to pre-construction conditions to the degree practicable, differences between the two scenarios indicate an increased potential for construction impacts under Alternative 5.

Both the Proposed Action and Alternative 5 would include a SWPPP designed to avoid or mitigate impacts associated with land disturbance during construction. However, as compared to the Proposed Action, Alternative 5 would be expected to result in a greater extent of land disturbance, and associated potential for erosion and sediment transport, as the entire width of the LIPA easement would have to be cleared to accommodate the two lines of transmission poles and significant additional grading and filling would be needed for construction of the temporary construction access road; and Alternative 5 would also require additional tree clearing within an expanded buffer extending about 50 feet beyond the existing easement (approximately 62 additional acres).

As compared to Alternative 5, the Proposed Action involves a significantly reduced potential for construction impacts along the segment of the LIPA easement in the vicinity of Long Pond by using HDD to install the cable beneath this area; whereas Alternative 5 would require direct, overland access to this area, including the wetlands contained therein, for the installation of transmission poles. Additionally, Alternative 5 would result in a significant increase in the magnitude of cut-and-fill during construction in order to provide equipment access to the area east of Bridgehampton-Sag Harbor Turnpike, where the use of HDD conduit installation will avoid land surface impacts in a sensitive ecological area under the Proposed Action; and extensive cut-and-fill also will be needed under this alternative for the segment of the LIPA easement between Sagg Road and Wainscott Northwest Road to allow for heavy equipment access to install poles, which will not be the case for the Proposed Action. Potential incidental impacts associated with the use of HDD under the Proposed Action will be avoided or mitigated by implementing a FCP, recycling of water used in the drilling operation, use of timber mats in the conduit laydown area to the west of the Bridgehampton Substation, Eastern Tiger Salamander habitat enhancement, and restoration of the area proposed for regrading to the north of the Bridgehampton Substation.

6.0 References

AECOM. November 20, 2018. Site Characterization Report East Hampton Airport. Prepared for NYSDEC Division of Environmental Remediation.

Dvirka and Bartillucci. March 1994. Preliminary Site Assessment Report: Sag Harbor Landfill, Town of Southampton, Suffolk County, New York (Site Registry No. 152047).

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.

Federal Emergency Management Agency, National Flood Insurance Program. September 25, 2009. Flood Insurance Rate Map Panel #36103C0531H.

Gibbs, J.P., A.R. Breisch, P.K. Ducey, G. Johnson, J.L. Behler, and R.C. Bothner. 2007. The amphibians and reptiles of New York State. Oxford University Press, NY.

Levy, Joyce R. 2001. Analysis of the Long Island habitat of the eastern tiger salamander (Ambystoma tigrinum) using a geographic information system. M.S. Thesis, University at Albany, State University of New York, Albany, NY.

Long Island Regional Planning Board. 1992. The Long Island Comprehensive Special Groundwater Protection Area Plan.

Madison, D. M., and L. Farrand, III. 1998. Habitat use during breeding and emigration in radio-implanted tiger salamanders, AMBYSTOMA TIGRINUM. Copeia 1998:402-410.

Madison, Dale and Valorie R. Titus. 2009. Final report for New York State Department of Environmental Conservation: Tiger salamander upland habitat requirements. Project MOU # AM 05513.

Nassau Suffolk Water Commissioners' Association. 2022. Our Long Island Aquifers: The Basics. Available: https://www.nswcawater.org/water_facts/our-long-island-aquifers-the-basics/. Accessed April 5, 2022.

National Park Service of the U.S. Department of the Interior (NPS). 1997. How to Apply the National Register Criteria for Evaluation. National Register Bulletin 15. https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf. Electronic document accessed September 13, 2021.

Nelson, M.W. 2007. Barrens Buckmoth (Hemileuca maia). Natural Heritage & Endangered Species Program Fact Sheet.

New York State. 1987. State Environmental Quality Review, 6 NYCRR Part 617, Environmental Conservation Law. Albany, NY. Amended June 27, 2018 (Effective January 1, 2019).

