DRAFT

Environmental Assessment

Plum Island Animal Disease Center Undersea Cable Installation

DEPARTMENT OF HOMELAND SECURITY
SCIENCE AND TECHNOLOGY DIRECTORATE

January 2024

This page intentionally left blank.

Table of Contents

List of Figures

List of Tables

List of Appendices

Acronyms and Abbreviations

3C	Three-conductor
AOI	Area of Interest
AOPC	Area of Potential Concern
APE	Area of Potential Effects
BGEPA	Bald and Golden Eagle Protection Act of 1940
bgs	Below Ground Surface
BMP	Best Management Practice
CAA	Clean Air Act
CEJST	Climate and Economic Justice Screening Tool
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
CICP	Cast Iron Cable Protectors
CLB	Cable-Laying Barge
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
CT	Connecticut
CWA	Clean Water Act
dBA	A-Weighted Decibels
DHS	United States Department of Homeland Security
EA	Environmental Assessment
EAF	Environmental Assessment Form
EBP	Environmental Benefit Project
EJ	Environmental Justice
EO	Executive Order
ESA	Endangered Species Act
EFH	Essential Fish Habitat
EPA	US Environmental Protection Agency
FCD	Federal Consistency Determination
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
FONPA	Finding of No Practicable Alternative
GARFO	Greater Atlantic Regional Fisheries Office
GCR	General Conformity Rule
GHG	Greenhouse Gas
GWP	Global Warming Potential
HDPE	High Density Polyethylene

HTMW	Hazardous Toxic Materials and Waste
IBA	Important Bird Area
IPaC	Information for Planning and Consultation
kV	Kilovolt
L_{max}	Maximum Sound Level
L_{eq}	Continuous Equivalent Noise Levels
LOD	Limits of Disturbance
MBTA	Migratory Bird Treaty Act
MMPA	Marine Mammal Protection Act of 1972
MSA	Magnuson Stevens Fishery Conservation and Management Act of 1976
NAAQS	National Ambient Air Quality Standards
NBAF	National Bio- and Agro-Defense Facility
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NLEB	Northern Long-Eared Bat
NOA	Notice of Availability
NOAA	National Oceanic and Atmospheric Administration
NO_x	Nitrogen Oxides
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NY	New York
NYCRIS	New York Resources Identification System
NYSDEC	New York State Department of Environmental Conservation
NYSDS	New York State Department of State
NYSNHP	New York State Natural Heritage Program
O_3	Ozone
PM	Particulate Matter
PM_{10}	Particulate Matter with aerodynamic size less than or equal to 10 micrometers
$PM_{2.5}$	Particulate Matter with aerodynamic size less than or equal to 2.5 micrometers
PIADC	Plum Island Animal Disease Center
SHPO	State Historic Preservation Office
SO_2	Sulfur Dioxide
SPCCP	Spill Prevention Control and Countermeasure Plan
SWPPP	Stormwater Pollution Prevention Plan
S&T	Science and Technology Directorate
THPO	Tribal Historic Preservation Officer
TMDL	Total Maximum Daily Load
tpy	Tons Per Year

U.S.	United States
USACE	United States Army Core of Engineers
USC	United States Code
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
VOC	Volatile Organic Compounds
WMA	Waste Management Area
WOUS	Water of the United States

1.0 Purpose of and Need for the Proposed Action

1.1 Introduction

This Environmental Assessment (EA) evaluates the United States (U.S.) Department of Homeland Security (DHS) Science and Technology Directorate's (S&T) proposal to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action).

DHS S&T prepared this EA in compliance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] §§ 4321 et seq.); the White House Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA*, and DHS Instruction 023-01-001-01 rev. 01 *Implementation of the NEPA*.

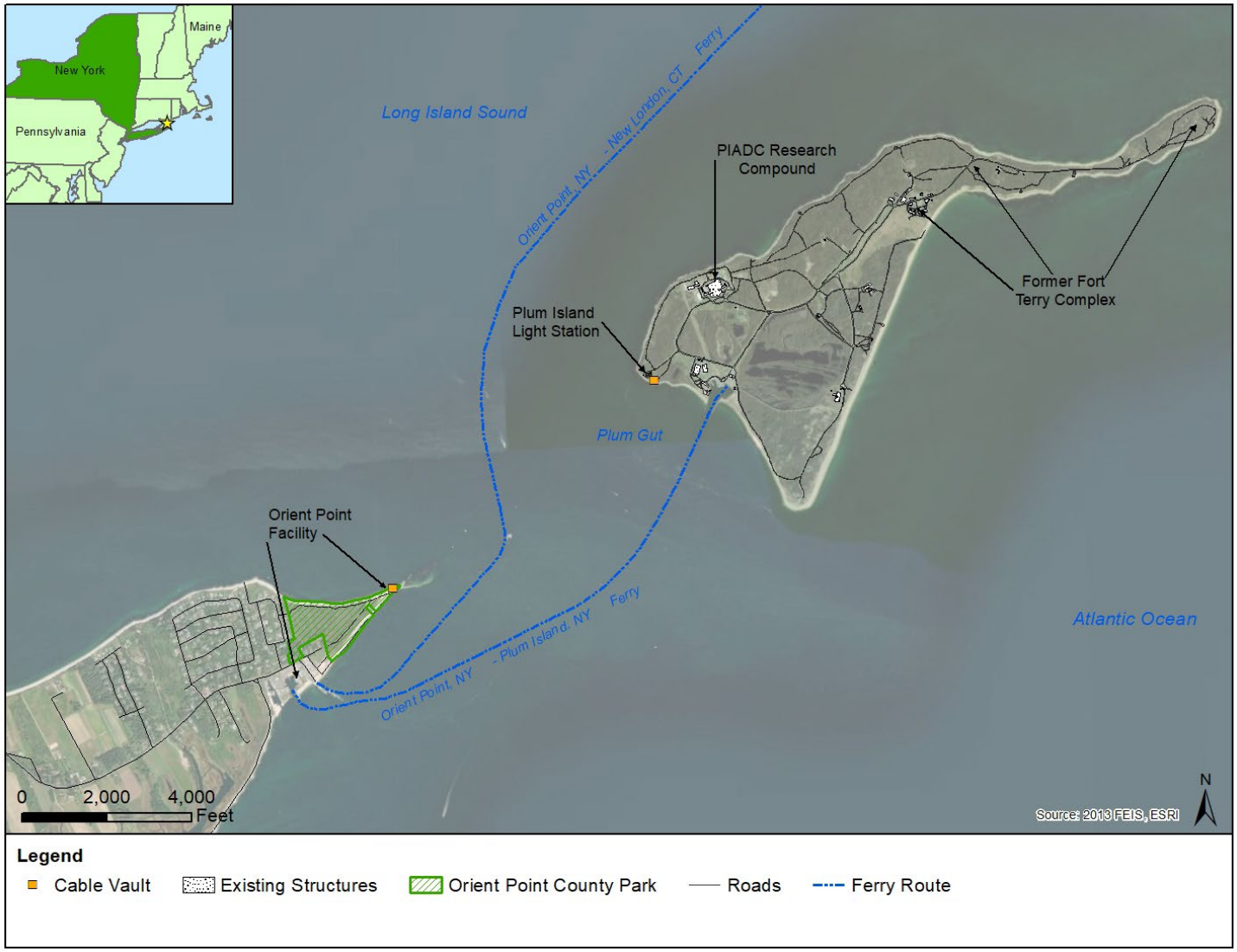
To facilitate public review of this EA, DHS S&T published this Draft EA and supporting documents on the DHS website at https://www.dhs.gov/national-environmental-policy-act.

1.2 Background

Since its establishment in 1954, PIADC has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, NY (**Figure 1**). Plum Island was transferred to the United States Department of Agriculture (USDA) in 1954 and then to DHS in 2003. DHS S&T currently operates PIADC in cooperation with the USDA. PIADC is comprised of numerous buildings including administrative and laboratory, industrial facilities and equipment, roadways, utilities, and specialized facilities. Additional assets on Plum Island include natural undeveloped land, the Plum Island Lighthouse complex constructed in 1869, a working harbor, as well as buildings and structures associated with the former United States Army's Coastal Artillery Corp's Fort Terry.

DHS S&T also owns and operates the Orient Point facility at Orient Point, NY, to support Plum Island. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility vault, which supports the underground cabling and utilities on Plum Island (**Figure 1**).

Figure 1: Proposed Action Location



Plum Island receives electrical service and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable supports 13.2 kilovolt (kV) service, measures up to approximately 11,000 feet, and together provide for the island's normal electrical requirements. The expected lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding.

DHS S&T is in the process of closing PIADC and transferring operations to the newly constructed National Bio and Agro-Defense Facility (NBAF) in Manhattan, Kansas. The Plum Island Closure and Support Program is anticipated to be completed over the next five to seven years (DHS, 2023).

1.3 Purpose and Need

DHS S&T requires continued electrical and communication capabilities on Plum Island during normal operation and throughout the duration of planned PIADC closure activities (i.e., five to seven years). DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, has reached the end of its planned lifespan and is degrading to such an extent that it is at risk of failing. Additionally, the island lacks redundant fiber optic communication measures. Therefore, the purpose of the Proposed Action is to replace one of the existing cables (M1 or M2) with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is needed to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC.

1.4 Scope of the EA

This EA analyzes the potential environmental, cultural, and socioeconomic consequences associated with DHS S&T's proposal to abandon an existing undersea electric cable and install a new electric/fiber optic cable between Orient Point and Plum Island. Actions associated with the cessation of the science mission at PIADC, and relocation of associated personnel, were previously analyzed in the 2013 Environmental Impact Statement and are therefore not discussed further in this EA (General Services Administration, 2013). Furthermore, current, and planned activities required to close PIADC facilities and infrastructure following mission transfer to NBAF were previously analyzed in the 2023 EA and therefore are not discussed in-depth in this EA (DHS, 2023).

The study area evaluated for potential impacts to the human and natural environment from cable replacement activities is defined as the stretch of land between the existing utility cable vault at the Orient Point facility and the coastline of Orient Point, the seafloor corridor of Plum Gut where the cable is to be laid, and the land from the coastline of Plum Island to the island's utility cable vault (hereafter referred to as the Proposed Action area; **Figure 2**). The Proposed Action is not anticipated to have meaningful impacts beyond this area.

Based on internal and external early scoping of the Proposed Action, including public comments received (see **Section 1.5**), DHS S&T identified 12 resource areas that require evaluation in this EA. These resource areas are identified in **Section 2.3** and analyzed in **Section 5.0**. Resource areas that are not expected to experience meaningful effects, and which are therefore not evaluated further in this EA, are also identified in **Section 2.3** along with DHS S&T's rationale for excluding them from further consideration.

1.5 Public Involvement

Public participation opportunities with respect to this NEPA process are guided by DHS NEPA implementing procedures, the requirements of NEPA, and the CEQ regulations (40 CFR 1506.6). In addition to public participation, interagency and intergovernmental coordination is a federally mandated process for informing and coordinating with other governmental agencies regarding federal proposed actions. This coordination also fulfills requirements under Executive Order (EO) 12416, *Intergovernmental Review of Federal Programs* (subsequently supplemented by EO 13132, *Federalism*), which requires federal agencies to cooperate with and consider state and local views in implementing a federal proposal.

Additionally, EO 13175, *Consultation and Coordination with Indian Tribal Governments*, Presidential Memorandum of January 26, 2021, *Tribal Consultation and Strengthening Nation to Nation Relationships*, and DHS Tribal Affairs policy at 071-04 and 071-04-001 require DHS to invite federally recognized Tribal Nations to participate in the NEPA and National Historic Preservation Act of 1966 (NHPA) Section 106 processes as Sovereign Nations based on their potential ancestral ties to the Proposed Action area. DHS S&T invited the federally recognized Delaware Tribe of Indians and the Shinnecock Indian Nation, the state-recognized Unkechaug Indian Nation, and the Montaukett Tribe to consult for this Proposed Action via letters sent to the tribes on September 22, 2023.

Following coordination with stakeholders, DHS S&T commenced a 30-day early scoping period for the Proposed Action on September 28, 2023, with an announcement in the *Suffolk Times* and *Riverhead News Review*. Responses received during this early scoping period are consolidated in a Scoping Report (see **Appendix A**) and addressed in **Section 5.0**, as appropriate.

A complete list of agencies and individuals consulted during preparation of the Draft EA is included in **Section 6.0**. A record of consultation with Tribal Nations is included in **Appendix B**.

This Draft EA, a Draft Finding of No Significant Impact (FONSI) and Finding of No Practicable Alternative (FONPA) have been made available for a 30-day public review period, during which the public; other federal, state, and local agencies; tribes; and other interested parties are encouraged to provide comments. The public review period was initiated with DHS S&T's publication of a Notice of Availability (NOA) for the Draft EA in the *Suffolk Times* and *Riverhead News Review* on January 25, 2024, and will conclude 30 days later on February 24,

2024. DHS S&T also sent the NOA to all stakeholders concurrent with the newspaper publication. The Draft EA and supporting documents were published digitally on the project website at https://www.dhs.gov/national-environmental-policy-act and made available in hard copy at the Floyd Memorial Library at 539 1st Street, Greenport, NY 11944 and the Southold Free Library at 53705 Main Road, Southold, NY 11971.

Substantive comments on the Draft EA and Draft FONSI or inquiries regarding the document should be submitted during the 30-day comment period via electronic mail to PlumIslandUnderseaCable@st.dhs.gov.

This page intentionally left blank.

2.0 Description of the Proposed Action and Alternatives

2.1 Proposed Action

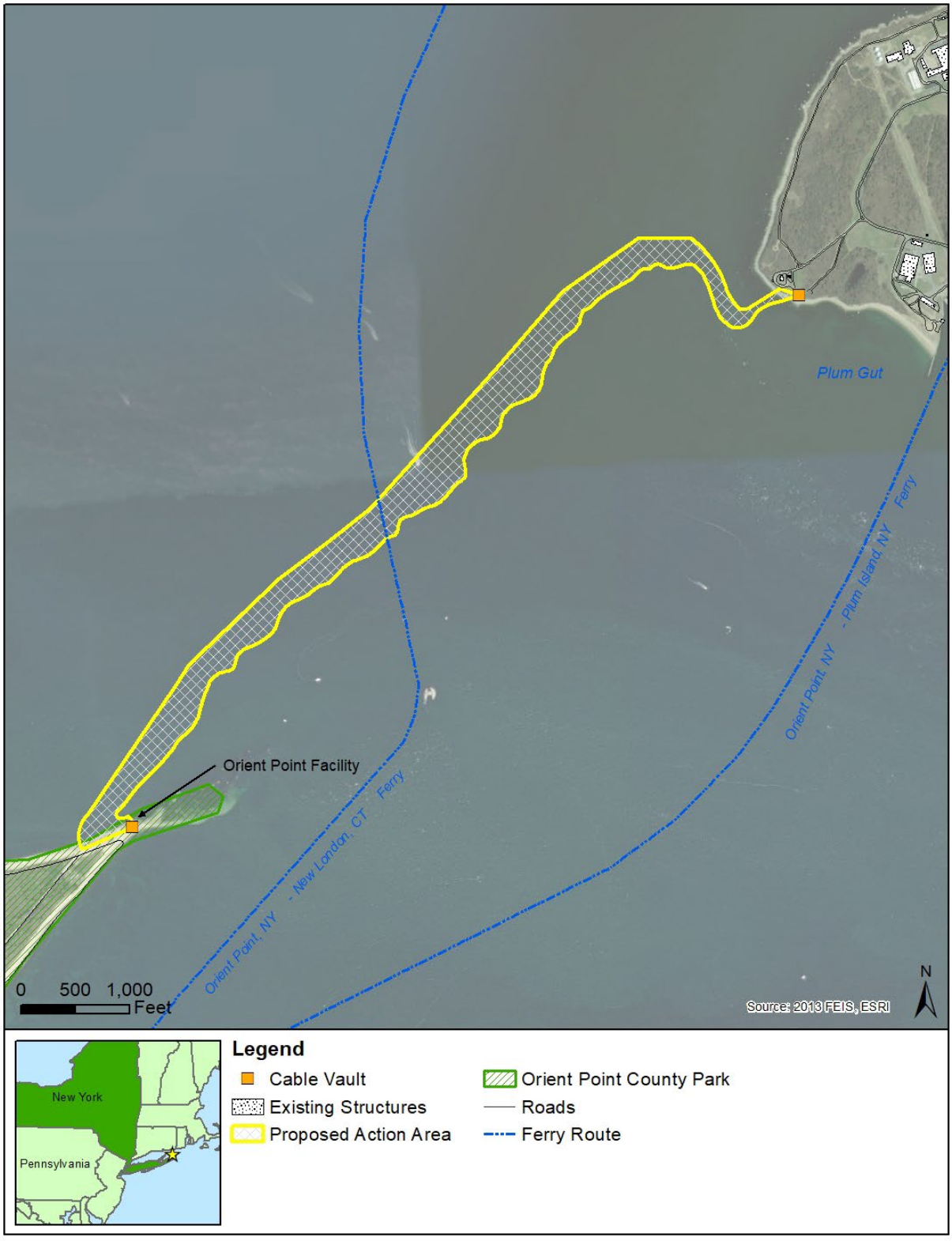
The Proposed Action is to conduct activities relating to the abandonment in place of an existing undersea utility cable (M1 or M2) and the installation of a new undersea utility cable between Orient Point and Plum Island.

The existing cables extend up to approximately 11,000 feet under Plum Gut, an area of open water between Orient Point and Plum Island, from the cable vault on Orient Point to the cable vault on Plum Island. Beginning at the Orient Point cable vault, the existing cables (M1 and M2) are entrenched under a rock bed until reaching Plum Gut. The cables span open water along the seabed of Plum Gut and Long Island Sound until reaching the shoreline of Plum Island where they are then buried until reaching the upland cable vault. The new undersea utility cable would replace one of the existing cables. The cable (M1 or M2) chosen for replacement would be disconnected from the cable vaults on Orient Point and Plum Island and abandoned in place. The ends of the cable being abandoned would be disconnected and capped, with ends remaining inside the cable vault. The disconnected cable would be abandoned in place and no salvage would occur. The new cable would be connected to terminations within each cable vault.

Installation of the new utility cable would entail connecting the cable to terminations within the existing cable vaults located on Orient Point and Plum Island, running the cable underground via trenching techniques, and then bottom laying the cable through Plum Gut. The new cable would be installed between, or immediately adjacent to, the existing M1 and M2 cables (**Figure 2**). The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area.

The final design for the proposed cable installation is currently underway. Cable installation is anticipated to involve trenching and the use of Cast Iron Cable Protectors (CICP) at both Orient Point and Plum Island. The new cable would be connected within each cable vault and entrenched along the beach (up to approximately 500 feet at Orient Point and 200 feet at Plum Island), through the existing shoreline riprap, and into the water. Existing soil, sand, and riprap would be temporarily excavated and stored on the shoreline adjacent to the trench line as the trench is constructed. Following cable installation, the excavated soil and sand would be used to backfill the trench and the riprap would be replaced above the trench. The cable would transition from the trench to the CICP near the shoreline with approximately 100 feet of CICP at each terminus (approximately 200 feet of CICP total) running through the surf-zone, into Plum Gut. The new cable is expected to be trenched to a depth similar to the existing cables (approximately 30 inches) using a small excavator (e.g., Bobcat).

Figure 2: Proposed Cable Corridor



In-water trenching is also anticipated and could occur up to several hundred feet along the seafloor before the bottom lay portion of the cable installation begins. DHS S&T anticipates using low impact in-water trenching methods, such as jetting or ploughing to minimize adverse impacts to nearshore areas to the extent practicable; however, traditional trenching methods utilizing a barge and excavator and/or hydraulic dredge may be required.[1] Approximately 0.5 acre on Plum Island and approximately 0.5 acre at Orient Point would be used temporarily to stage equipment and execute the work at each respective cable terminus location. No land disturbance is planned at these areas except for the trenches between the cable vaults and CICPs. Trenching and CICP work would be anticipated to take four to six weeks to complete at each site.

From the seaward end of the CICP, where the cable emerges into the bottom of Plum Gut, a cable-laying barge (CLB), assisted by tugboats and other support craft, would lay the remaining approximately 10,000 feet of cable between the CICP terminus points off the shores of Orient Point and Plum Island. The new cable would be approximately 3.5 inches in diameter and weigh approximately 6.2 pounds per linear foot in saltwater (approximately 10.3 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary and would not be anticipated. Any potential lateral movement of the cable would be greatly limited due to the weight of the cable, the rugged and rocky seafloor landscape, and changes in depth ranging from 0 to 100 feet. The CLB portion of the cable installation is anticipated to require a duration of up to seven days.

Prior to installing the cable, DHS S&T's contractor would perform marine route pre-lay and onshore surveys and would create a hydrographic map showing bottom contours and exact locations of the existing power cables and other obstructions within the proposed cable corridor. No sediment sampling is proposed; however, sonar would be used to map a 300-foot-wide corridor surrounding the anticipated path of the new cable. Additionally, DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, Suffolk County Police Department, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur in calendar year 2024 or 2025 and require approximately one year to complete; this includes completion of pre-installation surveys, installation and laying of the cable (4 to 6 weeks), cable inspection and testing, and

[1] Jetting entails fluidizing the seabed using high power water jets. Ploughing entails lifting a wedge of seabed which allows the seabed to then backfill over the laid cable (OSPAR, 2012).

preparation of as-built surveys. No work would occur between April 1 and September 1 to protect sensitive species (**Section 3.9**).

Following completion of the Proposed Action, the new cable would require minimal ongoing operational and maintenance efforts. Areas temporarily disturbed during trenching would revegetate passively over time. DHS S&T would maintain detailed records of the abandonment/replacement process, including as-built drawings for regulatory compliance and future reference. The new cable would be owned by DHS S&T and DHS S&T would be responsible for any required maintenance and upkeep of the cable.

2.1.1 Required Permits and Approvals for Plum Island Cable Installation

DHS S&T's contractor would be required to adhere to all applicable permits and approvals for the duration of the Proposed Action. A list of anticipated permits, approvals, and notifications is provided in **Table 1**, and would be verified by the contractor prior to starting construction.

Table 1: Anticipated Permits, Approvals, and Notifications for the Proposed Action

Agency	Permit/Approval/Notification	Status
U.S. Fish and Wildlife Service (USFWS)	- Endangered Species Act (ESA) Section 7 coordination/consultation	- Complete
National Marine Fisheries Service (NMFS)	- ESA Section 7 coordination/consultation - Magnuson-Stevens Act Essential Fish Habitat Consultation - Marine Mammal Protection Act (MMPA) coordination	- Ongoing
Federally Recognized Native American Tribes	- Consultation regarding potential effects on cultural resources - NHPA Section 106 consultation	- Ongoing
U.S. Army Corps of Engineers (USACE)	- Individual Permit (Section 10 of the Rivers and Harbors Act; Section 404 of the Clean Water Act)	- Ongoing
U.S. Coast Guard (USGC)	- Safety Zone Determination	- Ongoing
New York State Historic Preservation Office	- NHPA Section 106 consultation	- Complete
New York State Police	- Construction notification	- Ongoing
New York State Department of State	- Coastal Zone Management Act Federal Consistency Determination Review	- Ongoing

Agency	Permit/Approval/Notification	Status
New York State Department of Environmental Conservation (NYSDEC)	- Environmental Conservation Law - Protection of Waters Permit - Clean Water Act (CWA) 401 Water Quality Certification - Article 36 – Floodplain Management - Article 34 – Coastal Erosion - Federal Consistency Determination - Article 24 – Freshwater Wetlands - Article 24 – Tidal Wetlands	- Ongoing
New York State Office of General Services	- Public Lands Law for a Cable/Pipeline Easement	- Ongoing
Suffolk County Parks Department	- Construction notification	- Ongoing
Suffolk County Police Department	- Construction notification	- Ongoing
Southold Township	- Coastal Erosion and Wetland/Trustee Lands Permit - Erosion and Sediment Control Plan Approval	- Ongoing

2.1.2 Standard Best Management Practices for Plum Island Cable Installation

Additionally, to avoid or minimize adverse environmental impacts to the extent practicable, DHS S&T adopts the Best Management Practices (BMPs) listed in Table 2 for cable replacement activities. The impact analysis in **Section 3.0** assumes implementation of these BMPs.

Table 2: Standard Best Management Practices for Plum Island Cable-Laying Activities

Resource	Best Management Practice
Infrastructure	• Provide advance notice to all stakeholders (PIADC staff, utility provider, contractors, etc.) of any outages or potential service interruptions that may result from the Proposed Action.
Noise	• Schedule noise-producing construction activities, such as earth moving, to occur between 7:00 a.m. and 6:00 p.m. • Turn off equipment when not in use. • Prohibiting unnecessary idling of internal combustion engines. • Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.

Resource	Best Management Practice
Socioeconomics and Environmental Justice	• N/A
Recreation	• N/A
Air Quality and Greenhouse Gases	• Wet ground during excavation or grading activities to minimize dust, as needed. • Ensure stockpiled debris and soil are covered. • Ensure truckloads are covered. • Require a speed of less than 15 miles per hour for heavy equipment on unpaved surfaces. • Whenever possible, use electricity from established electrical power sources instead of generators. • Regularly repair and service heavy equipment to prevent excess emissions. • Shut down heavy equipment when not needed. • Clean excess soil from heavy equipment and trucks leaving the work area to prevent off-site transport of soil.
Climate Change	• N/A
Water Resources	• Obtain and adhere to the National Pollutant Discharge Elimination System (NPDES) General Permit and PIADC Stormwater Pollution Prevention Plan (SWPPP) to manage erosion and stormwater discharges. • Obtain and adhere to all necessary water resources permits from USACE and NYSDEC to ensure the requirements of applicable regulations (e.g., CWA Sections 401 and 404) are met. • Conduct routine inspections of equipment and heavy machinery. • Maintain spill containment materials on-site.
Hazardous and Toxic Materials and Waste	• Use low-impact trenching methods such as jetting or ploughing when feasible. • Establish containment structures for sediment removed and stored during trenching. • Adhere to the Spill Pollution Control and Countermeasure Plan (SPCCP). • Ensure spill containment materials are contained on-site and require vessels to maintain spill containment and spill response kits. • Develop a Vessel Response Plan to respond to and address inadvertent releases. • Adhere to standard protocols for refueling at marine refueling stations.

Resource	Best Management Practice
Biological Resources	• Inspect and thoroughly clean heavy machinery to remove rhizomes and seeds to minimize the potential distribution of invasive species. • Avoid maritime dunes during onshore cable installation activities to the maximum extent practicable. • Conduct a red knot survey not more than seven days prior to beginning onshore construction to identify potential species presence. If red knots are identified, maintain a 500-foot buffer, and notify USFWS. • Inspect areas within 660 feet (200 meters) of onshore cable replacement activities involving heavy machinery and where loud and intrusive noise may be created for special status species. If any special status species or migratory nesting birds are observed, modify project activities (e.g., scheduling and phasing) to ensure no adverse impacts to these species. • Adhere to time-of-year-restrictions for piping plover and roseate tern for onshore construction work between April 1 and September 1. • If bald eagle nests are discovered, coordinate with USFWS and implement measures included in the USFWS's National Bald Eagle Management Guidelines (i.e., establishing buffers around nesting sites or observing seasonal restrictions). • Vessels would travel at a slow, safe speed (i.e., approximately 6 knots) when in the proximity and/or path of a marine mammal and leave the area, if possible, to avoid potential vessel collisions.
Cultural Resources	• If unanticipated and previously unidentified archaeological resources are discovered, pause all ground-disturbing work and notify the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officers (THPOs) to coordinate a path forward.
Health and Safety	• Ensure all watercraft operators have the proper licenses, are aware of safety procedures and emergency protocols, and that all equipment is regularly inspected and maintained in good working order, including safety gear, navigational lights, and communication devices. • Keep close watch of weather conditions and pause all operations in the event of severe weather. • Adhere to the Safety Zone Determination identified in consultation with USCG. • Prepare an emergency response plan for cable installation and abandonment activities and ensure personnel are informed of the plan. • Use proper storage and handling procedures for Hazardous Toxic Materials and Waste (HTMW). • Operate machinery according to standard protocols. • Comply with all applicable federal, state, and local regulations regarding health and safety. • Comply with applicable design and construction standards to minimize electrical hazards during and after cable laying activities. • Use fencing or marking to identify the construction site within Orient Point County Park as off-limits to the public.

Resource	Best Management Practice
Earth Resources	• Use low-impact trenching methods such as jetting or ploughing. • Implement erosion and sediment control measures specified in the SWPPP and NPDES General Permit (e.g., silt fences, check dams, etc.). • Implement pollution prevention activities identified in the SWPPP. • Adhere to the SPCCP.

2.2 Alternatives Considered

NEPA and CEQ regulations require all reasonable alternatives to be explored and objectively evaluated. Alternatives that are eliminated from detailed study must be identified along with a brief summary of the reasons for their dismissal. For the purpose of this analysis, an alternative is considered "reasonable" if it would meet the Proposed Action's purpose and need. "Unreasonable" alternatives that would not meet the Proposed Action's purpose and need were dismissed from further consideration and evaluation in this EA.

2.2.1 Alternatives Development

To be carried forward for analysis, a "reasonable" alternative must meet specific screening criteria set forth by DHS S&T:

1. Ensure no net loss in the capacity of DHS S&T to conduct required operations at PIADC, including ongoing and planned PIADC closure activities.
2. Minimize environmental impacts, including through compliance with management plans and PIADC's Air State Facility Permit.
3. Ensure timely completion with minimal construction delays and permitting difficulty.
4. Minimize impediments to vessel traffic in the vicinity of Plum Island and Orient Point.

DHS S&T determined only one reasonable alternative (i.e., Preferred Alternative) would be capable of meeting these screening criteria and the Proposed Action's purpose and need. The No Action Alternative is also evaluated as required by CEQ regulations. Therefore, this EA carries forward two alternatives for further analysis.

2.2.2 Preferred Alternative

Under the Preferred Alternative, DHS S&T would implement the Proposed Action as described in **Section 2.1**. The Preferred Alternative best meets the screening criteria identified in **Section 2.2.1**). This alternative would provide DHS S&T with reliable electrical and communications capabilities with no net loss in the capacity of DHS S&T to perform required operations at PIADC, be completed in a timely fashion, and minimize impediments to vessel traffic to the maximum extent practicable.

2.2.3 No Action Alternative

Under the No Action Alternative, PIADC would continue to rely on the M1 and M2 cables for electrical and communications capabilities. The M1 cable would remain in danger of failing, which would significantly constrain PIADC's operational capabilities, including current and planned closure activities, should the cable fail in the near term. While the No Action Alternative would not meet the Proposed Action's purpose and need, it is analyzed in this EA to provide a comparative baseline for the Preferred Alternative.

2.2.4 Alternatives Dismissed from Further Analysis

DHS S&T initially considered four additional alternatives to achieve the purpose and need for the Proposed Action: 1) Alternative Cable Corridor; 2) Alternative Source of Electrical Power; 3) Salvaging the Abandoned Cable; and 4) Expedited Installation Schedule. DHS S&T eliminated these alternatives, described below, from further analysis in the EA.

2.2.4.1 Alternative Cable Corridor

DHS S&T initially considered the areas to the west and east of the existing M1 and M2 cables for potential routes for the new cable. However, the ocean depth of the area indicates that the area east of the existing cables is unsuitable for cable installation due to a steep drop off of the ocean floor. Additionally, the area west of the existing cables would require a longer route and more cable, which would increase duration of cable installation, have additional environmental impacts, and could increase overall cost. This alternative did not meet screening criteria #3 and was therefore eliminated from further analysis.

2.2.4.2 Alternative Source of Electrical Power

This alternative would involve supplementing PIADCs electrical power with alternative sources in the event an existing cable fails. DHS S&T initially considered installing solar and/or wind power on Plum Island. However, DHS S&T determined these sources of power were unlikely to consistently supply PIADC with adequate replacement power for an existing cable. Moreover, these sources would require lengthy permitting times, additional construction requirements, and may result in adverse environmental impacts (e.g., construction might be required in or near sensitive habitat or wind turbines might adversely impact the island's avian species).

Additionally, DHS S&T considered utilizing diesel backup generators to supply the required electricity if the M1 cable fails. DHS S&T maintains three 1,820 kV standby diesel-powered emergency generators on PIADC for use during electrical outages. However, utilizing the standby diesel-generators to supply ongoing power to PIADC would violate PIADC's existing Air State Facility Permit, which limits total generator operations to 500 hours per year. Furthermore, continuous operation of standby generators would create additional noise and air pollution that may adversely impact sensitive habitat on the island. Therefore, this alternative

did not meet any of the identified screening criteria and was thus eliminated from further analysis.

2.2.4.3 Salvaging the Abandoned Cable

This alternative would entail conducting the Proposed Action as described in **Section 2.1** with the exception that the abandoned cable would be salvaged from the ocean floor for recycling or disposal. Salvaging the abandoned cable would involve using cable grapplers or lift bags to lift the cable off the ocean floor and onto a salvage vessel. This process would disturb the ocean floor, which has accumulated around the existing cables over 25 years, and result in increased turbidity and disturbance to the surrounding marine environment. DHS S&T determined that salvaging the cable would result in greater environmental disturbance compared to leaving the abandoned cable in place. Furthermore, salvaging the existing cable would increase the duration of the Proposed Action. Therefore, this alternative did not meet screening criteria #2 and #3 and was eliminated from further analysis.

2.2.4.4 Expedited Installation Schedule

DHS S&T considered an expedited installation schedule in which the CLB portion of the cable installation would occur in three days or less (as opposed to four to seven days). However, this expedited schedule would result in greater restrictions on marine vessels in the vicinity of the cable route during that installation period, which DHS S&T considers to be unwarranted. Therefore, this alternative did not meet screening criteria #4 and was eliminated from further analysis.

2.3 Level of Environmental Analysis

In compliance with NEPA and CEQ regulations, this EA focuses on the resource areas that the Proposed Action could potentially impact. Table 3 presents each resource area, its corresponding area of interest (AOI), and the rationale for whether the resource area has been retained for detailed analysis or dismissed from further consideration, based upon the determination of a qualified DHS subject matter expert for each resource area.

Table 3. Resource Areas Considered in this EA

Resource Area	Area of Interest	Thresholds of Significance	Further Analysis?	Rationale for Level of Assessment
Land Use	Areas within or adjacent to the Proposed Action area.	Significant impacts would occur if cable replacement activities were to lead to permanent incompatible alteration of the characteristics of specific properties, or if existing land uses would be converted beyond minor changes.	No	Implementation of the Proposed Action would not change existing land use within Plum Island or Orient Point. Cable replacement activities would take place in close proximity to existing utility rights-of-way and in previously disturbed areas. There would be no permanent changes to land use at either Plum Island or Orient Point. The Proposed Action would have no potential to permanently disrupt, interfere with, or prevent the continued operation of existing land uses adjacent to Plum Island or the Orient Point support facility. Therefore, this resource was dismissed from analysis.
Visual Resources and Aesthetics	Areas within and adjacent to cable replacement activities, from which they would be visible.	Significant impacts would occur if cable replacement activities introduced permanent discordant elements or removed important (i.e., visually appealing) elements in the existing viewshed.	No	The Proposed Action would utilize trenching to install the cable on land- and the cable would be installed within the existing cable vaults on Plum Island and Orient Point; there would be no potential to permanently affect the aesthetic quality or change the visual appeal of Plum Island or Orient Point. Therefore, this resource was dismissed from analysis.

Resource Area	Area of Interest	Thresholds of Significance	Further Analysis?	Rationale for Level of Assessment
Infrastructure	Buildings, utilities, and transportation assets within the Proposed Action area.	Significant impacts would occur if there were substantial impacts to existing facilities, damage to transportation assets, or permanent impairment or loss of utility service.	Yes	The Proposed Action entails replacement of electric and communication utility infrastructure between Plum Island and Orient Point. This resource is evaluated further in **Section 3.1**.
Noise	Areas within 0.25 mile of the Proposed Action area that may experience increased noise during cable replacement activities.	Significant impacts would occur if generated noise was permanently intrusive to nearby sensitive receptors, or if it exceeded applicable noise limit thresholds, or if it would cause harm or injury to people or communities.	Yes	The Proposed Action would involve operation of construction equipment for trenching aboveground and/or underwater, as well as the operation of watercraft, which would temporarily generate noise in Proposed Action area. This resource is evaluated further in **Section 3.2**.
Socioeconomics and Environmental Justice	The Town of Southold and Census tract 1702.06, block group 3, which contains both Plum Island and Orient Point.	Significant impacts would occur if there were substantial changes to employment, population, or housing availability in nearby communities; or if environmental justice (EJ) communities could be disproportionately adversely affected.	Yes	The Proposed Action would lead to changes in local employment, and potential air emissions and noise generation from cable installation activities may affect nearby EJ communities, if present. This resource is evaluated further in **Section 3.3**.

Resource Area	Area of Interest	Thresholds of Significance	Further Analysis?	Rationale for Level of Assessment
Recreation	Areas within or adjacent to the Proposed Action area	Significant impacts would occur if cable replacement activities permanently interfered with established recreational activities.	Yes	The waters around Plum Island and the Orient Point facility, as well as Orient Point County Park, are currently accessible to the public. Impacts to recreation are possible as work conducted at Orient Point County Park and in Plum Gut would require temporary restrictions or limitations on recreational activities, such as boating, diving, and fishing. This resource is evaluated further in **Section 3.4**.
Air Quality	Suffolk County, NY	Significant impacts would occur if there was a change in the attainment status with respect to the National Ambient Air Quality Standards (NAAQS), or if emissions were to exceed regulatory thresholds.	Yes	Proposed cable replacement activities would create emissions associated with operation of motor vehicles, watercraft, and equipment as well as from minor earthwork in disturbed areas. This resource is evaluated further in **Section 3.5**.

Resource Area	Area of Interest	Thresholds of Significance	Further Analysis?	Rationale for Level of Assessment
Climate Change	Global	Significant impacts would occur if the Proposed Action increased the vulnerability of the Proposed Action area, or properties, to the effects of climate change; or if the Proposed Action were to not adequately mitigate potential climate change impacts on the project that could result in project failure.	Yes	Proposed cable replacement activities would generate greenhouse gas (GHG) emissions. The operation of motor vehicles, watercraft, and trenching equipment would require fossil fuel combustion, which produces GHGs such as carbon dioxide, methane, and nitrous oxides. This resource is evaluated further in **Section 3.6**.
Water Resources	Surface waters, wetlands, watersheds, groundwater, and coastal habitats within or near proposed cable replacement activities.	Significant impacts would occur if proposed activities resulted in an exceedance of established water quality thresholds; substantially increase the amount of stormwater entering surface waters; do not comply with wetland protection regulations and permits; substantially affect groundwater quantity or quality; induce flooding in occupied areas; or are inconsistent with applicable enforceable coastal zone policies.	Yes	The Proposed Action includes in-water ground disturbance associated with trenching as well as in-water work. The Proposed Action area is also located in a coastal zone. This resource is evaluated further in **Section 3.7**.

Resource Area	Area of Interest	Thresholds of Significance	Further Analysis?	Rationale for Level of Assessment
Hazardous and Toxic Materials and Waste	Areas within or adjacent to the Proposed Action area.	Significant impacts would occur if the total amount of hazardous or toxic materials and waste or solid waste were to exceed regulatory thresholds; if there is a permanent increased risk of contamination; or if a new or substantial human or environmental health risk is created.	Yes	Proposed cable replacement activities would require the use of hazardous and toxic materials, such as petroleum products and lubricants. This resource is evaluated further in **Section 3.8**.
Biological Resources	Vegetation and wildlife occurring within the Proposed Action area.	Significant impacts would occur if proposed activities were to result in substantial permanent loss or degradation of terrestrial or aquatic habitat, or result in unpermitted "take" of listed species.	Yes	The Proposed Action may include limited vegetation clearing to facilitate trenching. Multiple ESA-listed species are known to occur in the area, as well as essential fish habitat, marine mammals, migratory birds, and bald eagles. This resource is evaluated further in **Section 3.9**.

Resource Area	Area of Interest	Thresholds of Significance	Further Analysis?	Rationale for Level of Assessment
Cultural and Historic Resources	The Proposed Action Area.	Significant impacts would occur if the integrity of a historic property is diminished such that it would no longer be eligible for listing in the National Register of Historic Places; if historic viewsheds would be substantially altered; or if tribal concerns are inadequately resolved.	Yes	Historic properties exist on Plum Island and multiple Tribal Nations have historic ties to the island. This resource is evaluated further in **Section 3.10**.
Health & Safety	Areas within or adjacent to the Proposed Action area.	Significant impacts would occur if cable replacement activities would put the health and safety of the public at risk or violate applicable federal and/or state safety regulations.	Yes	Cable replacement activities include surveying, trenching, cable laying, as well as the operation of heavy machinery, equipment, vehicles, and watercraft in areas where the general public may be present. This resource is evaluated further in **Section 3.11**.
Earth Resources	Areas in which cable replacement activities would be conducted, including surrounding adjacent environments.	Significant impacts would occur if cable replacement activities would expose people or structures to major geological hazards or substantially increase potential occurrences of erosion or sedimentation.	Yes	Proposed cable replacement activities include limited ground disturbance due to trenching. This resource is evaluated further in **Section 3.12**.

3.0 Affected Environment and Environmental Consequences

This section describes the natural and human environment that exists within the AOI and the potential impacts (environmental and socioeconomic consequences) associated with implementing the Proposed Action in accordance with CEQ guidelines set forth in 40 CFR 1508.8.

The specific criteria for evaluating the potential environmental and socioeconomic impacts of the Proposed Action and No Action Alternative are described in the following sections. The significance of an action is also measured in terms of its context and intensity. The context and intensity of potential environmental impacts are described in terms of their duration, magnitude, whether they are direct or indirect, and whether they are adverse or beneficial, as summarized in the following paragraphs:

- **Short-term or long-term.** In general, short-term impacts are those that would occur only for a limited, finite time with respect to a particular activity of the Proposed Action. Long-term impacts are those that are more likely to be persistent and chronic throughout the life of the Proposed Action or would last years after an impact-producing activity occurred.
- **Less-than-significant (negligible, minor, moderate), or significant.** These relative terms are used to characterize the magnitude or intensity of an impact. Negligible impacts would generally be perceptible but at the lower level of detection. A minor impact would be slight, but detectable. A moderate impact would be readily apparent. Significant impacts would be those that, in their context and due to their magnitude (severity), have the potential to meet the thresholds for significance set forth in CEQ regulations (40 CFR 1508.27) and, thus, warrant heightened attention and examination for potential means for mitigation to fulfill the policies set forth in NEPA.
- **Direct or Indirect.** Direct impacts are those that would occur as a result of and at the same time and place as the Proposed Action. Indirect impacts are those that would be caused by the Proposed Action but would occur at a different time or place and involve dynamic variables.
- **Adverse or beneficial.** An adverse impact would cause unfavorable or undesirable outcomes on the human-made or natural environment. A beneficial impact would cause positive outcomes on the human-made or natural environment.
- **Cumulative.** A cumulative impact would be an additive impact when the effects of the Proposed Action are considered in the context of past, present, or reasonably foreseeable future project(s) impacts. Cumulative impacts could be negligible, minor, moderate, significant, adverse, or beneficial for a given environmental resource.

The Proposed Action has no mechanism to impact two of the environmental resources discussed in **Table 3**; therefore, these resources are not carried forward for further analysis.

3.1 Infrastructure

Infrastructure refers to the fundamental facilities and systems serving a geographic area, including transportation infrastructure, such as roads, bridges, railways, and ports, and utility infrastructure, including sanitary sewer, water, electricity, communications, and natural gas.

The AOI for infrastructure includes buildings, utilities, and transportation assets within the Proposed Action area.