New York Archaeological Council (NYAC). 1994. Standards for Cultural Resource Investigations and the Curation of Archaeological Collections in New York State. https://nysarchaeology.org/wp-content/uploads/2013/12/NYACStandards.pdf. Electronic document accessed September 15, 2021.

New York Cultural Resource Information System (NY CRIS). 2021. Confidential Database Review. https://cris.parks.ny.gov/. Website accessed April 8-9, 2021 and September 13-15, 2021.

New York State Breeding Bird Atlas 2000 [Internet]. 2000 - 2005. Release 1.0. Albany (New York): New York State Department of Environmental Conservation. [Updated 2007 Jun 11; cited 2021 Sept 8]. Available from: http://www.dec.ny.gov/animals/7312.html.

New York State Department of Environmental Conservation. 2005. Comprehensive Wildlife Conservation Strategy Planning Database. New York State Department of Environmental Conservation. Albany, NY

New York State Department of Environmental Conservation, 2007. "New York State Herp Atlas Project," posted on http://www.dec.ny.gov/animals/7140.html, accessed September 8, 2021.

New York State Department of Environmental Conservation. 2010. Eastern tiger salamander fact sheet. Available http://www.dec.ny.gov/animals/7143.html. (Data accessed October, 2021)

New York State Department of Environmental Conservation, Division of Hazardous Waste Remediation. December 27, 1989. Correspondence with Inactive Hazardous Waste Disposal Report: Sag Harbor Landfill (Site No. 152047).

New York State Department of Environmental Conservation. Chapter X, Subchapter A, Article 2, Part 701: Classifications-Surface Waters and Groundwaters. Available at: https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I0682f230b5a111dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default).

New York State Department of Environmental Conservation. Chapter X, Subchapter B, Article 16, Part 925: Western Suffolk County Waters. Available at: https://govt.westlaw.com/nycrr/Browse/Home/NewYork/NewYorkCodesRulesandRegulations?guid=I416df430b5a111dda0a4e17826ebc834&originationContext=documenttoc&transitionType=Default&contextData=(sc.Default).

New York State Department of Environmental Conservation. Critical Environmental Areas (CEAs). Available at: https://www.dec.ny.gov/permits/6184.html.

New York State Department of Environmental Conservation. Sample, Analysis, and Assessment of Per- and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs. January 2021. Available at: https://www.dec.ny.gov/docs/remediation_hudson_pdf/pfassampanaly.pdf.

New York State Department of Environmental Conservation. November 30, 2018. East Hampton Airport Final Site Characterize Report. Available at: https://www.dec.ny.gov/data/DecDocs/152250/ .

New York State Department of Environmental Conservation Division of Hazardous Waste Remediation. December 30, 1994. Registry Site Classification Decision: Sag Harbor Landfill (Site No. 152047).

New York State Department of Environmental Conservation Division of Hazardous Waste Remediation. May 4, 1995. Correspondence deleting Sag Harbor Landfill (Site No. 152047) from New York State Registry of Inactive Hazardous Waste Disposal Sites.

New York Natural Heritage Program. 2021a. Online Conservation Guide for Ambystoma tigrinum. Available from: https://guides.nynhp.org/tiger-salamander/. Accessed September 9, 2021

New York Natural Heritage Program. 2021b. Online Conservation Guide for Enallagma laterale. Available from: https://guides.nynhp.org/new-england-bluet/. Accessed October 12, 2021.

New York Natural Heritage Program. 2021c. Online Conservation Guide for Enallagma pictum. Available from: https://guides.nynhp.org/scarlet-bluet/. Accessed October 12, 2021.

New York Natural Heritage Program. 2021d. Online Conservation Guide for Enallagma recurvatum. Available from: https://guides.nynhp.org/pine-barrens-bluet/. Accessed October 12, 2021

New York Natural Heritage Program. 2021e. Online Conservation Guide for Hemileuca maia ssp. 5. Available from: https://guides.nynhp.org/coastal-barrens-buckmoth/. Accessed October 12, 2021

New York Natural Heritage Program. 2021f. Online Conservation Guide for Myotis septentrionalis. Available from: https://guides.nynhp.org/northern-long-eared-bat/. Accessed October 17, 2021

New York Natural Heritage Program. 2021g. Online Conservation Guide for Lespedeza stuevei. Available from: https://guides.nynhp.org/velvety-bush-clover/. Accessed October 17, 2021.

Nikula, B., J.L. Loose, and M.R. Burne. 2003. A field guide to the dragonflies and damselflies of Massachusetts. Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program, Westborough, MA. 197 pp.

NUS Corporation. May 29, 1983. Potential Hazardous Waste Site Preliminary Assessment: Sag Harbor Landfill.

PaleoWest. 2021. Phase I Investigation of Proposed Bridgehampton to Buell New 69kV Underground Cable, Suffolk County, New York. Prepared by PaleoWest for GEI Consultants, Inc., P.C. on behalf of PSEG Long Island. PaleoWest Technical Report 21-253. September 2021.

Power Engineers, Inc., December 22, 2020. Subsurface Investigation and Geotechnical Evaluation: Proposed 69kv UG Transmission Circuit, Bridgehampton 9R to Buell 9E Substations, Sag Harbor to East Hampton, Suffolk County, New York.

Rau, John G., Wooten, David C. 1980. Environmental Impact Analysis Handbook, McGraw-Hill, Inc.

State Historic Preservation Office (SHPO). 2005. Phase I Archaeological Report Format Requirements. https://parks.ny.gov/documents/shpo/environmental-review/PhaseIReportStandards.pdf. Electronic document accessed September 15, 2021.

State Historic Preservation Office/Office of Parks, Recreation, and Historic Preservation (SHPO/OPRHP). 2021. Archaeology Comments, Phase IA Archaeological Survey Recommendation, Project: Bridgehampton to Buell (BTB) New 69kV Underground Cable, PR#: 21PR02348. April 14, 2021.

Suffolk County Department of Health Services (SCDHS). 1992. Suffolk County Sanitary Code-Article 12 Toxic and Hazardous Materials Storage and Handling Controls. Hauppauge, New York. Revised November 2011.

Suffolk County Department of Health Services (SCDHS). 1993. Suffolk County Sanitary Code-Article 7 Water Pollution Control. Hauppauge, New York. Revised November 2011.

Suffolk County Water Authority. 2021 Drinking Water Quality Report for the period January 1, 2020 to December 31, 2020.

United States Department of Agriculture Soil Conservation Service and Cornell Agricultural Experiment Station, 1975. Soil Survey of Suffolk County, New York.

United States Environmental Protection Agency, October 18, 2021. Overview of the Drinking Water Sole Source Aquifer Program. Available: https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#What_Is_SSA. Accessed April 5, 2022.

United States Fish and Wildlife Service. 2013. 12-Month finding on a petition to list the eastern small-footed bat and the northern long-eared bat as threatened or endangered; Listing the northern long-eared bat as an endangered species; Proposed rule. Vol. 78 No. 191, Department of the Interior.

United States Fish and Wildlife Service. 2015. Northern Long-Eared Bat Myotis Septentionalis. Available from: https://www.fws.gov/midwest/endangered/mammals/nleb/pdf/NLEBFactSheet01April2015.pdf. Accessed October 12, 2021

United States Fish and Wildlife Service. Undated. Significant Habitats and Habitat Complexes of the New York Bight Watershed; Long Pond Greenbelt Complex #10. Available from: https://nctc.fws.gov/pubs5/web_link/text/lpg_form.htm. Accessed October 12, 2021.

YEC, Inc. September 1989. Engineering Investigations at Inactive Hazardous Waste Sites: Phase I Investigation, Sag Harbor Landfill, Site No. 152047, Southampton Suffolk County, New York.