3.1.1 Affected Environment

Infrastructure within the Proposed Action area is limited to erosion control infrastructure (e.g., riprap) installed on shore areas and existing undersea electric/fiber optic cables and associated cable vaults. No potable water, sanitary sewer, or natural gas infrastructure exists within the Proposed Action area. The Long Island Power Authority provides electricity to Suffolk County, including the Orient Point Facility and Plum Island. AT&T provides fiber optic communication to Plum Island and Orient Point.

The Orient Point Facility and Orient Point County Park are accessed by New York State Route 25A, which serves as the main east-west route for the North Shore of Long Island. Within the County Park, the cable vault is accessible via Point Road. Plum Island is accessed by the Orient Point – Plum Island Ferry, which is owned by DHS S&T and only available to authorized personnel. The ferry makes eight trips daily with four trips each during morning and evening peak commuting hours. Additionally, the Cross Sound Ferry operates between Orient Point, NY and New London, Connecticut (CT), and leaves the Orient Point Harbor hourly between 7:00 a.m. and 8:00 p.m. (Cross Sound Ferry, 2023).

3.1.2 Environmental Consequences

A significant adverse infrastructure impact would occur if there were substantial impacts to existing facilities, damage to transportation assets or substantial degradation of traffic conditions, or permanent impairment or loss of utility service.

3.1.2.1 Preferred Alternative

The Preferred Alternative would have no impact to on-land transportation infrastructure, water, or sanitary sewer service. Additionally, temporary increases in traffic related to cable installation activities, such as approximately a dozen construction personnel accessing the work sites, would be temporary and negligible in the context of existing traffic conditions. Implementation of the Preferred Alternative would require alterations to the existing electrical and fiber optic communication services serving Plum Island. An existing electrical cable would be disconnected at the cable vaults on Plum Island and Orient Point and replaced with a new electrical and fiber optic connection. DHS S&T's contractor would provide advance notice to all stakeholders (PIADC staff, utility provider, contractors, etc.) of any outages or potential service interruptions that may result from the Proposed Action. Since the cable vault on Orient Point only serves Plum Island, no impacts on utility service would be anticipated for any non-

DHS entities. During cable laying activities, the two ferry services that traverse Long Island Sound may be required to navigate around the CLB, which could result in minor delays for both PIADC staff and the general public. However, any delays to ferry services would be temporary (up to seven days) and would cease once the CLB portion of the Preferred Alternative is complete. Therefore, the Preferred Alternative would result in *short-term, less-than-significant adverse impacts* to infrastructure, due to the potential for temporary utility service interruptions and delays in ferry services.

Implementation of the Preferred Alternative would not change the overall utility usage at Plum Island. However, in the long-term, replacing a degraded undersea cable with a new electric and fiber optic communications cable between Orient Point and Plum Island would improve the redundancy and reliability of the utility infrastructure serving Plum Island. Therefore, the Preferred Alternative would have *a long-term, beneficial impact* on infrastructure in the AOI.

3.1.2.2 No Action Alternative

Implementation of the No Action Alternative would have no immediate impact on infrastructure in the AOI. PIADC would continue to rely on the existing cables for electrical and communications capabilities, which are in danger of failing and lack redundancy. Therefore, the No Action Alternative would result in potentially *significant adverse impacts* if an existing cable were to fail in the near term.

3.2 Noise

Sound occurs when vibrations travel through a medium, such as air, and are interpreted by biological components of the ear. Noise is defined as any sound that becomes unpleasant, disruptive, loud, or damaging. Sound levels are quantified in units called decibels (dB), which can be amplified by frequency and intensity, and are given a level on a logarithmic scale. The higher the decibel level, the louder the noise. The sound intensity the human ear hears can be quantified in A-weighted decibels (dBA) (FAA, 2022). Generally, noise levels decrease by approximately 6 dBA as the distance doubles from the point source (e.g., a piece of construction equipment or an airplane) (Abbott, 2022). Noise levels in rural, suburban, and urban environments can differ, especially when considering time of day and location of measurement. The average ambient noise level ranges from approximately 35 to 45 dBA in rural areas, approximately 45 to 60 dBA in suburban neighborhoods, and approximately 60 dBA to 70 or 85 dBA in urban areas (California State Portal, 2013).

Wildlife and human responses to noise can vary depending on the type of noise, proximity to the noise, sensitivity to the noise, and times of day the noise-generating events take place. Typically, environmental noise causes annoyance or stress in humans, but exposures to high noise levels can cause hearing loss (National Institute on Deafness and Other Communication Disorders, 2022). Settings where occupants are more vulnerable to the negative effects of noise exposure are generally referred to as sensitive receptors and typically include hospitals, schools, daycare facilities, elderly housing, convalescent facilities, and residential settings.

Noise might also impact wildlife such as species that rely on vocalizations for communication (Francis & Barber, 2013); potential effects of the Proposed Action on biological resources are analyzed in **Section 3.9**.

State and local governments are the primary entities responsible for controlling and regulating noise sources and levels in the environment. The Noise Control Act of 1972 (42 USC. § 4901 et seq.) and subsequent amendments, such as the Quiet Communities Act of 1978, delegate authority to the states to regulate environmental noise and direct government agencies to comply with local community regulations and statutes.

The AOI for noise includes areas within 0.25 mile of the Proposed Action area that may experience increased noise during cable replacement activities.

3.2.1 Affected Environment

Within the AOI, the noise conditions near the respective cable vaults on Orient Point and Plum Island are similar due to their beachfront locations in areas relatively removed from other human activities. Noise at these locations generally originates from existing DHS operations, periodic Plum Island and Orient Point facility maintenance, ocean environments, vehicle traffic, and maritime traffic. Noise conditions offshore are primarily associated with wind and maritime traffic. Throughout the AOI, noise can periodically be heard from boat traffic in Long Island Sound, including from the Cross Sound Ferry and Plum Island Ferry, which regularly pass through Plum Gut numerous times daily (**Section 3.1.1**). In addition, noise generated from the presence of strong waves, high wind speeds, and coastal wildlife in Long Island Sound and Plum Gut also contributes to existing and elevated noise conditions in the AOI. Sensitive receptors in the AOI include the Orient Point County Park and a single residence located approximately 200 feet south of the Proposed Action area on Orient Point.

The Suffolk County Noise Ordinance specifies maximum permissible noise levels for residential, commercial, and industrial land use types within the County. The maximum permissible noise levels for residential areas are 65 dBA for daytime hours between 7:00 a.m. to 10:00 p.m. and 50 dBA for nighttime hours between 10:00 p.m. to 7:00 a.m. Noise generated from construction activities occurring Monday through Friday between 7:00 a.m. and 6:00 p.m. is exempt from the Noise Ordinance. Noise generated from construction equipment, trenching, earth-moving, excavating, or demolition work is prohibited during holidays, weekends, and weekday hours from 6:00 p.m. to 7:00 a.m. unless the stated construction activities do not exceed county noise limits, are designated as emergency work, or are conducted by or for a municipal entity (Suffolk County, 2023a).

3.2.2 Environmental Consequences

A significant adverse noise impact would occur if generated noise would be permanently intrusive to nearby sensitive receptors, or if it exceeded applicable noise limit thresholds, or if it would cause harm or injury to people or communities.

3.2.2.1 Preferred Alternative

Due to the geographic location of Plum Island within Long Island Sound, no communities are located within a 2-mile radius. As a result, noise emanated from Plum Island during cable installation activities would not be discernible on the mainland. Additionally, noise emanating from vessel operations associated with the Preferred Alternative would not be discernable above ambient levels, as this area of Long Island Sound is frequented by vessel traffic, including the two ferries, and the CLB and associated support vessels would generally move slowly (less than 6 knots), thereby limiting engine noise.

Construction activities associated with the Preferred Alternative would result in a short-term increase in noise levels within the vicinity of construction occurring within Orient Point County Park. Noise impacts would be greatest for receptors within 0.25 mile of the construction area, including recreational users of the county park and the single residence located on Orient Point approximately 200 feet south of the Proposed Action area. For each equipment type anticipated to be utilized during trenching and nearshore dredging activities, **Table 4** identifies the maximum time-weighted noise reference levels (L_{max}), measured at 50 feet, and continuous equivalent noise levels (L_{eq}), calculated at 50 feet, the nearest residence (200 feet), and the edge of AOI (0.25 mile).

Table 4: Construction Equipment Noise Levels at Nearest Sensitive Receptors

Sound Source	Maximum Sound Pressure Level at 50 feet (L_{max} in dBA)[1]	Equivalent Time Average Sound Pressure Level at 50 feet (L_{eq} in dBA)	Equivalent Time Average Sound Pressure Level Closest Residence at 200 feet (L_{eq} in dBA)	Equivalent Time Average Sound Pressure Level Edge of AOI at 1,320 feet (0.25 mile) (L_{eq} in dBA)
Excavator	85	81	69	53
Forklift	85	78	66	50
Generator Set	82	79	67	51
Mud Pump Unit	77	74	62	46
Sump Pump	77	74	62	46
Hydraulic Dredging - Pump	77	74	62	46
Tugboat – Engine Generator	82	79	67	51
Truck	84	80	68	52

1. Source: (Federal Highway Administration, 2006)

The predicted L_{eq} noise levels for each equipment type at the closest residence to the Proposed Action area range from 62 to 69 dBA. While some of these levels would slightly exceed permissible noise levels identified in the Suffolk County Noise Ordinance, construction

activities of this type would be required to comply with this Ordinance. DHS S&T's contractor would notify the Suffolk County Parks Department prior to starting cable installation activities. Contractors are anticipated to work Monday through Friday during daytime hours (between 6:00 a.m. to 6:45 p.m.). DHS S&T's contractor would schedule noise-producing construction activities, such as trenching and earth moving, to occur between 7:00 a.m. and 6:00 p.m. in order to comply with the Suffolk County Noise Ordinance. Beyond 0.25 mile from the Proposed Action area, construction noise would dissipate to ambient levels.

The overall construction activities in Orient Point County Park, including preparation of shore landings and trenching, are anticipated to occur over a four- to six-week period. Moreover, these construction activities would occur relatively far from the nearest residential communities and recreational areas with the exception of the Orient Point County Park and the single residence south of the Proposed Action area considered above. Although short-term adverse noise impacts are anticipated during construction, the contractor would adhere to standard construction BMPs to limit noise impacts to the extent practicable, including turning off equipment when not in use, prohibiting unnecessary idling of internal combustion engines, and equipping all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment. These BMPs, as well as compliance with the Suffolk County Noise Ordinance, would minimize noise impacts to recreational and residential areas during construction activities to the maximum extent practicable. Therefore, the construction activities under the Preferred Alternative would result in *short-term, less-than-significant adverse impacts* and *no long-term impacts* to the overall noise environment.

3.2.2.2 No Action Alternative

Under the No Action Alternative, the proposed installation of an undersea utility cable from Orient Point to PIADC would not occur, and there would be *no impact* to the noise environment.

3.3 Socioeconomics and Environmental Justice

Socioeconomics refers to the basic attributes and resources associated with the human environment, particularly the demographic and economic characteristics of an area and its population. Economic activity typically encompasses employment, personal income, and industrial or commercial growth. Changes in these socioeconomic indicators typically result in changes to additional indicators, such as housing availability and the provision of public services. Socioeconomic data at local, county, regional, and state levels enable characterization of baseline local conditions in the context of regional and state trends. The U.S. Census Bureau's American Community Survey provides a variety of demographic data, including population numbers, employment, labor characteristics, income, and race and ethnicity.

EJ is based on the principle that all people have a right to be protected from environmental pollution, and to live in and enjoy a clean and healthful environment. This means equal

protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits. EJ considerations are guided by EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, which directs federal agencies to identify and address the environmental effects of their actions on minority and low-income populations. Additional guidance published by the CEQ and USEPA Federal Interagency Working Group on Environmental Justice (now the White House Environmental Justice Interagency Work Group or IAC) provides practical definitions of EJ communities and establishes a framework on how to appropriately identify such communities and assess potential impacts. According to the CEQ's guidance, minority populations exist if "(a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis" (CEQ, 1997). The CEQ also recommends the identification of low-income populations using annual statistical poverty thresholds, and the IAC suggests assessing "the proportion of individuals below the poverty level, households below the poverty level, and families with children below the poverty level" (EJ IWG, 2016).

EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, reaffirms the importance of EJ and directs federal agencies to consider measures to address and prevent disproportionate and adverse environmental and health impacts on communities, including the cumulative impacts on pollution and other burdens such as climate change. Potential disproportionate impacts to EJ communities are caused by the presence and accumulation of other environmental impacts within the identified community. To determine if such impacts are disproportionately high and adverse, agencies should consider whether the impacts on health or the natural and physical environment are significant and significantly impact an EJ population; whether such effects have impacts on EJ communities that exceed or are likely to exceed those on the general population; and whether health or environmental effects occur in an EJ community affected by cumulative or multiple adverse exposures (CEQ, 1997).

The AOI for socioeconomics is limited to the Town of Southold, in which Plum Island and Orient Point are located, and where work under the Proposed Action would occur. As the Proposed Action is limited to abandonment of the existing cable and installation of a new undersea utility cable, no changes in personnel at PIADC would occur that would have the potential to affect socioeconomic conditions in a larger geographic area (i.e., in areas where personnel live). The AOI for EJ considerations consists of Census tract 1702.06, block group 3, which contains both Plum Island and Orient Point, is the area where impacts from the Proposed Action would be most directly felt, and is where communities may receive a disproportionate share of those impacts.

3.3.1 Affected Environment

Socioeconomics: Population trends are presented in **Table 5**. In addition to data for the Town of Southold, **Table 5** also includes data for Suffolk County, NY, in which the Town of Southold is located; and New York State for comparative purposes and to demonstrate larger population trends in the region. Population in the region has been increasing, with the population in the AOI (i.e., Town of Southold) growing at a rapid rate and far outpacing that of Suffolk County and New York. This is likely due in part to permanent occupation of summer homes following the Coronavirus pandemic (Gannon, 2021).

Table 5. Population in the Socioeconomic AOI

Location	2010 Population	2021 Population	Percent Change (%)
Town of Southold, NY[1]	5,780	6,700	13.73
Suffolk County, NY	1,482,548	1,522,998	2.66
New York	19,229,752	20,114,745	4.40

Source: (US Census Bureau, 2010; US Census Bureau, 2021e)

As shown in **Table 6**, over 90 percent of the population over 16 years of age is employed within the civilian labor force in the AOI and in the comparative geographies of Suffolk County and New York State. The employment rate is the lowest in the AOI, which subsequently has the highest unemployment rate; however, these rates are still comparable with Suffolk County and New York State. The same industry sector is the largest for each geography, but government and scientific and research jobs at PIADC are not included within this sector.

No community services, such as schools, hospitals, or emergency response services are located within 3 miles of the Proposed Action area. A small residential area is located outside the Orient Point County Park boundaries, as well as a few commercial services, including a restaurant and the Cross Sound Ferry.

Table 6. Labor Force and Employment in the Socioeconomic AOI

Location	Total Number in Civilian Labor Force	Employment Rate (%)[2]	Unemployment Rate (%)	Largest Industry Sector	Government Workers (%)
Town of Southold, NY[1]	2,950	92.5	7.5	Educational services, and health care, and social assistance	17.8
Suffolk County, NY	815,851	95.1	4.8	Educational services, and health care, and social assistance	17.5

Location	Total Number in Civilian Labor Force	Employment Rate (%)[2]	Unemployment Rate (%)	Largest Industry Sector	Government Workers (%)
New York	10,331,727	93.5	6.2	Educational services, and health care, and social assistance	14.9

1. The AOI is limited to the Town of Southold.
2. The employment rate is based on the percent of employed people within the civilian labor force. This total is based on people 16 years of age and older and does not include those who are part of the Armed Forces.

Source: (US Census Bureau, 2021d)

Environmental Justice: Plum Island is uninhabited due to its exclusive use as a DHS S&T research facility. It is, however, included within the same Census block group as Orient Point and other neighborhoods on that peninsula. In addition, due to the geographic location of Plum Island within Long Island Sound, no communities are located within a 2-mile radius. Small neighborhoods are located west of Orient Point on the same peninsula, but Orient Point is immediately surrounded by the Orient Point County Park and Long Island Sound. Minority population and income characteristics of the EJ AOI are presented in **Table 7**, along with data for the Town of Southold and Suffolk County, for comparative purposes.

Table 7. Minority Population and Income Characteristics of the EJ AOI

Location	Total Population	Non-Hispanic White Alone (%)	Minority Population (%)[1]	Low-Income Population (%)[2]
Census Tract 1702.06, Block Group 3	1,037	94.4	5.6	7.5
Town of Southold, NY	6,700	82.9	17.1	6.5
Suffolk County, NY	1,522,998	65.2	34.8	6.6

1. Minority population includes the following non-white races: Black or African-American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, Some Other Race, and Two or More Races. It also incorporates the population of Hispanic or Latino ethnicity.
2. In accordance with CEQ guidance, low-income population identifies the population living below annual poverty thresholds.

Source: (US Census Bureau, 2021a; 2021b; 2021c)

In accordance with the CEQ EJ guidance, the minority population within the AOI does not exceed 50 percent, and while some low-income populations have been identified, the rate is comparable to those of the Town of Southold and Suffolk County. In addition to minority and low-income population data, the CEQ has developed a Climate and Economic Justice Screening Tool (CEJST) to identify Census tracts that are considered overburdened and underserved based on a combination of burden and socioeconomic thresholds. Census tract 1702.06 is not considered disadvantaged for any burden category according to the CEJST,

although it does exceed the threshold for Formerly Used Defense Sites (CEQ, 2022). This is likely attributed to the inclusion of Fishers Island within Census tract 1702.06, an island located approximately 12 miles northeast of Orient Point, which previously housed a U.S. Naval installation.

3.3.2 Environmental Consequences

A significant adverse socioeconomic impact would occur if there were substantial changes to employment, population, or housing availability in nearby communities; or if EJ communities could be disproportionately adversely affected.

Due to the absence of minority and low-income populations, and since the Census tract containing the Proposed Action area has not been identified as overburdened, the EJ AOI is not considered an EJ community of concern, and there would be no potential for disproportionate adverse impacts within the AOI. Therefore, EJ is dismissed from further analysis.

3.3.2.1 Preferred Alternative

Socioeconomics: Installation of the new undersea utility cable would require construction/utility work at Plum Island and at Orient Point, specifically at the cable vault within Orient Point County Park, resulting in negligible, temporary economic benefits for local contractors. In the long-term, the number of employed personnel at PIADC, or employment opportunities within the region, are not anticipated to change as a result of the Proposed Action. Therefore, housing availability within the AOI is not anticipated to change since the Proposed Action would not result in migration of people to or from the AOI, nor displacement of nearby residents.

Public community services, such as schools and emergency services, are located outside of the Proposed Action area and would not be impacted. In-water work to place the cable may have a minor effect on maritime routes, such as the Cross Sound Ferry from Orient Point to New London, CT, but there would be no waterway closures. The Proposed Action would have a *short-term, negligible beneficial impact* and *no long-term impact* on socioeconomic conditions in the AOI.

3.3.2.2 No Action Alternative

Under the No Action Alternative, the proposed installation of an undersea utility cable from Orient Point to PIADC would not occur, and there would be *no impact* to the socioeconomics conditions.

3.4 Recreation

This section describes existing recreational resources within or adjacent to the Proposed Action area and evaluates impacts of the Proposed Action on recreational resources. Recreational resources include national, state, and local parks, beaches, trails, and associated amenities that

could potentially be affected by the Proposed Action. Factors to be considered include changes in the demand for, or availability or quality of, the recreational resources potentially affected by the Proposed Action. The AOI for recreational resources includes areas within or adjacent to the Proposed Action area.

3.4.1 Affected Environment

The recreational resources within the Proposed Action area primarily consist of Orient Point County Park and the waters around Plum Island and the Orient Point facility, both of which are currently accessible to the general public. Plum Island is not accessible to the public and contains no recreational resources.

Orient Point County Park is located on the eastern tip of the north fork of Long Island. Open from dawn until dusk, the park is accessible to vehicles via Point Road with hiker-specific parking located immediately inside the front entrance, adjacent to the Orient Point Ferry Terminal. Rules and regulations regarding the use of motor vehicles on Suffolk County beaches can be found on the Suffolk County Parks Department website (Suffolk County Parks, 2018a). This small waterfront park, adjacent to Long Island Sound, offers opportunities for recreational activities such as fishing, cycling, hiking, and picnicking (Suffolk County Parks, 2018b). Visitors to the park can also view the Orient Point Lighthouse that sits on a raised iron platform in the middle of Plum Gut. The lighthouse was listed on the National Register of Historic Places (NRHP) in 2007.

Plum Gut itself is also a source of recreational activities, including boating and fishing. From the numerous marinas located within 10 miles of the Proposed Action area, boat traffic is considered substantial as visitors pass through daily either for recreational boating, diving, or sport fishing.

3.4.2 Environmental Consequences

A significant adverse impact on recreation would occur if cable replacement activities permanently interfered with established recreational opportunities.

3.4.2.1 Preferred Alternative

The waters around Plum Island and the Orient Point facility, as well as Orient Point County Park, are currently accessible to the general public. Short-term restrictions on access to recreational resources would occur within the immediate vicinity of construction activities (i.e., trenching activities in Orient Point County Park and cable-laying within Plum Gut) to ensure the safety of the general public.

Under the Preferred Alternative, public access and recreational activities such as hiking, cycling, and picnicking within or adjacent to the landing site at Orient Point, where cable replacement activities would be occurring, would be temporarily restricted (four to six weeks for onshore and in-water trenching activities). However, this impact on recreational availability is anticipated to be negligible as activities relating to the Preferred Alternative would all occur

within a very small portion of the available beachfront within Orient Point County Park. Likewise, there would be no impact on the quality or availability of hiking or natural trails as all construction equipment would be transported to and from the landing site via existing access roads (e.g., Point Road).

Within the vicinity of cable-laying activities in Plum Gut, a suitable buffer zone around the cable-laying operation would be enforced for the up to seven days during which this activity is anticipated to occur. However, this impact would be negligible in the context of Plum Gut as other vessel traffic would be expected to easily avoid or maneuver around the buffer zone. Overall, there would be no effect on maritime recreational opportunities.

Overall, the Preferred Alternative would have no effect on the demand for recreational resources. The quality of recreational resources may slightly decrease, primarily due to potential noise disturbance (see **Section 3.2**), for the Preferred Alternative duration, but would return to existing conditions following the completion of cable replacement activities. Any limitations or restrictions to recreational activities would not exceed four to six weeks in duration; therefore, there would be *short-term, less-than-significant impacts* on recreational resources.

Following completion of the Preferred Alternative, recreational access within the Orient Point County Park and Plum Gut would be restored to existing conditions. Therefore, the Preferred Alternative would have *no long-term or ongoing impacts* to recreation in the AOI.

3.4.2.2 No Action Alternative

Under the No-Action Alternative, no cable replacement activities would occur, and the existing utility cables would remain in danger of failing. There would be *no impacts* to the recreational resources located at Orient Point County Park or within Plum Gut as there would be no restrictions on recreational activities and no change in the number of visitors or boat traffic.

3.5 Air Quality and Greenhouse Gases

The Clean Air Act (CAA), as amended, requires the U.S. Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. NAAQS are provided for six principal pollutants called "criteria pollutants" (as listed under Section 108 of the CAA): carbon monoxide (CO); lead; nitrogen dioxide; ozone (O_3); particulate matter (PM), divided into two size classes of 1) aerodynamic size less than or equal to 10 micrometers (PM_{10}), and 2) aerodynamic size less than or equal to 2.5 micrometers ($PM_{2.5}$); and sulfur dioxide (SO_2). Ambient (i.e., outdoor) air quality in an area can be characterized in terms of whether it complies with the primary and secondary NAAQS.

The U.S. EPA and state and local agencies have established a network of ambient air quality monitoring stations to measure concentrations of criteria pollutants across the U.S. The data are then averaged over a specific time period and used by regulatory agencies to determine

compliance with the NAAQS and to determine if an area is in attainment (criteria pollutant concentrations are below the NAAQS), nonattainment (criteria pollutant concentrations exceed the NAAQS), or maintenance (area was formerly nonattainment and is currently in attainment).

The General Conformity Rule (GCR) (40 CFR Part 51, Subpart W) requires federal agencies to prepare written Conformity Determinations for federal actions in nonattainment and maintenance areas to demonstrate that their actions will not cause or contribute to violations of the NAAQS, except when the action is covered under the Transportation Conformity Rule or when the action is exempt because the total increase in emissions is insignificant, or *de minimis*. The AOI for ambient air quality is Suffolk County, NY, which is considered nonattainment or maintenance for one or more NAAQS. Since the Proposed Action is not a transportation project, only the GCR applies.

GHGs occur in the atmosphere both naturally and as a result of human activities, such as the burning of fossil fuels. GHGs are made up of water vapor, carbon dioxide, nitrous oxide, methane, ozone, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs are regulated under Section 202 of the CAA. Carbon Dioxide (CO_2) is the primary GHG emitted during fossil-fuel combustion, while smaller amounts of methane and nitrous oxide are also emitted. Each GHG is assigned a global warming potential (GWP). The GWP is the ability of a gas or aerosol to trap heat in the atmosphere. The GWP rating system is standardized to CO_2, which has a value of one. The equivalent CO_2 (CO_2e) rate is calculated by multiplying the emissions of each GHG by its GWP and adding the results together to produce a single, combined emissions rate representing all GHGs. This EA considers CO_2e as the representative GHG emission.

The AOI for air quality is Suffolk County, NY.

3.5.1 Affected Environment

3.5.1.1 Ambient Air Quality

The primary regulatory authority for air quality in New York is NYSDEC. Suffolk County is in attainment for all criteria pollutants except for O_3 and $PM_{2.5}$. Suffolk County is designated as a serious nonattainment area for O_3 and a maintenance area for $PM_{2.5}$ (USEPA, 2022). Therefore, a GCR applicability analysis is required for this Proposed Action. Because Suffolk County is located in a serious O_3 nonattainment area, the *de minimis* level is 50 tons per year for the O_3 precursors, nitrogen oxides (NO_x) and volatile organic compounds (VOC). The *de minimis* level for $PM_{2.5}$ is 100 tons per year since Suffolk County is located in a $PM_{2.5}$ maintenance area (40 CFR § 93.153(b)(1)).

Sensitive air quality receptors in the AOI include the Orient Point County Park and a single residence located approximately 200 feet south of the Proposed Action area on Orient Point.

3.5.1.2 Greenhouse Gases

In 2009, New York State EO 24, *Establishing a Goal to Reduce Greenhouse Gas Emissions Eighty Percent by the Year 2050 and Preparing a Climate Action Plan*, set a goal to reduce GHG emissions in the state by 80 percent below 1990 emission rates by 2050. The EO required the State to prepare a climate action plan to assess how all economic sectors can reduce GHG emissions and adapt to climate change. The 2019 Climate Leadership and Community Protection Act additionally requires New York to reduce economy-wide GHG emissions 40 percent by 2030 and no less than 85 percent by 2050 from 1990 levels.

In 2021, EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, directed the federal government to reduce GHG emissions, bolster resilience to the impacts of climate change, and immediately commence work to confront the climate crisis using the best science in federal decision-making. EO 13990 further created the Working Group on the Social Cost of Greenhouse Gases, tasked with developing methods to account as accurately as possible for the global damages of GHG emissions in financial terms; social cost of GHGs is discussed further in **Section 3.6**.

3.5.2 Environmental Consequences

This section identifies and discloses potential air quality impacts from criteria pollutant and GHG emissions associated with the Proposed Action. Significant impacts on ambient air quality would occur if there were a change in the attainment status with respect to the NAAQS, or if emissions exceed regulatory thresholds. Because the Proposed Action area is in serious nonattainment for O_3 and maintenance for $PM_{2.5}$, a General Conformity Determination would need to be prepared if the Proposed Action would result in an increase of 50 tons per year or more of NO_x or VOCs, or 100 tons per year or more of $PM_{2.5}$.

No significance threshold for GHG emissions and climate change has been established. As discussed further in **Section 3.6**, the change in climate conditions is a global effect, and the Proposed Action is unlikely to have a measurable effect on climate change.

3.5.2.1 Preferred Alternative

Construction emissions would result from operation of non-road equipment (particularly fuel-burning combustion equipment), on-road vehicles, and in-water vessels. As previously stated, the GCR applicability analysis is required for the Preferred Alternative. Pursuant to the GCR, all reasonably foreseeable emissions (both direct and indirect) associated with the implementation of the Proposed Action were quantified and compared to the applicable annual *de minimis* levels (**Table 8**). The total construction emissions show no exceedance of the applicable *de minimus* criteria of 50 tons per year (tpy) for NO_x and VOC and 100 tpy of $PM_{2.5}$. Therefore, the Preferred Alternative would not require a formal General Conformity determination.

Table 8 provides emissions estimates for criteria pollutants and GHGs from all proposed construction activities. Additionally, fugitive dust generation would occur from land disturbance, which would be limited due to the small scale of excavation (i.e., a narrow-bucket Bobcat, backhoe, or similar piece of equipment trenching up to 500 feet).

Table 8: Total Emissions (tons) Associated with Construction of the Preferred Alternative

Source	VOC	NO_x	CO	$PM_{2.5}$	PM_{10}	SO_2	CO_2	CO_2e
Equipment	0.03	0.41	0.13	0.02	0.02	0.00	119.58	119.81
Vehicle	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38
Fugitive Dust	-	-	-	0.01	0.05	-	-	-
Vessel	0.13	2.50	0.41	0.06	0.07	0.00	300.88	305.36
Total	**0.16**	**2.91**	**0.54**	**0.09**	**0.14**	**0.00**	**420.84**	**425.55**

Following the construction activities, the new cable would require minimal ongoing operational and maintenance efforts resulting in essentially no change to overall criteria pollutant and GHG emissions. No new emissions sources would be established.

Based on the analysis results described above, the Preferred Alternative would have minimal temporary air quality impacts during the construction period and no adverse impacts during operation. Therefore, both the short-term or long-term impacts on air quality and climate change are expected to be *less-than-significant*.

3.5.2.2 No Action Alternative

Under the No Action Alternative, the proposed installation of an undersea utility cable from Orient Point to PIADC would not occur, and there would be *no impact* to the air quality environment.

3.6 Climate Change

Climate change refers to a general transformation in the average climate conditions of the earth. Scientists have identified human activity that generates GHG emissions as a significant contributor to climate change. GHGs are discussed in detail in **Section 3.5**. This section summarizes the observed and predicted changes in the climate of New York in terms of temperature on land and sea, precipitation, sea level rise, storms, erosion, and ocean and coastal acidification. The AOI for climate change includes the Orient Point and Plum Island facilities, as well as Plum Gut and Long Island Sound.

New York State has undertaken several climate initiatives, including the 2014 Community Risk and Resiliency Act (CRRA), amended by the 2019 Climate Leadership and Community

Protection Act (CLCPA), which requires consideration of future physical risks associated with climate change in permits issued for major projects. It also authorizes NYSDEC to require mitigation of climate risks to public infrastructure, natural resources, and more. Other initiatives include "Climate Smart NY" 2015, "Resilient NY" 2018, and the Climate Smart Communities Program.

Additionally, EO 14008, *Tackling the Climate Crisis at Home and Abroad*, requires climate considerations to be an essential element of U.S. foreign policy and national security. Under EO 14008, the federal government is directed to drive the assessment, disclosure, and mitigation of climate pollution and climate-related risks in all economic sectors, as well as to facilitate the organization and deployment of a government-wide approach to combat the climate crisis, facilitate planning and implementation of key federal actions to reduce climate pollution, and increase resilience to the impacts of climate change.

In January 2023, the CEQ published, "National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change." This guidance instructs federal agencies to consider in their NEPA reviews: (1) the potential effects of a proposed action on climate change, including by assessing both GHG emissions and reductions from the proposed action; and (2) the effects of climate change on a proposed action and its environmental impacts. It also recommends determining the social cost of GHG emissions from a proposed action where feasible as a means of comparing the GHG impacts of the alternatives. The "social cost of GHG" is an estimate of the monetized damages associated with incremental increases in GHG emissions, such as reduced agricultural productivity, human health effects, property damage from increased flood risk, and the value of ecosystem services (CEQ, 2023). Due to the universal nature of this issue, the AOI for climate change is global.

3.6.1 Affected Environment

The climate of Suffolk County is described as warm-summer humid continental. An average of 51.2 inches of annual precipitation is evenly distributed throughout the year, with July as the driest month (3.2 inches average precipitation) and October as the wettest month (5.6 inches average precipitation). The average annual temperature is 46.9 degrees Fahrenheit (°F). July is the warmest month and January is the coldest month, with average temperatures of 69.2°F and 23.1°F, respectively (Climate Data, 2022).

Projections for shifts associated with climate change, as described below, are mostly sourced from the NY ClimAid Report (Rosenzweig, et al., 2011), its 2014 update (Horton, et al., 2014), and NYSDEC's overview of climate change in New York (Seggos, 2021).

Temperature: Since 1900, the temperature of New York has warmed, with an acceleration in warming since 1970, and temperatures are projected to continue climbing (Horton, et al., 2014; Rosenzweig, et al., 2011). Extreme temperatures, such as heatwaves, have increased and are

expected to continue to increase over the century. Periods of extreme cold could also occur; however, this is harder to predict (Cohen, et al., 2014).

Precipitation: Over the past century, most regions of New York have experienced an increase in average annual precipitation, while variability in mean annual precipitation has also increased (Horton, et al., 2014). This trend is expected to continue, and monthly precipitation in the Northeast is expected to increase by 1 inch for the period between December through April (IPCC, 2019).

Ocean Temperature: Along the Northeast Continental Shelf, ocean and coastal temperatures are driven by the position of the Gulf Stream, water from the Labrador Current, and background warming of the oceans. These temperatures have increased and the trend is projected to continue, with the Northeast warming faster than other parts of the world (Alexander, et al., 2018). The coastal warming trends have been strongest during the summer months, and the duration of summer-like sea surface temperatures has expanded (Dupigny-Giroux, et al., 2018).

Sea Level Rise: Sea level rise is a directly observable effect of climate change that can result in flooding during high tides, permanent inundation, and deeper and more extensive flooding during coastal storm events. Observed sea level in New York has risen by more than 1 foot since 1900 (Horton, et al., 2014). NYSDEC anticipates sea level along the Coast of Long Island to rise 8 to 30 inches between the 2020s and 2050s (NYSDEC, 2014).

Coastal Storms: The frequency, severity, and duration of tropical cyclones, nor'easters, and other storm events are predicted to increase, though projections are difficult to forecast over long periods (Horton & Liu, 2014). Any increase in frequency or intensity could further drive impacts, such as from sea level rise and warming, which also feed into storm processes.

Coastal Erosion: As sea level rise and storms increase, they may drive coastal erosion. As water nearshore gets deeper, the wave energy can increase, leading to erosion greater than from beach inundation alone. In areas of Long Island not influenced by inlets and coastal engineering, there could be 9 feet of erosion for every inch of sea level rise (Leatherman, Zhang, & Douglas, 2011).

Ocean and Coastal Acidification: Increasing atmospheric CO_2 from human actions can be absorbed by ocean and coastal waters (Sabine, et al., 2004). The CO_2 that is absorbed impacts water chemistry and can impact any species that depends on calcification for its growth, development, or survival, which can impact the health of marine ecosystems and food webs as well as commercial fishing (Talmage & Gobler, 2009). Continued rising emissions predictions will increase the rate of acidification, and when compounded with species thermal tolerances and rising ocean temperatures, may further impact ocean and coastal species.

3.6.2 Environmental Consequences

A significant adverse climate change impact would occur if the Proposed Action increases the vulnerability of the Proposed Action area, or nearby properties, to the effects of climate change; or if the Proposed Action were to not adequately mitigate potential climate change impacts on the project that could result in project failure.

3.6.2.1 Preferred Alternative

As discussed in **Section 3.5.2.1**, construction of the Preferred Alternative would involve operation of non-road equipment, on-road vehicles, and in-water vessels, which would produce approximately 426 tons of CO_2e in 2024 (**Table 8**). For comparison, this is equivalent to about 86 gasoline-powered vehicles being driven for one year (USEPA, 2023). Because the change in climate conditions caused by GHGs analyzed in this EA is a global effect, the analysis and disclosure of localized incremental emissions changes are unlikely to have a measurable effect on climate change. However, the monetized impact of these GHG emissions, in terms of the social cost, would be about $21,255 (using a 3% discount rate) (IWG, 2021). Besides GHG emissions during construction, installation of the proposed undersea cable would have no impact on the effects of climate change, or on the vulnerability or resiliency of the Proposed Action area to the effects of climate change.

The Preferred Alternative includes installing a new utility cable in part underground and in part at the bottom of Plum Gut. The undersea cable would be designed according to industry standard to be able to withstand these extreme conditions. Additionally, the fact that it would be buried and/or deep underwater would insulate it from potential weather hazards, such as severe storms. Overall, the proposed cable would not be vulnerable to changes in temperature, precipitation, ocean temperature or acidification, sea level rise, or coastal storms. Should the shorelines of Orient Point or Plum Island experience substantial erosion in the future, the cable may be at risk of being exposed. However, DHS S&T monitors the utility vaults and onshore cable routes in these locations routinely and would ensure that proper maintenance is conducted.

Overall, the Preferred Alternative would have *negligible adverse effects* on climate change due to GHG emissions during construction, and would *not be adversely affected* by climate change over the long term.

3.6.2.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be implemented. There would be no new GHG emissions or long-term vulnerabilities to climate change.

3.7 Water Resources

Water resources analyzed in this EA include surface water (including stormwater), wetlands, floodplains, groundwater, and coastal resources. Surface water consists of lakes, rivers, and streams, and bays. Wetlands are areas that are inundated or saturated by surface or groundwater

at a frequency and duration sufficient to support, and under normal conditions do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (USACE, 1987). Floodplains are belts of low, level ground on one or both sides of a stream channel and are subject to either periodic or infrequent inundation by flood water. A 100-year floodplain has a one percent chance of inundation in any given year. Groundwater can be defined as subsurface water resources that are interlaid in layers of rock and soil and recharged by surface water seepage. Coastal resources are protected by the federal Coastal Zone Management Act of 1972, which enables states and territories to implement federally approved coastal programs to protect coastal areas in conjunction with environmental, economic, and human health.

The AOI for water resources includes surface waters, wetlands, watersheds, groundwater, and coastal zones within or near proposed cable replacement activities on Plum Island and Orient Point.

3.7.1 Affected Environment

Surface Water: Plum Island and Orient Point are surrounded by Long Island Sound, a tidal estuary located between Long Island, NY, and Connecticut, and opening to the Atlantic Ocean to the east. Long Island Sound is a "water of the United States" (WOUS). The term WOUS has broad meaning under the CWA and incorporates deep water aquatic habitats and special aquatic habitats (including wetlands). WOUS are protected under Section 404 of the CWA, which is administered by the USACE. In addition, Section 401 of the CWA gives New York State the authority to regulate, through the State water quality certification program, proposed federally permitted activities that may result in a discharge to water bodies. The NYSDEC is responsible for issuing Section 401 Water Quality Certification in New York State. No streams are present on Plum Island or in the vicinity of the Orient Point facility (USFWS, 2022a). Surface water runoff from the island is minimal, as most soils are described as well drained (see **Section 3.12**).

Plum Gut is an area of open water and turbulent tidal exchange separating Long Island Sound and Gardiners Bay. Given this exchange, surface water is frequently turned over.

Section 303(d) of the CWA requires states and territories to identify and list waters which do not meet water quality standards for specified pollutants or substances. Waters not meeting the established thresholds are considered to be impaired, and agencies are required to develop total maximum daily loads (TMDL) for the applicable pollutants to bring the listed water into compliance. The surface waters of Plum Gut are not listed or proposed to be listed as impaired (USEPA, 2020). However, both NYSDEC and the Connecticut Department of Environmental Protection have listed Long Island Sound, the body of water adjacent to Plum Gut to the northwest, as impaired due to low dissolved oxygen. A TMDL addressing nitrogen pollution in Long Island Sound was established in 2000 (NYSDEC & CDEP, 2000). Sanitary sewage on Plum Island is treated on the on-Island Wastewater Treatment Plant and discharged into Long Island Sound in accordance with the State Pollutant Discharge Elimination System

operating and discharge permits. Sanitary sewage at the Orient Point facility is stored in a cesspool and pumped on a routine basis.

Wetlands: According to the USFWS's National Wetlands Inventory (NWI), Plum Island contains approximately 31 acres of freshwater wetlands, primarily located in the south-central portion of the island. These wetlands include a mixture of freshwater emergent wetlands, freshwater forested/shrub wetlands, and freshwater ponds. Approximately 43 acres of estuarine and marine wetlands are dispersed along the entire Plum Island coastline (USFWS, 2022a).

The NWI shows the Proposed Action area at both Orient Point and Plum Island traverses estuarine and marine wetlands (USFWS, 2022a). However, review of the Proposed Action area indicates these areas consist of rocky and sandy beaches that lack soil and vegetation characteristics indicative of jurisdictional wetlands (**Photo 1** and **Photo 2**).

Floodplain: The Plum Island coastline and a large area of the southern portion of the island, including the wetland areas, utility vault and the Plum Island Ferry Dock area, are within the Federal Emergency Management Agency (FEMA) 100-year floodplain (**Figure 3**) (FEMA, 2009). Additionally, the entire Orient Point facility and Orient Point County Park, where the utility vault is located, are within the 100-year floodplain (FEMA, 2009).

Groundwater: Plum Island is underlain by an unconfined freshwater aquifer and groundwater occurs within the sand and gravel of the upper Pleistocene glacial deposits. Depth to groundwater is highly variable, occurring between 0 and 75 feet below ground surface (bgs) (ENTECH, 2002). The Plum Island aquifer is the source of potable water on Plum Island and is recharged solely from precipitation falling on the island's surface. On Orient Point, groundwater is drawn from the aquifer system underlying Long Island, where groundwater generally occurs between 0 and 190 feet bgs (USGS, 2017). The estimated depth to water on Plum Island where the Proposed Action would take place is between 20 and 30 feet, and at Orient Point may be less than 10 feet, though the aquifer does not extend to the northernmost portions where the Proposed Action would take place (USGS, 2016).

Coastal Resources: Plum Island and Orient Point are located within New York's designated coastal zone and must comply with the enforceable policies established under New York's Coastal Zone Management Program. A Federal Consistency Determination (FCD) is submitted to the New York State Department of State (NYSDS) for review and concurrence (NYSDS, 2022). In addition, the Town of Southold implements a Local Waterfront Revitalization Program, which guides development actions in the Town and provides the basis for the FCD for actions affecting the Town's coastal areas (Town of Southold, 2022).

Photo 1: Onshore Proposed Action Area at Orient Point

Photo 2: Onshore Proposed Action Area at Plum Island (Representative)

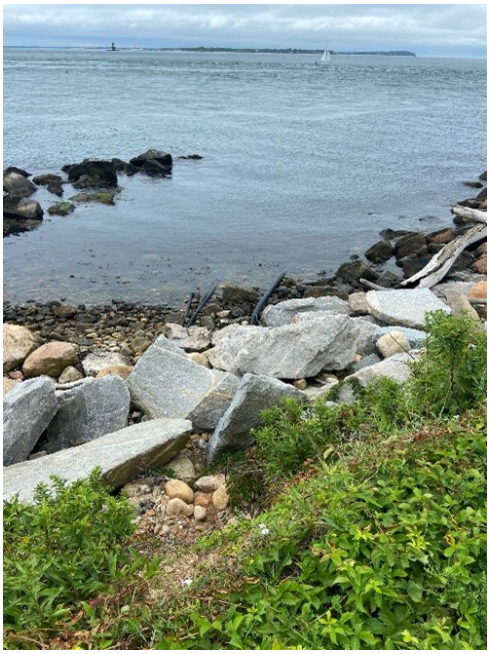
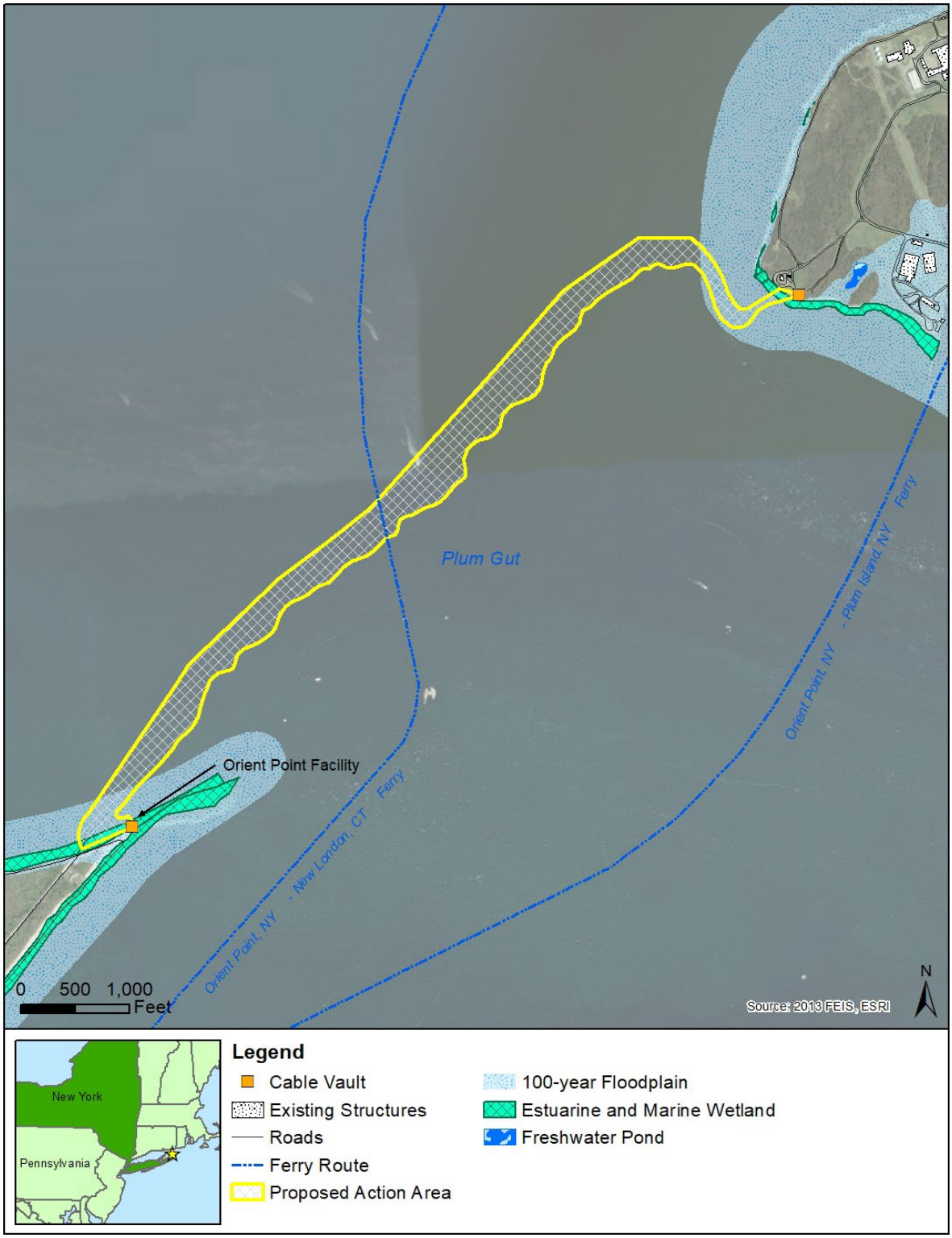


Figure 3: Water Resources at the Proposed Action Area



3.7.2 Environmental Consequences

A significant adverse water resources impact would occur if proposed activities result in an exceedance of established water quality thresholds; substantially increase the amount of stormwater entering surface waters; do not comply with wetland protection regulations and permits; substantially affect groundwater quantity or quality; induce flooding in occupied areas; or are inconsistent with applicable enforceable coastal zone policies.

3.7.2.1 Preferred Alternative

Surface Water: The potential effects on surface water resources associated with cable laying activities would be minor and temporary. Cable laying activities may cause increased turbidity as sediments are disturbed from the contact of the cable with the seafloor. Following installation of the cable, these sediments are anticipated to settle within a few hours, meaning water quality in the area would return to its original state.

The Preferred Alternative would involve minimal earthwork along the beaches at Orient Point and Plum Island, which may temporarily increase erosion and sedimentation into Plum Gut or Long Island Sound. DHS S&T would obtain a NPDES General Permit and adhere to the PIADC SWPPP, which has identified erosion controls and BMPs to manage stormwater discharges. In addition, the Proposed Action would have no potential to affect the existing Long Island Sound TMDL, as there are no substances with TMDLs being used in this project that could enter the Sound.

The Preferred Alternative has been designed to use trenching that may impact surface water quality by causing a temporary increase in suspended sediment in Plum Gut or Long Island Sound. Areas near the trench line could be subject to increased potential for turbidity, erosion, or sedimentation, though these impacts would likely be temporary. The cable laydown along the ocean floor may also disturb and suspend sediment, leading to decreased water clarity and light penetration in the water column; however, any resultant sediment plume would be expected to settle in a matter of hours. Prior to beginning construction of the Preferred Alternative, DHS S&T would coordinate with and obtain all necessary water resources permits from USACE and NYSDEC to ensure the requirements of applicable regulations (e.g., CWA Sections 401 and 404) are met. Impacts to the benthic environment and species, as well as to species present in the water column, from turbidity or sedimentation are addressed in **Section 3.9**. No other water quality parameters, such as dissolved oxygen, temperature, or pollutant levels, would be affected by the Proposed Action. Impacts associated with degradation of the undersea cables are anticipated to be negligible (**Section 3.8**).

Vessels moving along the surface of the water to lay cable could potentially contribute foreign or hazardous materials to the water surface, should a spill or accidental release occur. However, any impacts would be negligible in the context of existing boat traffic and temporary given the timeline of cable laying. Impacts to water resources caused by potential spills of oil or hazardous materials are addressed in **Section 3.8**. Therefore, the Preferred Alternative would

have a *short-term, less-than-significant adverse impact* on surface water. In the long-term, cable laying activities would not create any new impervious surfaces or modify the topography of Plum Island or Orient Point. Stormwater runoff would continue to percolate through the well-drained soils and there would be no new stormwater discharges to Plum Gut or Long Island Sound. Therefore, the Preferred Alternative would have *no long-term impacts* to surface water. Impacts on Plum Gut (open water) would be minimized to the greatest extent practicable. DHS S&T would follow all applicable permits and BMPs listed in **Table 2.**

Wetlands: Although NWI mapping suggests the presence of wetlands, based on review of the Proposed Action area, onshore areas predominately consist of sand and rock, lacking the characteristics indicative of jurisdictional wetlands (**Photo 1** and **Photo 2**). Therefore, the Preferred Alternative would not result in significant effects on wetlands that may potentially be present. DHS S&T is coordinating with USACE on a pre-jurisdictional wetland review to identify jurisdictional wetlands within the Proposed Action area. Prior to commencing construction of the Preferred Alternative, DHS S&T would coordinate with and obtain all necessary water resources permits from USACE and NYSDEC to ensure the requirements of applicable regulations (e.g., CWA Sections 401 and 404) are met. DHS S&T would also utilize the erosion control measures specified in the NPDES permit and the PIADC SWPPP to minimize indirect impacts to wetlands that may occur in or adjacent to the LOD. Therefore, the Preferred Alternative would have *short-term, less-than-significant adverse effects* on wetlands in the AOI. Once cable installation activities are complete, there would be *no ongoing or long-term adverse impacts* on wetlands in the AOI.

Floodplain: Components of the Preferred Alternative would involve work within the 100-year floodplain. Since the Preferred Alternative involves installation of a new undersea cable at the previously established utility vault locations, there is no practicable alternative for conducting work within the floodplain. Therefore, DHS S&T prepared an Early Notice of Proposed Activity in a Floodplain in accordance with EO 11988, *Floodplain Management*, which was included in the Early Scoping Notice for this EA. No comments regarding floodplains were received during the early scoping period (**Appendix A)**. The Preferred Alternative primarily involves ground disturbance on previously disturbed land from trenching. Minimal sand and gravel fill material would be used to refill the trenches and bury the cable. It would not alter or interfere with the long-term function of the 100-year floodplain or increase the potential for flooding in the Proposed Action area. Therefore, the Proposed Action would have *no short-term or long-term adverse effects* on the floodplain.

Groundwater: The Preferred Alternative would not involve withdrawals of groundwater or intentionally release or inject materials into groundwater resources or aquifers. Although the Proposed Action area is underlain by aquifers, the Proposed Action is not anticipated to intersect an aquifer during trenching activities given the anticipated shallow depth of trenching (i.e., 30 inches).

Potential impacts on groundwater may occur if petroleum products or other liquids associated with heavy equipment and trenching were accidentally spilled or released. Such a spill during construction could infiltrate the ground and reach unconfined aquifers and shallow groundwater areas. The greatest risk to groundwater resources due to accidental spills during construction would be associated with refueling or storage of fuels, lubricants, or oil. This impact would be minimized through adherence to BMPs, such as performing routine inspections of equipment and maintaining spill containment materials on-site. This is further discussed in **Section 3.8**. Overall, adverse impacts on groundwater under the Preferred Alternative would be *short-term and less-than-significant*. The Preferred Alternative would result in *no long-term adverse impacts* on groundwater in the AOI.

Coastal Resources: The Preferred Alternative would be consistent to the maximum extent practicable with New York's enforceable policies with compliance to applicable regulations and appropriate agency coordination. Implementation of the Preferred Alternative would avoid impacts on the coastal zone to the maximum extent practicable, resulting in *short-term, less-than-significant adverse impacts* on New York's coastal zone and coastal resources. DHS S&T submitted its FCD for implementation of the Preferred Alternative to the NYSDS on October 13, 2023. DHS S&T's FCD and associated correspondence is included in **Appendix D**.

3.7.2.2 No Action Alternative

Under the No Action Alternative, the proposed installation of an undersea utility cable from Orient Point to PIADC would not occur, and there would be *no impact* to water resources.

3.8 Hazardous and Toxic Materials and Waste

HTMW are generally defined as materials or substances that pose a risk to human health or the environment because of their physical, chemical, or infectious characteristics; quantity; concentration; or improper management (i.e., storage, disposal, treatment, or transport). Hazardous substances are identified by the Occupational Safety and Health Administration (OSHA) through federal laws and regulations. As defined in 40 CFR 261.3 and not otherwise excluded by 40 CFR 261.4, hazardous wastes are generally discarded solids or liquids that exhibit hazardous characteristics (i.e., ignitable, corrosive, reactive, or toxic) or those specifically identified within 40 CFR Part 261. Petroleum products are specifically exempted from 40 CFR Part 302 but are considered to be hazardous substances due to their physical characteristics and ability to impair natural resources. Non-hazardous solid waste is waste that is not hazardous in nature and typically includes items such as office and domestic waste, and recyclable materials (e.g., aluminum cans, paper, cardboard, glass, and plastic bottles). The Resource Conservation and Recovery Act of 1976 addresses the management of hazardous and non-hazardous municipal and industrial solid waste.

The AOI for HTMW includes areas within, or adjacent to, the Proposed Action area.

3.8.1 Affected Environment

No potential sources of contamination are anticipated at the Orient Point portion of the AOI within Orient Beach State Park. This section discusses potential sources of existing HTMW at Plum Island and from the abandonment in place of the undersea cable.

Original PIADC policy prohibited any removal of waste material from Plum Island. Non-combustible materials such as glass, metal, and construction waste were disposed of in designated Waste Management Areas (WMAs), while combustible materials were incinerated on Plum Island (DHS, 2018). Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) in the 1990s, efforts began on Plum Island to evaluate the potential environmental impacts from 49 areas of concern, which included 21 WMAs, 15 areas of potential concern (AOPCs), and 13 former U.S. Army structures historically used for storage and/or disposal of potentially harmful materials. While the investigation results indicated that Plum Island did not warrant listing on the National Priorities List and would not be regulated under CERCLA, USDA Agricultural Research Service continued using the "CERCLA Program" title for their voluntary characterization and remediation of these areas (ENTECH, 2002). Over the past three decades, DHS S&T has been working closely with the NYSDEC and Suffolk County Department of Health Services to evaluate, delineate, and remediate WMAs and AOPCs present on Plum Island, including removing buried waste, capping contaminated areas, and conducting groundwater and soil monitoring. To date, 10 sites of concern needing further investigation remain. These sites were previously used to stage construction and demolition materials and dispose of a variety of materials such as animal waste/bedding, non-burnable materials (i.e., insulation and construction/demolition debris), treated regulated medical waste, auto parts, scrap rubber, and iron. The nearest of these sites (WMA 02) is located approximately 1,000 feet north of the Proposed Action area on Plum Island. Additionally, subsurface oil remediation activities pursuant to Section 17-0303 of the New York Environmental Conservation Law and Section 176 of the New York Navigation Law are ongoing to remediate a petroleum spill that occurred in the PIADC Research Compound in 1996, approximately 0.5 mile north of the Proposed Action area (NYSDEC Spill Number 95-12713).

PIADC is part of the major oil storage facility program with over 400,000 gallons of petroleum products stored in Underground Storage Tanks and Aboveground Storage Tanks on the property. The nearest petroleum storage tank is located approximately 0.3 mile east of the Proposed Action area near the Plum Island harbor.

No HTMW or non-hazardous solid wastes are generated or stored in the Proposed Action area.

The existing undersea cable is made by Kerite and would be abandoned in place. The new undersea utility cable would be approximately 3.5 inches in diameter and weigh approximately 6.2 pounds per linear foot in saltwater. Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. The cables are three-conductor (3C) submarine cables with alternating current. The electromagnetic field of the 3C cable is almost neutralized at the

surface of the cable, and plastic is used instead of oil as stabilizing material to fill the hollow space (OSPAR, 2012). The cables have many insulating layers, but the outermost layer that comes in contact with the environment is made of multiple galvanized steel armor wires, each jacketed with high density polyethylene (HDPE). HDPE helps protect the undersea cable from corrosion that could be caused by salinity and temperature (Wang, et al., 2021). Kerite's insulated cables, when placed in all types of environments, have had no known failures due to insulation degradation, weakness, or age-related failure (USNRC, 2009). However, if deterioration or corrosion of the outer HDPE layer were to occur, for either the abandoned cable or the new cable, breakdown would occur similar to other plastics, resulting in nanoplastics (particles of less than 1 μm) in the marine environment (Ekvall, et al., 2022). These nanoplastics may be toxic to some species in certain concentrations; research on this general topic is still ongoing.

CICPs would also be installed at each landing site, extending approximately 100 feet within the surf zone (200 feet total). Cast iron corrosion occurs at a slow rate and is considered harmless for marine environments, due to the low quantities of waste leached from the cast iron (Peycheva, 2019).

3.8.2 Environmental Consequences

A significant adverse HTMW impact would occur if proposed activities would result in an exceedance of regulatory thresholds of the total amount of HTMW or solid waste generated; permanently increase the risk of contamination; or create a new or substantial human or environmental health risk (e.g., soil or groundwater contamination).

3.8.2.1 Preferred Alternative

The Preferred Alternative would have no potential to impact ongoing WMA/AOPC remediation activities or petroleum storage tanks on Plum Island, as none exist in the vicinity of the Proposed Action area. Similarly, there would be no impact on activities associated with the subsurface oil spill within the PIADC research compound, as this spill occurred 0.5 mile north of the Proposed Action area within the PIADC Research Compound.

Under the Preferred Alternative, burying of the new cable would be completed using trenching methods. DHS S&T anticipates using low-impact trenching methods, such as jetting or ploughing, although traditional trenching methods using an excavator/hydraulic dredge may be required. To minimize impacts, DHS S&T's contractor would implement BMPs, such as establishing containment structures for sediment removed and stored during trenching. Therefore, any adverse impacts associated with trenching would be *short-term and less-than-significant*.

Operation of heavy equipment and vehicles, including watercraft, would create the potential for discharge, spill, and contamination of commonly used products, such as diesel fuel, gasoline, oil, antifreeze, and lubricants. All hazardous materials or waste discovered, generated, or used during construction would be handled, containerized, and disposed of in

accordance with a SPCCP and applicable local, state, and federal regulations. The potential for an accidental spill or leak from vessels is negligible as the vessels would be undergoing normal operation for up to seven days, and would be refueled, as needed, in accordance with standard protocols at marine refueling stations. The potential for marine HTMW releases would be further minimized through applicable regulations and BMPs, including requiring vessels to be equipped with spill containment and spill response kits; having a Vessel Response Plan consistent with 33 CFR Part 155; and controlling the discharge of operational wastes. Overall, the Preferred Alternative would have the potential for *short-term, less-than-significant impacts* from accidental HTMW spills or releases.

Following construction, operation of the proposed undersea cable would involve no HTMW. Over time, HDPE would break down in a similar manner to other plastic products, releasing nanoplastics. However, the degradation rate is anticipated to be very slow, and any resulting nanoplastics would be negligible in the context of Long Island Sound. Corrosion of the CICPs or leaching of heavy metals is not anticipated; thus, the Proposed Action would have *negligible long-term impacts* on HTMW.

3.8.2.2 No Action Alternative

No hazardous wastes or toxic materials would be generated or potentially released with implementation of the No Action Alternative. Therefore, *no impacts* related to HTMW would occur.

3.9 Biological Resources

Biological resources addressed in this EA consist of vegetation, wildlife, and special status species. Special status species relevant to this EA are those protected under the federal ESA of 1973, Magnuson Stevens Fishery Conservation and Management Act of 1976 (MSA), MMPA of 1972, Bald and Golden Eagle Protection Act of 1940 (BGEPA), Migratory Bird Treaty Act of 1918 (MBTA), or under applicable state laws or regulations. The AOI for biological resources includes vegetation and wildlife occurring within the Proposed Action area.

3.9.1 Affected Environment

Despite its long history of human use, much of Plum Island remains undeveloped, providing biological resources that are regionally significant. The New York State Natural Heritage Program (NYSNHP) conducted terrestrial surveys of Plum Island in 2016 as part of a project to document the island's biodiversity. The resulting biodiversity report identified 25 separate natural communities and 187 species on the island (NYSNHP, 2016). Additionally, Plum Island has been designated a Long Island Stewardship Area due to its unique ecological value (Long Island Sound Study, 2022). Moreover, approximately 147 acres of sensitive habitat on Plum Island are protected by an environmental benefit project (EBP) undertaken by DHS and NYSDEC. Plum Island's biological resources are further discussed by type below.

Terrestrial Vegetation: The shoreline at both Plum Island and Orient Point is sparsely vegetated with herbaceous and shrub cover (**Photo 1** and **Photo 2**). Herbs such as the American sea rocket (*Calkile edentula*), seaside goldenrod (*Solidago sempervirens*), beach pea (*Lathyrus japonicus*), and the common evening primrose (*Oenothera biennis*), and shrubs such as bayberry (*Morella caroliniensis*) and dewberry (*Rubus flagellaris*) occur within the beach and bluff areas that make up the Proposed Action area (NYSNHP, 2016).

Invasive species found on Plum Island include tree of heaven (*Ailanthus altissima*), rugosa rose (*Rosa rugosa*), and common reed (*Phragmites australis*). As noted above, NYSNHP conducts surveys and makes management recommendations to improve the island's natural communities and limit the spread of invasive species (NYSNHP, 2016).

Terrestrial Wildlife: Plum Island provides regionally significant habitat that supports a high diversity of wildlife. Notably, Plum Island provides critical stopover habitat for migrating birds (NYSNHP, 2016). The most recent biodiversity survey, conducted by the NYNHP in 2015, identified over 200 species of birds, over 200 species of moths, 9 mammals, and 5 reptiles inhabiting Plum Island. Other wildlife occasionally observed on Plum Island include white-tailed deer (*Odocoileus virginianus*), raccoon (*Procyon lotor*), and eastern box turtle (*Terrapene carolina*). Raccoons were accidentally introduced to Plum Island in 1995 and are considered a pest species due to their negative impact on breeding birds. NYNHP has recommended full-scale eradication of raccoons on Plum Island (NYSNHP, 2016). Common wildlife at Orient Point include those typically present in a semi-suburban environment, such as white-tailed deer, groundhog (*Marmota monax*), herring gull (*Larus argentatus*), and red fox (*Vulpes vulpes*).

Terrestrial Special Status Species: DHS S&T queried the USFWS Information for Planning and Consultation (IPaC) database to identify federally listed species with the potential to occur in the Proposed Action area. IPaC identified four federally listed species that DHS S&T has considered in its effect analysis. Additionally, the monarch butterfly (*Danaus plexippus*), a federal candidate species known to occur on Plum Island, was added to the effect analysis (**Appendix E**). These species are further discussed in **Table 9**.

DHS S&T queried the NYSDEC Environmental Assessment Form (EAF) Mapper to obtain a list of state-threatened and endangered species, and species of special concern, with potential to occur in the Proposed Action area. The EAF Mapper identified 16 species, including 2 birds and 14 plants (NYSDEC, 2023a; NYSDEC, 2023b) (**Appendix F)**. DHS S&T also reviewed the NYSNHP's 2016 Plum Island Biodiversity Inventory, which identified eight additional state-listed species not listed on the EAF Mapper (NYSNHP, 2016). All state-listed species, including those identified by the EAF Mapper and by the 2016 Plum Island Biodiversity Inventory, are discussed in **Table 10**.

As previously discussed, Plum Island provides important habitat for birds protected under the MBTA, and Audubon New York regularly surveys Plum Island, surveying 16-20 times per year between 2011 and 2015 (NYSNHP, 2016). The diversity of bird species is highest in the

spring between April and May and in the fall between September and October with 157 and 146 species observed, respectively. Species diversity is slightly lower in the summer between June and August and in the winter between November and March with 126 and 129 species observed, respectively. The breeding season on Plum Island for migratory birds generally occurs between June and August (NYSNHP, 2016). Audubon has designated Orient Point and Plum Island as an Important Bird Area (IBA) (Audubon, 2022). An IBA is a distinct area that provides essential habitat for breeding, wintering, or migrating birds. The Orient Point and Plum Island IBA includes significant habitat for bird species, such as barrier beaches, wetlands, and maritime forests. Plum Island and Orient Point are known to provide breeding habitat for colonies of great egrets (*Ardea alba*), snowy egrets (*Egretta thula*), black-crowned night-herons (*Nycticorax nycticorax*), piping plover (*Charadrius melodus*), American oystercatchers (*Haematopus palliates*), herring gulls (*Larus argentatus*), great black-backed gulls (*Larus marinus*), and least terns (*Sternula antillarum*) (Audubon, 2022).

Historically, bald eagles (*Haliaeetus leucocephalus*), protected under the BGEPA, were rarely observed on Plum Island; however, DHS S&T staff have observed one bald eagle nest on the north point of the island near the former Fort Terry complex, over 2.5 miles from the Proposed Action area. Frequent sightings of bald eagles, though no nests, have occurred in the vicinity of the Plum Island harbor, approximately 0.3 mile from the Proposed Action area. Bald eagles are known to exhibit high nest fidelity and nesting territories are often used year after year (USFWS, 2007). Non-breeding eagles are typically social and establish communal roosts (areas where eagles gather and perch overnight). Communal roosts are typically positioned near major foraging areas (large bodies of water), which are isolated from human disturbance and contain sustainable substrate for roosting, protected from harsh weather, and have a clear movement corridor between the roost and primary foraging areas. Bald eagle nesting season can occur between January and March (CT DEEP, 2022). Bald eagles typically nest in mature trees. No known bald eagle nesting sites have been observed at Orient Point or in the vicinity (NYSNHP, 2016; The Center for Conservation Biology, 2022).

Table 9: Federal-listed Species with Potential to Occur at the Proposed Action Area

Species Common Name	Scientific Name	Federal Status	Habitat Description
Northern long-eared bat	*Myotis septentrionalis*	FE	This species overwinters in caves and mines and lives in forested habitat the remainder of the year. During the summer, this species roosts underneath bark, or in cavities or crevices of both live and dead trees. It has also been found roosting in structures such as barns and sheds (USFWS, 2022b). Northern long-eared bats (NLEB) have been found in every county of New York, although bat surveys conducted in 2015 did not identify any on Plum Island (NYSDEC, 2022; NYSNHP, 2016). However, these surveys did identify historic bunkers on Plum Island that have suitable characteristics for bat hibernacula, although none of the bunkers are within 0.25 mile of the Proposed Action area. While no NLEB were identified during bat surveys, due to the species' presence on nearby Long Island, they may travel to Plum Island for foraging (NYSNHP, 2016).
Piping plover	*Charadrius melodus*	FT	This species is found in coastal habitats, primarily on sandy beaches and tidal flats, typically nesting in open sandy areas near water (National Audubon Society, 2022a). Piping plover have been documented at Plum Island and confirmed breeding pairs have been observed. There is a known occurrence on the beach on the southeast shore of the island, between the months of April and October, and this species is commonly found between June and August (NYSNHP, 2016). This species is rarely seen in the Spring (April – May) and Fall (September - October), and no occurrences have been documented between November and March (NYSNHP, 2016).
Red knot	*Calidris canutus rufa*	FT	This species nests in inland tundra habitat near water in the summer and uses coastal mudflats and tidal shores as stopover habitat during migration (National Audubon Society, 2022b). Red knot has been observed on Plum Island between September and October, but this observation is considered an accidental occurrence, as it was recorded only once between 2011 and 2015 (NYSNHP, 2016).
Roseate tern	*Sterna dougallii dougallii*	FE	This species occurs in coastal environments, including salt bays and estuaries. Nests are usually found on sandy or rocky islands with some low plant cover and close to shallow waters for feeding (National Audubon Society, 2022c). Roseate terns have been documented on Plum Island (NYSNHP, 2016). This species occurs along most of the shoreline of Plum Island, but most commonly occurs in the northern tip of the island. It has been observed between the months of April and August. This species has not been observed on Plum Island between September and March (NYSNHP, 2016).

Species Common Name	Scientific Name	Federal Status	Habitat Description
Monarch butterfly	*Danaus plexippus*	C	This species is known to inhabit all of North and South America but have also spread to many other locations wherever milkweed and suitable temperatures exist. Monarchs in North America undergo long distance migration to their overwintering sites during the autumn months, and subsequently disperse during the springtime, breeding and laying eggs on host milkweed over several generations throughout the summer. For the eastern North American population, most monarchs overwinter in oyamel fir tree roosts located in mountainous regions in central Mexico (USFWS, 2023b; NWF, 2023) Both monarch butterflies and three species of milkweed were observed on Plum Island in a 2015 survey, with the host milkweed being most documented in July and August (NYSNHP, 2016).
Fin whale	*Balaenoptera physalus*	FE	Inhabits deep offshore waters in oceans around the world, commonly found north of 30º North latitude. Migratory pathway generally moves from northern latitudes for foraging, where there is high concentration areas of food, to southern latitudes for calving grounds. There is evidence of fin whales wintering in mid-shelf areas east of New Jersey and possible offshore calving areas. Year-round fin whales are in the mid-shelf area off the east end of Long Island. However, as the action area is not close to the shelf, fin whales are not likely to occur in the action area unless they are passing through (NOAA Fisheries, 2023a; GARFO, 2023).
North Atlantic right whale	*Eubalaena glacialis*	FE	Highly migratory whale that commonly inhabits the coastal waters of eastern North America and the Gulf of Mexico. This whale spends much of its time at or near the water surface. Migratory pathway to/from northern latitude foraging and southern calving grounds. May briefly utilize the action area as stopover habitat during migration (NOAA Fisheries, 2023d; GARFO, 2023).
Sea Turtles		See below for each species	In general, juveniles and adults migrate north in the spring as water temperatures warm, arriving in mid-Atlantic waters in May. As the waters cool in the fall, most sea turtles leave the area by the end of November.
Green sea turtle	*Chelonia mydas*	FT	Inhabits shallow waters inside reefs bays and inlets unless migrating. Commonly observed in lagoons and shoals with marine grass and algae. Hatchlings seek refuge and food in sargassum habitat. May be in shallower parts of action area where there is more abundance of food (USFWS, 2023; GARFO, 2023).
Kemp's ridley sea turtle	*Lepidochelys kempi*	FE	Inhabits nearshore muddy or sandy bottom waters less than 120 feet deep. Moves to deeper offshore waters as water temperature drops. May be in shallower parts of action area where there is more abundance of food (NOAA Fisheries, 2023b; GARFO, 2023).

Species Common Name	Scientific Name	Federal Status	Habitat Description
Leatherback sea turtle	*Dermochelys coriacea*	FE	Inhabits the tropical and temperate open oceans worldwide but typically feeds just offshore. Active in waters below 40º F, which is atypical for reptilian species. Likely to be further offshore (NOAA Fisheries, 2023c; GARFO, 2023).

Status: FT = Federally Threatened; FE = Federally Endangered; C = Federal Candidate Species
Source: (USFWS, 2023a) (GARFO, 2022) (GARFO, 2023)

Table 10: State-listed Species with Potential to Occur at the Proposed Action Area

Species Common Name	Scientific Name	State Status	Habitat Description
Bald eagle	*Haliaeetus leucocephalus*	ST	Historically, bald eagles were rarely seen on Plum Island; however, DHS S&T staff have observed an increase in sightings of bald eagles on the island, including a pair of bald eagles observed multiple times in the vicinity of the Plum Island harbor in July 2022. No bald eagle nesting sites have been observed at the Orient Point facility or in the vicinity (The Center for Conservation Biology, 2022; NYSNHP, 2016). One bald eagle nest has been observed by DHS S&T personnel on the north point of the island near the former Fort Terry complex. Bald eagles exhibit high nest fidelity and nesting territories are often used year after year. Bald eagles nest in large mature trees with clear view of shoreline foraging areas (USFWS, 2007).
Black tern	*Chlidonias niger*	SE	Black terns have been observed on Plum Island between September and October; however, this occurrence is considered accidental (NYSNHP, 2016).
Common tern	*Sterna hirundo*	ST	Common terns are found in a wide range of aquatic habitats and nesting typically occurs in colonies. Nests are built on bare ground or in areas with low vegetation (Audubon, 2023).This species is abundant on Plum Island from April through October (NYSNHP, 2016).
Least tern	*Sterna antillarum*	ST	Least terns are not typically observed on Plum Island, although they are sometimes spotted between June and August. Plum Island likely provides breeding habitat for this species, although breeding has not been confirmed (NYSNHP, 2016).

Species Common Name	Scientific Name	State Status	Habitat Description
Northern harrier	*Circus cyaneus*	ST	Northern harrier has been observed on Plum Island year-round, although occurrences are considered uncommon or rare. This species has historically been observed breeding in the meadows in the north central portion of the island and in the dunes to the south of the freshwater wetlands (NYSNHP, 2016).
Peregrine falcon	*Falco peregrines*	SE	Peregrine falcons are periodically observed on Plum Island (NYSNHP, 2016). No nesting habitat is present on Plum Island or Orient Point.
Piping plover	*Charadrius melodus*	SE	See **Table 9**.
Red knot	*Calidris canutus rufa*	ST	See **Table 9**.
Roseate tern	*Sterna dougalii*	SE	See **Table 9**.
Northern long-eared bat	*Myotis septentrionalis*	ST	See **Table 9**.
Annual saltmarsh aster	*Symphyotrichum subulatum var. subulatum*	ST	Annual saltmarsh aster occurs along the banks of salt-influences habitats, such as tidal channels/creeks, salt ponds, and wet brackish swales (NYNHP, 2008b). A 2015 survey on Plum Island identified a few of these species within ditches in the maritime dune community on the island (NYSNHP, 2016).

Species Common Name	Scientific Name	State Status	Habitat Description
Coastal fireweed	*Erechtites hieraciifolius var. megalocarpus*	SE	Coastal fireweed occurs on the upper edge of beaches in sand, gravel, and sometimes in small brackish marshes (NYNHP, 2012a). While this species has historically been observed on Plum Island, surveys in 2015 failed to identify this species (NYSNHP, 2016).
Cut-leaved water milfoil	*Myriophyllum pinnatum*	SE	This species is found along shores of small ponds, ditches, and large lakes. It is primarily threatened by saltwater intrusion during storm events (NYNHP, 2008a). This species has been observed on Plum Island (NYSNHP, 2016).
Dwarf umbrella sedge	*Fuirena pumila*	ST	This species is found on the coastal plain, typically within pond shores and low areas (Native Plant Trust, 2023b). This species has been observed on Plum Island (NYSNHP, 2016).
Grass-leaved Ladies' Tresses	*Spiranthes vernalis*	SE	Also known as “Spring Ladies' Tresses,” this species is found in dry to moist meadows, prairies, fields, along roadsides, and occasionally in bogs. This species has special status in much of the New England region (North American Orchid Conservation Center, 2023). This species is documented on Plum Island and its occurrence is one of the largest in the state (NYSNHP, 2016).
Great plains flat sedge	*Cyperus lupulinus ssp. lupulinus*	ST	Great plains flat sedge occurs in a variety of habitats, including open sandy beaches, pastures, and roadsides (NYNHP, 2008c). While this species has historically been observed on Plum Island, surveys in 2015 failed to identify this species (NYSNHP, 2016).
Many spiked flatsedge	*Cyperus polystachyos Rottb*	SE	This species is a perennial sedge occurring throughout Long Island in sandy pond shores, ditches, and wetlands between coastal dunes (Native Plant Trust, 2023a). This species is documented on Plum Island (NYSNHP, 2016).
Marsh straw sedge	*Carex hormathodes*	ST	Marsh straw sedge occurs in and adjacent to salt or brackish tidal marshes or in margins of wetlands and wet forest adjacent to the coast (NYNHP, 2006). While this species has historically been observed on Plum Island, surveys in 2015 failed to identify this species (NYSNHP, 2016).
Oakes’ evening primrose	*Oenothera oakesiana*	ST	Oakes’ evening primrose occurs in extremely low numbers within New York’s maritime dune communities. This species requires periodic disturbance to reduce competition with woody plants (NYNHP, 2011a). A 2015 survey on Plum Island identified three of these plants (NYSNHP, 2016).

Species Common Name	Scientific Name	State Status	Habitat Description
Reflexed flat sedge	*Carex retroflexa*	ST	This species occurs in open successional areas and open grasslands (NYNHP, 2022). This species has not been documented on Plum Island (NYSNHP, 2016).
Scotch lovage	*Ligusticum scothicum ssp. scothicum*	SE	Scotch lovage is typically found on stabilized dunes with low shrubs and on the edge of disturbed coastal forests (NYNHP, 2012b). While this species has historically been observed on Plum Island, surveys in 2015 failed to identify this species (NYSNHP, 2016).
Single-glumed spike rush	*Eleocharis uniglumis*	ST	This species is found in or near salty and brackish water, most commonly at the margin of fluctuating shorelines (NYNHP, 2008d). A 2015 survey on Plum Island identified this species (NYSNHP, 2016).
Velvet rosette grass	*Dichanthelium scoparium*	SE	Velvet rosette grass occurs in moist, sandy, and often disturbed areas (NYNHP, 2012c). While this species has historically been observed on Plum Island, surveys in 2015 failed to identify this species (NYSNHP, 2016).
Wild pink	*Silene caroliniana ssp. pensylvanica*	ST	Wild pink typically occurs in open grassy and shrubby areas along the edge of sandy trails, roads, and powerlines (NYNHP, 2011b). A 2015 survey on Plum Island identified this species along periodically mowed roadsides on Plum Island (NYSNHP, 2016).

Status: ST = State Threatened; SE = State Endangered

Source: (NYSDEC, 2023b; NYSDEC, 2023a; NYSNHP, 2016)

Aquatic Vegetation: Aquatic vegetation between Plum Island and Orient Point can be grouped by depth of habitat and substrate on which the vegetation grows. The benthic community of the Proposed Action area, where most of the vegetation is found, may be important habitat that provides a food source, nursery grounds, protective cover, or other purposes for species in the area. An investigation of Plum Island's subtidal marine habitats was conducted by the NYNHP and InnerSpace Scientific Diving in 2021 (NYNHP, 2022). Prominent vegetation identified in shallower habitats (nearshore areas off the coast of Plum Island) includes eelgrass (*Zostera marina*) in sand flats, typically in depths of 20 feet or less. Deeper habitats further offshore are dominated by algal species. Red algae (*Rhodophyta*) species were most diverse, with researchers finding up to 15 species, two of which were non-native species, often found alongside large rock substrate (>10 cm). There were three species of brown algae (*Ochrophyta*) found, including sugar kelp (*Saccharina latissimi*) which was often found in areas with boulders (>1 m), and two species of green algae (*Chlorophyta*) found, sea lettuce (*Ulva lactuca*) and the non-native dead-man's fingers (*Codium fragile*).

Aquatic Wildlife: The 2021 biodiversity survey of Plum Island's subtidal marine habitats also investigated aquatic wildlife in the nearshore areas in the vicinity of Plum Island (NYNHP, 2022). Surveys were conducted around the entirety of the island at depths of 10, 20, and 30 feet, with only one sampling site (N3) falling within the Proposed Action area; as survey location was noted for each species in the report, only those species found in the relevant sampling site are noted here. It should also be noted that this survey does not follow the path of the proposed cable, but is the best representative data available.

Species found in the relevant sample area included those which are typically found in water masses that are driven by surface currents. Aquatic wildlife observed in the vicinity of the Proposed Action area include lion's mane jellyfish (*Cyanea capillata*), small invertebrates, shellfish (including bay scallops), marine snails, and multiple types of crabs. It should be noted that the survey did not extensively search for infaunal species (those that live in the substrate such as clams and worms) and so these species are likely underrepresented in survey results. No mammals or fish were seen during the sampling in the relevant area (NYNHP, 2022).

Common aquatic life near Orient Point includes slipper shells and mussels, though there is not a biodiversity survey for this habitat as there is for Plum Island for which to confirm abundance and species presence. It is likely that this area is fairly similar in biodiversity composition to similar sites in the Long Island Sound and Peconic Bays. Plum Gut has been designated as a Significant Coastal Fish and Wildlife Habitat by the New York Department of State due to the high ecological value of the waterbody and the habitat it provides. Plum Gut has been classified for use as commercial shellfishing and recreational fishing, as it provides productive habitat for those species (Town of Southold, 2014). The Plum Gut area between Orient Point and Plum Island, near where the cable would be laid, is popular for sport fishermen and commonly caught species include porgies, black fish, blue fish, fluke, and striped bass. The Connecticut Department of Energy and Environmental Protection (CT DEEP) has conducted the Long

Island Sound Trawl Survey throughout the Sound to track the size of fish populations over the past 30 years. Though the survey does not go through Plum Gut, from 1984 to 2021 112 finfish species have been identified by the survey (CT DEEP, 2021).

Aquatic Special Status Species: DHS S&T queried the National Oceanic and Atmospheric Administration (NOAA) NMFS Greater Atlantic Region Fisheries Office (GARFO) ESA Section 7 Mapper (GARFO, 2022) to identify federally listed marine species with potential to occur near the Proposed Action area. Two species of Atlantic large whales, four species of sea turtles, and the Atlantic sturgeon (*Acipenser oxyrhynchus oxyrhynchus*) were identified as potentially occurring in the waters near the Proposed Action area. These species are further discussed in **Table 9.**

Long Island Sound and the area around Orient Point and Plum Island are home to marine mammals protected under the MMPA. The southeast shore of Plum Island, approximately one mile or more from the Proposed Action area, is one of the largest winter haul-out sites in New York State. Harbor seals (*Phoca vitulina*) are most observed, while small numbers of gray seals (*Halichoerus grypus*) also occur (NYSNHP, 2016). The Proposed Action area is not commonly used as a seal haul-out site. Other species covered by the MMPA are transitory in the area or were already noted as ESA-listed species.

Long Island Sound and the area around Orient Point and Plum Island is identified as Essential Fish Habitat (EFH) in accordance with the MSA. The offshore habitats within the Proposed Action area are unique due to the combination of deep-water habitats and shoals which creates a productive environment that supports a variety of marine life, including valuable sport fishes. The DHS S&T used the NOAA Fisheries EFH Mapper (NOAA Fisheries, 2022) to identify possible EFH. The Proposed Action area intersects EFH for 19 fish species, identified in **Table 11.**

Table 11: Species with Possible Essential Fish Habitat in the Action Area

Species Name	Scientific Name
Albacore Tuna	*Thunnus obesus*
Atlantic Butterfish	*Peprilus triacanthus*
Atlantic Herring	*Clupea harengus*
Atlantic Mackerel	*Scomber scombrus*
Atlantic Spiny Dogfish	*Squalus acanthias*
Black Sea Bass	*Centropristis striata*
Bluefish	*Pomatomus saltatrix*
Little Skate	*Leucoraja erinacea*
Longfin Inshore Squid	*Doryteuthis pealeii*
Pollock	*Pollachius virens*

Species Name	Scientific Name
Red Hake	*Urophycis chuss*
Sand Tiger Shark	*Carcharias taurus*
Scup	*Stenotomus chrysops*
Skipjack Tuna	*Thunnus albacares*
Smoothhound Shark Complex (Atlantic stock)	*Mustelus* spp.
Summer Flounder	*Paralichthys dentatus*
Windowpane Flounder	*Scophthalmus aquosus*
Winter Flounder	*Pseudopleuronectes americanus*
Winter Skate	*Leucoraja ocellata*

Source: (NOAA Fisheries, 2022)

The NYSDEC maintains a list of state-threatened and endangered species. All seven aquatic species protected by the ESA are also state threatened or endangered, except for the North Atlantic Sturgeon. No additional state-listed aquatic species have been identified.

In 2019, New York State Senate Bill S5871 designated the waters surrounding Plum Island (from the mean high-water line seaward to a distance of 1,500 feet) a Marine Mammal and Sea Turtle Protection Area (NYSNHP, 2022). This provides protection for the harbor seals and gray seals, previously covered in the MMPA, as well as the four federally endangered or threatened sea turtle species that may use the waters around Plum Island, previously covered in the federally listed species section.

3.9.2 Environmental Consequences

A significant adverse biological resources impact would occur if proposed activities were to result in substantial permanent loss or degradation of terrestrial or aquatic habitat, or result in unpermitted "take" of listed species.

3.9.2.1 Preferred Alternative

Terrestrial Vegetation: Proposed activities on Plum Island and Orient Point would solely impact shoreline communities of vegetation, mainly grasses and small shrubs. Minimal vegetive clearing may occur on small grasses and shrubs in predominately previously disturbed areas. Areas proposed for disturbance include narrow beach corridors between the utility vaults and the waterline, which are dominated by riprap and other erosion control measures on both Orient Point and Plum Island. The proposed staging areas (0.5-acre each) on Plum Island and Orient Point would be located in previously disturbed land with little to no vegetation. No natural vegetative communities would be significantly impacted by any vegetative clearing or ground disturbance activities. Additionally, once cable installation activities are complete, any affected vegetation populations would revegetate passively over time. DHS S&T would avoid

impacting maritime dunes during onshore cable installation activities to the maximum extent practicable.

Secondary effects associated with disturbances to vegetation could include increased potential for the introduction and establishment of invasive herbaceous or shrub species within the shoreline community. However, to prevent the spread of invasive species, all heavy equipment would be inspected and thoroughly cleaned to remove any rhizomes and seeds prior to arrival to the Proposed Action area, thereby minimizing potential dispersion of invasive species.

DHS S&T concludes the Preferred Alternative would result in *short-term, less-than-significant adverse impacts* on terrestrial vegetation. Once cable replacement activities are complete, any disturbed areas would return to naturalized conditions over time. Therefore, *no long-term adverse impacts* on vegetation are anticipated.

Terrestrial Wildlife: The Preferred Alternative would temporarily impact common wildlife species in the Proposed Action area due to increased human presence and noise associated with the proposed cable replacement activities. Clearing of small grasses and shrubs on previously disturbed areas that provide limited suitable wildlife habitat would have minimal impacts on wildlife species. Mobile species such as birds would likely relocate to other nearby suitable habitat and avoid the project area for the duration of the Preferred Alternative (i.e., about four to six weeks in each onshore location). The amount of habitat in which excavation would occur represents only a small portion of the habitat available to wildlife throughout Plum Island and Orient Point. Any disturbed habitat would return to natural conditions over time. No cable replacement activities would occur within 0.4 mile of the approximately 147 acres of sensitive habitat protected by Plum Island's EBP and therefore the Preferred Alternative has no potential to affect those areas. Terrestrial wildlife would be indirectly impacted by increased noise for approximately four to six weeks during onshore trenching activities. However, these impacts would be temporary and would cease once cable installation is complete. Therefore, noise associated with cable replacement activities is not anticipated to significantly impact wildlife in the Proposed Action area.

DHS S&T concludes the Preferred Alternative would have a *short-term, less-than-significant adverse impact* on common wildlife species due to increased disturbance from noise and human presence at Plum Island and Orient Point while conducting cable replacement activities, and from minimal habitat alteration due to trenching activities along the shoreline. Additionally, the Preferred Alternative would have *no long-term adverse impacts* on wildlife species or population-level effects on wildlife. DHS S&T would minimize impacts to the greatest extent practicable and would utilize best management practices as listed in **Table 2**.

Terrestrial Special Status Species: As discussed in **Table 9,** the piping plover, roseate tern, and red knot are the only federally listed species that may occur within or near the Proposed Action area. DHS S&T determined that the Preferred Alternative would have *no effect* on the federally listed NLEB, and the monarch butterfly, a federal candidate species, as these species are not likely to occur within the AOI (**Appendix D**).

DHS S&T initially determined that the Preferred Alternative would have *no effect* on the red knot because the only record of red knot on Plum Island is considered accidental. However, the USFWS provided in their letter dated November 16, 2023, that red knots have been observed at Orient Point County Park, and provided recommendations to minimize impacts. Not more than seven days prior to beginning onshore construction work between September 1 and November 30, DHS S&T or its contractor would conduct a red knot survey in accordance with USFWS survey protocol. If red knots are observed, a 500-meter buffer would be maintained, and DHS S&T would notify USFWS. With implementation of these recommendations, the USFWS concurred that the Preferred alternative *may affect, but is not likely to adversely affect*, the red knot (**Appendix E**).

While suitable habitat for the piping plover and roseate tern is present within the Proposed Action area, these species would be expected to avoid areas where cable replacement activities are taking place due to increased noise and human presence. As mentioned in **Table 9**, these species are generally found in coastal habitats primarily on beaches and tidal flats and have been documented along the shorelines of Plum Island and Orient Point. Prior to construction, DHS S&T would inspect for special status species all areas within 660 feet (200 meters) of onshore cable replacement activities involving heavy machinery and where intrusive noise, ground disturbance, or vegetation clearing may occur. Should any special status species, including any nesting birds, be observed, DHS S&T would modify project activities (e.g., scheduling and phasing) to ensure special status species would not be adversely impacted by cable replacement activities. The Proposed Action area is not within critical habitat for these species (USFWS, 2023a). Given that DHS S&T commits to the measures listed above, DHS S&T concluded that the Preferred Alternative *may affect, but is not likely to adversely affect* the piping plover and roseate tern. Pursuant to Section 7 of the ESA, DHS S&T notified USFWS of its effect determinations via letter on October 19, 2023. In their letter dated November 16, 2023, USFWS recommended additional time-of-year restrictions and conservation measures for the piping plover and roseate tern. In accordance with USFWS' recommendations, DHS S&T would not perform construction work on the shorelines of Plum Island or Orient Point between April 1 and September 1. With acceptance of these additional time-of-year restrictions, USFWS concurred with DHS S&T's determination that the Preferred Alternative *may affect, but is not likely to adversely affect* the piping plover and roseate tern. The DHS S&T's documentation of its effect determinations for federally listed species and correspondence with USFWS regarding Section 7 of the ESA are provided in **Appendix E**.

Potential adverse impacts on state-protected species would be similar to those described for vegetation and wildlife: habitat loss, displacement, and disturbance. Overall, these impacts would be temporary and would cease once cable replacement activities are complete. Most of the state-protected animal species are birds and are likely highly mobile and would avoid the AOI during implementation of the Proposed Action. These species would be further protected by the measures to protect migratory birds discussed below. Although most state-protected plant species that may occur on either Plum Island or Orient Point are associated with the

shoreline community, terrestrial vegetation within the Proposed Action area is limited and ground-disturbing activities, including activities in maritime dunes, would be limited to the extent practicable. The potential for impacts on these species would be minimal. Therefore, there would be *short-term, less-than-significant adverse impacts* and *no long-term adverse impacts* on state-protected species.

Potential impacts on migratory birds could include disturbance to breeding individuals, particularly if ground-disturbing or vegetation clearing activities occurred during the nesting season and if individuals are located within, or adjacent to, the Proposed Action area. Prior to conducting clearing or trenching activities, DHS S&T would confirm that no nesting birds or their nests are present in the area by conducting a pedestrian inspection of areas within 660 feet (200 meters) of onshore areas where cable replacement activities would occur. Should any nesting birds be observed on or near areas where heavy machinery would be operated, all work would immediately cease, and DHS S&T would be contacted. Most birds would likely avoid areas where cable replacement activities would occur and/or relocate to nearby habitats in the area. Therefore, the Preferred Alternative would have a *short-term, less-than-significant adverse impact* on migratory birds. The Preferred Alternative would have *no long-term adverse impacts* on migratory birds following completion of cable replacement activities.

No suitable bald eagle habitat (such as mature trees) would be impacted by the Proposed Action. Should eagles happen to be present while cable replacement activities are occurring, they would be expected to avoid the area due to increased noise and human presence. Vegetative clearing and ground-disturbing activities would solely occur along the coastlines of Plum Island and Orient Point, neither of which contain suitable bald eagle habitat. The nearest known bald eagle nest is over 2.5 miles northeast from the stretch of coastline on the western side of Plum Island where proposed cable installation activities would take place. DHS S&T would conduct a pedestrian nest survey of the Proposed Action area and areas within 660 feet (200 meters) to avoid or minimize potential impacts on eagles prior to trenching or clearing activities. If nests are found within or near sites where such activities would occur, DHS S&T would coordinate with USFWS to avoid impacts on bald eagles and implement measures included in the USFWS's National Bald Eagle Management Guidelines and the Northeast Bald Eagle Project Screening Form, such as establishing buffers around nesting sites or observing seasonal restrictions (USFWS, 2007). Therefore, DHS S&T concludes that the Preferred Alternative would have *no effect* on the bald eagle.

Aquatic Vegetation: Proposed activities in the aquatic environment between Plum Island and Orient Point would not likely impact aquatic vegetation. As a result of trenching, portions of the cable would be installed beneath the seafloor, extending up to several hundred feet from the shoreline at each end. The majority of the cable length would be laid on top of the seafloor and would not be trenched. The path would aim to avoid, to the extent practicable, any benthic habitat shallow enough to support eelgrass beds, thus avoiding any impacts to the resource. Some algae may be disturbed because of laying the cable, but as there would be little movement

due to the weight of the cable and bathymetry (i.e., ocean depth), any impact would be minor to negligible and temporary. Additionally, the Preferred Alternative has been sited along a previously used undersea cable route, thus avoiding impacts to previously undisturbed areas. This route is mostly rocky substrate with no ecologically sensitive or undisturbed habitats, and thus minimizes impacts. There is also significant area surrounding the small corridor where the cable will be laid, and where aquatic vegetation and habitat would continue to remain available and undisturbed.

DHS S&T concludes the Preferred Alternative would result in *short-term, less-than-significant adverse impacts* on aquatic vegetation. Once trenching and cable laying are complete, disturbed areas would return to naturalized conditions over time and there would be no permanent impacts on eelgrass beds. Therefore, no long-term adverse impacts on aquatic vegetation are anticipated.

Aquatic Wildlife: The Preferred Alternative would temporarily impact common aquatic wildlife species due to increased noise during cable laying activities, including from the operation of trenching equipment and the CLB, as well as due to physical disturbance associated with bottom-laying the undersea cable. Any noise generated during cable installation would cease once cable installation is complete, and noise generated during trenching would remain close to shore, with equipment primarily located on land or above water. Any underwater noise that is generated is not anticipated to exceed thresholds that could impact the behavior or survival of aquatic wildlife. Increased turbidity would likely be avoided by most aquatic wildlife, and therefore not impact them. Decreased light penetration could impact photosynthetic species, but turned up sediment is expected to settle from the water column quickly and will only impact species briefly before settling.

All impacts to aquatic wildlife would be temporary, limited to the duration of cable-laying activities (up to seven days for in-water work). These impacts would not permanently change the quality of the ecosystem, result in habitat modifications for aquatic species, or affect the potential for Plum Gut to retain its designation as a significant coastal fish and wildlife habitat. DHS S&T concludes that the Preferred Alternative would have a *short-term, less-than-significant adverse impact* on common aquatic wildlife species, primarily due to increased disturbance while conducting trenching and cable-laying activities. Additionally, the Preferred Alternative would have *no long-term adverse impacts* on aquatic wildlife species or population-level effects on aquatic wildlife.

Aquatic Special Status Species: DHS S&T has determined that the Preferred Alternative *may affect but is not likely to adversely affect* seven federally protected marine species. The Preferred Alternative introduces possible stressors to the federally listed species, such as increases in vessel traffic (which can impact noise and the possibility of vessel strikes), possible short-term habitat disturbances, and impacts to water quality (turbidity) during cable laying. However, as it is likely that any species, if present, would avoid the AOI by either going around areas of increased noise/traffic or foraging elsewhere, and in-water work associated

with the Proposed Action would have a very short duration, risks associated with these possible stressors are likely discountable and their impacts insignificant. Therefore, the Preferred Alternative *may affect, but is not likely to adversely affect* all federally listed species potentially present in the AOI. These potential impacts are discussed in greater detail in DHS S&T's consultation letter to NMFS, prepared pursuant to Section 7 of the ESA, which was submitted on October 19, 2023. NMFS initially responded on October 23, 2023, providing suggestions and recommendations for addressing potential impacts to listed aquatic species. DHS S&T submitted another letter on October 30, 2023, acknowledging NMFS' requests. Consultation with NMFS is currently ongoing. The DHS S&T's documentation of its effect determinations for federally listed species and correspondence to date with NMFS regarding Section 7 of the ESA are provided in **Appendix E**.

Impacts to marine mammals protected by the MMPA would be similar to those described above for common aquatic wildlife, primarily stemming from increased noise and human presence during the duration of cable laying activities. The Proposed Action area on Plum Island is not commonly used as a seal haul-out site, with seals instead favoring the southeast beach of the island as a haul out site, over 1 mile from the Proposed Action area (NYNHP, 2022; NYSNHP, 2016), and therefore there is not anticipated to be any incidental take or harassment of MMPA species. There have been sightings of seals onshore at Orient State Park, which is near the Proposed Action area, though other sites on Long Island are more common haul-out locations (Larsen, 2021). The Preferred Alternative would have a *short-term, less-than-significant adverse impact* on species protected under the MMPA. The Preferred Alternative would have *no long-term impacts* on MMPA species following completion of the Proposed Action.

Potential impacts to EFH are discussed in greater detail in DHS S&T's consultation letter to NMFS and in the GARFO EFH Assessment Worksheet used to evaluate potentially affected EFH (NOAA Fisheries, 2021). DHS S&T determined that the impact of the Proposed Action on EFH is not substantial, meaning that the adverse effects are no more than minimal, temporary, or can be alleviated with minor project modifications or conservation recommendations. The EFH Assessment analyzed potential consequences, including possible habitat and noise disturbances, to EFH associated with the Proposed Action and found that given the length of time for the Proposed Action, any impacts would be minimal. Short-term impacts on fish habitat would occur during construction only and include mostly turbidity increases from sediment entering the water column (settling after) and minimal increases in noise above baseline conditions. The DHS S&T's documentation of its assessment of EFH and correspondence with NMFS are provided in **Appendix E**.

The Proposed Action would also minimize potential environmental impacts through abandonment in-place of an existing cable, extraction of which would increase disturbance to sediments in Plum Gut both nearshore and offshore which would minimize disturbance to on and near-shore areas. Short-term impacts on fish habitat would occur during construction only

and include mostly turbidity increases from sediment entering the water column (settling after) and minimal increases in noise above baseline conditions. As the in-water portion of the work will be completed in a short period of time (a maximum of 7 days), the Preferred Alternative would have a *short-term, less-than-significant adverse impact* on EFH. The Preferred Alternative would have no long-term adverse impacts on EFH following completion of the Proposed Action. The DHS S&T's documentation of its assessment of EFH and correspondence with NMFS are provided in **Appendix E**.

3.9.2.2 No Action Alternative

Under the No-Action Alternative, no cable replacement activities would occur, and the existing utility cables would remain in danger of failing. No onshore or offshore activities would occur. Therefore, the No Action Alternative would have *no impact* on biological resources.

3.10 Cultural and Historic Resources

Cultural resources is a broad term that generally includes historic properties as defined by Section 106 of the NHPA, archaeological resources as defined by the Archaeological Resources Protection Act, cultural items as defined by the Native American Graves Protection and Repatriation Act, sacred sites as defined in EO 13007, *Indian Sacred Sites,* to which access is afforded under the American Indian Religious Freedom Act, and collections and associated records as defined in 36 CFR Part 79.

Historic properties covered by the NHPA include any prehistoric or historic district, site, building, structure, or object with known or potential significance with regard to pre- or post-American history, architecture, archaeology, engineering, or culture that is eligible for, or listed in, the NRHP. Section 106 of the NHPA requires federal agencies to consider the effect an undertaking may have on historic properties. The Preferred Alternative is considered an undertaking and is required to comply with Section 106 including consultation with the New York State Historic Preservation Office (SHPO) and federally recognized Tribes. All Section 106 correspondence is provided in **Appendix B**.

The AOI for cultural and historic resources includes the aboveground and belowground area of potential effects (APE) as defined by the NHPA. The APE is the Proposed Action area.

3.10.1 Affected Environment

To identify historic properties in the APE, DHS S&T reviewed internal data, NRHP listings, the New York Cultural Resources Identification System (NYCRIS), historic maps (e.g., historic navigation and topographic maps), and NOAA shipwreck databases.

Aboveground Historic Resources: One aboveground historic resource exists within the APE. The Plum Island Light Station (**Figure 1**) was listed in the NRHP on February 11, 2011. It is an approximately 3-acre property currently owned by DHS S&T, and primarily consists of the lighthouse, a granite, gable-roofed residence with an integrated cast iron tower that was constructed in 1869, with the addition of an associated c.1900 brick oil house and c.1920 wood-

framed storage shed. The property also contains a tubular steel tower west of the lighthouse that was built after the period of significance (1992) (Walker, et al., 2011). The period of significance is listed as 1869-1960. The current lighthouse is one of six lighthouses constructed between 1867 and 1869 around Long Island Sound to a Third Light-House District standardized design. The Plum Island Light Station is a contributing property to the multiple property listing for Light Stations of the United States established in 2002 and listed under Criterion A for its association with maritime history as an example of navigational aid. Additionally, the station is listed under Criterion C under architecture at the state level as an example of the Third Light-House District standard plan for a fourth order lighthouse (Walker, et al., 2011)

Archaeological Resources: NYCRIS does not show any previously recorded archaeological sites, terrestrial surveys, or marine archaeological remote sensing surveys within or in the immediate vicinity of the APE. Similarly, a review of the NOAA Automated Wreck and Obstruction Information System (AWOIS) and NOAA Electronic Navigation Charted (ENC) wrecks do not show any known shipwrecks within the APE. The closest database shipwreck with some reliability exists approximately 0.5 mile northwest of the APE. A review of historical navigation charts revealed the APE to be a marked cable crossing area at least as far back as 1930 (U.S. Coast and Geodetic Survey, 1930). Existing shoreline improvements within the APE include stabilization efforts such as addition of riprap and sheet metal breakwater as well as multiple cable crossing signs.

Based on the development of the APE, including shoreline alterations and multiple cable iterations as well as proposed construction methodology utilizing the existing cable vaults and extant cable corridor, there is a low potential for the APE to contain intact, significant cultural resources.

3.10.2 Environmental Consequences

A significant adverse cultural and historic resources impact would occur if the integrity of a historic property is diminished such that it would no longer be eligible for listing in the NRHP; if historic viewsheds would be substantially altered; or if tribal concerns are inadequately resolved.

3.10.2.1 Preferred Alternative

Aboveground Historic Resources: The Plum Island cable vault is located within the parcel boundary of the Plum Island Light Station; therefore, the Proposed Action would involve construction activities occurring on the edge of, but within, this historic property. The LOD for proposed activities, however, would not include the lighthouse or any of the associated features that comprise the historic property. Further, no new above-ground components would be constructed. Therefore, the Proposed Action would have *short-term, less-than-significant adverse effects* on the NRHP-listed Plum Island Light Station (*no adverse effect* under the NHPA).

Archaeological Resources: No significant archaeological resources are known within the APE, and the APE has a low potential to contain significant archaeological resources. As such, there would be *no effect* on archaeological historic properties by the Proposed Action (*no effect* under the NHPA). However, in the event that unanticipated and previously unidentified archaeological resources are discovered during implementation of the Preferred Alternative, DHS S&T would pause all ground-disturbing work and notify the SHPO/THPOs to coordinate a path forward.

Section 106 Consultation: In accordance with Section 106 of the NHPA, DHS S&T initiated consultation with the SHPO on September 30, 2023. On October 23, 2023, the SHPO responded and concurred with DHS S&T's determination of *no adverse effect* on the Plum Island Light Station and on archaeological resources. Following receipt of SHPO concurrence, however, the scope of the Proposed Action changed slightly (i.e., the potential use of horizontal directional drilling, in lieu of trenching, was removed). DHS S&T reinitiated consultation to notify SHPO of this modification on November 30, 2023, and SHPO provided its updated concurrence with the *no adverse effect* determination on December 7, 2023. All correspondence with the SHPO under Section 106 of the NHPA is included in **Appendix B**.

Furthermore, in accordance with EO 13175, *Consultation and Coordination with Indian Tribal Governments*, DHS S&T identified federally recognized Tribal Nations that may have ancestral ties to Plum Island and Orient Point. DHS S&T initiated consultation with the federally recognized Delaware Tribe of Indians and Shinnecock Indian Nation, the state-recognized Unkechaug Indian Nation, and the Montaukett Indian Tribe on September 22, 2023. On September 22, 2023, the Montaukett Indian Tribe responded acknowledging receipt of the letter. No other responses have been received to date. A record of tribal consultation for this Proposed Action is included in **Appendix B**.

3.10.2.2 No Action Alternative

Under the No Action Alternative, the proposed installation of an undersea utility cable from Orient Point to Plum Island would not occur, and there would be *no impact* to cultural resources.

3.11 Health and Safety

Human health and safety includes occupational hazards to workers as well as the exposure of the general public to conditions that would cause injury or health hazards. Potential hazards include toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. The Occupational Safety and Health Act (29 USC §651 et seq.) ensures worker and workplace safety and created the National Institute for Occupational Safety and Health to establish and enforce standards for workplace health and safety. In addition, other federal, state, and local regulations further protect people and the environment from hazards.

The AOI for human health and safety includes areas within or adjacent to the Proposed Action area.

3.11.1 Affected Environment

Operations on Plum Island are monitored and secured to ensure safety. PIADC first responders, including fire, emergency medical technicians, and security personnel, are located on the property, and an ambulance and helipad are available on the island to facilitate emergency evacuation if necessary. The Federal Protective Service and contracted security provide full-time law enforcement on Plum Island and the Orient Point facility. The general public is not permitted on Plum Island and security personnel verify contractors' and visitors' backgrounds prior to admittance onto the property.

Orient Point County Park is open to the public for recreation (**Section 3.4**) and emergency services are provided by the Suffolk County Police Department and the Suffolk County Fire Department (Suffolk County, 2023b; Suffolk County Fire Department, 2023b). Emergency services within Long Island Sound are provided by USCG, Suffolk County Police Department Marine Division, and the New York State Police Marine Unit (Suffolk County, 2023c; USCG, 2023; New York State, 2023). Eastern Long Island Hospital in the Village of Greenport is the closest hospital, approximately 8 miles away from the Proposed Action area.

Besides routine maintenance of the cable vaults, no ongoing activities occur in the immediate vicinity of the Proposed Action area on Plum Island or Orient Point. Plum Gut is extensively transited by ferries and other maritime vessels.

3.11.2 Environmental Consequences

A significant adverse health and safety impact would occur if cable replacement activities would put the health and safety of the public at risk or violate applicable federal and/or state safety regulations.

3.11.2.1 Preferred Alternative

The primary health and safety hazards that may be encountered during the Preferred Alternative include water-related hazards, such as severe weather, strong currents, and maritime traffic; mechanical hazards associated with handling the heavy cable spools and operation of heavy equipment; and electrical hazards associated with the high voltage cables.

DHS S&T's contractor would ensure all watercraft operators have the proper licenses, are aware of safety procedures and emergency protocols, and that all equipment is regularly inspected and maintained in good working order, including safety gear, navigational lights, and communication devices. DHS S&T's contractor would keep close a watch on weather conditions and would pause all operations in the event of severe weather. Prior to starting construction, DHS S&T's contractor would obtain a Safety Zone Determination from the USCG. This determination would identify a safety zone around areas where in-water work is occurring, in which public access would be temporarily restricted. Additionally, DHS S&T's contractor would notify the USCG, New York State Police, Suffolk County Police Department, and the Suffolk County Parks Department prior to starting cable laying activities. DHS S&T's

contractor would also prepare an emergency response plan for the cable installation and abandonment process, detailing measures to response to emergency events, and would ensure personnel are aware and informed of the plan. The Preferred Alternative is not expected to substantially increase the amount of vessel traffic in the area, thereby not increasing the risk of vessel collision. The CLB and support vessels would typically also move slowly (less than 6 knots) and would be conducting cable laying activities for a maximum of roughly seven days.

Mechanical and electrical hazards would be minimized to the extent practicable through adherence to applicable federal, state, and local worker safety and regulatory requirements and guidelines, including those established by the Occupational Safety and Health Administration. DHS S&T's contractor would be required to handle all HTMW in accordance with applicable local, state, and federal regulations (**Section 3.8**). Operation of heavy construction equipment would be conducted in accordance with applicable safety protocols. DHS S&T would obtain a contractor experienced with undersea cable installations with a demonstrated safety track record. DHS S&T would mandate that the contractor comply with the following design and construction standards to minimize electrical hazards both during and after cable laying activities have been completed.

- International Electrotechnical Commission (IEC) 63026, Edition 1.0 2019, *Submarine power cables with extruded insulation and their accessories for rated voltages from 6 kV (Um = 7,2 kV) up to 60 kV (Um = 72,5 kV) – Test methods and requirements*
- International Council on Large Electric Systems (CIGRE), WG B1.55 722, *Additional Test for Submarine Cables 6kV up to 60 kV*
- International Council on Large Electric Systems (CIGRE), WG B1.65 883, *Installation of Submarine Power Cables*
- American National Standards Institute (ANSI), ANSI C2, *National Electrical Safety Code (NESC)*
- National Fire Protection Association (NFPA), NFPA 70, *National Electrical Code*
- 29 CFR 1910.147, *Control of Hazardous Energy (Lock-Out/Tag Out)*
- National Electrical Manufacturers Association (NEMA), NEMA ICS 6, *Enclosures for Industrial Control and Systems*

The public is not permitted on Plum Island, and the contractors would monitor the construction site within Orient Point County Park to ensure the public remains a safe distance away. Site fencing or marking may also be used to establish the construction site as off-limits.

Overall, the Preferred Alternative would not put the health and safety of the public at risk, nor would it violate applicable safety regulations. Therefore, the Preferred Alternative would have *no effect* on the human health and safety of the general public.

3.11.2.2 No Action Alternative

Under the No Action Alternative, cable laying activities would not occur and there would be no change to human health and safety in the AOI. Therefore, the Preferred Alternative would have *no effect* on human health and safety.

3.12 Earth Resources

Earth resources analyzed in this EA include geology and soils. Soils are typically described in terms of their type, physical characteristics, and types of land use. Geology refers to surface and subsurface materials and processes, as well as their seismic tendencies and stability. Soils are typically described in terms of their type, physical characteristics, and types of land use. The AOI for earth resources includes the Proposed Action area.

Prime Farmland: Prime Farmland is defined as land that is available for and has a combination of physical and chemical characteristics that are best suited for producing food, feed, forage, fiber, and oilseed crops (USDA, 2015). The Farmland Protection Policy Act of 1981 (7 USC 4201 et seq.) states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." No prime farmland is located within or directly adjacent to the LOD. Therefore, activities under the Preferred Alternative would have no potential to affect prime farmlands and this resource is dismissed from further analysis.

Topography: The Proposed Action would involve minor ground disturbance activities such as trenching. These ground-disturbing activities would not alter the topography of Plum Island or Orient Point; therefore, the Proposed Action would have no potential to affect topography and this resource is dismissed from further analysis.

3.12.1 Affected Environment

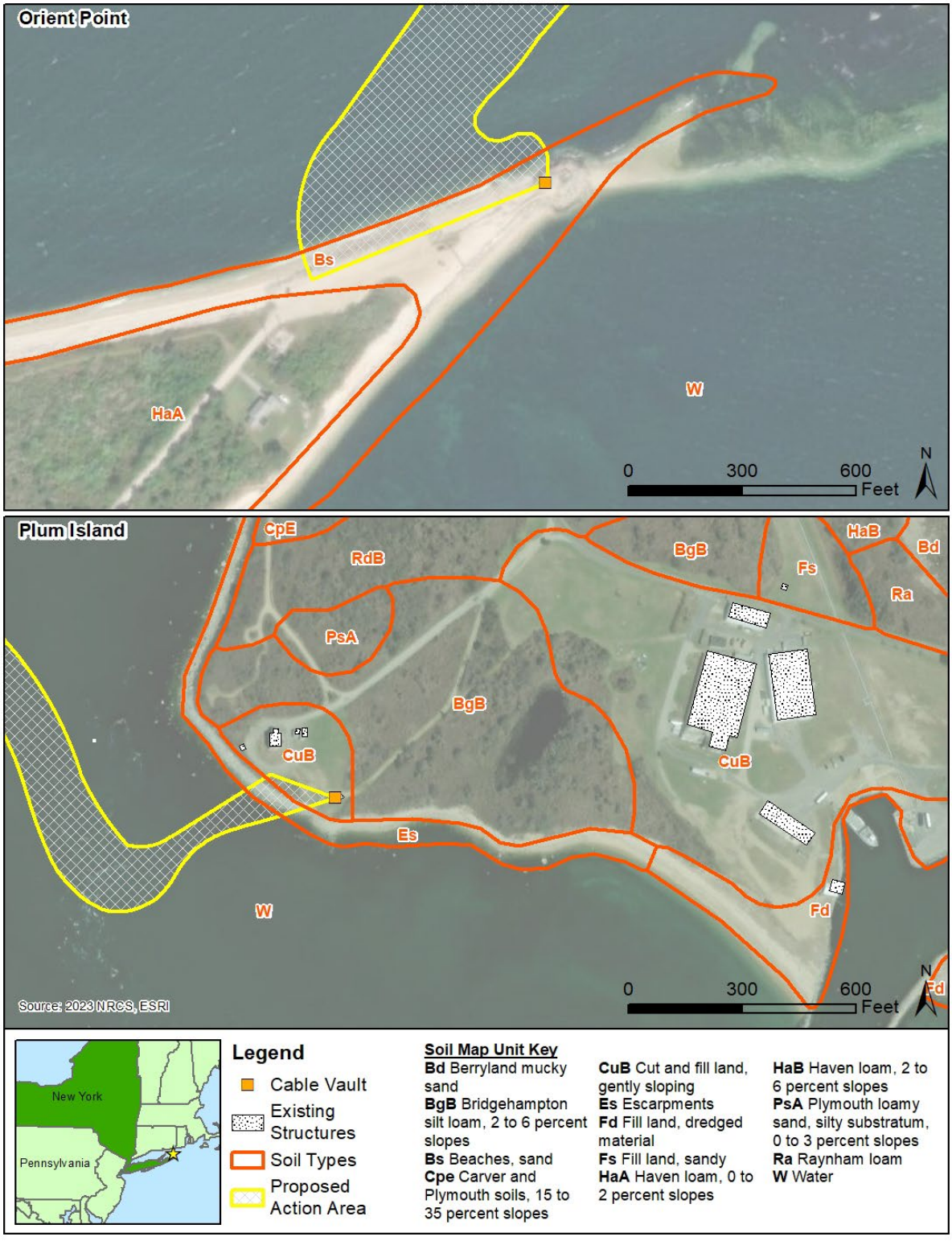
Geology: A bedrock basement, composed of Precambrian granite and granite gneiss, lies over 600 feet bgs. Surficial deposits of rocks and coarse sands originate from periods of glaciation events (Crandell, 1962; ENTECH, 2007). The groundwater on Plum Island occurs between 0 and 75 feet bgs (ENTECH, 2002). The U.S. Geological Survey (USGS) 2018 Seismic Hazard Map shows the site is at moderate risk of seismic hazard (i.e., hazard level 3 out of 7) (USGS, 2018).

Soils: Surface soils within the Proposed Action area are described predominantly as sandy and fill material. Two soil map units are identified within the Proposed Action area at Plum Island: (1) 'Cut and fill land, gently sloping,' and (2) 'escarpments.' At Orient Point, the entire Proposed Action area is identified as 'beaches, sand' (**Figure 4**) (NRCS, 2023).

3.12.1 Environmental Consequences

A significant adverse earth resources impact would occur if cable replacement activities would expose people or structures to major geological hazards or substantially increase potential occurrences of erosion or sedimentation.

Figure 4: Soils at the Proposed Action Area



3.12.1.1 Preferred Alternative

The Proposed Action would include minor vegetation clearing and limited excavation activities (i.e., trenching) within the Proposed Action area. Trenching at the ground surface is anticipated to occur up to 500 linear feet at Orient Point and 200 linear feet at Plum Island, through the existing beach sand and shoreline riprap, and then into the water. In-water trenching would occur up to several hundred feet from each shoreline. All excavation activities would be shallow relative to the bedrock basement, both at each landing site and the in-water length of trenching, to a depth of no more than 30 inches bgs. For the onshore portion of trenching, traditional methods of excavation (e.g., use of a small excavator) are anticipated. However, the excavator bucket size would be small and narrow in width, reducing the amount of ground disturbance along the shorelines at each landing site. DHS S&T also anticipates using low impact in-water trenching methods, such as jetting or ploughing, to minimize adverse impacts to nearshore areas to the extent practicable, thereby further limiting the total amount of ground disturbance. Excavating activities would occur over approximately four to six weeks. Therefore, there would be *short-term, less-than-significant adverse impacts* on geology.

Proposed activities would impact approximately 1 acre of previously disturbed areas on Plum Island and Orient Point. Existing soil, sand, and riprap would be temporarily excavated and stored on the shoreline adjacent to the trench line as the trench is constructed. Following cable installation, the excavated soil and sand would be used to backfill the trench and the riprap would be replaced above the trench. Excavated soils may be temporarily susceptible to erosion by wind and surface runoff until the excavated trenches are refilled. Excavating activities onshore and in-water may also result in a temporary increase in turbidity and sedimentation in the surf-zone at each site. Since the Proposed Action would meet or exceed one acre of land disturbance, a NPDES General Permit would be obtained for the project pursuant to the CWA (33 USC 1251 et seq). Furthermore, the current PIADC SWPPP would be implemented, which has identified potential sources of pollutants, described pollution prevention activities (i.e., BMPs) to be implemented on the site, and established erosion and sediment controls to manage stormwater discharges and minimize sedimentation to the extent practicable. Implementation of the erosion and sediment control measures specified in the SWPPP and NPDES permit (e.g., silt fences, check dams, etc.) would minimize these potential impacts.

Potential impacts on soils may also occur if petroleum products or other liquids associated with heavy equipment (e.g., excavators) were accidentally spilled or released. Potential HTMW impacts are discussed further in **Section 3.8**.

Overall, impacts on soils would be temporary and minimized through the BMPs designated in the NPDES permit and SWPPP, adhering to the site SPCCP, and through standard characterization and testing processes. Therefore, the Preferred Alternative would have *short-term, less-than-significant adverse impacts* on soils. Following implementation of the Preferred Alternative, the areas of ground disturbance would return to natural shoreline

conditions. Therefore, the Preferred Alternative would have *no long-term or ongoing impacts* on soils in the AOI.

3.12.1.2 No Action Alternative

Under the No Action Alternative, no cable replacement activities would occur. Potential excavation and erosion and sedimentation impacts associated with ground disturbance would not occur. Therefore, there would be *no impacts* on earth resources in the AOI under the No Action Alternative.

3.13 Cumulative Resources

CEQ and NEPA guidance sets forth a method for analyzing the impact to the human environment which results from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such actions. These cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. Significant cumulative impacts would occur if impacts from the Proposed Action in combination with the effects of other past, present, or reasonably foreseeable actions rise to the level of significance as defined by the resource-specific thresholds of significance (**Table 3**).

3.13.1 Preferred Alternative

The impacts on the environment that would result from the incremental impact of the Proposed Action, when added to other past, present, and reasonably foreseeable future actions, have been considered. No significant effects were identified to the resources discussed in **Section 3.0**.

Projects that may result in cumulative impacts when viewed in combination with the Proposed Action include transfer of the DHS S&T science mission to the new NBAF facility in Manhattan, Kansas, closure of PIADC facilities, and installation of the Beacon Wind undersea cable.

Transfer of PIADC's science mission to Manhattan, Kansas, and activities associated with closure of PIADC are currently ongoing and would continue throughout the duration of the Proposed Action. While the science mission transfer does not include any physical impacts, closure activities would result in ground disturbance associated with facilities decontamination and remediation activities on Plum Island (DHS, 2023). However, ground disturbance associated with the closure activities would be minimal (approximately 26 acres) in the context of Plum Island (840 acres) and would occur entirely within previously disturbed areas (e.g., existing building footprints and WMAs). Additionally, no closure activities would occur on beaches or involve in-water work. Due to the minimal amount of ground disturbance associated with the closure of PIADC and its location in a different land cover type (i.e., uplands), as well as the short duration of the current Proposed Action (four to six weeks for onshore ground-

disturbing activities), the long-term cumulative effects on water resources, earth resources, biological resources, and cultural resources of the Proposed Action would remain negligible.

The Beacon Wind project involves the construction and operation of an offshore wind facility approximately 60 miles east of Montauk, NY. This project would entail the installation of an undersea cable approximately 4 miles north of Plum Island. Undersea cable installation is anticipated to occur between 2026 and 2028. Cable installation activities associated with the Beacon Wind project are anticipated to be similar to those described for the Proposed Action, including water quality impacts from increased turbidity and biological resource impacts from vessel traffic and disturbance to the seafloor. However, cumulative impacts from cable installation activities and the Proposed Action would be temporary and negligible in the context of the Long Island Sound, and would not occur concurrently.

3.13.2 No Action Alternative

Under the No Action Alternative, the Proposed Action would not occur; therefore, there would be no significant cumulative effects.

4.0 Conclusions

Pursuant to NEPA, the analysis presented in this EA finds that no significant adverse impact on the environment is anticipated from the Proposed Action. Implementation of the Proposed Action would allow DHS S&T to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point and Plum Island, NY.

As no adverse environmental impacts are potentially significant, no mitigation measures would be required for the Proposed Action. DHS S&T would, however, adhere to the BMPs outlined in **Section 2.1.2** and satisfy all applicable regulatory requirements associated with the Proposed Action. Implementation of such BMPs and adherence to regulatory requirements would further ensure that potential adverse impacts resulting from the Proposed Action would be minimized to the maximum extent practicable.

The No Action Alternative would not enable DHS S&T to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. Selection of the No Action Alternative would leave PIADC vulnerable to potential loss of electrical or communication services, which would significantly constrain PIADC's operational capabilities should the cable fail in the near term.

This page intentionally left blank.

5.0 References

Abbott, D. (2022). *Understanding Sound, Chapter 45: Intensity and Distance.* Pressbooks. Retrieved April 7, 2022, from https://sound.pressbooks.com/chapter/intensity-and-distance-april-2019-version/

Alexander, M. A., Scott, J. D., Friedland, K., Mills, K. E., Nye, J. A., Pershing, A. J., & Thomas, A. C. (2018). Projected sea surface temperatures over the 21st century: Changes in the mean, variability and extremes for large marine ecosystem regions of Northern Oceans. *Elementa: Science of the Anthropocene*, 6 (1), Article 9. http://dx.doi.org/10.1525/elementa.191.

Audubon. (2022). *Orient Point and Plum Island*. Retrieved September 2023, from Important Bird Areas: https://www.audubon.org/important-bird-areas/orient-point-and-plum-island

Audubon. (2023). *Guide to North American Birds: Common Tern*. Retrieved September 2023, from https://www.audubon.org/field-guide/bird/common-tern

California State Portal. (2013, June). *PG&E Cressey-Gallo 115 kV Power Line Project 5.12 Noise*. Retrieved April 14, 2022, from California State Portal: https://ia.cpuc.ca.gov/environment/info/aspen/cresseygallo/fmnd/5-12_noise.pdf

CEQ. (1997). *CEQ Environmental Justice Guidance under NEPA.* Retrieved from https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf?VersionId=78iNGtdwSTz5E2x.H0aHq.E96_Tphbgd

CEQ. (2022). *Explore the Map*. Retrieved from Climate and Economic Justice Screening Tool: https://screeningtool.geoplatform.gov/en/#9.24/41.1916/-72.1552

CEQ. (2023). *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change.* Retrieved from https://www.energy.gov/sites/default/files/2023-01/2023-01-CEQ%20interim%20guidance%20on%20GHG%20emissions%20and%20climate%20change.pdf

Climate Data. (2022). *Climate Long Island*. Retrieved April 14, 2022, from https://en.climate-data.org/north-america/united-states-of-america/maine/long-island-141075/

Cohen, J., Screen, J. A., Furtado, J. C., Barlow, M., Whittleston, D., Coumou, D., . . . Jones, J. (2014). Recent Arctic amplication and extreme mid-latitude weather. *Nature Geoscience*, 7, 627-637. https://doi.org/10.1038/ngeo2234.

Crandell, H. C. (1962). *Geology and Ground Water Resources of Plum Island Suffolk County, New York.* USGS Water-Supply Paper 1539-X. Retrieved October 5, 2023, from https://pubs.usgs.gov/wsp/1539x/report.pdf

Cross Sound Ferry. (2023). *Orient Point Departure Times*. Retrieved October 2, 2023, from https://www.longislandferry.com/Reservation/Departure.aspx

CT DEEP. (2021). *2021 Long Island Sound Trawl Survey.* Retrieved from Connecticut Department of Energy and Environmental Protection (CT DEEP) Long Island Sound Trawl Survey: https://portal.ct.gov/-/media/DEEP/fishing/fisheries_management/2021-Long-Island-Sound-Trawl-Survey.pdf

CT DEEP. (2022). *Bald Eagle*. Retrieved September 2023, from Connecticut Department of Energy and Environmental Protection: https://portal.ct.gov/DEEP/Wildlife/Fact-Sheets/Bald-Eagle

DHS. (2018). *Conceptual Site Model: Plum Island Disease Center.* ARCADIS Design & Consultancy.

DHS. (2023). *Final Environmental Assessment for Closure Activities at the Plum Island Animal Disease Center on Plum Island New York.* Retrieved August 30, 2023, from https://www.dhs.gov/publication/final-environmental-assessment-closure-activities-plum-island-animal-disease-center

Dupigny-Giroux, L. A., Mercay, E. L., LemckeStampone, M. D., Hodgkins, G. A., Lentz, E. E., Mills, K. E., . . . Caldwell, C. (2018). *Northeast. In Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)].* doi: 10.7930/NCA4.2018.CH18: U.S. Global Change Research Program, Washington, DC, USA, pp. 669-742.

EJ IWG. (2016). *Promising Practices for EJ Methodologies in NEPA Reviews.* Retrieved from https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf

Ekvall, M. T., Gimskog, I., Hua, J., Kelpsiene, E., Lundqvist, M., & Cedervall, T. (2022). Size fractionation of high-density polyethylene breakdown nanoplastics reveals different toxic response in Daphnia magna. *Nature: Scientific Reports*, 12, 3109. https://doi.org/10.1038/s41598-022-06991-1.

ENTECH. (2002). *CERCLA Program Report Vol 1 PIADC.*

ENTECH. (2007). *Groundwater Study, Plum Island, New York.* Retrieved October 5, 2023, from https://www.gsa.gov/cdnstatic/Groundwater_Study_Plum_Island_2007.pdf

FAA. (2022). *Fundamentals of Noise and Sound*. Retrieved April 7, 2022, from Federal Aviation Administration: https://www.faa.gov/regulations_policies/policy_guidance/noise/basics

Federal Highway Administration. (2006). *Federal Highway Administration Highway Construction Noise Handbook.* Retrieved from https://www.fhwa.dot.gov/environment/noise/construction_noise/handbook/

FEMA. (2009). *National Flood Hazard Layer Viewer*. Retrieved April 21, 2022, from Federal Emergency Management Agency: https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd

Francis, C. D., & Barber, J. R. (2013). A framework for understanding noise impacts on wildlife: an urgent conservation priority. *Frontiers in Ecology and the Environment*, 303-313. doi:10.1890/120183

Gannon, T. (2021, August 30). *Census results show large gains in population on East End*. Retrieved from https://suffolktimes.timesreview.com/2021/08/census-results-shows-large-gains-in-population-on-east-end/

GARFO. (2022). *ESA S7 Mapper, Version 2.1*. Retrieved from NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO) Protected Resources Division: https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=a85c0313b68b44e0927b51928271422a

GARFO. (2023). *Section 7: Species/Critical Habitat Information & Maps in the Greater Atlantic Region*. Retrieved from NOAA Fisheries GARFO: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-species-critical-habitat-information-maps-greater

General Services Administration. (2013). *Sale of Plum Island, New York Environmental Impact Statement.* Retrieved August 2023, from https://www.gsa.gov/cdnstatic/2013_06_25_Sale_of_Plum_Island_FEIS_GSA-DHS.pdf

Horton, R. M., & Liu, J. P. (2014). Beyond Hurricane Sandy: What might the future hold for tropical cyclones in the North Atlantic? *Journal of Extreme Events*, 1 (1), 1450007. doi:10.1142/S2345737614500079.

Horton, R., Bader, D., Rosenzweig, C., DeGaetano, A., Solecki, W., & . (2014). *Climate Change in New York State: Updating the 2011 ClimAID Climate Risk Information.* Retrieved from New York State Energy Research and Development Authority, Albany, NY: http://www.nyserda.ny.gov/climaid

IPCC. (2019). *Scenario Process for AR 5*. Retrieved from Intergovernmental Panel on Climate Change (IPCC) Data Distribution Centre: https://sedac.ciesin.columbia.edu/ddc/ar5_scenario_process/RCPs.html

IWG. (2021, February). *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide, Interim Estimates Under Executive Order 13990.* Retrieved from

https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf

Larsen, R. (2021, February). *Great places to see seals on Long Island*. Retrieved from Long Island Parks: https://liparks.com/longislandseals/_39159/

Leatherman, S. P., Zhang, K., & Douglas, B. C. (2011). *Sea level rise shown to drive coastal erosion.* Retrieved from Eos Science News: at https://agupubs.onlinelibrary.wiley.com/ doi/abs/10.1029/00EO00034

Long Island Sound Study. (2022). *Stewardship Initiative*. Retrieved November 3, 2022, from https://longislandsoundstudy.net/our-vision-and-plan/thriving-habitats-and-abundant-wildlife/lis-stewardship-initiative-in-depth/

National Audubon Society. (2022a). *Guide to North American Birds: Piping Plover*. Retrieved September 2023, from https://www.audubon.org/field-guide/bird/piping-plover

National Audubon Society. (2022b). *Guide to North American Birds: Red Knot*. Retrieved September 2023, from https://www.audubon.org/field-guide/bird/red-knot

National Audubon Society. (2022c). *Guide to North American Birds: Roseate Tern*. Retrieved September 2023, from https://www.audubon.org/field-guide/bird/roseate-tern

National Institute on Deafness and Other Communication Disorders. (2022). *Noise-Induced Hearing Loss*. Retrieved April 7, 2022, from National Institute on Deafness and Other Communication Disorders: https://www.nidcd.nih.gov/health/noise-induced-hearing-loss

Native Plant Trust. (2023a). *Cyperus polystachyos - Many-spiked flatsedge*. Retrieved September 2023, from https://gobotany.nativeplanttrust.org/species/cyperus/polystachyos/

Native Plant Trust. (2023b). *Fuirena pumila - dwarf umbrella sedge*. Retrieved September 2023, from https://gobotany.nativeplanttrust.org/species/fuirena/pumila/

New York State. (2023). *New York State Police: Specialty Units*. Retrieved October 2, 2023, from https://troopers.ny.gov/specialty-units

NOAA Fisheries. (2022). *Essential Fish Habitat Mapper*. Retrieved from https://www.habitat.noaa.gov/apps/efhmapper/

NOAA Fisheries. (2023a, October 30). *Fin Whale*. Retrieved from Species Directory: https://www.fisheries.noaa.gov/species/fin-whale

NOAA Fisheries. (2023b, October 3). *Kemp's Ridley Turtle*. Retrieved from Species Directory: https://www.fisheries.noaa.gov/species/kemps-ridley-turtle

NOAA Fisheries. (2023c, May 31). *Leatherback Turtle*. Retrieved from Species Directory: https://www.fisheries.noaa.gov/species/leatherback-turtle

NOAA Fisheries. (2023d, October 4). *North Atlantic Right Whale*. Retrieved from Species Directory: https://www.fisheries.noaa.gov/species/north-atlantic-right-whale

North American Orchid Conservation Center. (2023). *Spiranthes vernalis*. Retrieved October 2023, from https://goorchids.northamericanorchidcenter.org/species/spiranthes/vernalis/#:~:text=It%20can%20be%20found%20in,the%20northern%20mid%2DAtlantic%20region.

NRCS. (2023). *Custom Soil Resource Report for Suffolk County, New York.*

NWF. (2023). *Milkweed for Monarchs*. Retrieved September 2023, from National Wildlife Federation: https://www.nwf.org/Garden-for-Wildlife/About/Native-Plants/Milkweed

NYNHP. (2006). *Marsh Straw Sedge*. Retrieved September 2023, from https://guides.nynhp.org/marsh-straw-sedge/

NYNHP. (2008a). *Cut-leaved water milfoil*. Retrieved September 2023, from https://guides.nynhp.org/green-parrots-feather/

NYNHP. (2008b). *Annual Saltmarsh Aster*. Retrieved September 2023, from https://guides.nynhp.org/annual-saltmarsh-aster/#:~:text=Saltmarsh%20aster%20is%20an%20annual,small%20flowers%20(flower%20heads).

NYNHP. (2008c). *Great plains flatsedge*. Retrieved September 2023, from https://guides.nynhp.org/great-plains-flatsedge/

NYNHP. (2008d). *Sing-glumed spike rush*. Retrieved September 2023, from https://guides.nynhp.org/salt-marsh-spike-rush/

NYNHP. (2011a). *Oakes' Evening Primrose*. Retrieved September 2023, from https://guides.nynhp.org/oakes-evening-primrose/

NYNHP. (2011b). *Wild Pink*. Retrieved September 2023, from https://guides.nynhp.org/wild-pink/

NYNHP. (2012a). *Coastal fireweed*. Retrieved September 2023, from https://guides.nynhp.org/coastal-fireweed/

NYNHP. (2012b). *Scotch Lovage*. Retrieved September 2023, from https://guides.nynhp.org/scotch-lovage/

NYNHP. (2012c). *Velvet rosette grass*. Retrieved September 2023, from https://guides.nynhp.org/velvet-panic-grass/

NYNHP. (2022, March). *New York Natural Heritage Program (NYNHP) and InnerSpace Scientific Diving Survey of Plum Island's Subtidal Marine Habitats: Report to Save the*

Sound. Retrieved from New York Natural Heritage Program, Albany, NY: https://www.nynhp.org/projects/plum-islandinventory/

NYNHP. (2022). *Reflexed Sedge*. Retrieved September 2023, from https://guides.nynhp.org/reflexed-sedge/

NYSDEC & CDEP. (2000). *A Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound.* Retrieved April 21, 2022, from http://longislandsoundstudy.net/wp-content/uploads/2010/03/Tmdl.pdf

NYSDEC. (2014). *Climate Change Regulatory Revisions: Adopted Par 490, Projected Sea-Level Rise*. Retrieved October 11, 2023, from https://www.dec.ny.gov/regulations/119069.html

NYSDEC. (2022). *Northern Long-eared Bat*. Retrieved September 2023, from https://www.dec.ny.gov/animals/106713.html

NYSDEC. (2023a). *EAF Mapper Results. Environmental Assessment Form: Plum Island.*

NYSDEC. (2023b). *EAF Mapper Results. Environmental Assessment Form. Orient Point.*

NYSDS. (2022). *New York State Department of State Coastal Management Program*. Retrieved April 22, 2022, from Waterfront Navigator: NYC's Onestop Waterfront Permit Planner: https://waterfrontnavigator.nyc/agency-contacts-information/nys-dos/#:~:text=Federal%20consistency%20reviews%20are%20required,resources%20within%20the%20coastal%20area.

NYSNHP. (2016). *Plum Island Biodiversity Inventory.* Retrieved September 19, 2023, from https://www.nynhp.org/documents/140/plum_island_inventory.pdf

NYSNHP. (2022). *Survey of Plum Island's Subtidal Marine Habitats.* Retrieved September 22, 2023, from https://www.nynhp.org/documents/177/Plum_Island_Marine_Subtidal_Habitats_March_2022.pdf

OSPAR. (2012). *Guidelines on Best Environmental Practice (BEP) in Cable Laying and Operation* . OSPAR Commission. Agreement 2012-2. Annex 14.

Peycheva, R. (2019). *Why trust cast iron for marine renewable energy projects*. Retrieved from Renewable Energy World: https://www.renewableenergyworld.com/om/asset-management/a-couple-of-good-reasons-to-trust-cast-iron-for-offshore-ballast-solutions/#gref

Rosenzweig, C., Solecki, W., DeGaetano, A., O'Grady, M., Hassol, S., & Grabhorn, P. (2011). *Responding to Climate Change in New York State: The ClimAID Integrated Assessment for Effective Climate Adaptation. Technical Report.* Retrieved from New York State Energy Research and Development Authority (NYSERDA), Albany, NY: http://www.nyserda.ny.gov/climaid

Sabine, C. L., Feely, R. A., Gruber, N., Key, R. M., Lee, K., Bullister, J. L., . . . Rios, A. F. (2004). The oceanic sink for anthropogenic CO2. *Science*, 305, 367-371.

Seggos, B. (2021). *Observed and Projected Climate Change in New York State: An Overview.* Retrieved from NY DEC: https://www.dec.ny.gov/docs/administration_pdf/ccnys2021.pdf

Suffolk County. (2023a). *Chapter 618 Noise*. Retrieved from Suffolk County, NY: https://ecode360.com/14948702

Suffolk County. (2023b). *Suffolk County Police Department*. Retrieved October 2, 2023, from https://suffolkpd.org/

Suffolk County. (2023c). *Suffolk County Police Department Marine Bureau*. Retrieved October 2, 2023, from https://suffolkpd.org/Precincts-and-Specialized-Units/Specialized-Units/Marine-Bureau

Suffolk County Fire Department. (2023b). *Suffolk County Fire Departments*. Retrieved October 2, 2023, from https://www.suffolkcountyny.gov/Departments/FRES/Fire-Marshals-Office/Suffolk-County-Fire-Departments

Suffolk County Parks. (2018a). *Suffolk County Outer Beach 4x4 Permit*. Retrieved October 2023, from https://www.suffolkcountyny.gov/Portals/0/FormsDocs/parks/pdf/outerbeachbrochure6-17Final.pdf

Suffolk County Parks. (2018b). *Orient County Park*. Retrieved September 26, 2023, from https://www.suffolkcountyny.gov/Departments/Parks/Our-Parks/Orient-County-Park

Talmage, S. C., & Gobler, C. J. (2009). The effects of elevated carbon dioxide concentrations on the metamorphosis, size, and survival of larval hard clams (Mercenaria mercenaria), bay scallops (Argopecten irradians), and Eastern oysters (Crassostrea virginica). *Limnology and Oceanography*, 54(6):2072-2080.

The Center for Conservation Biology. (2022). *CCB Mapping Portal - Eagle Roosts*. Retrieved September 2023, from https://ccbbirds.org/maps/#eagleroststopo

Town of Southold. (2014). *Local Waterfront Revitalization Program.*

Town of Southold. (2022). *Local Waterfront Revitalization Policies.* Retrieved April 22, 2022, from https://www.southoldtownny.gov/DocumentCenter/View/1432/LWRPpolicies?bidId=

U.S. Coast and Geodetic Survey. (1930). *Gardiners Bay Long Island New York Navigation Chart No. 298.* Washington D.C.

US Census Bureau. (2010). *American Community Survey, Table DP05: Demographic and Housing Estimates*. Retrieved from https://data.census.gov/cedsci/

US Census Bureau. (2021a). *American Community Survey, Table B02001: Race*. Retrieved from https://data.census.gov/table/ACSDT5Y2021.B02001?q=B02001&g=050XX00US36103_1500000US361031702063_160XX00US3669452

US Census Bureau. (2021b). *American Community Survey, Table B03002: Hispanic or Latino Origin by Race*. Retrieved from https://data.census.gov/table/ACSDT5Y2021.B03002?q=B03002&g=050XX00US36103_1500000US361031702063_160XX00US3669452

US Census Bureau. (2021c). *American Community Survey, Table C17002: Ratio of Income to Poverty Level in the Past 12 Months*. Retrieved from https://data.census.gov/table/ACSDT5Y2021.C17002?q=C17002&g=050XX00US36103_1500000US361031702063_160XX00US3669452

US Census Bureau. (2021d). *American Community Survey, Table DP03: Selected Economic Characteristics*. Retrieved from https://data.census.gov/table/ACSDP5Y2021.DP03?q=DP03&g=040XX00US36_050XX00US36103_160XX00US3669452

US Census Bureau. (2021e). *American Community Survey, Table DP05: Demographic and Housing Estimates*. Retrieved from https://data.census.gov/table/ACSDP5Y2021.DP05?q=DP05&g=040XX00US36_050XX00US36103_160XX00US3669452

USACE. (1987). *Wetland Delineation Manual, Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, MS.*

USCG. (2023). *Sector Long Island Sound*. Retrieved October 2, 2023, from https://www.atlanticarea.uscg.mil/Our-Organization/District-1/District-Units/Sector-Long-Island-Sound/

USDA. (2015). *Prime Farmland Definition - Field Office Technical Guide*. Retrieved October 5, 2023, from United States Department of Agriculture: https://efotg.sc.egov.usda.gov/references/public/CO/5a_Prime_Farmland_Definition.pdf

USEPA. (2020). *FINAL New York State 2018 Section 303(d) List of Impaired/TMDL.* Retrieved from New York Impaired Waters List: https://www.epa.gov/system/files/documents/2022-04/new-york-2018-impaired-waters-list.pdf

USEPA. (2022). *New York Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants*. Retrieved April 15, 2022, from https://www3.epa.gov/airquality/greenbook/anayo_ny.html

USEPA. (2023, July 21). *Greenhouse Gas Equivalencies Calculator*. Retrieved from United States Environmental Protection Agency: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

USFWS. (2007). *National Bald Eagle Management Guidelines.* Retrieved September 2023, from https://www.fws.gov/pacific/ecoservices/documents/NationalBaldEagleManagementGuidelines.pdf

USFWS. (2022a). *National Wetlands Inventory*. Retrieved from United States Fish and Wildlife Service: https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

USFWS. (2022b). *Myotis septentrionalis*. Retrieved September 2023, from https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis

USFWS. (2023). *Green sea turtle (Chelonia mydas)*. Retrieved from Environmental Conservation Online System (ECOS): https://ecos.fws.gov/ecp/species/C00S

USFWS. (2023a). *IPAC Official Species List.*

USFWS. (2023b). *Monarch*. Retrieved September 2023, from https://www.fws.gov/species/monarch-danaus-plexippus

USGS. (2016). *Long Island Depth to Water and Hydrologic Conditions Viewer*. Retrieved from USGS New York Water Science Center: https://experience.arcgis.com/experience/81dc041e5331461e942787bed9ce084b

USGS. (2017). *Long Island Groundwater*. Retrieved April 22, 2022, from https://www.usgs.gov/centers/new-york-water-science-center/science/long-island-groundwater?qt-science_center_objects=0#qt-science_center_objects

USGS. (2018). *2018 Long-term National Seismic Hazard Map*. Retrieved October 4, 2023, from https://www.usgs.gov/media/images/2018-long-term-national-seismic-hazard-map

USNRC. (2009). *United States Nuclear Regulatory Commission.* Retrieved from Review of Suitability of EPR Medium Voltage Cables for Wet and Submerged Conditions: https://www.nrc.gov/docs/ML0928/ML092810125.pdf

Walker, J. C., Tomberlin, J. E., McGovern, W., Warren, J., , & . (2011). *Plum Island Light Station - National Register of Historic Places Nomination Form. Drafted by Booz Allen Hamilton on behalf of United States Department of Homeland Security Science and Technology Directorate.*

Wang, W., Yan, X., Li, S., Zhang, L., Ouyang, J., & Ni, X. (2021). Failure of submarine cables used in high-voltage power transmission: Characteristics, mechanisms, key issues and prospects. *The Institute of Engineering and Technology (IET) Generation, Transmission and Distribution*, 15:1387–1402.

This page intentionally left blank.

6.0 Persons and Agencies Contacted

Federal Level

Advisory Council on Historic Preservation POC: Odette Williams, Administrative Assistant
Email: owilliams@achp.gov

The National Archives and Records Administration
8601 Adelphi Road, College Park, MD 20740-6001
POC: N/A

National Park Service
Region 1 Capitol Area
POC: Kym Hall, National Capital Area Director
Email: kym_hall@nps.gov

NOAA National Marine Fisheries
Greater Atlantic Regional Fisheries Office
POC: Karen E. Greene, Fishery Management Specialist
Email: nmfs.gar.garfo@noaa.gov

US Army Corps of Engineers
New York District
POC: Kathleen Cuzzolino, Project Manager
Email:
Kathleen.Cuzzolino@usace.army.mil

US Environmental Protection Agency
Region 2
POC: Richard Balla, Environmental Engineer
Email: balla.richard@epa.gov

US Environmental Protection Agency
National Estuary Program
POC: Richard Balla, Environmental Engineer
Email: balla.richard@epa.gov

US Congress
New York 1st District
POC: Congressman Nick LaLota
Email: nicole.rapanose@mail.house.gov
Peter.ganley@mail.house.gov

US Department of Homeland Security
United States Coast Guard Atlantic Area Sector Long Island Sound
POC: N/A
Email: D01-SMB-LISCCenter@uscg.mil

US Department of Homeland Security Management Directorate
Office of the Chief Readiness Support Officer
POC: Jennifer Hass, Environmental Planning Program Manage
Email: jennifer.hass@hq.dhs.gov

US Department of Homeland Security Science & Technology
DHS S&T OES Environment, Safety, Health & Energy (ESH)
POC: Ted Mitchell, Manager, Holly Bisbee, NEPA Program Lead
Email: ted.mitchell@hq.dhs.gov
holly.bisbee@hq.dhs.gov

US Department of Homeland Security Science & Technology
Office of Enterprise Services (OES)
POC: Gail Miller, Acting Executive Director, Rochelle Smith, Acting Principal Director
Email: gail.miller@hq.dhs.gov
rochelle.smith@hq.dhs.gov

US Department of Homeland Security Science & Technology
Office of National Laboratories
Plum Island Animal Disease Center
POC: Tod Companion, PhD, Acting Center Director
Email: tod.companion@hq.dhs.gov

US Fish and Wildlife Service
POC: David Eisenhauer, Chief, Public Affairs
Email. david_eisenhauer@fws.gov

US General Services Administration
POC: John L. A. Dugan, Office of Real Property Utilization & Disposal
Email: john.dugan@gsa.gov

US Senators
New York
POC: Senator Kirsten E. Gillibrand
Senator Charles E. Schumer
Email:
kirsten_gillibrand@gillibrand.senate.gov
Scheduling_schumer@schumer.senate.gov

State Level

New Yok State Assembly
District 2
POC: Assembly Member Jodi Giglio
Email: giglioj2@nyassembly.gov

New York State Department of Environmental Conservation
Region 1
POC: Jie Zhao
Email: Jie.Zhao@dec.ny.gov

New York State Governor
1 State Capitol Building
Albany, NY 12224
POC: The Honorable Kathleen C. Hochul

New York State Office of Fire Prevention and Control
POC: N/A
Email: fire@dhses.ny.gov

New York State Parks/SHPO
POC: Daniel Mackay, Nancy Herter, Director, State Preservation Bureau, State Archaeologist for Government Policy
Email: Daniel.Mackay@parks.ny.gov, nancy.herter@parks.ny.gov

New York State Senate
District 1
POC: Senator Anthony H. Palumbo
Email: palumbo@nysenate.gov

Local Level

Long Island Sound Study Citizens Advisory Committee
POC: Mark Tedesco, EPA Long Island Sound Office Director
Email: tedesco.mark@epa.gov

Southold Town
POC: Scott A. Russell, Town Supervisor
Email: scott.russell@town.southold.ny.us

Suffolk County Department of Health Services
Health Services
POC: N/A
Email: scdhsweb@suffolkcountyny.gov

Suffolk County Department of Health Services
Water and Wastewater
POC: Corey Humphrey, District Manager, Soil and Water Conservation District
Email:
corey.humphrey@suffolkcountyny.gov

Suffolk County Legislator
POC: Al Krupski
Email: Al.Krupski@suffolkcountyny.gov

Southold Town Representatives
POC: Michelle Tomaszewski, Administrative Assistant to Town Board
Email:
michelle.tomaszewski@town.southold.ny.us

Suffolk County Parks
POC: N/A
Email: scparks@suffolkcountyny.gov

Non-Governmental Organizations

Delaware Tribe of Indians (Federally Recognized)
Delaware Tribal Offices
POC: N/A
Email: tribe@delawaretribe.org

Shinnecock Indian Nation (Federally Recognized)
Shinnecock Indian Tribal Nation Tribal Office
Email: adminoffice@shinnecock.org

Unkechaug Tribe (State-Recognized)
POC: N/A
Email: unkechaugnation@gmail.com

Montaukett Tribe
POC: Sandi Brewster-Walker, Executive Director & Government Affairs Officer
Email: montaukett.executive.director@gmail.com

This page intentionally left blank.

7.0 List of Preparers

7.1 Department of Homeland Security

Name	Role
Jennifer Hass	Director, Environmental Planning & Historic Preservation Program
Sarah Koeppel	Senior Environmental Protection Specialist
Kimberly Poli	Senior Environmental Protection Specialist
Holly Bisbee	Senior Environmental Protection Specialist
Erika Castro	NEPA Specialist
Thomas Dwyer	Senior Environmental Protection Specialist
Lisa Buckley	Executive Administrative Assistant – Dynamis
John Searing	Deputy Center Director

7.2 AECOM

Name	Role	Degree	Years of Experience
Jennifer Warf	Project Manager, EA Review and Oversight	M.S. in Environmental Studies B.A in Zoology	20
Michael Busam	Quality Assurance/Quality Control (QA/QC) of the EA, Preparation of the EA	B.S. in Environmental Science and Policy	8
Benjamin Obenland	Preparation of EA Sections	M.S. in Environmental Management B.S. in Environmental Science and Policy	4
Natalie Kisak	Preparation of EA Sections	B.A. in Environmental Studies, Public Policy	4
Kate Melanson	Preparation of EA Sections	Ph.D. in Ecology and Evolutionary Biology M.A. in Ecology and Evolutionary Biology B.A. in Biology	9
Joseph Grinnan	SOI-Qualified Archaeologist, preparation of Section 106 consultation letter	M.A. in Historical Archaeology B.A. in Anthropology	13
Fang Yang	Preparation of Air Quality and Noise Analysis	M.S., Atmospheric Science B.S., Physics	35

Name	Role	Degree	Years of Experience
Priyal Pandya	Preparation of Air Quality Analysis	M.S., Environmental Technology M.E., Chemical Engineering B.S., Chemical Engineering	15
Evan Dodd	Preparation of EA Sections	B.S. in Environmental Sciences B.S. in Marine Biology	1
Kaylyn Miller	Preparation of EA Sections	B.S. in Environmental Science and Policy	1

Appendix A: Scoping Report

This page intentionally left blank.

FINAL

PUBLIC SCOPING REPORT

Environmental Assessment for Plum Island Animal Disease Center Undersea Cable Installation

DEPARTMENT OF HOMELAND SECURITY

SCIENCE AND TECHNOLOGY DIRECTORATE

December 2023

This page intentionally left blank.

Acronyms and Abbreviations

CLB	Cable Laying Barge
DHS	Department of Homeland Security
EA	Environmental Assessment
NBAF	National Bio and Agro-Defense Facility
NEPA	National Environmental Policy Act
NOA	Notice of Availability
NY	New York
NYSDEC	New York State Department of Environmental Conservation
PIADC	Plum Island Animal Disease Center
S&T	Science and Technology Directorate
U.S.	United States
USDA	United States Department of Agriculture

Attachments

Attachment A: Newspaper Advertisements

Attachment B: Department of Homeland Security Website Public Scoping Notice

Attachment C: Comments Received

This page intentionally left blank.

1.0 Introduction

The United States (U.S.) Department of Homeland Security (DHS) Science and Technology Directorate (S&T) conducted early public scoping between September 28 and October 28, 2023, for the Environmental Assessment (EA) that will analyze the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). The purpose of the early public scoping process was to identify potential environmental issues associated with Plum Island cable replacement activities by DHS S&T, to ensure that all interested and affected parties are aware of the Proposed Action, and to provide the public with an opportunity to participate in and provide input into the National Environmental Policy Act (NEPA) process.

1.1 Purpose of Scoping

Public participation is an integral component of the environmental review process for federal actions. The scoping process provides an opportunity for the public and other interested federal, state, tribal and local agencies to provide input on the range of issues to be addressed in the EA. Scoping is conducted early in the NEPA process to guide the preparation of NEPA documents. DHS S&T sought information, comments, and assistance from federal, state, and local agencies, tribes, and other individuals who may be interested in or affected by the Proposed Action. Information received during scoping will be considered in preparing the Draft EA to facilitate the preparation of a comprehensive and sound document. This scoping report outlines the scoping process, provides background information regarding the Proposed Action, and describes the scoping comments and where they would be addressed, as appropriate, in the EA.

1.2 Proposed Action Overview

Plum Island is an 840-acre island owned by DHS and located 1.5 miles northeast of Orient Point in Suffolk County, New York. DHS S&T operates PIADC in cooperation with the United States Department of Agriculture (USDA). DHS S&T also owns and operates the supporting Orient Point facility at Orient Point, NY. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility vault, which supports the underground cabling and utilities on Plum Island.

DHS proposes to conduct activities related to the abandonment in place of an existing undersea utility cable and the installation of the new undersea utility cable. Plum Island currently receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. An inspection of the cables' condition in 2022 revealed that the older cable, M1, has exceeded its 25-year lifespan and is degrading to such an extent that it is at risk of failing.

A new utility cable would be connected within the existing cable vaults located on Orient Point and Plum Island and would be installed underground from the shore to below the water line and then would be bottom laid through Plum Gut via a cable laying barge (CLB). The new cable would

be installed between or immediately adjacent to the existing M1 and M2 cables. The Proposed Action is necessary as any potential loss of electrical or communications capabilities would significantly constrain PIADC's operational capabilities, including its standard mission as well as ongoing and planned closure activities, should the cable fail in the near-term.

The EA will analyze the potential environmental, cultural, and socioeconomic consequences associated with DHS S&T's Proposed Action.

2.0 Public Scoping Process

DHS published a public notice in the *Suffolk Times* and the *Riverhead News Review* newspapers on September 28, 2023, initiating the EA public scoping process (**Attachment A**). The public notice informed affected stakeholders of the Proposed Action and invited them to comment on the Proposed Action. In addition to the public notice, DHS also distributed letters directly to federal, state, and local agencies, and Native American tribes, informing and inviting them to comment on the Proposed Action. An announcement was also published on the DHS website (https://www.dhs.gov/nepa) on September 28, 2023 (**Attachment B**). The public scoping period formally concluded on October 28, 2023.

3.0 Summary of Public Scoping Feedback

During the scoping period, three responses were received.

The comments, submitted by the New York State Department of Environmental Conservation (NYSDEC), Save the Sound, and the Town of Southold, primarily focused on the potential environmental impacts of the Proposed Action, relating to hazardous and toxic materials and waste, biological resources, earth resources, recreational resources, and water resources.

- Comments regarding the Proposed Action focused on complying with all relevant local, state, and federal regulations, acquiring necessary permits, maintaining detailed records, as well as implementing an emergency response plan.
- Comments regarding hazardous and toxic materials and waste focused on considering how to remove or contain possible dielectric fluids or other contamination resulting from cable abandonment, as well as the potential to disturb any historical landfills.
- Comments regarding biological resources focused on impacts to marine life and the surrounding ecosystem.
- Comments regarding earth resources focused on the installation method's impacts to sediment and shoreline erosion, and potential to disturb bedrock.
- Comments regarding recreational resources focused on the potential impacts to swimming and recreational or commercial boating and fishing.
- Comments regarding water resources focused on potential impacts to water quality in the Long Island Sound.

A summary of the concerns raised by the commenters is presented in **Table 1**. The comments received during the scoping period are included in **Attachment C**.

4.0 Conclusion and Next Steps

DHS has reviewed comments received during the EA scoping period and will incorporate relevant comments into the Draft EA, as appropriate. The public; other federal, state, and local agencies; and federally recognized tribes will have an additional opportunity to review and comment on the Proposed Action following the preparation of the Draft EA and Draft Decision Document. These documents will be made available for a 30-day public review in which comments are encouraged to support the NEPA process. DHS will initiate the public review period with the publication of a Notice of Availability (NOA) in the *Suffolk Times* and *Riverhead News Review*. The NOA will be mailed to all stakeholders on the project mailing list concurrent with the newspaper publication. The Draft EA and supporting documents will also be published digitally on the project website at https://www.dhs.gov/national-environmental-policy-act, and made available in hard copy at the Floyd Memorial Library at 539 1st Street, Greenport, NY 11944, and the Southold Free Library at 53705 Main Road, Southold, NY 11971. Public comments, agency responses, and tribal responses will be addressed in the Final EA, as appropriate.

Table 1: Summary of Scoping Comments

Commenter	Proposed Action	Hazardous and Toxic Materials and Waste	Biological Resources	Earth Resources	Recreational Resources	Water Resources
NYSDEC	Emphasized adhering to all relevant local, state, and federal regulations, maintaining detailed records and drawings, as well as implementing an emergency response plan.	Requests consideration for the removal or containment of possible dielectric fluids from the abandoned cable, and identification of any potential to disturb historical landfills.	Requests that the EA should evaluate impacts to marine life and the surrounding ecosystem.	Requests that the EA should evaluate the abandonment and installation methods' potential to impact sediment and shoreline erosion, and potential to disturb bedrock.	--	--
Save the Sound	Emphasized consultation with the New York State Office of General Services, adherence to the New York State Coastal Consistency Review, and acquiring all permits required by NYSDEC.	Requests that the EA consider potential contamination related to the deterioration of the abandoned cable, specifically the potential discharge of insulating materials and liquids.	Requests that the EA evaluate all adverse impacts on aquatic wildlife, plants, ecological communities, and significant habitats from construction, operation, and maintenance of the new cable and from aging of the old cable. Specifically, requests avoidance of seabirds, sea turtles, and eelgrass meadows.	Expressed concern with the handling and deposition of disturbed sediment across the entire Proposed Action, specifically the risk of potential increases in turbidity and sedimentation in Plum Gut.	Requests that the EA address impacts on commercial and recreational fishing and boating, swimming, and other human uses of the area, as well as impacts on habitat and trails by construction equipment at Orient Point County Park.	--

Commenter	Proposed Action	Hazardous and Toxic Materials and Waste	Biological Resources	Earth Resources	Recreational Resources	Water Resources
Town of Southold	Requests information on past cable replacement projects, specifically requesting the number of abandoned cables in Plum Gut to date. Requests dates and size information for restricted areas during Proposed Action activities.	Requests information pertaining to the decomposition rate of the current utility cables and what substances, chemicals, and heavy metals may be released.	Requests information pertaining to the bioaccumulation and toxicity of substances originating from cable decomposition on marine receptors.	--	Requests information pertaining to restrictions that would be placed on vessel navigation of the Proposed Action area.	Expressed concern regarding compliance with the Clean Water Act, and the potential for the abandoned cable to become a source of pollution for Long Island Sound.

This page intentionally left blank.

Attachment A: Newspaper Advertisements

This page intentionally left blank.

LIFE LESSONS FROM PECONIC LANDING:

Marjorie Day

Stories from a 103-year-old nurse and activist

BY NICHOLAS GRASSO
STAFF WRITER

Marjorie Day admits that nobody knows the secret to reaching their 100th birthday, but it may be that her avoidance of processed foods, sugar and white flour has kept her healthy.

Now 103, Ms. Day was among 13 centenarians recognized with proclamations courtesy of New York State Sen. Anthony Palumbo at a birthday celebration last month. A few weeks later, Ms. Day recounted stories from her life with The Suffolk Times for its series drawing wisdom from the residents of Peconic Landing. Here are some key takeaways from this discussion.

Help others however you can

For 10 years, Ms. Day worked as a visiting nurse, helping patients in their homes in Brooklyn. She then took to teaching the trade at Jane Addams High School for Academic Careers. Although a noble profession, it was not always the safest. In those days, she explained, nurses wore uniforms and carried marked bags, which made them targets for those seeking illicit substances.

"We weren't carrying drugs," she emphasized. "But they didn't know that."

During her time helping others, she met a fellow nurse who, after all these years, she still remembers for helping her and her husband, Lloyd Day, secure a home in Sag Harbor by taking out a second mortgage on her own home.

"I remember her being a very kind lady, and very friendly," Ms. Day said.

Respect others and their differences

While earning her master's degree in nursing at NYU, Ms. Day recalled being the only Black woman in the program. For the lifelong activist, who lived through the Civil Rights movement, these experiences were common.

Growing up, she said, "I learned that I was different from everybody else, but I didn't know why I was different.

"You have to be yourself and understand other people are different from you," she added. "When I first got [to Peconic Landing], the only other Black lady here was [Josephine Watkins-Johnson]. She just died [in 2020]. Our hair is different, our eyes are different, our skin is different. You have to accept that you are different, and you are special because you are different. Love yourself. You have to be conscious of being different, you have to accept it, but it's not easy."

COURTESY PHOTOS

While earning her master's degree in nursing at NYU, Ms. Day recalled being the only Black woman in the program, an experience that was common in many stages of her life. She doesn't claim to know the secret to reaching 103, but advised all to accept that we are all different, and special because we are different.

Continue the fight for civil rights

When asked about her time as a Civil Rights activist and her thoughts on current efforts for equality, Ms. Day said she wants people of color to have greater access to better "housing, education and jobs." As a Black woman in New York in the middle of the 20th century, Ms. Day said, her only education and career paths were teaching or nursing. If not for that fellow nurse, she added, she and her husband could not have afforded their Sag Harbor home.

> 'You have to be yourself and understand other people are different from you.'
>
> **Marjorie Day**

"It's hard for a Black person to get money to buy a house," she said. "The bank hesitates to give a mortgage."

While progress she herself fought for has been made, she said there is still more to be achieved?.

"I was always involved in civil rights," she said. "I always took part in any protest.

"How long will it take?" she added of the push for equality. "It's been going on for years and years."

Stick to projects and hobbies

Ms. Day lived a full life, from raising her two children to taking part in civil rights meetings and protests. However, she said, she did let some less important activities drop by the wayside.

"I would start a project, I would start things to do but never completed them, so that's a fault in me," she said. "One time, a long time ago, there were these wire figures and I used to make animals wrapping cloth around the [wires]. I did choral singing. I went to the rehearsals but I didn't continue ... I belonged to the ukulele club for a minute. I was trying to have the poets here learn more about Black poets. I tried to bring in names that I didn't know a lot about myself, so I was learning, too."

Value whatever time you have with loved ones

When she was a child, Ms. Day said, her mother worked as a housekeeper while her father worked overnight shifts as a janitor.

"I don't remember my father too well because he had a hard time," she said. "He had a very hard time."

She does, however, treasure memories of a few special family outings she took with both her parents.

"I remember going to Coney Island with my father," she said. "We would drive up to Croton Point [Park] and we would have picnics there. I remember my mother used to make this particular dish and put it in a jar; it was sliced onions and mayonnaise. It was delightful, we had a good time."

ngrasso@timesreview.com

PUBLIC SCOPING AND EARLY NOTICE OF A PROPOSED ACTIVITY WITH THE POTENTIAL TO IMPACT FLOODPLAINS
Environmental Assessment for Installation of Undersea Cable at the Plum Island Animal Disease Center
United States Department of Homeland Security | Plum Island, New York

DESCRIPTION: Interested parties are hereby notified that the United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) intends to prepare an Environmental Assessment (EA) and requests receipt of public scoping comments. This EA will evaluate the DHS S&T's proposal to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action).

STATUTORY AUTHORITY: This notice is being issued to all interested parties in accordance with the National Environmental Policy Act (NEPA) of 1969, the White House Council on Environmental Quality Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508), DHS Management Directive 023-01, rev. 01 Implementation of the NEPA, and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA. This posting also serves as a notice in accordance with Section 2(a)(4) of Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands.

BACKGROUND: Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet long, and provides for the island's normal electrical requirements. The expected lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding.

PROPOSED ACTION: DHS S&T is proposing the installation of a new undersea utility cable between Orient Point, NY and PIADC on Plum Island, NY. The cable would be connected to the existing utility vaults located on Orient Point and Plum Island, and would be installed using a combination of trenching and/or horizontal directional drilling from the shore to below the water line, and then bottom laying the cable from a barge across the seafloor of Plum Gut. The new cable would be installed between or adjacent to the existing M1 and M2 cables. The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. One of the existing cables would be disconnected from the utility vaults on Orient Point and Plum Island and abandoned in place, identical to how previous cable replacement projects have been conducted in the area. Tasks to facilitate the Proposed Action would occur within the Federal Emergency Management Agency 100-year floodplain as well as within fringing estuarine and marine wetlands, including cable abandonment, upland trenching along the coastlines of Plum Island and Orient Point, underground horizontal drilling from the shore to below the water line, and cable laying. No impacts to the long-term function of the 100-year floodplain have been identified, nor is there an increased potential for flooding either on-site or off-site. Proposed work is necessary at these coastal areas; therefore, there is no practicable alternative to working in the floodplain.

PUBLIC REVIEW: DHS S&T is seeking comments from Federal, State, and local agencies, Tribes, and individuals who may be interested in or affected by the Proposed Action. This input will be used in preparing the Draft EA. Please provide your comments by October 28, 2023. Please reply to: Benjamin Obenland at benjamin.obenland@aecom.com. Email responses are preferred, although letter responses may be submitted to Benjamin Obenland, AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876.

DRAFT EA AND FINAL EA REVIEW: A Notice of Availability of the Draft EA will be published in the Suffolk Times and the Riverhead News Review. The Draft EA is anticipated to be available for public comment in December 2023. The Draft EA will also be made available for public viewing at:
• Floyd Memorial Library at 539 1st St, Greenport, NY 11944
• Southold Free Library at 53705 Main Rd, Southold, NY 11971.

After the comment period on the Draft EA ends, substantive comments will be addressed in the Final EA. A public notice announcing the availability of the Final EA will be published in The Suffolk Times and The Riverhead News Review.

PUBLIC SCOPING AND EARLY NOTICE OF A PROPOSED ACTIVITY WITH THE POTENTIAL TO IMPACT FLOODPLAINS

Environmental Assessment for Installation of Undersea Cable at the Plum Island Animal Disease Center
United States Department of Homeland Security | Plum Island, New York

DESCRIPTION: Interested parties are hereby notified that the United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) intends to prepare an Environmental Assessment (EA) and requests receipt of public scoping comments. This EA will evaluate the DHS S&T's proposal to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action).

STATUTORY AUTHORITY: This notice is being issued to all interested parties in accordance with the National Environmental Policy Act (NEPA) of 1969, the White House Council on Environmental Quality Regulations Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations (CFR) Parts 1500-1508), DHS Management Directive 023-01, rev. 01 Implementation of the NEPA, and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA. This posting also serves as a notice in accordance with Section 2(a)(4) of Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands.

BACKGROUND: Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet long, and provides for the island's normal electrical requirements. The expected lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding.

PROPOSED ACTION: DHS S&T is proposing the installation of a new undersea utility cable between Orient Point, NY and PIADC on Plum Island, NY. The cable would be connected to the existing utility vaults located on Orient Point and Plum Island, and would be installed using a combination of trenching and/or horizontal directional drilling from the shore to below the water line, and then bottom laying the cable from a barge across the seafloor of Plum Gut. The new cable would be installed between or adjacent to the existing M1 and M2 cables. The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. One of the existing cables would be disconnected from the utility vaults on Orient Point and Plum Island and abandoned in place, identical to how previous cable replacement projects have been conducted in the area. Tasks to facilitate the Proposed Action would occur within the Federal Emergency Management Agency 100-year floodplain as well as within fringing estuarine and marine wetlands, including cable abandonment, upland trenching along the coastlines of Plum Island and Orient Point, underground horizontal drilling from the shore to below the water line, and cable laying. No impacts to the long-term function of the 100-year floodplain have been identified, nor is there an increased potential for flooding either on-site or off-site. Proposed work is necessary at these coastal areas; therefore, there is no practicable alternative to working in the floodplain.

PUBLIC REVIEW: DHS S&T is seeking comments from Federal, State, and local agencies, Tribes, and individuals who may be interested in or affected by the Proposed Action. This input will be used in preparing the Draft EA. Please provide your comments by October 28, 2023. Please reply to: Benjamin Obenland at benjamin.obenland@aecom.com. Email responses are preferred, although letter responses may be submitted to Benjamin Obenland, AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876.

DRAFT EA AND FINAL EA REVIEW: A Notice of Availability of the Draft EA will be published in the Suffolk Times and the Riverhead News Review. The Draft EA is anticipated to be available for public comment in December 2023. The Draft EA will also be made available for public viewing at:
• Floyd Memorial Library at 539 1st St, Greenport, NY 11944
• Southold Free Library at 53705 Main Rd, Southold, NY 11971.

After the comment period on the Draft EA ends, substantive comments will be addressed in the Final EA. A public notice announcing the availability of the Final EA will be published in The Suffolk Times and The Riverhead News Review.

OBITUARIES

CONTINUED FROM PREVIOUS PAGE

Benjamin Kowalchuk

Benjamin Kowalchuk, longtime Peconic resident, died on Saturday, Sept. 23, 2023. He was 99 years old.

Benjamin was born Aug. 23, 1924, in Brooklyn, N.Y., to Helen (née Dryzuk) and Jacob Kowalchuk. He was one of four children. He graduated from Westbury High School. After high school, he joined the United States Air Force and served from 1943 to 1946. After his military service, he attended Pratt Institute where he attained his bachelor's degree.

He married the love of his life, Joan Doyle, in Garden City, N.Y., in 1950. Together they had four children. In his professional career, Benjamin worked as an electrical engineer for AT&T for 30 years.

Predeceased by his wife, Joan Kowalchuk; children Patricia and William; and siblings Paul, Mary and Elaine, Benjamin is survived by his children Richard Kowalchuk of Virginia and Susan Kowalchuk of Pennsylvania; and grandchildren Morgan Kowalchuk, Alyssa Simon, Ariel Simon and Adria Simon.

A celebration of Benjamin's life will be held at a future date. Memorial donations may be made to the Kanas Center For Hospice Care, P.O. Box 1048, Westhampton Beach, NY 11978.

DeFriest-Grattan Funeral Home in Southold is assisting the family.

Paid notice

Eleanor 'Holly' McKallor Page

Eleanor "Holly" McKallor Page of Peconic Landing in Greenport, and formerly of Cold Spring Harbor, N.Y., died on Monday, Sept. 18, 2023. She was 84 years old.

She joins her husband, Dr. David A. Page, and many friends in heaven. Rumor has it that there is a giant welcoming party going on!

Holly is predeceased by her older brother Edgar McKallor and Susan Holic.

On July 14, 1972, in Locust Valley, N.Y., she married the love of her life, Dr. David A. Page. Together they raised a wonderful family based on working hard, love, laughter and not taking yourself too seriously! Holly was known for her sense of humor and as a powerhouse on the tennis and paddle courts. She also loved tending to her beautiful gardens and needlepoint.

Holly is survived by her children, Robert Hanafin Jr. (Lisa) of Vestal, N.Y., Douglas Hanafin (Katherine) of Seattle, Wash., David Page Jr. (Breanna) of Eagle, Colo., and Eleanor Kellershon (Joseph) of Mattituck; grandchildren Charles Hanafin, Susan Fields, Allison Hanafin, Colton Page, Caroline Page, Page Kellershon, Axel Kellershon and Ashley Rybacki; and siblings Janet Bates and Ruth Brown.

The family has chosen to remember Holly's life privately at this time.

DeFriest-Grattan Funeral Home in Mattituck is assisting the family.

Paid notice

Visit **riverheadnewsreview.com** for notices about arrangements that may occur between print editions.

Attachment B: Department of Homeland Security Website Public Scoping Notice

This page intentionally left blank.

U.S. Department of Homeland Security

Public Scoping and Early Notice of a Proposed Activity with the Potential to Impact Floodplains and Preparation of an Environmental Assessment for Installation of Undersea Cable at the Plum Island Animal Disease Center at Plum Island, New York

Interested parties are hereby notified that the United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) intends to prepare an Environmental Assessment (EA) and requests receipt of public scoping comments. This EA will evaluate the DHS S&T's proposal to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet long, and provides for the island's normal electrical requirements. The expected lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding. DHS S&T is proposing the installation of a new undersea utility cable between Orient Point, NY and PIADC on Plum Island, NY.

The cable would be connected to the existing utility vaults located on Orient Point and Plum Island and would be installed using a combination of trenching and/or horizontal directional drilling from the shore to below the water line, and then bottom laying the cable from a barge across the seafloor of Plum Gut. The new cable would be installed between or adjacent to the existing M1 and M2 cables. The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. One of the existing cables would be disconnected from the utility vaults on Orient Point and Plum Island and abandoned in place, identical to how previous cable replacement projects have been conducted in the area.

Tasks to facilitate the Proposed Action would occur within the Federal Emergency Management Agency 100-year floodplain as well as within fringing estuarine and marine wetlands, including cable abandonment, upland trenching along the coastlines of Plum Island and Orient Point, underground horizontal drilling from the shore to below the water line, and cable laying. No impacts to the long-term function of the 100-year floodplain have been identified, nor is there an increased potential for flooding either on-site or off-site. Proposed work is necessary at these coastal areas; therefore, there is no practicable alternative to working in the floodplain.

This notice is being issued to all interested parties in accordance with the National Environmental Policy Act (NEPA) of 1969, the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations (CFR) Parts 1500-1508), DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA*, and DHS Instruction 023-01-001-01 rev. 01 *Implementation of the NEPA*. This posting also serves as a notice in accordance with Section 2(a)(4) of Executive Order 11988, *Floodplain Management*, and Executive Order 11990, *Protection of Wetlands*.

Public Review: DHS S&T is seeking comments from Federal, State, and local agencies, Tribes, and individuals who may be interested in or affected by the Proposed Action. This input will be used in preparing the Draft EA. Please provide your comments by October 28, 2023 to: Benjamin Obenland at benjamin.obenland@aecom.com (mailto:benjamin.obenland@aecom.com?subject=RE%3A%20Plum%20Island%20Public%20Scoping%20and%20Early%20Notice%20) . Email responses are preferred, although letter responses may be submitted to Benjamin Obenland, AECOM, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876**.**

Topics

SCIENCE AND TECHNOLOGY (/TOPICS/SCIENCE-AND-TECHNOLOGY)

Keywords

ENVIRONMENTAL IMPACT (/KEYWORDS/ENVIRONMENTAL-IMPACT)

Last Updated: 10/06/2023

This page intentionally left blank.

Attachment C: Comments Received

This page intentionally left blank.

From: Zhao, Jie (DEC)
To: Obenland, Benjamin
Cc: Buckley, Lisa (CTR)
Subject: RE: PIADC/AECOM Public Involvement Plan Letter
Date: Friday, October 27, 2023 5:17:13 PM
Attachments: image003.png
image004.png
image005.png

Mr. Obenland,

As I was invited by John Searing, deputy center director of Plum Island Animal Disease Center (PIADC), I am writing to provide my considerations for on the proposed site assessment preparation for abandonment in-place of two existing undersea utility cables and installation of a new cable between Orient Point and PIADC on Plum Island.

1. Identify the Responsible party: Who is the owner of the cables. Is it PIADC or PSEG or somebody else?
2. Regulations Compliance: The proposed installation and abandonment plans should adhere with the relevant local, state and federal regulations.
3. This replacement work should have an emergency response plan for the abandonment and installation process as well as a post-abandonment monitoring plan.
4. Potential Environmental Impact consideration for cables replacement:
    a). Dielectric fluid containing cables abandoning in-place, if applies: Drain the fluid for abandonment. The rest consideration would be how to proper remove or contain fluid residual not to be released to waterbody in a long term when cables continue getting rotted and exposed.
    b). Evaluate any other impact of this process which would affect marine life and the surrounding ecosystem.
    c). Evaluate the abandonment and installation methods as well as equipment to be used if it will disturb bedrock, cause sediment or shoreline erosion.
    d). Identify if the replacement process will disturb any historical landfill areas on Plum Island.
    e). Maintain detailed records for abandonment/replacement process, including methods, drawing, etc., for regulatory compliance and future reference.

Thank you for the review opportunity.

Sincerely,

Jie Zhao, P.E., EE2
She/Her/Hers
Division of Materials Management, Region One

New York State Department of Environmental Conservation
Stony Brook University
50 Circle Road, Stony Brook, NY 11790-3409
P: 631-444-0375 | F: 631-444-0231 | jie.zhao@dec.ny.gov

www.dec.ny.gov | | |

From: Buckley, Lisa (CTR) <Lisa.Buckley@ST.DHS.GOV>
Sent: Thursday, September 28, 2023 2:19 PM
To: Zhao, Jie (DEC) <jie.zhao@dec.ny.gov>
Subject: PIADC/AECOM Public Involvement Plan Letter

Dear Ms. Zhao,

The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T invites your comments on the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3 and Section 106 of the National Historic Preservation Act of 1966 (NHPA).

We are preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA.* The EA will be made available for viewing on dhs.gov and shared with you in December 2023 (anticipated).

As we begin our scoping and initial environmental analysis, we invite comments or requests to consult on the proposed action. Please provide any comments, concerns, information, studies, or other data you may have regarding the Proposed Action within **thirty (30) days** of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe. All responses will be considered for incorporation in the EA. We look forward to and welcome your participation in this analysis. If you have comments or information relevant to the development of the EA, please direct your correspondence to Benjamin Obenland at benjamin.obenland@aecom.com.

This email was sent on behalf of John Searing.

John M. Searing, PE PMP
Deputy Center Director
Plum Island Animal Disease Center
US Dept of Homeland Security

John.Searing@ST.DHS.GOV
Office: 631-323-3036
Cell: 631-312-7833

CHAT with me on TEAMS!

Best-

Lisa

Lisa C. Buckley

Executive Administrative Specialist- Dynamis
Plum Island Animal Disease Center (PIADC)
Department of Homeland Security
Office Phone: 631-323-3202
Office Cell Phone: 631-223-5788
Lisa.Buckley@ST.DHS.GOV

We are **S&Trong**!

'For there is always light. If only we're brave enough to see it. If only we're brave enough to be it'

Amanda Gorman

November 6, 2023

Benjamin Obenland
AECOM
12420 Milestone Center Drive, Suite 150
Germantown, MD 20876
benjamin.obenland@aecom.com

Dear Mr. Obenland,

We were pleased to receive Mr. John M. Searing's request for our input regarding information or potential environmental concerns for incorporation into the Environmental Assessment (EA) for the United States Department of Homeland Security (DHS) Science and Technology Directorate's (S&T) proposal to abandon in place an existing undersea utility cable and install a new cable between Orient Point, NY and Plum Island, NY. As a nonprofit organization representing over 4,200 member households and 10,000 activists regionwide in our mission to protect and improve the land, air, and water of the entire Long Island Sound region, we thank you for the opportunity to provide the following comments.

We ask that DHS S&T ensure the following important topics are included in the EA, or Environmental Impact Statement (EIS), should one be prepared:

- Adverse impacts on aquatic wildlife, plants, and ecological communities
- Adverse impacts on areas of particular ecological significance
- Contamination related to the deterioration of the abandoned cable
- Consultation with the New York State Office of General Services
- Adherence to New York State Coastal Consistency Review
- Permits required by the New York State Department of Environmental Conservation
- Impacts on human uses of the area during construction

Additional detail is provided below.

Adverse impacts on aquatic wildlife, plants, and ecological communities from construction, operation, and maintenance of new cable and from aging of old cable

The waters surrounding Plum Island and the intertidal zone boast a high biodiversity of plants and wildlife, including the presence of several federally listed threatened or endangered species. Save the Sound requests assurance that ecologically sensitive assets, including aquatic plants, significant ecological communities, and wildlife be considered in the process of construction, operation, and maintenance of the new cable and the aging of the cable to be abandoned. This should include assurances regarding potential impacts on seabirds such as northern gannets (*Morus bassanus*) and other diving birds known to forage in Plum Gut; sea turtles, such as

juvenile Kemp's Ridley sea turtles, known to use the waters proximal to the cable crossing as developmental habitat; and marine mammals using the rocky shoreline, nearshore areas, and marine waters around Plum Island and Orient Point.

Northwest of Plum Island's harbor entrance is an ecologically and regionally significant meadow of eelgrass *(Zostera marina).* Construction should avoid this area completely. Adverse impacts of any nearshore suspension of particulates (turbidity) and sedimentation in the eelgrass meadow should be avoided to protect this critically important marine resource.

Save the Sound is also concerned with the handling and deposition of disturbed sediment across the entire Proposed Action. We request that the EA include relevant plans and mitigating measures, particularly in the intertidal zone and on land within the jurisdiction of New York's Tidal Wetlands Act.

Further, Save the Sound is particularly, though not exclusively, concerned about the trenching and horizontal directional drilling processes typically associated with the laying of cables and mentioned in Mr. Searing's letter. We request that the EA thoroughly address the potential adverse impacts of these activities on the plants, wildlife, and ecological communities described herein, including impacts from noise.

Adverse impacts on areas of particular ecological significance

Plum Gut is where waters from two National Estuaries – Long Island Sound and the Peconic Estuary – converge. Plum Gut is part of the Suffolk County-designated Peconic Bay Environs Critical Environmental Area and Audubon New York's Orient Point/Plum Island Important Bird Area. It is designated by New York State as a Significant Coastal Fish and Wildlife Habitat and recognized by the United States Fish and Wildlife Service as part of a Significant Coastal Habitat (Site 7, Northeast Coastal Areas Study). Its renowned natural resources must be protected. The EA should discuss the resources recognized in each of these designations and potential adverse impacts on those resources.

Contamination related to the deterioration of the abandoned cable

Save the Sound requests an analysis of contamination related to the deterioration of the abandoned cable over time, and the potential for insulating materials and liquids to leach or discharge into the waters. If such releases occur in areas where the cable is buried near shore, there may be a risk of accumulation in benthic sediments or fauna. The EA should address these concerns and compare the impacts from abandoning the existing cable in place as opposed to removing it. Save the Sound also requests that DHS devise a plan to provide broad notice to the public and appropriate agencies regarding the risk of environmental exposure to insulating materials and other substances as the cable housing left in place degrades over time.

Consultation with the New York State Office of General Services

New York's Public Lands Law vests the general care and superintendence of all state lands, including submerged lands, in the New York State Office of General Services (OGS). This includes the authority to grant rights and easements to lands under water. Please describe your process for notifying, consulting with, and acquiring any necessary permits or easements from OGS for the abandonment of the old cable and laying of the new cable across submerged lands under the jurisdiction of New York State.[1]

Adherence to New York State Coastal Consistency Review

A federal agency undertaking an activity that will have reasonably foreseeable coastal effects must submit a consistency determination to the New York Department of State pursuant to the New York State Coastal Management Program (CMP). Please describe your participation in this process and other related consultations with appropriate state and federal agencies regarding the Proposed Action's consistency with the New York State CMP.

Permits required by New York State Department of Environmental Conservation

Activities that will have certain environmental impacts require particular permits from the New York State Department of Environmental Conservation, including but not limited to the Protection of Waters permit, Tidal Wetlands permit, and the Endangered/Threatened Species Incidental Take permit. Please discuss your process for acquiring these and any other necessary permits, including relevant consultations with appropriate State agencies.

Impacts on human uses of the area during construction

The EA should address impacts to boating, swimming, commercial and recreational fishing, and other human uses of the area during construction. These may include, but are not limited to, potential disruptions to navigation through Plum Gut, including impacts on commercial ferry traffic, commercial and recreational fishing, and sailing vessels.

The EA should also address potential impacts on habitat and trails by construction equipment at Orient Point County Park during construction.

Finally, Save the Sound reiterates the concerns we expressed in our March 11, 2022 letter in response to the "Public Notice of Environmental Assessment for the Closure Activities of Plum Island, New York and Public Scoping" regarding DHS's practice of producing separate EAs for different components of the closure activities. That earlier EA was limited to buildings and previously identified waste management areas. Our March 2022 letter requested that the scope be expanded to encompass all closure activities and their cumulative effect on the environment. The

[1] *See* Public Lands Law § 3; 9 NYCRR 270-4.2.

preparation of yet another separate EA for the cable abandonment and replacement exemplifies our ongoing concern that DHS is not evaluating the environmental impact of the closure activities as a whole.

Thank you again for the opportunity to comment on the scope of the forthcoming EA. We look forward to continuing our participation in the NEPA process for the Proposed Action.

Respectfully submitted,

Louise Harrison
New York Natural Areas Coordinator
Save the Sound
P.O. Box 1851
Southold, NY 11971
lharrison@savethesound.org

Dara Illowsky
Staff Attorney (pending New York Bar admission)
Save the Sound
1385 Boston Post Road, 2nd Floor
Larchmont, NY 10538
dillowsky@savethesound.org

MAILING ADDRESS:
P.O. Box 1179
Southold, NY 11971

OFFICE LOCATION:
Town Hall Annex
54375 State Route 25
(cor. Main Rd. & Youngs Ave.)
Southold, NY

Telephone: 631 765-1938
www.southoldtownny.gov

PLANNING BOARD OFFICE
TOWN OF SOUTHOLD

November 27, 2023

John M. Searing, PE PMP
Deputy Center Director
Plum Island Animal Disease Center
US Dept of Homeland Security

Re: The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) proposal to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY.

Dear Mr. Searing;

The Southold Town Planning Board is submitting the following comments in response to *The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) proposal to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action).*

The Long Island Sound Estuary

The Long Island Sound bounds the northern shorelines of the Southold Town land mass and islands. The watershed is one of the most significant coastal areas in the nation, spanning 16,000 square miles that traverses all of Connecticut and parts of New York, Massachusetts, New Hampshire, Rhode Island, and Vermont. Post World War II, the ecological health of the Sound began to decline. To address the decline, the Long Island Sound Study (LISS) was developed under the Environmental Protection Agencies National Estuary Program and authorized by Congress in 1985, establishing a collaborative partnership of federal, state, interstate, and local government agencies, industries, universities, and community groups in an effort to restore and protect the Sound. LISS partners work together to implement a Comprehensive Conservation and Management Plan to maintain the health of the ecosystem, restore coastal habitats, and increase

public awareness of the Sound. Recognizing that the environmental concerns affecting the Sound cross political boundaries the LISS works together to share ideas, coordinate actions, and leverage financial resources to protect an entire ecosystem. The LISS initiated the Long Island Sound Futures Fund in 2005 through EPA's Long Island Sound Office and the National Fish and Wildlife Foundation. Over the years the Long Island Sound Futures Fund has invested $42 million in 570 projects. The program has generated an additional $54 million in grantee match for a total conservation impact of $97 million. (LISS Website).

Significant Coastal Fish and Wildlife Habitats.

The Town of Southold contains twenty-one (21) Significant Coastal Fish and Wildlife Habitats (SCFWH). These habitats are indicative of high ecological value. To designate a SCFWH, the New York State Department of Environmental Conservation (DEC) evaluates the significance of coastal fish and wildlife habitat areas, and following a recommendation from the DEC, the Department of State designates and maps the specific areas. Recent additions to the program include Pipes Cove (2005) and the Goldsmith Inlet and Beach (2005). The Town of Southold recognizes the importance of protecting and enhancing these valuable habitats.

Twenty-one areas within the Town of Southold have been designated as SCFWHs by the NYS Department of State (DOS, 1987, 2005):

- Cedar Beach Point
- Conkling Point
- Corey Creek
- Cutchogue Harbor Wetlands
- Downs Creek
- Dumpling Islands & Flat Hammock
- Fishers Island Beaches, Pine Islands & Shallows
- Goldsmith's Inlet and Beach
- Great Gull Island
- Hashamomuck Pond
- Jockey Creek Spoil Area
- Little Creek and Beach
- Long Beach Bay
- Mattituck Inlet Wetlands and Beaches
- Orient Harbor

- Pipes Cove Creek & Moore's Drain
- Plum Gut
- Port of Egypt Island
- Richmond Creek and Beach
- Robins Island
- The Race

A list of the Significant Fish and Wildlife Habitats and their narratives can be found on the New York Department of State website at the following web address:

http://www.dos.ny.gov/communitieswaterfronts/consistency/scfwhabitats.html

Water Quality

All of the Town's coastal waters are assigned a classification by the New York State Department of Environmental Conservation based on best usage of a particular water body. The classifications set attainment goals and discharge standards for point sources, but do not necessarily indicate existing water quality conditions. Most coastal waters in the Town are classified as SA. The SA designation indicates that the primary use of the water body is shellfishing for market purposes, primary and secondary contact recreation, and fishing. These waters shall be suitable for fish propagation and survival (LWRP). By classifying waters as SA, the NYSDEC has set a management goal to achieve a level of water quality that is capable of supporting shellfish harvesting. This does not imply that the waters which are so designated are always considered harvestable. Although much of Southold's coastal waters are classified as SA, many of these same water bodies are not certified for direct market harvesting of shellfish due to the seasonal occurrence of pathogens.

The classification is also important from an ecological and economic standpoint because healthy, productive waters support tourism and marine uses. Town departments and numerous organizations work to retain high-quality surface waters through local laws, The LWRP, the Peconic Estuary Comprehensive Conservation and Management Plan, and the Long Island Sound Study.

Town of Southold Comments

The Southold Town Planning Board is concerned that leaving the abandoned undersea utility cable in place could result in potentially significant moderate to large adverse impacts to this area of the Long Island Sound that are long-term in duration and unknown.

Although we are not aware of the intricate chemical details of the decomposition process of the undersea utility cable, the life span of 25 years suggests that a level of degradation takes place and an influence to the surrounding soils and water quality is expected. The questions that we are seeking answers to include:

1. How many undersea utility cables have been abandoned in place to date?
2. What is the undersea utility cable decomposition rate and what substances and or chemicals will it release into the soils and water?
3. Will heavy metals be released into the water body?
4. Is there a zone of influence established for the undersea utility cable decomposition?
5. Will bioaccumulation potential or toxicity to marine receptors be increased from the decomposition of the undersea utility cable if left in place?
6. Will the undersea utility cable if left in place become another potential pollution source and a stressor on the LIS ecosystem?
7. How long, what season and what size in the area would be restricted during the work cited?
8. What restrictions will be placed on vessel navigation of the area?

New York State and the Town of Southold have spent years committing to restoring the LIS water quality and estuaries using millions of dollars in funding under the Clean Water Act. Leaving the abandoned undersea utility cable in place to decompose, over time, would seem to conflict with the Clean Water Act.

The potential impacts to marine species from leaving the abandoned underwater cable in place needs to be adequately assessed to the Town of Southold Local Waterfront Revitalization Program (LWRP).

The program provides strategies to encourage and protect the public waters and waterfront areas of the Town. It emphasizes the importance of the coastal zone and traditional maritime uses in terms of the commercial and recreational qualities of the Town. The coastal policies of an LWRP are used to review a project for consistency if the activity will occur within or affect that LWRP. All Federal and State actions require consistency with policies adopted under the program. Applicable policies include:

Natural Coast Policies

Policy 6. Protect and restore the quality and function of the Town of Southold's ecosystem.

Policy 8. Minimize environmental degradation in the Town of Southold from solid waste and hazardous substances and wastes.

Policy 11. Promote sustainable use of living marine resources in the Town of Southold.

We thank you for the consideration.

Sincerely,

Donald Wilcenski, Chairman

Cc: Scott Russell, Town Supervisor
Southold Town Board

Appendix B: Section 106 Consultation and Consultation with Tribal Nations

This page intentionally left blank.

September 29, 2023

Daniel Mackay
Deputy State Historic Preservation Officer
Division for Historic Preservation
New York State Offices of Parks, Recreation and Historic Preservation
PO Box 189
Waterford, NY 12188

RE: Section 106 Consultation, Environmental Assessment for the Replacement of an Undersea Cable at the Plum Island Animal Disease Center by the United States Department of Homeland Security's Science and Technology Directorate

Dear Mr. Mackay,

The United States (U.S.) Department of Homeland Security (DHS) Science and Technology Directorate (S&T) would like to notify the New York State Offices of Parks, Recreation and Historic Preservation (NYOPRHP) of proposed construction activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Undertaking). DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Undertaking pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508); and DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA*; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA. The EA will be made available for viewing on dhs.gov in December 2023 (anticipated). By this letter, the DHS S&T is initiating consultation with your office pursuant to Section 106 of the National Historic Preservation Act (NHPA; 54 USC 306108) and its implementing regulations (36 CFR Part 800) "Protection of Historic Properties" (Section 106).

Description of the Undertaking

The proposed Project, which is the Undertaking for the purposes of Section 106, includes activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point and Plum Island. Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet, and together provide power for the island's normal electrical requirements. The typical lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding. DHS conducted an

inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, which has exceeded its planned lifespan, is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Therefore, the purpose of the Proposed Action is to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is needed to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC. Without the implementation of the Proposed Action (i.e., No Action Alternative), the cables would remain in danger of further degradation leading to failure in the near-term, which would significantly constrain PIADC's operational capabilities, including current and planned closure activities.

Final design for the proposed cable installation is currently underway. Cable installation is anticipated to involve trenching and horizontal directional drilling (HDD). At each site, the new cable would be connected in the utility vault and trenched on the surface/land up to approximately 500 feet at Orient Point and 200 feet at Plum Island. At that location on the beach, an HDD pit would be installed from which the cable would be drilled underground to an anticipated depth of 30-50 feet below sea level and a length of approximately 400 feet from each shoreline (800 feet total), to exit underwater.

From the end of the HDD conduit, a cable-laying barge (CLB), assisted by tugboats and other support craft, would install the remaining approximately 10,200 feet of cable between the HDD terminus points off the shore of Orient Point to Plum Island. The new cable would be approximately 3.9 inches in diameter and weigh 8.8 pounds per linear foot in saltwater (approximately 14 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. Any potential lateral movement of the cable would be greatly limited due to the rugged and rocky seafloor landscape and changes in bathymetry.

Area of Potential Effect

The area of potential effects (APE), as defined in 36 CFR Part 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking."

The APE is confined to the limits of disturbance (LOD), which consists of the approximately 25 by 30 feet HDD pit, up to 700 linear feet of onshore trench, and up to approximately 10,200 feet of cable to be lain on the ocean floor (**Figure 1**). The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables with the M1 cable being abandoned in place.

Identification and Evaluation of Historic Properties

To identify historic properties in the APE, DHS S&T's Secretary of the Interior-qualified consultants conducted a review of available information, including data provided by DHS S&T; National Register of Historic Places (NRHP) listings; the New York Cultural Resources Identification System; historic maps (e.g., historic navigation and topographic maps), and National Oceanic and Atmospheric Administration (NOAA) shipwreck databases. A map showing the location of known above-ground historic properties within or in the vicinity of the APE is in **Figure 2**.

Above-Ground Resources

Plum Island Light Station (01NR01802)

The Plum Island Light Station was listed in the National Register of Historic Places on February 11, 2011. The station consists of the lighthouse, a granite, gable-roofed residence with an integrated cast iron tower that was constructed in 1869 and its associated c.1900 brick oil house and c.1920 wood-framed storage shed, all of which exist outside the LOD. The property also contains a tubular steel tower west of the lighthouse that was built after the period of significance (1992). The listed parcel is an approximately 3-acre property currently owned by DHS (Walker et al. 2011). The period of significance is listed as 1869-1960. The current lighthouse is one of six lighthouses constructed between 1867 and 1869 around Long Island Sound to a Third Light-House District standardized design. The Plum Island Lighthouse Station is a contributing property to the multiple property listing for Light Stations of the United States established in 2002 and listed under Criterion A for its association with maritime history as an example of navigational aid. Additionally, the station is listed under Criterion C under architecture at the state level as an example of the Third Light-House District standard plan for a fourth order lighthouse (Walker et al. 2011).

Archaeological Resources

The New York Cultural Resources Identification System does not show any previously recorded archaeological sites, terrestrial surveys, or marine archaeological remote sensing surveys within or in the immediate vicinity of the APE. Similarly, a review of the NOAA Automated Wreck and Obstruction Information System (AWOIS) and NOAA Electronic Navigation Charted (ENC) wrecks do not show any known shipwrecks within the APE. The closest database shipwreck with some reliability exists approximately 0.5 miles northwest of the APE. A review of historical navigation charts revealed the APE to be a marked cable crossing area at least as far back as 1930 (U.S. Coast and Geodetic Survey 1930) (**Figure 3**). The two existing cables were installed in 1995 and replaced by an earlier cable installed in 1983 (STV/Sanders & Thomas 1995). Existing shoreline improvements within the APE include shoreline stabilization efforts such as addition of riprap and sheet metal breakwater as well as multiple cable crossing signs.

Based on the development of the APE, including shoreline alterations and multiple cable iterations as well as proposed construction methodology utilizing the existing utility vaults and extant cable corridor, there is a low potential for the APE to contain intact, significant cultural resources.

Assessment of Effects

After applying the criteria of adverse effect as found in 36 CFR 800.5(a)(1), U.S. DHS S&T has determined that since the proposed activities will not extend beyond the LOD and will utilize the existing above-ground utility vaults with no new above-ground components, the Undertaking would have No Adverse Effect on the NRHP-listed Plum Island Light Station. No significant archaeological resources are known within the APE, and the APE has a low potential to contain significant archaeological resources. As such, the U.S. DHS S&T has determined that there will be No Effect to archaeological historic properties by the Undertaking.

Conclusion

Pursuant to Section 106 of the NHPA, U.S. DHS S&T has made a No Adverse Effect on the Plum Island Light Station and No Effect on archaeological historic properties determination for the proposed Undertaking. We seek your concurrence within thirty (30) days of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe.

Please reach out to me via email at Sarah.Koeppel@hq.dhs.gov if you have any additional comments or concerns regarding this Proposed Action. Email responses are preferred, although letter responses may be submitted to Sarah Koeppel, Department of Homeland Security, 301 7th Street SW, 7th Floor, Room 7062, Washington D.C., 20528. We look forward to and welcome your participation in this analysis.

Respectfully,

SARAH N KOEPPEL

Digitally signed by SARAH N KOEPPEL
Date: 2023.09.29 08:39:33 -04'00'

Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer

Enclosure:

1. Figures

References:

STV/Sanders & Thomas
1995 USDA Plum Island Animal Disease Research Center (PIADC) Environmental Assessment for the Underwater Electrical Cable Replacement Project. Contract No. IQC 53-3K15-2-9047 Task Order No. 9.

Walker, Julia C., Joseph E. Tomberlin, Willian McGovern, and James Warren
2011 Plum Island Light Station - National Register of Historic Places Nomination Form. Drafted by Booz Allen Hamilton on behalf of United States Department of Homeland Security Science and Technology Directorate

US Coast and Geodetic Survey
1930 Gardiners Bay Long Island New York Navigation Chart No. 298. Published at Washington D.C.

Figure 1: Project Location Map

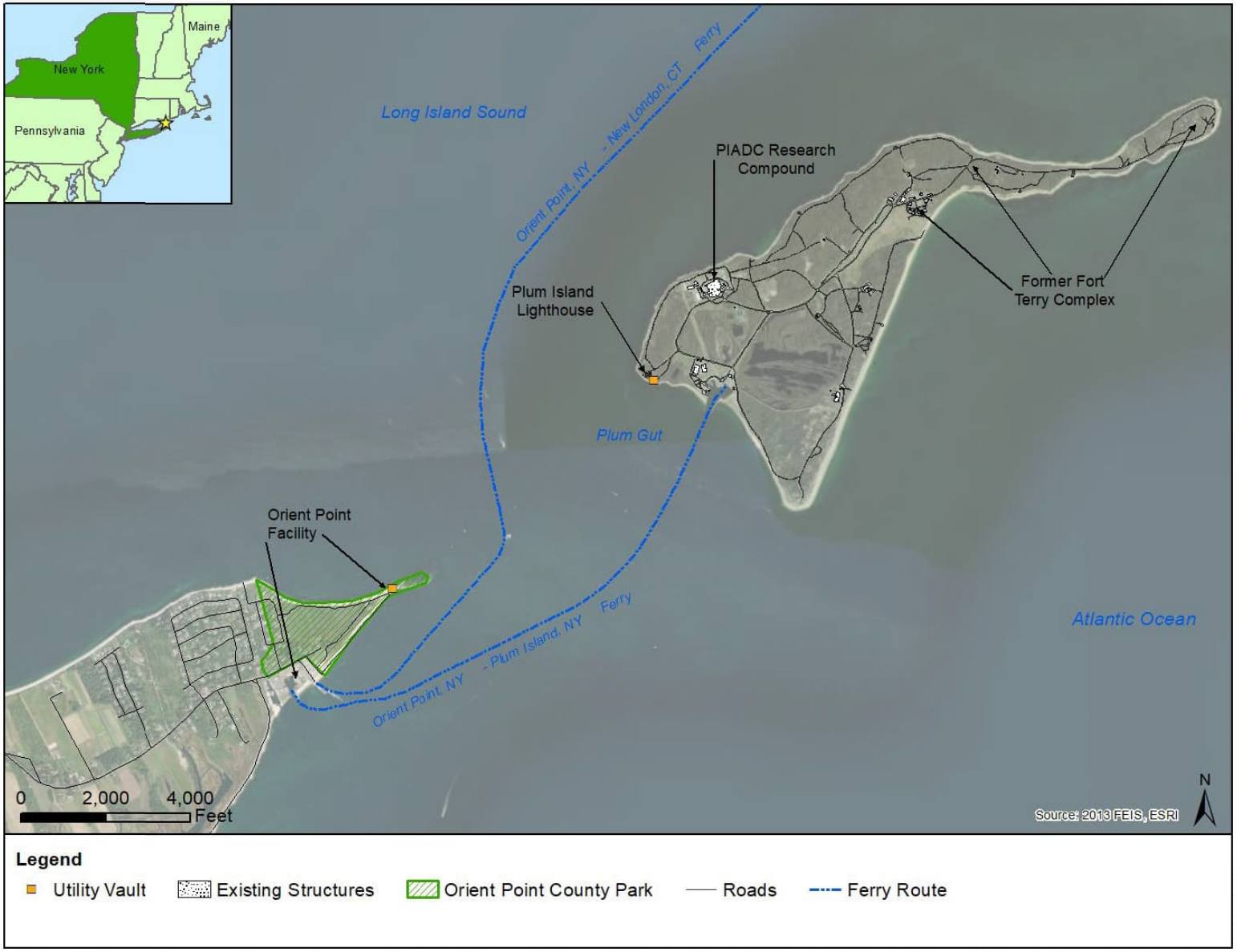


Figure 2: Cultural Resources Map

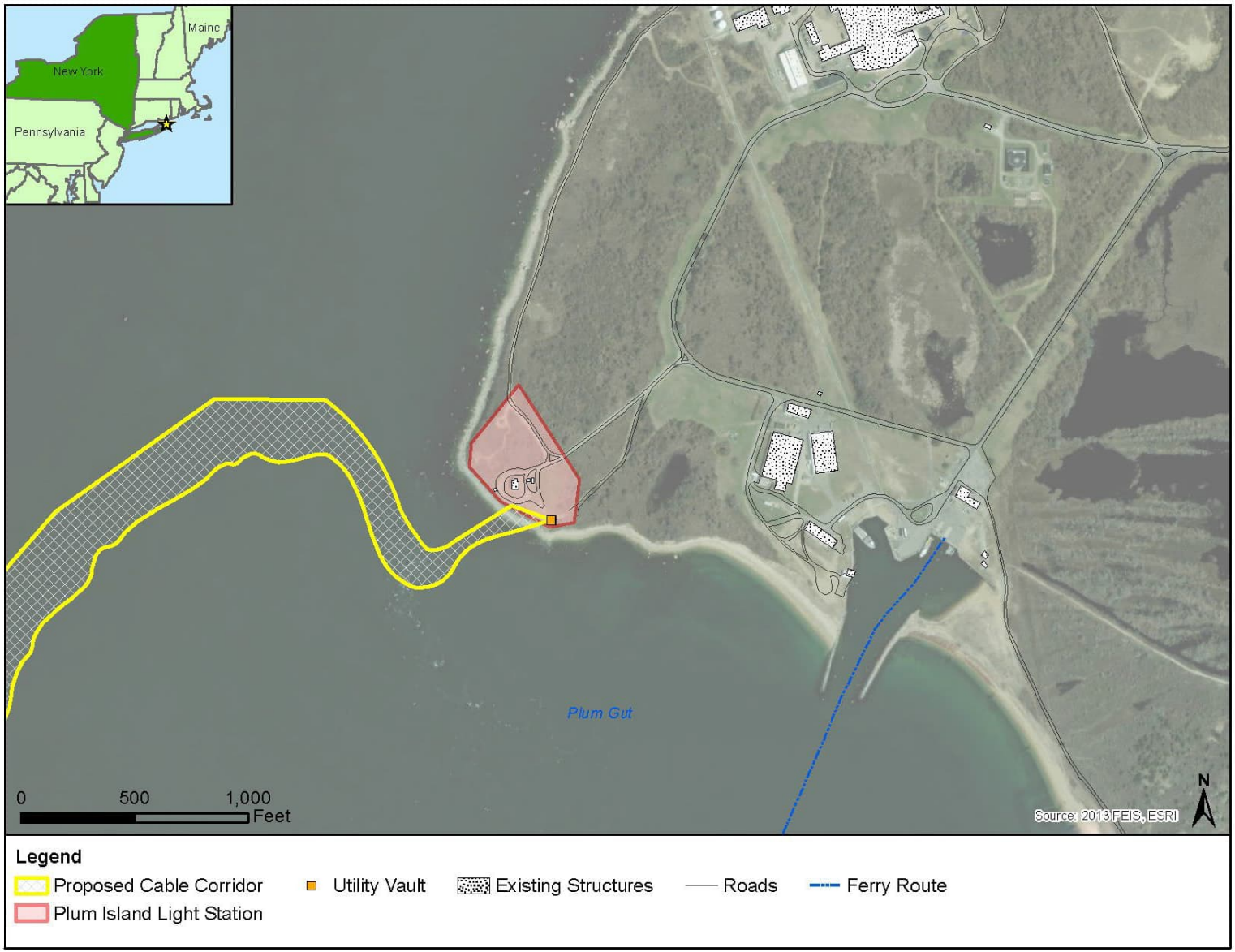
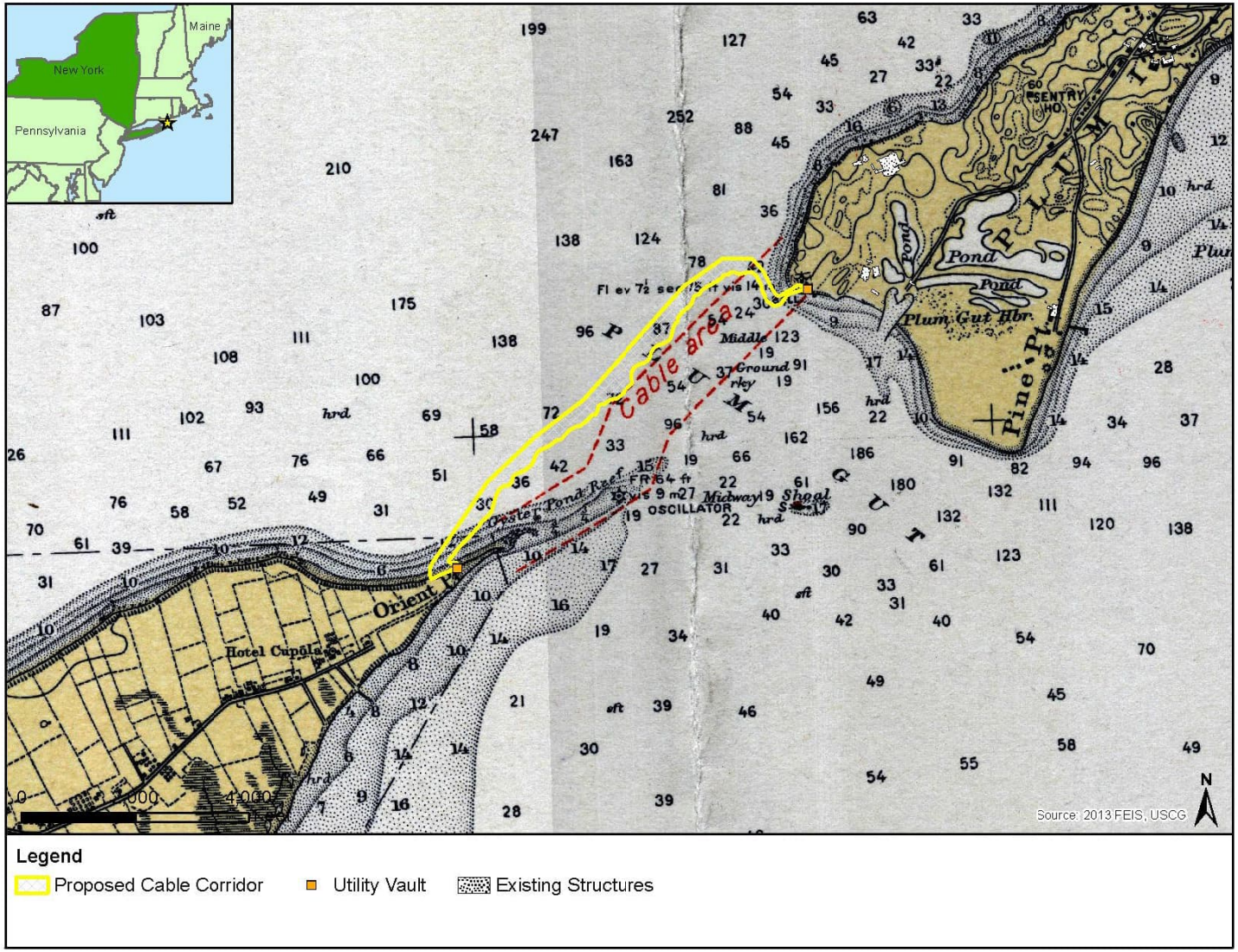


Figure 3: USCGS 1930 Navigation Chart



New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

October 23, 2023

Sarah Koeppel
Deputy Federal Preservation Officer
United States Department of Homeland Security
301 7th Street SW
7th Floor, Room 7062
Washington, DC 20528

Re: DHS
Replacement of Undersea Cable from Orient Point to Plum Island
Town of Southold, Suffolk County
23PR08254

Dear Sarah Koeppel:

Thank you for requesting the comments of the New York State Historic Preservation Office (NYSHPO). We have reviewed the submitted materials in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources.

Based upon this review, the NYSHPO concurs with the U.S. Department of Homeland Security that this undertaking will have No Adverse Effect on the Plum Island Light Station and No Effect on archaeological historic properties.

If you have any questions, I can be reached at nancy.herter@parks.ny.gov.

Sincerely,

Nancy Herter

Nancy Herter
Director, Technical Preservation Services Bureau

U.S. Department of Homeland Security
Washington, DC

Science and Technology

November 22, 2023

Daniel Mackay
Deputy State Historic Preservation Officer
Division for Historic Preservation
New York State Offices of Parks, Recreation and Historic Preservation
PO Box 189
Waterford, NY 12188

RE: Supplemental Section 106 Consultation, Environmental Assessment for the Replacement of an Undersea Cable at the Plum Island Animal Disease Center by the United States Department of Homeland Security's Science and Technology Directorate
NYOPRHP Project No. 23PR08254

Dear Mr. Mackay,

The United States (U.S.) Department of Homeland Security (DHS) Science and Technology Directorate (S&T) would like to notify the New York State Offices of Parks, Recreation and Historic Preservation (NYOPRHP) of proposed construction activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Undertaking). DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Undertaking pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508); and DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA*; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA. The EA will be made available for viewing on dhs.gov in December 2023 (anticipated).

On October 23, 2023, your office concurred with DHS S&T's finding of no historic properties affected for the Project; however, since that time, the Project construction methodologies have been revised. Specifically, DHS S&T now anticipates cable installation would not include horizontal directional drilling (HDD); rather, the cable would be trenched from the cable vault to several hundred feet offshore. Additionally, we have noted that about 0.5 acre would be used for staging equipment at each trenching location. These changes are discussed in greater detail in the revised Description of the Undertaking below.

Subsequent to these Undertaking modifications, additional review has occurred in an effort to identify historic properties within the proposed Project alignment, and we are seeking revised concurrence from the NYOPRHP for our finding of no historic properties affected. Pursuant to Section 106 of the National Historic Preservation Act (NHPA; 54 USC 306108), and its implementing regulations (36 Code of Regulations [CFR] Part 800) "Protection of Historic Properties" (Section 106), this letter would supplement the initial concurrence letter dated October 23, 2023, titled: *DHS Replacement of Undersea Cable from Orient Point to Plum Island Town of Southold, Suffolk County 23PR08254*.

Description of the Undertaking

The proposed Project, which is the Undertaking for the purposes of Section 106, includes activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point and Plum Island. Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable supports 13.2 kilovolts service, measures up to approximately 11,000 feet, and together provide power for the island's normal electrical requirements. The typical lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding. DHS conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, which has exceeded its planned lifespan, is degrading to such an extent that it is in danger of failing. Additionally, the island lacks redundant fiber optic communications measures. Therefore, the purpose of the Proposed Action is to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is needed to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC. Without the implementation of the Proposed Action (i.e., No Action Alternative), the cables would remain in danger of further degradation leading to failure in the near-term, which would significantly constrain PIADC's operational capabilities, including current and planned closure activities.

Final design for the proposed cable installation is currently underway. The new cable would be connected in the cable vault and entrenched on the beach up to approximately 500 feet at Orient Point and 200 feet at Plum Island through the existing shoreline riprap and into the water. Existing soil, sand, and riprap would be temporarily excavated and stored as the trench is constructed. Following cable installation, the excavated soil and sand would be used to backfill the trench and the riprap would be replaced above the trench. The new cable is expected to be trenched to a depth similar to the existing cables (approximately 30 inches) using a small excavator (e.g., Bobcat). In-water trenching is also anticipated and could occur up to several hundred feet along the seafloor before the bottom lay portion of the cable installation begins. DHS anticipates using low impact in-water trenching methods, such as jetting or ploughing to minimize adverse impacts to nearshore areas to the extent practicable; however, traditional trenching methods utilizing a barge and excavator/hydraulic dredge may be required. If traditional trenching methods are determined necessary, DHS would obtain all applicable permits and authorizations, including the state dredge permit. Additionally, approximately 100 feet of

Cast Iron Cable Protectors (CICP) would also be installed around the cable at each landing point during trenching.

From where the cable exits the trench offshore, a cable-laying barge (CLB), assisted by tugboats and other support craft, would install the remaining length of cable between the trench exit points off the shores of Orient Point to Plum Island. The new cable would be approximately 3.5 inches in diameter and weigh 6.2 pounds per linear foot in saltwater (approximately 10.3 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. Any potential lateral movement of the cable would be greatly limited due to the rugged and rocky seafloor landscape and changes in bathymetry. Approximately 0.5 acre on Plum Island and approximately 0.5 acre at Orient Point immediately adjacent to the proposed cable corridor would be used to stage equipment at each respective cable terminus location. The equipment staging areas are currently open beachfronts with sufficient existing access roads to support planned construction activities. No land disturbance is planned at these areas except for the trenches between the cable vaults and the shoreline.

Area of Potential Effect

The area of potential effects (APE), as defined in 36 CFR Part 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking."

The APE is confined to the limits of disturbance (LOD), which consists of the up to 700 linear feet of onshore trench (approximately 30 inches deep), up to several hundred feet of trenching along the seafloor (approximately 30 inches deep), up to approximately 10,000 feet of cable to be lain on the ocean floor, and two (2) 0.5-acre equipment staging areas (one at each terminus) (**Figure 1**). The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables with the M1 cable being abandoned in place.

Identification and Evaluation of Historic Properties

To identify historic properties in the APE, DHS S&T's Secretary of the Interior-qualified consultants conducted a review of available information, including data provided by DHS S&T; National Register of Historic Places (NRHP) listings; the New York Cultural Resources Identification System; historic maps (e.g., historic navigation and topographic maps), and National Oceanic and Atmospheric Administration (NOAA) shipwreck databases. A map showing the location of known above-ground historic properties within or in the vicinity of the APE is in **Figure 2**.

Above-Ground Resources

Plum Island Light Station (01NR01802)

The Plum Island Light Station was listed in the National Register of Historic Places on February 11, 2011. The station consists of the lighthouse, a granite, gable-roofed residence with an integrated cast iron tower that was constructed in 1869 and its associated c.1900 brick oil house and c.1920 wood-framed storage shed, all of which exist outside the LOD. The property also contains a tubular steel tower west of the lighthouse that was built after the period of significance (1992). The listed parcel is an approximately 3-acre property currently owned by DHS (Walker et al. 2011). The period of significance is listed as 1869-1960. The current lighthouse is one of six lighthouses constructed between 1867 and 1869 around Long Island Sound to a Third Light-House District standardized design. The Plum Island Lighthouse Station is a contributing property to the multiple property listing for Light Stations of the United States established in 2002 and listed under Criterion A for its association with maritime history as an example of navigational aid. Additionally, the station is listed under Criterion C under architecture at the state level as an example of the Third Light-House District standard plan for a fourth order lighthouse (Walker et al. 2011).

Archaeological Resources

The New York Cultural Resources Identification System does not show any previously recorded archaeological sites, terrestrial surveys, or marine archaeological remote sensing surveys within or in the immediate vicinity of the APE. Similarly, a review of the NOAA Automated Wreck and Obstruction Information System (AWOIS) and NOAA Electronic Navigation Charted (ENC) wrecks do not show any known shipwrecks within the APE. The closest database shipwreck with some reliability exists approximately 0.5 miles northwest of the APE. A review of historical navigation charts revealed the APE to be a marked cable crossing area at least as far back as 1930 (U.S. Coast and Geodetic Survey 1930) (**Figure 3**). The two existing cables were installed in 1995 and replaced an earlier cable installed in 1983 (STV/Sanders & Thomas 1995). Existing shoreline improvements within the APE include shoreline stabilization efforts such as addition of riprap and sheet metal breakwater as well as multiple cable crossing signs.

Based on the development of the APE, including shoreline alterations and multiple cable iterations as well as proposed construction methodology utilizing the existing cable vaults and extant cable corridor and no ground disturbance within the equipment staging areas, there is a low potential for the APE to contain intact, significant cultural resources.

Assessment of Effects

After applying the criteria of adverse effect as found in 36 CFR 800.5(a)(1), U.S. DHS S&T has determined that since the proposed activities will not extend beyond the LOD, will utilize the existing above-ground cable vaults with no new above-ground components, and will not include ground disturbance within the equipment staging areas, the Undertaking would have

No Adverse Effect on the NRHP-listed Plum Island Light Station. No significant archaeological resources are known within the APE, and the APE has a low potential to contain significant archaeological resources. As such, the U.S. DHS S&T has determined that there will be No Effect to archaeological historic properties by the Undertaking.

Conclusion

We are continuing consultation with your Agency on the Undertaking in accordance with Section 106 of the NHPA. Please provide any concurrence with our aforementioned determinations of No Adverse Effect on the Plum Island Light Station and No Effect on archaeological historic properties from the Undertaking within thirty (30) days of receipt of this letter to enable us to complete this phase of the project within the scheduled timeframe.

Please reach out to Sarah Koeppel via email at Sarah.Koeppel@hq.dhs.gov if you have any additional comments or concerns regarding this Proposed Action. Email responses are preferred, although letter responses may be submitted to Sarah Koeppel, Department of Homeland Security, 301 7th Street SW, 7th Floor, Room 7062, Washington D.C., 20528. We look forward to and welcome your participation in this analysis.

Respectfully,

SARAH N KOEPPEL

Digitally signed by SARAH N KOEPPEL
Date: 2023.11.30 08:48:41 -05'00'

Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer

Enclosure:

1. Figures

References:

STV/Sanders & Thomas
1995 USDA Plum Island Animal Disease Research Center (PIADC) Environmental Assessment for the Underwater Electrical Cable Replacement Project. Contract No. IQC 53-3K15-2-9047 Task Order No. 9.

Walker, Julia C., Joseph E. Tomberlin, Willian McGovern, and James Warren
2011 Plum Island Light Station - National Register of Historic Places Nomination Form. Drafted by Booz Allen Hamilton on behalf of United States Department of Homeland Security Science and Technology Directorate

US Coast and Geodetic Survey
1930 Gardiners Bay Long Island New York Navigation Chart No. 298. Published at Washington D.C.

Figure 1: Project Location Map

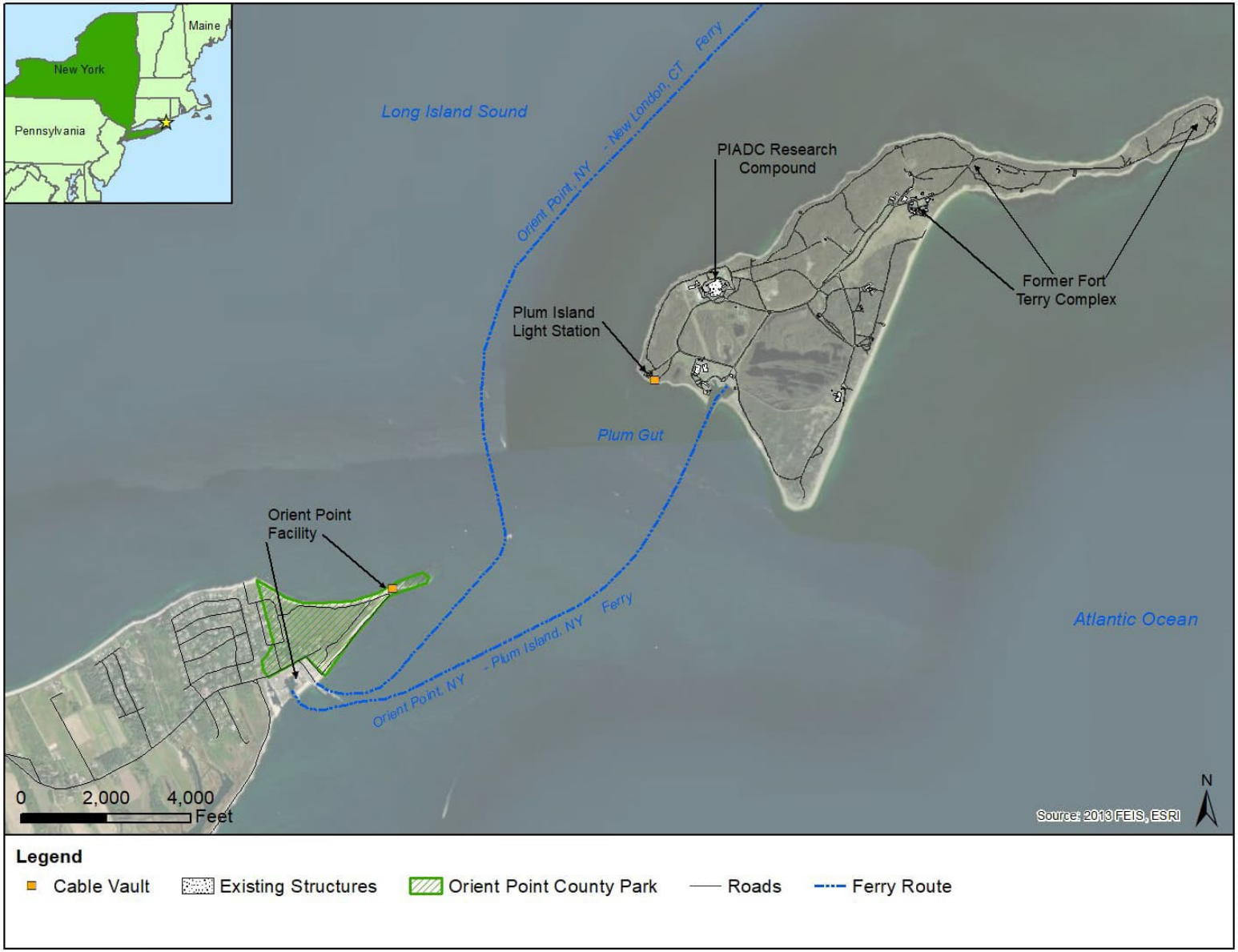


Figure 2: Cultural Resources Map

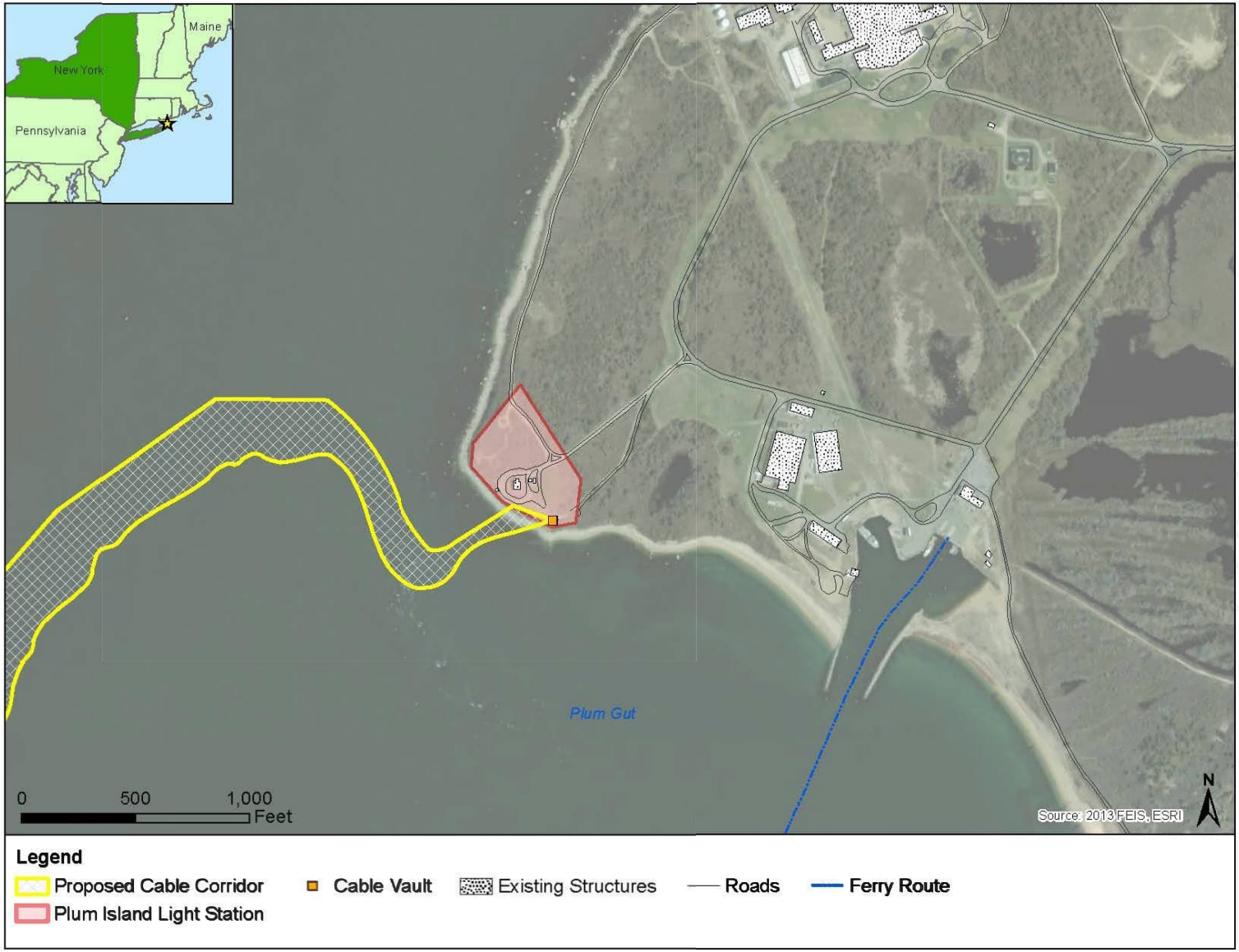
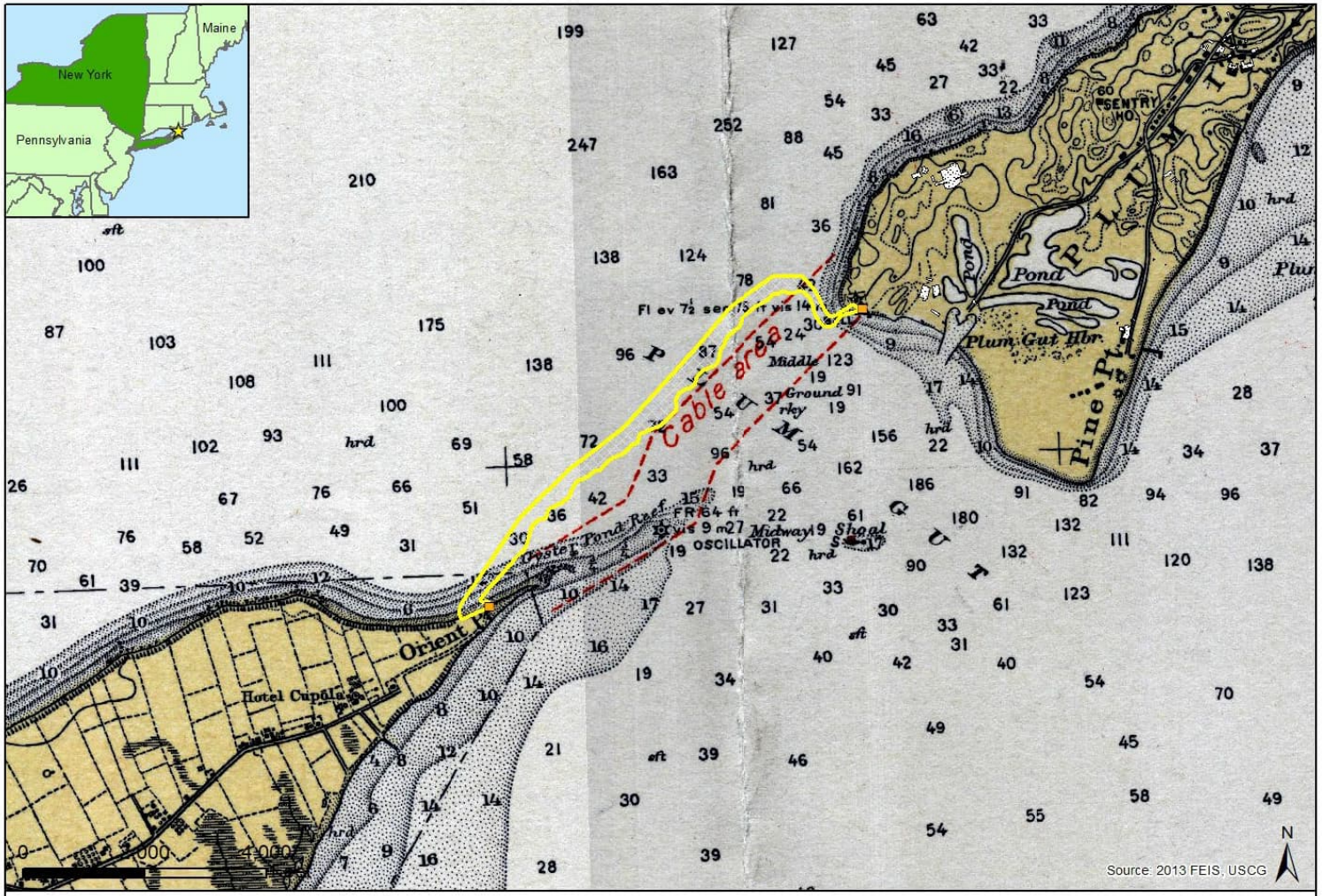


Figure 3: USCGS 1930 Navigation Chart



New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

December 7, 2023

Sarah Koeppel
Deputy Federal Preservation Officer
United States Department of Homeland Security
301 7th Street SW
7th Floor, Room 7062
Washington, DC 20528

Re: DHS
Replacement of Undersea Cable from Orient Point to Plum Island
Town of Southold, Suffolk County, NY
23PR08254

Dear Sarah Koeppel:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the submitted materials in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project.

We have reviewed the materials regarding the modification of the project's construction methods, submitted under cover letter dated November 22, 2023. The NYSHPO reaffirms our prior concurrence with the U.S. Department of Homeland Security that this undertaking will have No Adverse Effect on the Plum Island Light Station and No Effect on archaeological historic properties.

If further correspondence is required regarding this project, please refer to the SHPO Project Review (PR) number noted above. If you have any questions, please contact me via email.

Sincerely,

Tim Lloyd, Ph.D.
Scientist - Archaeology
timothy.lloyd@parks.ny.gov via e-mail only

From:	Koeppel, Sarah
To:	tribe@delawaretribe.org; sbachor@delawaretribe.org
Cc:	Poli, Kimberly; Dwyer, Thomas R.; Bisbee, Holly; Busam, Michael; Obenland, Benjamin; Hass, Jennifer
Subject:	DHS/S&T Proposed Project in Orient Point and Plum Island NY - Scoping and Invitation to Consult
Date:	Friday, September 22, 2023 1:59:41 PM
Attachments:	20230920_Plum Island_Tribal Outreach Letter_Delaware Tribe of Indians.pdf

Afternoon.

The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T invites your comments on the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3 and Section 106 of the National Historic Preservation Act of 1966 (NHPA). We are preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA*. The EA will be made available for viewing on dhs.gov and shared with your Tribe in December 2023 (anticipated).

As we begin our scoping and initial environmental analysis, we invite comments or requests to consult on the proposed action. I invite your responses by November 6, 2023 to me or via our general email inbox at sep-ephp@hq.dhs.gov. Until then, please let me know if I can answer any questions you may have.

Sincerely,
Sarah

Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer/
Senior Environmental Protection Specialist
Environmental Planning & Historic Preservation Program
Office of the Chief Readiness Support Officer
Department of Homeland Security
Phone: 202-868-2759
sarah.koeppel@hq.dhs.gov

U.S. Department of Homeland Security
Washington, DC

Science and Technology

September 22, 2023

Chief Brad KillsCrow
Delaware Tribe of Indians
5100 Tuxedo Boulevard
Bartlesville, OK 74006

SUBJECT: Proposed undersea utility cable abandonment and installation between Orient Point and Plum Island, New York.

Dear Chief KillsCrow:

The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T wishes to invite you to formally consult for the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3, Section 106 of the National Historic Preservation Act of 1966 (NHPA), and Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*.

DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA.* The EA will be made available for viewing on dhs.gov and shared with your Tribe in December 2023 (anticipated).

PIADC has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, NY (**Attachment 1**). Plum Island was transferred to the United States Department of Agriculture (USDA) in 1954 and to DHS in 2003. DHS S&T currently operates PIADC in cooperation with the USDA).

DHS S&T also owns and operates the Orient Point facility at Orient Point, NY, to support Plum Island. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, parking lots, and ferry docking facilities; and a 0.5-

acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island. DHS is in the process of closing PIADC and transferring operations to the newly constructed National Bio and Agro-Defense Facility in Manhattan, Kansas. The Plum Island Closure and Support program is anticipated to be completed over the next five to seven years.

Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet, and provides power for the island's normal electrical requirements. The typical lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding.

DHS requires continued electrical and communication capabilities on Plum Island throughout the duration of planned PIADC closure activities (i.e., five to seven years). DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, has reached the end of its planned lifespan and is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Therefore, the purpose of the Proposed Action is to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is needed to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC. Without the implementation of the Proposed Action (i.e., No Action Alternative), the cables would remain in danger of further degradation leading to failure in the near-term, which would significantly constrain PIADC's operational capabilities, including current and planned closure activities.

The new utility cable would be connected to the existing utility vaults located on Orient Point and Plum Island and would be installed using a combination of trenching and/or horizontal directional drilling from the shore to below the water line, and then bottom laying the cable through Plum Gut. The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables (**Attachment 2**). The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. One of the existing cables would be disconnected from the utility vaults on Orient Point and Plum Island and abandoned in place, identical to how previous cable replacement projects have been conducted in the area.

DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur in calendar year (CY) 2024 and require approximately one year to complete, including completion of pre-installation surveys, preparation of horizontal directional drilling conduits, laying of the cable, cable inspection and testing, and preparation of as-built surveys.

Please reach out to me via email at sep-ephp@hq.dhs.gov if you would like to participate as a consulting party pursuant to Section 106 of the NHPA or if you have any additional comments or concerns regarding this Proposed Action. Email responses are preferred, although letter responses may be submitted to Sarah Koeppel, Department of Homeland Security, 301 7th Street SW, 7th Floor, Room 7062, Washington D.C., 20528. We look forward to, and welcome, your participation in this analysis.

Respectfully,

SARAH N KOEPPEL

Digitally signed by SARAH N KOEPPEL
Date: 2023.09.22 13:46:58 -04'00'

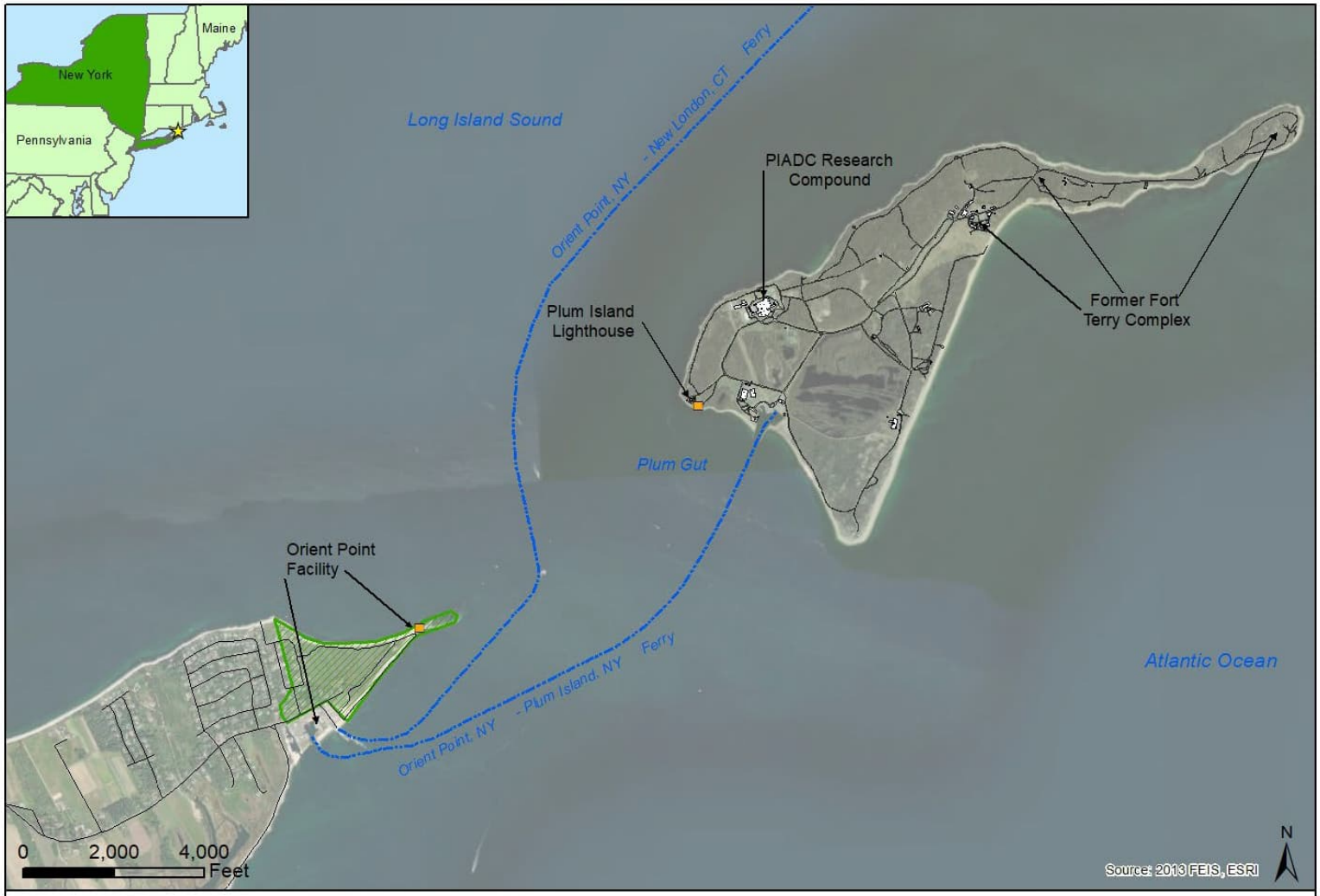
Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer

Cc: Susan Bachor, Tribal Historic Preservation Officer

Enclosures

Attachment 1: Proposed Action Location
Attachment 2: Proposed Cable Corridor

Attachment 1: Proposed Action Location



Attachment 2: Proposed Cable Corridor

From:	Koeppel, Sarah
To:	ADMINOFFICE@SHINNECOCK.ORG; josephinesmith@shinnecock.org
Cc:	Poli, Kimberly; Dwyer, Thomas R.; Bisbee, Holly; Busam, Michael; Obenland, Benjamin; Hass, Jennifer
Subject:	DHS/S&T Proposed Project in Orient Point and Plum Island NY - Scoping and Invitation to Consult
Date:	Friday, September 22, 2023 2:01:41 PM
Attachments:	20230920_Plum Island_Tribal Outreach Letter_Shinnecock Indian Nation.pdf

Afternoon.

The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T invites your comments on the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3 and Section 106 of the National Historic Preservation Act of 1966 (NHPA). We are preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA*. The EA will be made available for viewing on dhs.gov and shared with your Tribe in December 2023 (anticipated).

As we begin our scoping and initial environmental analysis, we invite comments or requests to consult on the proposed action. I invite your responses by November 6, 2023 to me or via our general email inbox at sep-ephp@hq.dhs.gov. Until then, please let me know if I can answer any questions you may have.

Sincerely,
Sarah

Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer/
Senior Environmental Protection Specialist
Environmental Planning & Historic Preservation Program
Office of the Chief Readiness Support Officer
Department of Homeland Security
Phone: 202-868-2759
sarah.koeppel@hq.dhs.gov

Science and Technology

September 22, 2023

Chairman Brian Polite
Shinnecock Indian Nation
P.O. Box 5006
Southampton, NY 11969

SUBJECT: Proposed undersea utility cable abandonment and installation between Orient Point and Plum Island, New York.

Dear Chairman Polite:

The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T wishes to invite you to formally consult for the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3, Section 106 of the National Historic Preservation Act of 1966 (NHPA), and Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*.

DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA.* The EA will be made available for viewing on dhs.gov and shared with your Tribe in December 2023 (anticipated).

PIADC has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, NY (**Attachment 1**). Plum Island was transferred to the United States Department of Agriculture (USDA) in 1954 and to DHS in 2003. DHS S&T currently operates PIADC in cooperation with the USDA).

DHS S&T also owns and operates the Orient Point facility at Orient Point, NY, to support Plum Island. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, parking lots, and ferry docking facilities; and a 0.5-

acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island. DHS is in the process of closing PIADC and transferring operations to the newly constructed National Bio and Agro-Defense Facility in Manhattan, Kansas. The Plum Island Closure and Support program is anticipated to be completed over the next five to seven years.

Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet, and provides power for the island's normal electrical requirements. The typical lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding.

DHS requires continued electrical and communication capabilities on Plum Island throughout the duration of planned PIADC closure activities (i.e., five to seven years). DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, has reached the end of its planned lifespan and is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Therefore, the purpose of the Proposed Action is to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is needed to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC. Without the implementation of the Proposed Action (i.e., No Action Alternative), the cables would remain in danger of further degradation leading to failure in the near-term, which would significantly constrain PIADC's operational capabilities, including current and planned closure activities.

The new utility cable would be connected to the existing utility vaults located on Orient Point and Plum Island and would be installed using a combination of trenching and/or horizontal directional drilling from the shore to below the water line, and then bottom laying the cable through Plum Gut. The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables (**Attachment 2**). The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. One of the existing cables would be disconnected from the utility vaults on Orient Point and Plum Island and abandoned in place, identical to how previous cable replacement projects have been conducted in the area.

DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur in calendar year (CY) 2024 and require approximately one year to complete, including completion of pre-installation surveys, preparation of horizontal directional drilling conduits, laying of the cable, cable inspection and testing, and preparation of as-built surveys.

Please reach out to me via email at sep-ephp@hq.dhs.gov if you would like to participate as a consulting party pursuant to Section 106 of the NHPA or if you have any additional comments or concerns regarding this Proposed Action. Email responses are preferred, although letter responses may be submitted to Sarah Koeppel, Department of Homeland Security, 301 7th Street SW, 7th Floor, Room 7062, Washington D.C., 20528. We look forward to, and welcome, your participation in this analysis.

Respectfully,

SARAH N KOEPPEL

Digitally signed by SARAH N KOEPPEL
Date: 2023.09.22 13:46:18 -04'00'

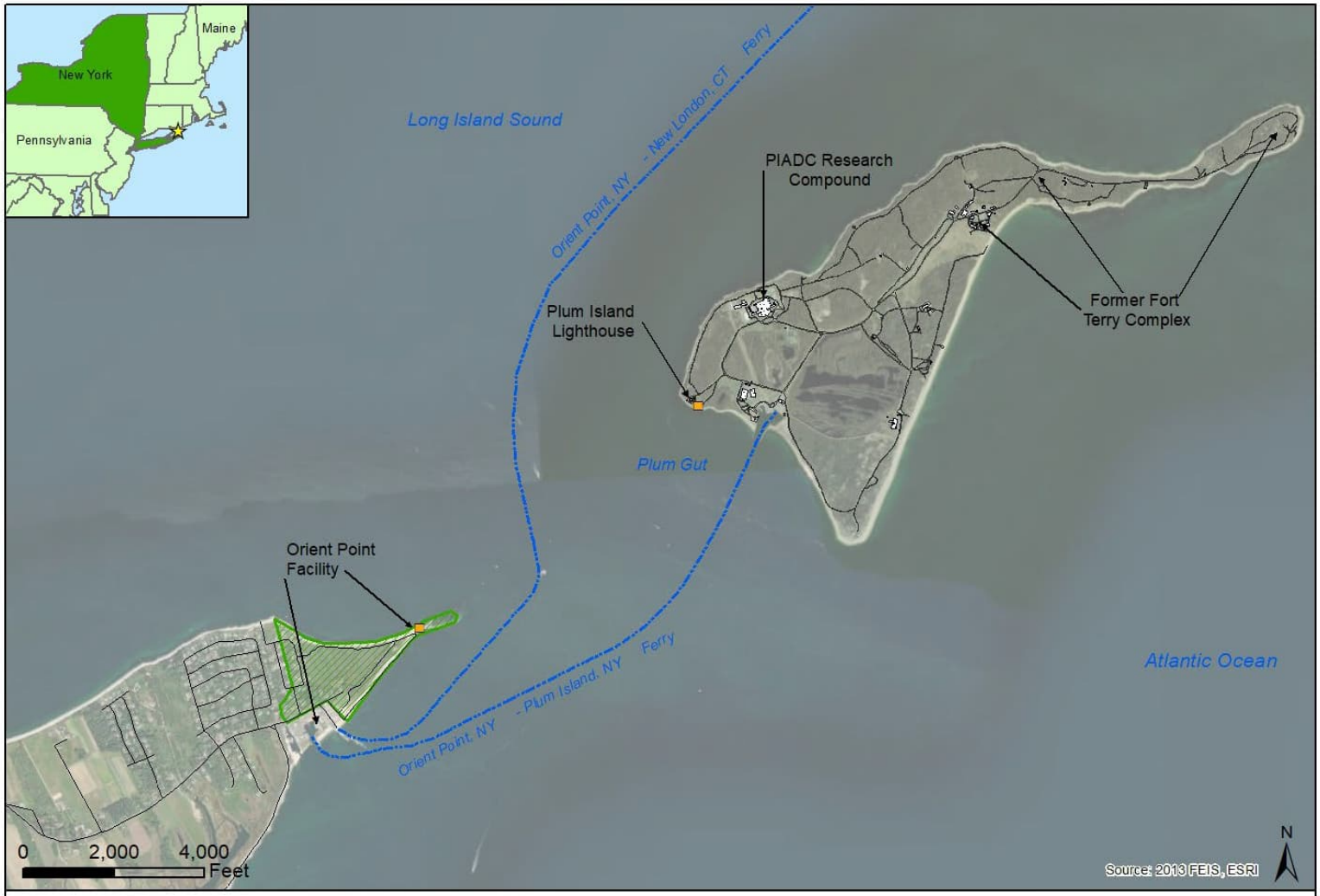
Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer

Cc: Josephine Smith, Cultural Resource Manager
Jeremy Dennis, Junior Tribal Historic Preservation Officer

Enclosures

Attachment 1: Proposed Action Location
Attachment 2: Proposed Cable Corridor

Attachment 1: Proposed Action Location



Attachment 2: Proposed Cable Corridor

From:	Koeppel, Sarah
To:	unkechaugnation@gmail.com
Cc:	Poli, Kimberly; Dwyer, Thomas R.; Bisbee, Holly; Busam, Michael; Obenland, Benjamin; Hass, Jennifer
Subject:	DHS/S&T Proposed Project in Orient Point and Plum Island NY - Scoping and Invitation to Consult
Date:	Friday, September 22, 2023 2:04:44 PM
Attachments:	20230920_Plum Island_Tribal Outreach Letter_Unkechaug Indan Nation.pdf

Afternoon.

The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T invites your comments on the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3 and Section 106 of the National Historic Preservation Act of 1966 (NHPA). We are preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA*. The EA will be made available for viewing on dhs.gov and shared with your Tribe in December 2023 (anticipated).

As we begin our scoping and initial environmental analysis, we invite comments or requests to consult on the proposed action. I invite your responses by November 6, 2023 to me or via our general email inbox at sep-ephp@hq.dhs.gov. Until then, please let me know if I can answer any questions you may have.

Sincerely,
Sarah

Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer/
Senior Environmental Protection Specialist
Environmental Planning & Historic Preservation Program
Office of the Chief Readiness Support Officer
Department of Homeland Security
Phone: 202-868-2759
sarah.koeppel@hq.dhs.gov

U.S. Department of Homeland Security
Washington, DC

Science and Technology

September 22, 2023

Chief Henry Wallace
Unkechaug Indian Nation
207 Poospatuck Lane
Mastic, NY 11950

SUBJECT: Proposed undersea utility cable abandonment and installation between Orient Point and Plum Island, New York.

Dear Chief Wallace:

The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T invites your comments on the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3 and Section 106 of the National Historic Preservation Act of 1966 (NHPA).

DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA.* The EA will be made available for viewing on dhs.gov and shared with your Tribe in December 2023 (anticipated).

PIADC has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, NY (**Attachment 1**). Plum Island was transferred to the United States Department of Agriculture (USDA) in 1954 and to DHS in 2003. DHS S&T currently operates PIADC in cooperation with the USDA).

DHS S&T also owns and operates the Orient Point facility at Orient Point, NY, to support Plum Island. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, parking lots, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility transfer station, which

supports the underground cabling and utilities on Plum Island. DHS is in the process of closing PIADC and transferring operations to the newly constructed National Bio and Agro-Defense Facility in Manhattan, Kansas. The Plum Island Closure and Support program is anticipated to be completed over the next five to seven years.

Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet, and provides power for the island's normal electrical requirements. The typical lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding.

DHS requires continued electrical and communication capabilities on Plum Island throughout the duration of planned PIADC closure activities (i.e., five to seven years). DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, has reached the end of its planned lifespan and is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Therefore, the purpose of the Proposed Action is to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is needed to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC. Without the implementation of the Proposed Action (i.e., No Action Alternative), the cables would remain in danger of further degradation leading to failure in the near-term, which would significantly constrain PIADC's operational capabilities, including current and planned closure activities.

The new utility cable would be connected to the existing utility vaults located on Orient Point and Plum Island and would be installed using a combination of trenching and/or horizontal directional drilling from the shore to below the water line, and then bottom laying the cable through Plum Gut. The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables (**Attachment 2**). The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. One of the existing cables would be disconnected from the utility vaults on Orient Point and Plum Island and abandoned in place, identical to how previous cable replacement projects have been conducted in the area.

DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur in calendar year (CY) 2024 and require approximately one year to complete, including completion of pre-installation surveys, preparation of horizontal directional drilling conduits, laying of the cable, cable inspection and testing, and preparation of as-built surveys.

Please reach out to me via email at sep-ephp@hq.dhs.gov if you would like to participate pursuant to Section 106 of the NHPA or if you have any additional comments or concerns regarding this Proposed Action. Email responses are preferred, although letter responses may be submitted to Sarah Koeppel, Department of Homeland Security, 301 7th Street SW, 7th Floor, Room 7062, Washington D.C., 20528. We look forward to, and welcome, your participation in this analysis.

Respectfully,

SARAH N KOEPPEL

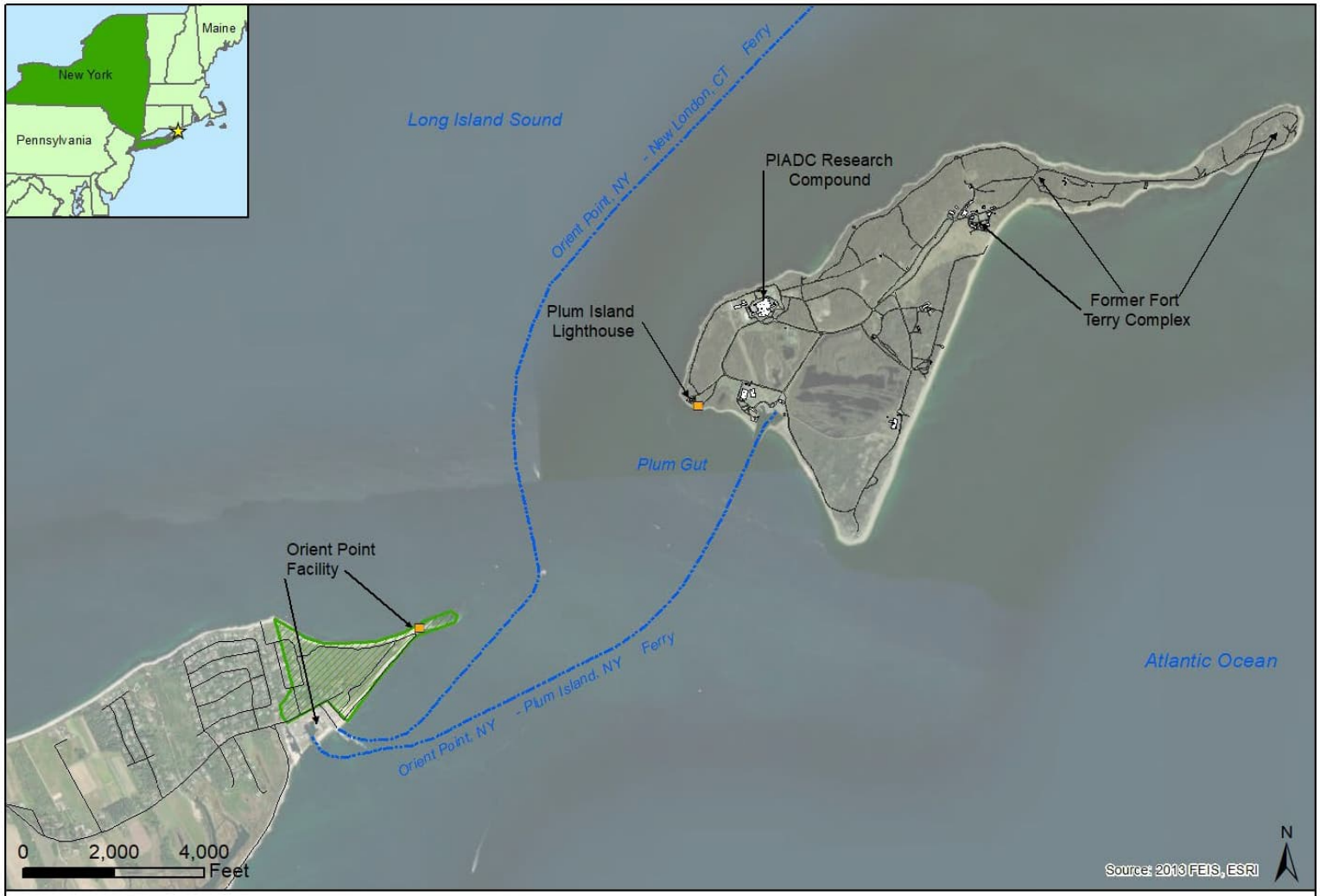
Digitally signed by SARAH N KOEPPEL
Date: 2023.09.22 13:45:32 -04'00'

Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer

Enclosures

Attachment 1: Proposed Action Location
Attachment 2: Proposed Cable Corridor

Attachment 1: Proposed Action Location



Attachment 2: Proposed Cable Corridor

From:	Koeppel, Sarah
To:	Sandi Brewster-walker; Sandi Walker; robertpharaoh@gmail.com
Cc:	Poli, Kimberly; Dwyer, Thomas R.; Bisbee, Holly; Busam, Michael; Obenland, Benjamin; Hass, Jennifer
Subject:	DHS/S&T Proposed Project in Orient Point and Plum Island NY - Scoping and Invitation to Consult
Date:	Friday, September 22, 2023 1:58:21 PM
Attachments:	20230922_Plum Island_Tribal Outreach Letter_Montaukett Indian Nation.pdf

Afternoon.

The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T invites your comments on the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3 and Section 106 of the National Historic Preservation Act of 1966 (NHPA). We are preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA*. The EA will be made available for viewing on dhs.gov and shared with your Tribe in December 2023 (anticipated).

As we begin our scoping and initial environmental analysis, we invite comments or requests to consult on the proposed action. I invite your responses by November 6, 2023 to me or via our general email inbox at sep-ephp@hq.dhs.gov. Until then, please let me know if I can answer any questions you may have.

Sincerely,
Sarah

Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer/
Senior Environmental Protection Specialist
Environmental Planning & Historic Preservation Program
Office of the Chief Readiness Support Officer
Department of Homeland Security
Phone: 202-868-2759
sarah.koeppel@hq.dhs.gov

Science and Technology

September 22, 2023

Chief Robert Pharaoh
Montaukett Indian Nation

SUBJECT: Proposed undersea utility cable abandonment and installation between Orient Point and Plum Island, New York.

Dear Chief Pharaoh:

The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T invites your comments on the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3 and Section 106 of the National Historic Preservation Act of 1966 (NHPA).

DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA*. The EA will be made available for viewing on dhs.gov and shared with your Tribe in December 2023 (anticipated).

PIADC has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, NY (**Attachment 1**). Plum Island was transferred to the United States Department of Agriculture (USDA) in 1954 and to DHS in 2003. DHS S&T currently operates PIADC in cooperation with the USDA).

DHS S&T also owns and operates the Orient Point facility at Orient Point, NY, to support Plum Island. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, parking lots, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island. DHS is in the process of closing PIADC and transferring operations to the newly constructed National Bio and Agro-Defense

Facility in Manhattan, Kansas. The Plum Island Closure and Support program is anticipated to be completed over the next five to seven years.

Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet, and provides power for the island's normal electrical requirements. The typical lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding.

DHS requires continued electrical and communication capabilities on Plum Island throughout the duration of planned PIADC closure activities (i.e., five to seven years). DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, has reached the end of its planned lifespan and is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Therefore, the purpose of the Proposed Action is to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is needed to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC. Without the implementation of the Proposed Action (i.e., No Action Alternative), the cables would remain in danger of further degradation leading to failure in the near-term, which would significantly constrain PIADC's operational capabilities, including current and planned closure activities.

The new utility cable would be connected to the existing utility vaults located on Orient Point and Plum Island and would be installed using a combination of trenching and/or horizontal directional drilling from the shore to below the water line, and then bottom laying the cable through Plum Gut. The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables (**Attachment 2**). The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. One of the existing cables would be disconnected from the utility vaults on Orient Point and Plum Island and abandoned in place, identical to how previous cable replacement projects have been conducted in the area.

DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur in calendar year (CY) 2024 and require approximately one year to complete, including completion of pre-installation surveys, preparation of horizontal directional drilling conduits, laying of the cable, cable inspection and testing, and preparation of as-built surveys.

Please reach out to me via email at sep-ephp@hq.dhs.gov if you would like to participate as a consulting party pursuant to Section 106 of the NHPA or if you have any additional comments or

concerns regarding this Proposed Action. Email responses are preferred, although letter responses may be submitted to Sarah Koeppel, Department of Homeland Security, 301 7th Street SW, 7th Floor, Room 7062, Washington D.C., 20528. We look forward to, and welcome, your participation in this analysis.

Respectfully,

SARAH N KOEPPEL

Digitally signed by SARAH N KOEPPEL
Date: 2023.09.22 13:47:46 -04'00'

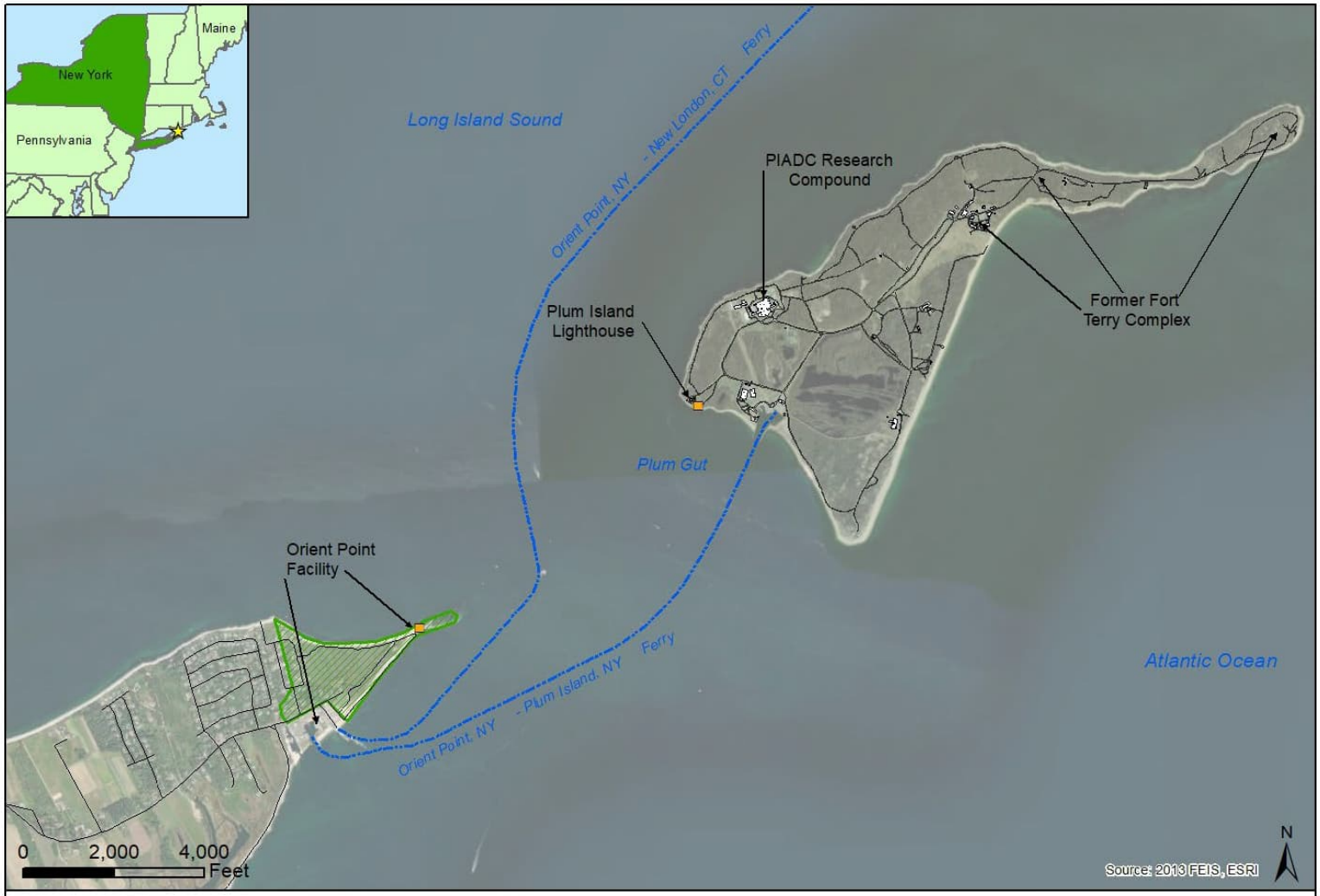
Sarah Koeppel, MA, RPA
Deputy Federal Preservation Officer

Cc: Sandi Brewster-Walker, Executive Director & Government Affairs Officer

Enclosures

Attachment 1: Proposed Action Location
Attachment 2: Proposed Cable Corridor

Attachment 1: Proposed Action Location



Attachment 2: Proposed Cable Corridor

From:	Sandi Walker
To:	Koeppel, Sarah
Cc:	Bisbee, Holly; Busam, Michael; Dwyer, Thomas R.; Hass, Jennifer; Obenland, Benjamin; Poli, Kimberly; Sandi Brewster-walker; robertpharaoh@gmail.com
Subject:	Re: DHS/S&T Proposed Project in Orient Point and Plum Island NY - Scoping and Invitation to Consult
Date:	Friday, September 22, 2023 5:06:51 PM

Thank you for the information, and I will review by the deadline.

Sandi Brewster Walker

On Fri, Sep 22, 2023 at 1:56 PM Koeppel, Sarah <sarah.koeppel@hq.dhs.gov> wrote:

> Afternoon.
>
> The United States Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY), and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS S&T invites your comments on the Proposed Action, in accordance with 36 Code of Federal Regulations (CFR) 800.3 and Section 106 of the National Historic Preservation Act of 1966 (NHPA). We are preparing an Environmental Assessment (EA) to evaluate the potential impacts associated with the Proposed Action pursuant to the National Environmental Policy Act of 1969 (NEPA) (42 United States Code §§ 4321 et seq.); the White House Council on Environmental Quality *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA; and DHS Instruction 023-01-001-01 rev. 01 Implementation of the NEPA.* The EA will be made available for viewing on dhs.gov and shared with your Tribe in December 2023 (anticipated).
>
> As we begin our scoping and initial environmental analysis, we invite comments or requests to consult on the proposed action. I invite your responses by November 6, 2023 to me or via our general email inbox at sep-ephp@hq.dhs.gov. Until then, please let me know if I can answer any questions you may have.
>
> Sincerely,
> Sarah

Sarah Koeppel, MA, RPA

Deputy Federal Preservation Officer/

Senior Environmental Protection Specialist

Environmental Planning & Historic Preservation Program

Office of the Chief Readiness Support Officer

Department of Homeland Security

Phone: 202-868-2759

sarah.koeppel@hq.dhs.gov

This page intentionally left blank.

Appendix C: Air Emissions Analysis

This page intentionally left blank.

APPENDIX C

GENERAL CONFORMITY RULE

AND

CRITERIA POLLUTANTS

AND

GREENHOUSE GAS EMISSIONS ANALYSES

C.1 Introduction

This appendix provides the following analyses of potential air quality impacts:

- Criteria pollutants emissions analysis and Clean Air Act general conformity rule applicability analysis.
- Greenhouse gas analysis.

C.2 Clean Air Act Conformity

The 1990 amendments to the Clean Air Act (CAA) require federal agencies to ensure that their actions conform to the appropriate State Implementation Plan (SIP) in a nonattainment area. The SIP provides for implementation, maintenance, and enforcement of the National Ambient Air Quality Standards (NAAQS); it includes emission limitations and control measures to attain and maintain the NAAQS. Conformity to a SIP, as defined in the CAA, means conformity to a SIP's purpose of reducing the severity and number of violations of the NAAQS to achieve attainment of the standards. The federal agency responsible for a proposed action is required to determine if its proposed action conforms to the applicable SIP.

The US Environmental Protection Agency (USEPA) has developed two sets of conformity regulations; federal actions are differentiated into transportation projects and non-transportation-related projects:

- Transportation projects, which are governed by the "transportation conformity" regulations (40 CFR Parts 51 and 93), effective on December 27, 1993 and revised on August 15, 1997.
- Non-transportation projects which are governed by the "general conformity" regulations (40 CFR Parts 6, 51 and 93) described in the final rule for *Determining Conformity of General Federal Actions to State or Federal Implementation Plans* published in the *Federal Register* on November 30, 1993. The general conformity rule became effective January 31, 1994 and was revised on March 24, 2010.

Since the Proposed Action is not a transportation project, the general conformity regulation applies. The general conformity applicability analysis is prepared for the project involving the dredging and power cable installation anticipated from on-land trenching at both Plum Island and Orient Point, and dredging and laying cable between the terminus points off the shore of Orient Point to Plum Island.

C.3 General Conformity

C.3.1 Attainment and Nonattainment Areas

The general conformity rule applies to federal actions occurring in air basins designated as nonattainment for the NAAQS or in attainment areas subject to maintenance plans (maintenance areas). Federal actions occurring in air basins that are in attainment with the NAAQS are not subject to the conformity rule.

A criterion pollutant is a pollutant for which an air quality standard has been established under the CAA. The designation of nonattainment is based on the exceedances or violations of the air quality standard. A maintenance plan establishes measures to control emissions to ensure the air quality standard is maintained in areas that have been re-designated as attainment from a previous nonattainment status.

Under the requirements of the 1970 Clean Air Act (CAA), as amended in 1977 and 1990, the USEPA established NAAQS for six criteria pollutants: carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone (O_3), inhalable particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb).

Areas that meet the NAAQS for a criterion pollutant are designated as being in "attainment;" an area where a pollutant level exceeds the corresponding NAAQS is designated as being in "nonattainment." O_3 nonattainment areas are subcategorized based on the severity of their pollution problem (marginal, moderate, serious, severe, or extreme). $PM_{10,}$ $PM_{2.5,}$ and CO nonattainment areas are classified as moderate or serious. When insufficient data exist to determine an area's attainment status, it is designated unclassifiable (or in attainment).

The Preferred Alternative would take place at the Suffolk County, New York, an area that is currently designated as a serious nonattainment area for O_3 and a maintenance area for $PM_{2.5}$ (USEPA, 2022). Federal agencies must evaluate the emissions of O_3 and $PM_{2.5}$ to determine the applicability of the general conformity regulations. For Suffolk County, the applicable *de minimis* levels 50 tons per year (tpy) for the O_3 precursors nitrogen oxides (NO_x) and volatile organic compounds (VOC) and 100 tpy $PM_{2.5}$ (40 CFR § 93.153(b)(1)).

C.3.2 *De Minimis* Emissions Levels

To focus general conformity requirements on those federal actions with the potential to have significant air quality impacts, threshold (*de minimis*) rates of emissions were established in the final rule. A formal conformity determination is required when the annual net total of direct and indirect emissions from a federal action occurring in a nonattainment or maintenance area for a criterion pollutant would equal or exceed the annual *de minimis* level for that pollutant. Table C-1 lists the *de minimis* levels for each pollutant.

Table C-1: *De Minimis* Emission Levels for Criteria Air Pollutants

Pollutant	Nonattainment Designation	Tons/Year
Ozone*	Serious	50
	Severe	25
	Extreme	10
	Other nonattainment or maintenance areas outside ozone transport region	100
	Marginal and moderate nonattainment areas inside ozone transport region	50/100**
Carbon Monoxide	All	100
Sulfur Dioxide	All	100
Lead	All	25
Nitrogen Dioxide	All	100
Particulate Matter ≤ 10 microns	Moderate	100
	Serious	70
Particulate Matter ≤ 2.5 microns	Moderate	100
	Serious	70
Source: https://www.epa.gov/general-conformity/de-minimis-tables		

For O_3 nonattainment areas, USEPA's conformity rules establish *de minimis* emission levels for both O_3 precursors, NO_x and VOC, on the presumption that NO_x and VOC reductions will contribute to reductions in O_3 formation. Since the project site is located in an O_3 serious nonattainment area and $PM_{2.5}$ maintenance area, the *de minimis* levels of 50 tons per year (tpy) of NO_x, and VOC. and 100 tpy of $PM_{2.5}$ apply.

C.3.3 Analysis

This CAA General Conformity Rule (GCR) analysis was conducted according to the guidance provided by *40 CFR Parts 6, 51, and 93. Determining Conformity of Federal Actions to State or Federal Implementation Plans,* (USEPA, November 30, 1993 and March 24, 2010).

The GCR analysis was performed to determine whether a formal conformity analysis would be required. Pursuant to the GCR, all reasonably foreseeable emissions (both direct and indirect) associated with the implementation of the project were quantified and compared to the applicable annual *de minimis* levels to determine potential air quality impacts.

The conformity analysis for a federal action examines the impacts of the direct and indirect net emissions from mobile and stationary sources. Direct emissions are emissions of a criterion pollutant or its precursors that are caused or initiated by a federal action and occur at the same time and place as the action. Indirect emissions, occurring later in time and/or further removed in distance from the action itself, must be included in the determination if both of the following apply:

- The federal agency can practicably control the emissions and has continuing program responsibility to maintain control.
- The emissions caused by the federal action are reasonably foreseeable.

Increased direct and indirect emissions are the result of the following potential construction activities:

- Use of construction equipment.
- Movement of trucks containing construction and removal materials.
- Commute of construction workers.
- Use of tugboat for dredging and cable installation.
- Earth disturbance dust emissions from equipment and truck operations.

C.4 Emissions Determination

The GCR requires that potential emissions generated by any project-related activity and/or increased operational activities be determined on an annual basis and compared to the annual *de minimis* levels for those pollutants (or their precursors) for which the area is classified as nonattainment or maintenance. Emissions attributable to activities related to the proposed project were analyzed for NO_x, VOC, and $PM_{2.5}$.

The equipment and manpower requirements for the construction associated with the Preferred Alternative are conservatively estimated assuming the entire construction activities would last for a total of two weeks with each equipment operating continuously for a total of 80 hours at each site. The tugboat-supported underwater cable installations involving dredging and cable laying would assumed to last a total of two weeks, respectively during dredging and cable installation.

The typical equipment likely to be implemented include:

- Excavator.
- Forklift.
- Power generator set.
- Mud pumping unit.
- Sump pump.
- Hydraulic dredging cutterhead pump.

The house power from each equipment with unknown size was selected based on the data source available from US Army Corps of Engineers (November 2018 and March 1983).

Emission factors from both construction equipment (nonroad engines including excavators, generators, and other construction equipment) and motor vehicles were derived from USEPA's Motor Vehicle Emission Simulator (MOVES) MOVES3 emission factor model, which is associated with the national default model database applicable to Suffolk County for both nonroad equipment and on-road vehicle engines.

To calculate emission factors for the Preferred Alterative, model runs were conducted for a conservatively assumed construction start year of 2024. Nonroad emission factors from the USEPA's MOVES3 emission factor model are provided in units of grams per horsepower-hour (g/hp-hr), so emissions were estimated by multiplying the emission factor by the nonroad engine's assumed horsepower (hp) rating and the total operating hours developed, and the load factor for each different type of equipment as applied in MOVES model. Emission factors of greenhouse gases (GHGs), in terms of carbon dioxide (CO_2) and methane (CH_4), were also predicted using MOVES3. Emissions for nitrous oxide, N_2O, were calculated using a conversion factor due to the limitations of MOVES3 where N_2O emission factors are not provided for nonroad equipment. Table B-8 of EPA's Direct Emissions from Mobile Combustion Sources (January 2016) was used and a conversion was made by dividing N_2O emission factor by CH_4 for diesel construction equipment.

An example of the calculation methodology for nonroad engines using the MOVES emission factors is as follows, per unit:

$$E = EF \times hp \times HR \times LF \times 1.10231E(-6)$$

Where:

E = nonroad e missions per unit (tons)
EF = nonroad emission factor per unit type (g/hp-hr)
HR = hours of operation
LF = load factor
1.10231E(-6) = g to ton conversion factor

Typical load factors for various equipment types were based on Appendix A of USEPA's "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling".

On-road vehicle emission factors from MOVES3 are provided in grams per vehicle mile traveled (g/VMT) for running operations, g/hour for idling and g/start for vehicle starts. Total emissions from on-road vehicles during construction were estimated based on running operational modes. It is assumed that total of five delivery or material handling trucks and 10 construction workers would take one trip per day during the two-week trenching and dredging duration to and from each site. It is also conservatively assumed that each vehicle would travel at an average speed of 25 miles per hour on arterial road with an approximate 20 miles for each round trip.

Example equation for emissions during running operations is the following:

$$E = EF \times Miles \times 1.10231E(-6)$$

Where:

E = on-road emissions per unit (tons)

EF = on-road emission factor per vehicle type (g/VMT)

Miles = total driven miles

1.10231E(-6) = g to ton conversion factor

In addition to engine emissions, fugitive dust emissions resulting from earth disturbance (e.g., excavation and transferring of excavated materials into dump trucks were calculated.

For earth disturbance emissions, particulate emission factors were taken from Wrap Fugitive Dust Handbook, (September 2006). PM_{10} emissions were halved in order to account for mitigation attempts that will be made. The base equation is the following:

$$PM_{10}\ emission\ factor\ (tons/acre-month) = 0.42 \times (1 - CE)$$

Where:

CE = control efficiency [for example, 50 percent control due to water application]

$PM_{2.5}$ = PM_{10} emission factor × ratio [0.1 for construction and demolition activity] emission factor (tons/acre-month)

In-river vessel (i.e., tugboat) emission and load factors were obtained from EPA *Port Emissions Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source, (April 2022)* in grams per kilowatt-hour (g/kilowatt-hour) for vessel propulsion and auxiliary engines running operations during dredging and power cable installation. Total emissions from in-river vessel operations were estimated based on estimated in the similar way as landside construction equipment.

The total emissions estimated are summarized in:

- Table C-4 for on-land construction equipment.
- Table C-5 for on-land vehicles including both trucks and commuter vehicles.
- Table C-6 for earth disturbance resulting fugitive dust.
- Table C-7 for in-water vessels.

Table C-4: Total On-land Combustion Equipment Emissions

Equipment Type	Hours	Horsepower (hp)	Load Factor	Emission Factor 2024 (grams/hp-hour)								Construction Emission (tons)							
				VOC	NOx	CO	$PM_{2.5}$	PM_{10}	SO_2	CO_2	CO_2e	VOC	NOx	CO	$PM_{2.5}$	PM_{10}	SO_2	CO_2	CO_2e
Excavator	320	160	0.59	0.01	0.27	0.09	0.02	0.02	0.00	536.79	536.97	0.00	0.01	0.00	0.00	0.00	0.00	17.86	17.86
Sump Pump	320	73	0.43	0.32	3.91	1.49	0.24	0.25	0.00	589.45	592.14	0.00	0.04	0.02	0.00	0.00	0.00	6.52	6.55
Mud Pumping Unit	320	35	0.43	0.18	3.01	0.64	0.10	0.10	0.00	589.84	592.66	0.00	0.02	0.00	0.00	0.00	0.00	3.13	3.14
Telehandler Forklift	320	142	0.59	0.01	0.17	0.05	0.01	0.01	0.00	536.81	536.91	0.00	0.01	0.00	0.00	0.00	0.00	15.85	15.85
300 KW Generator Set	320	428	0.43	0.16	2.32	0.71	0.11	0.11	0.00	530.58	531.82	0.01	0.15	0.05	0.01	0.01	0.00	34.41	34.49
Dredge Pump	320	520	0.43	0.16	2.32	0.72	0.11	0.12	0.00	530.58	531.83	0.01	0.18	0.06	0.01	0.01	0.00	41.81	41.91
											Total	0.03	0.41	0.13	0.02	0.02	0.00	119.58	119.81

Table C-5: Construction Vehicle Emissions

Vehicle Type	Distance Traveled (miles)	2024 Emission Factor (grams/mile)								Vehicle Emission (tons)							
		VOC	NOx	CO	$PM_{2.5}$	PM_{10}	SO_2	CO_2	CO_2e	VOC	NOx	CO	$PM_{2.5}$	PM_{10}	SO_2	CO_2	CO_2e
Car	400	0.05	0.08	2.68	0.01	0.07	0.00	321.72	322.52	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14
Truck	200	0.10	2.26	1.39	0.07	0.24	0.00	1068.14	1069.56	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.24

Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.38**	**0.38**

Table C-6: Fugitive Dust Emissions

Site	Trenching Area (Acres)	Duration (Weeks)	Fugitive Dust (tons)	
			$PM_{2.5}$	PM_{10}
Orient Point	0.035	4	0.00	0.03
Plum Island	0.028	4	0.00	0.02
Total			**0.01**	**0.05**

Table C-7: Vessel Emissions

Vessel Type	Hours	Horsepower (kw)	Load Factor	Emission Factor (grams/kw-hour)							Vessel Emission (tons)							
				VOC	NOx	CO	$PM_{2.5}$	PM_{10}	SO_2	CO_2e	VOC	NOx	CO	$PM_{2.5}$	PM_{10}	SO_2	CO_2	CO_2e
Tug - Main Propulsion	160	3,512	0.68	0.30	5.64	0.92	0.14	0.15	0.01	679.47	0.12	2.38	0.39	0.06	0.06	0.00	286.19	290.42
Tug – Auxiliary	160	285	0.43	0.30	5.64	0.92	0.14	0.15	0.01	679.47	0.01	0.12	0.02	0.00	0.00	0.00	14.69	14.94
										Total	**0.13**	**2.50**	**0.41**	**0.07**	**0.06**	**0.00**	**300.89**	**305.36**

C.5 General Conformity Rule Compliance

Based on this analysis of nonattainment and maintenance criteria pollutant emissions performed in conjunction with the Final Rule of *Determining Conformity of Federal Actions to State or Federal Implementation Plans*, (USEPA, November 30, 1993 and March 24, 2010), the Preferred Alternative would not require a formal conformity determination. Even in a worst case scenario (assuming each equipment would run continuously over the entire work day during the two-week construction duration), the total emissions predicted as summarized in Table C-8 show no exceedance of the applicable *de minimis* criteria of 50 tpy for NO_x and VOC and 100 tpy of $PM_{2.5}$. Therefore, the Preferred Alternative would have minimal air quality impacts and would not require a formal conformity determination.

Table C-8: Total Construction Emissions

Source	**Total Emission (tons)**							
	VOC	**NOx**	**CO**	**$PM_{2.5}$**	**PM_{10}**	**SO_2**	**CO_2**	**CO_2e**
Equipment	0.03	0.41	0.13	0.02	0.02	0.00	119.58	119.81
Vehicle	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.38
Fugitive Dust	-	-	-	0.01	0.05	-	-	-
Vessel	0.13	2.50	0.41	0.06	0.07	0.00	300.88	305.36
Total	**0.16**	**2.91**	**0.54**	**0.09**	**0.14**	**0.00**	**420.84**	**425.55**
De Minimis Threshold	*50*	*50*	*n/a*	*100*	*n/a*	*n/a*	*n/a*	*n/a*
Exceeding De Minimis	*No*	*No*	*n/a*	*No*	*n/a*	*n/a*	*n/a*	*n/a*
Note: n/a – not applicable								

C.6 Other Pollutant Emissions

Table C-8 also provides estimated construction emissions for NAAQS attainment pollutants and GHG emissions for NEPA disclosure purposes.

C.7 References

US Army Corps of Engineers. November 2018. *USACE Construction Equipment Ownership and Operating Expense Schedule Region I.*

US Army Corps of Engineers. March 25, 1983. *USACE Engineering Manual - Dredging and Dredged Material Disposal.*US Environmental Protection Agency. November 30, 1993. *40 CFR Parts 6, 51, and 93. Determining Conformity of Federal Actions to State or Federal Implementation Plans, Federal Register.*

US Environmental Protection Agency. March 24, 2010. *40 CFR Parts 51 and 93. Revision to the General Conformity Rule*.

US Environmental Protection Agency. January 2016. *Direct Emissions from Mobile Combustion Sources.*

US Environmental Protection Agency. July 2010. *Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling, Report No. NR-005d (EPA420-R-10-016)*

US Environmental Protection Agency. November 2020. *Policy Guidance on the Use of MOVES3 for State Implementation Plan Development, Transportation Conformity, General Conformity, and Other Purposes*

US Environmental Protection Agency. November 2022. MOVES3: Latest Version of Motor Vehicles Emission Simulator.

US Environmental Protection Agency. September 1999. *Estimating Particulate Matter Emissions From Construction Operations, Final Report, Eastern Research Group, Inc., September 30, 1999, EPA Contract 68-D7-0068.*

US Environmental Protection Agency. April 2022. *Port Emissions Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source Emissions.*

Western Governors' Association. September 2006. *WRAP Fugitive Dust Handbook. September 7, 2006.*

This page intentionally left blank.

Appendix D: Coastal Zone Management Act Federal Consistency Determination

U.S. Department of Homeland Security
Washington, DC

Science and Technology

December 6, 2023

Consistency Review Unit
New York State Department of State
Office of Planning, Development & Community Infrastructure
One Commerce Plaza, 99 Washington Avenue
Albany, NY 12231
CR@dos.ny.gov

To whom it may concern,

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is submitting the enclosed Federal Consistency Determination for the proposed abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York, and the Plum Island Animal Disease Center (PIADC) on Plum Island, New York (Proposed Action). DHS S&T has completed this Consistency Determination in accordance with the Coastal Zone Management Act (CZMA) and New York's Coastal Management Program (CMP).

The scope of work for the proposed project includes the abandonment of an existing undersea electric cable and installation of a new electric/fiber optic cable between Orient Point and Plum Island. One of the existing two cables has reached the end of its lifespan and is at risk of failing. Additionally, there is a lack of redundancy with regards to fiber optic communications. DHS S&T is in the process of closing PIADC and transferring operations; however, electrical and communication capabilities are required on Plum Island during continued mission operation (until at least the end of 2024) and throughout the duration of planned closure activities. The Proposed Action would prevent potential loss of electrical or communication services at PIADC.

Enclosed for your review and concurrence is the DHS's consistency determination that the Proposed Action would be consistent to the maximum extent practicable with the enforceable policies of the New York State CMP. DHS respectfully requests your response within **60 days** from the receipt of this document, pursuant to 15 CFR Section 930.41, concurring or objecting to this consistency determination, or requesting an extension under Section 930.41(b). Your concurrence will be presumed if a response is not received by DHS on the 60th day from receipt of this determination. DHS has contracted AECOM to facilitate the CZMA process. Please direct your response or requests for additional information to Benjamin Obenland at AECOM via benjmain.obenland@aecom.com.

Sincerely,

JOHN M SEARING

Digitally signed by JOHN M SEARING
Date: 2023.12.06 16:15:16 -05'00'

John M. Searing, PE
Deputy Director, Plum Island Animal Disease Center
Office of National Laboratories
Science and Technology Directorate

Enclosure: Federal Consistency Determination

FEDERAL CONSISTENCY DETERMINATION
PLUM ISLAND ANIMAL DISEASE CENTER UNDERSEA CABLE INSTALLATION
UNITED STATES DEPARTMENT OF HOMELAND SECURITY
SOUTHOLD, SUFFOLK COUNTY, NEW YORK

Introduction

The United States (US) Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York, and Plum Island, New York (Proposed Action). Orient Point and Plum Island are located within New York State's designated coastal zone. Although Plum Island, as a federally owned property, is statutorily exempt from the State's coastal zone, the Proposed Action could have reasonably foreseeable effects on coastal zone resources and enforceable policies of New York's federally approved Coastal Management Program (CMP). Therefore, DHS S&T has prepared this Federal Consistency Determination in accordance with Section 307(d) of the Coastal Zone Management Act of 1972 (CZMA) and 15 Code of Federal Regulations (CFR) Part 930, Subpart C to evaluate the Proposed Action's effects on those resources and enforceable policies. DHS S&T has determined that the Proposed Action would be consistent to the maximum extent practicable with the enforceable policies of New York State's CMP.

The analysis presented here is drawn from the more detailed analyses presented in the Environmental Assessment (EA) that DHS S&T is preparing to analyze the Proposed Action's potential impacts in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] §§ 4321 et seq.); the President's Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); and DHS Management Directive 023-01, *Implementation of NEPA*.

Project Background

Plum Island is owned by DHS and is located approximately 1.5 miles northeast of Orient Point in Southold, Suffolk County, New York (**Figure 1**). Plum Island Animal Disease Center (PIADC) is operated by the DHS Science & Technology Directorate's Office of National Laboratories and is comprised of administrative and laboratory buildings, industrial facilities, roadways, utilities, easements, and utility rights of way. DHS also owns and operates the supporting Orient Point facility, which consists of two parcels: a 9.5-acre harbor facility; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island.

Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Both cables together provide for the island's normal electrical requirements. The expected lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding. DHS is in the process of closing PIADC and transferring operations to the newly constructed National Bio and Agro-Defense Facility (NBAF) in Manhattan, Kansas, over the next five to seven years. DHS continues to require electrical and communication capabilities on Plum Island during normal operation and throughout the duration of planned PIADC closure activities.

Purpose and Need

The *purpose* of the Proposed Action is to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is *needed* to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC.

Proposed Action

The Proposed Action is to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point and Plum Island. The existing cables extend up to approximately 11,000 feet under Plum Gut, an area of open water between Orient Point and Plum Island, from the cable vault on Orient Point to the cable vault on Plum Island. Beginning at the Orient Point cable vault, the existing cables are entrenched under a rock bed until reaching Plum Gut. From there, the cables span open water along the seabed of Plum Gut and Long Island Sound until reaching the shoreline of Plum Island where they are then buried until reaching the upland cable vault. One of the existing cables would be disconnected from the cable vaults on Orient Point and Plum Island and abandoned in place. The ends of the cable being abandoned would be disconnected and capped, with ends remaining inside the cable vault.

Installation of the new utility cable would entail connecting the cable to terminations within the existing cable vaults located on Orient Point and Plum Island, running the cable underground to well below the water line, and then bottom laying the cable through Plum Gut. The new cable would follow the same route as the existing M1 and M2 cables as it has been determined to be the most suitable route due to ocean depth in the area (**Figure 2**).

Final design for the proposed cable installation is currently underway. The new cable would be connected within each cable vault and entrenched along the beach, up to 500 feet at Orient Point and 200 feet at Plum Island, through the existing shoreline riprap, and into the water (laid on the seafloor). Existing soil, sand, and riprap would be temporarily excavated and stored on the shoreline adjacent to the trench line as the trench is constructed. Following cable installation, the excavated soil and sand would be used to backfill the trench and the riprap would be replaced above the trench. The new cable is expected to be trenched to a depth similar to the existing cables (approximately 30 inches) using a small excavator. In-water trenching is also anticipated and could occur up to several hundred feet along the seafloor. Approximately 100 feet of Cast Iron Cable Protectors (CICPs) would also be installed around the cable at each landing point during trenching. Approximately 0.5 acre on Plum Island and 0.5 acre at Orient Point would be used to stage equipment at each cable terminus. No land disturbance is planned at these areas except for the trenches between the cable vaults and the shoreline.

From where the cable exits the trench along the seafloor of Plum Gut, a cable-laying barge (CLB), assisted by tugboats and other support craft, would lay the remaining cable between Orient Point and Plum Island. The new cable would be approximately 3.5 inches in diameter and weigh approximately 6.2 pounds per linear foot in saltwater. Due to the heavy weight of the cable, anchoring to the seafloor is not necessary.

No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur either in 2024 or 2025, between the months of September and March. No work would occur between April 1 and September 1. Work would require approximately one year to complete, including completion of pre-installation surveys, installation and laying of the cable, cable

inspection and testing, and preparation of as-built surveys. The bottom laying portion of the in-water work for the Proposed Action is anticipated to only last up to seven days. Areas temporarily disturbed during trenching and installation would revegetate passively over time.

Alternatives

DHS S&T has determined that the Preferred Alternative, which would implement the Proposed Action as described above, is the only reasonable alternative for this Proposed Action. No other alternatives would meet the purpose and need of the Proposed Action.

Enforceable Policies

New York State's federally approved CMP is administered by the New York State Department of State (DOS). The DOS manages and implements the CMP and administers Federal Consistency Determinations as required under the CZMA. Federal agency actions that may impact coastal zone resources must be consistent to the maximum extent practicable with the enforceable policies of the New York State CMP. These policies are located within the New York State Coastal Management Program and Final Environmental Impact Statement (EIS), which was published and approved in 1982, and updated in 1983, 2001, and 2017. In addition, the Town of Southold has an approved Local Waterfront Revitalization Program (LWRP), which has been incorporated into the New York State CMP. The Southold LWRP contains its own set of enforceable policies with which federal consistency must also be determined. An analysis of the Proposed Action's consistency with applicable policies of New York State's CMP and the Southold LWRP, and review of potential impacts to other coastal resources, is presented below. **Table 1** provides a summary of applicable and non-applicable enforceable policies of the New York State CMP, and **Table 2** provides a summary of applicable and non-applicable enforceable policies of the Town of Southold LWRP.

New York State CMP Enforceable Policies

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.*** Plum Island is an important terrestrial habitat, as it supports populations of threatened and endangered species and is used as stopover habitat for migrating birds, and has been designated as a Long Island Stewardship Area. Plum Gut has been designated by the DOS as a significant coastal fish and wildlife habitat. Habitat found in the Proposed Action area supports various common terrestrial and aquatic species, as well as federal and state-listed threatened and endangered species, species protected under the Marine Mammal Protection Act (MMPA) and essential fish habitat (EFH). DHS is consulting with the US Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries Office to ensure these resources would not be adversely affected, including from changes to habitat. DHS would adhere to conservation recommendations provided by USFWS and NOAA to minimize potential adverse impacts to these species and their habitat.

Proposed activities on the shorelines of Plum Island and Orient Point would occur within designated Coastal Erosion Hazard Areas (CEHAs) as designated by the New York State Department of Environmental Conservation (NYSDEC). The Proposed Action would disturb narrow beach corridors primarily containing riprap and erosion control measures, and limited shoreline vegetation that may provide coastal habitat. Vegetation removal may result in increased erosion and stormwater discharges to the waters surrounding Plum Island, including Plum Gut. DHS would obtain coverage for the Proposed Action under a National

Pollutant Discharge Elimination System (NPDES) General Permit and would adhere to the existing PIADC Stormwater Pollution Prevention Plan (SWPPP) to identify erosion controls and manage discharges to these waters. DHS would also obtain a Coastal Erosion Management permit, if applicable, to minimize damage to natural protective features and natural resources located within the CEHA, including significant fish and wildlife habitat. No terrestrial vegetative communities would be significantly impacted, and any affected vegetation populations would passively revegetate following the completion of the Proposed Action to ensure the maintenance and restoration of terrestrial habitats. DHS would avoid sand dunes to the extent practicable during onshore cable installation activities.

Proposed activities in the aquatic environment would result in the disturbance of benthic habitat from undersea trenching. Trenching activities would displace bottom sediment, resulting in an increase in turbidity and potential impacts to benthic species from sediment removal and suspended sediment in the water column. DHS anticipates using low-impact in-water trenching methods to install the cable such as jetting or ploughing to minimize adverse impacts to aquatic species and nearshore habitat to the extent practicable; however, traditional trenching methods utilizing an excavator/hydraulic dredge may be required. The trench would be backfilled once the cable is installed. Further, offshore trenching work would occur during periods of low tide when trenching is occurring within the intertidal area to minimize sediment disturbance, to the extent practicable. If traditional trenching methods are determined necessary, DHS would obtain all applicable permits and authorizations for in-water excavation, which could potentially include a Protection of Waters permit from NYSDEC, a Coastal Erosion Management permit from NYSDEC, and a Clean Water Act (CWA) Section 404 permit or Nationwide Permit with NYSDEC conditions from the US Army Corps of Engineers (USACE).

No known eelgrass beds are present within the planned cable installation route, and any disturbed deeper vegetation such as algae would return to normal conditions following installation. Undersea cable laydown would result in other physical disturbances that could temporarily affect the quality of aquatic habitat, such as changes in vessel traffic, noise, and turbidity. An increase in vessel traffic to lay the cable across Plum Gut, which would take up to seven days, could increase the risk of marine species interactions; however, such an increase would be negligible in the context of existing vessel traffic in Plum Gut and Long Island Sound. Noise emitted from the CLB and support craft could increase the ambient underwater noise baseline during the duration of installation activities, but would not exceed noise thresholds for species injury. Substrate displacement during the cable laydown would temporarily increase local turbidity levels, but those changes would not result in adverse species effects or result in permanent changes to undersea conditions. No permanent changes to aquatic habitat would occur that could affect its long-term viability. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 8: ***Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sublethal or lethal effect on those resources.*** Original PIADC policy prohibited the removal of waste material from Plum Island; as such, wastewater decontamination occurred on-site, waste was incinerated, and non-combustible waste was disposed of in designated waste management areas (WMAs). No WMAs are in the Proposed Action area, and no hazardous wastes or materials are generated or stored in the Proposed Action area. Operation of heavy equipment, vehicles, and vessels during cable installation could result in accidental discharge or spill of hazardous materials such as diesel, oil, antifreeze, and lubricants. DHS has a US Environmental Protection Agency and NYSDEC-approved Spill Prevention, Control, and Countermeasure Plan (SPCCP) and would require all vessels maintain spill containment and response equipment onboard

and develop a Vessel Response Plan to control the discharge of operational wastes. Adherence to these practices and other controls would minimize the potential for hazardous wastes to enter the environment and affect fish and wildlife resources during cable installation.

Operation of the new cable and abandonment of the existing cable are not anticipated to result in releases of hazardous materials. Both the new and old cable would be the same type of utility cable. The cables have multiple layers and hollow space within the cable is filled with plastic rather than oil, to prevent leakages into the water should the cable break. The outermost layer of the cables is made of galvanized steel armor wires, each of which is jacketed with high density polyethylene (HDPE) to prevent corrosion. Kerite, the cable manufacturer, has had no recorded instances of cable failure due to degradation; however, should the HDPE layer deteriorate for either the abandoned cable or the new cable, breakdown would occur similar to other plastics and no hazardous materials would be released. Corrosion of the CICPs installed along the length of the new cable would occur at a slow rate, and cast iron corrosion is generally considered harmless for marine environments. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Flooding and Erosion Hazards Policies

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*****.** Cable trenching occurring under the Proposed Action would impact coastal beach areas at Orient Point and at Plum Island, as the new cable would be buried underground between the shoreline and the upland cable vaults at each terminus. Up to approximately 500 feet of beach would be trenched at Orient Point to accommodate cable laydown, and approximately 200 feet of beach would be trenched at Plum Island. Beaches at both Orient Point and Plum Island are located within the NYSDEC-designated CEHA; DHS would obtain a Coastal Erosion Management permit, as applicable, to minimize impacts to natural protective features. Trenches that are excavated in these beach areas would be refilled with comparable beach and sandy soils so that the beach landforms are not permanently impacted, and their protective capacity is not reduced. Trenching activities would not lead to the destruction or loss of beaches at Orient Point or Plum Island, and disturbed areas would return to natural shoreline conditions. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 14: ***Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations.*** Activities occurring under the Proposed Action would involve work within the 100-year floodplain designated by the Federal Emergency Management Agency (FEMA). Actions occurring in the floodplain would include all elements of installing the undersea cable. Minor ground disturbance would occur, but there would be no net fill. These activities would not alter or interfere with the function of the floodplain, nor result in an increased potential for flooding at Orient Point or Plum Island. Excavated soils from trenching activities would be susceptible to erosion from wind or runoff until they are replaced. DHS would obtain and adhere to an NPDES General Permit that identifies erosion and sediment control measures necessary to minimize potential erosion impacts, and would also obtain a Coastal Erosion Management permit as needed. There would be no long-term change to the erosion potential under the Proposed Action, and existing erosion control features installed on shore areas would not be affected. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 15: ***Mining, excavation or dredging in coastal waters shall not significantly interfere with the natural coastal processes which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land.*** DHS may need to utilize traditional trenching methods, such as excavation, in nearshore waters when implementing the Proposed Action. Excavation would be relatively shallow (30 inches), narrow (e.g., width of a small excavator bucket), and over a relatively short distance (several hundred feet), and would not result in changes in the supply and net flow of shoreline materials. During trenching, sediment removed from the in-water trench would be placed on-shore above the high-water mark or on support vessels, so it does not contribute to offshore sedimentation. Once the cable is laid, the trench would be backfilled. DHS would obtain a Coastal Erosion Management Permit, as applicable, to address potential adverse impacts resulting from proposed trenching. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

General Policy

Policy 18: ***To safeguard the vital economic, social and environmental interests of the State and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the State has established to protect valuable coastal resource areas.*** Proposed cable installation activities would not result in new developments or hardened infrastructure at either Orient Point or Plum Island, as the new cable would be connected to existing cable vaults at each location. Proposed onshore activities may result in erosion and sedimentation into Plum Gut or Long Island Sound, and underwater activities may result in turbidity from sediment disturbance as the cable is placed on the seafloor. Vessels used to place the cable on the seafloor may inadvertently discharge hazardous substances into coastal waters. The implementation of best management practices (BMPs), such as adherence to the existing SPCCP, Vessel Response Plan, and adherence to applicable protocols and regulations, including the NPDES General Permit, Coastal Erosion Management permit, and Protection of Waters permit, would ensure that coastal waters are not impaired. The protection of and minimization of potential impacts to coastal waters would protect this natural resource, as well as other economic and social interests dependent on it. The Proposed Action may temporarily interfere with recreational activities, as public access to the Orient Point shoreline would be limited where cable installation activities are occurring, and a buffer zone would be enforced around underwater cable-laying activities in Plum Gut. However, there would be no permanent changes to recreational opportunities either onshore or in-water. The Proposed Action would not result in any changes to local socioeconomic conditions and no communities with environmental justice concerns have been identified in the vicinity of the Proposed Action area. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Public Access Policies

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.*** Elements of the Proposed Action would occur within Orient Point County Park, a waterfront park operated by the Suffolk County Parks Department that is open to the general public. The park offers various recreational opportunities, including access to the waters of Plum Gut. Proposed cable installation activities would temporarily impact public access to a small beachfront area along the western shoreline of Orient Point County Park. The cable would be trenched up to 500 feet at the beach at Orient Point, and public access would be restricted in this area while onshore and undersea trenching activities are occurring to protect public safety. These restrictions are anticipated to last between four to six

weeks. An additional 0.5 acre of shoreline would be used for equipment staging. While these activities would reduce public access to the water's edge throughout the duration of the cable replacement, they would be limited to a very small area of beachfront in comparison to the available beachfront at Orient Point County Park. Further, the Proposed Action would not result in a permanent loss or reduction of access to public coastal lands and waters, nor would any land at Orient Point County Park be removed from public ownership. Plum Island is a secure property not accessible to the public. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Historic and Scenic Resources Policies

Policy 23: ***Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the State, its communities, or the Nation.*** One aboveground historic resource has been identified within the aboveground Area of Potential Effect (APE) for the Proposed Action. The Plum Island Light Station, which includes a lighthouse, residence, and an associated oil house and storage shed, was listed in the National Register of Historic Places (NRHP) in 2011. The Plum Island Light Station is also a contributing property to the multiple property listing for Light Stations of the United States that was established in 2002. The Plum Island cable vault is located within the property boundary of the Plum Island Light Station; therefore, cable installation activities would also occur within the property boundary. No new above-ground components would be constructed, however, and there would be no adverse effects to the Plum Island Light Station. Review of the belowground APE, which includes underwater areas, has indicated a low potential for intact, significant archaeological resources. DHS therefore anticipates that there would be no effect on archaeological resources. DHS is consulting with the New York State Historic Preservation Office (SHPO) and Native American tribes in accordance with Section 106 of the National Historic Preservation Act (NHPA) regarding the Proposed Action If the SHPO does not concur with DHS's determinations of no adverse effect on the Plum Island Light Station and no effect on archaeological historic properties, DHS would adhere to SHPO recommendations and would continue to consult in order to minimize potential impacts. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 25: ***Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.*** Orient Point and Plum Island do not contain scenic resources of statewide significance; however, they may still contribute to the overall scenic quality of the coastal area. Trenching occurring on the beaches of Orient Point and Plum Island would temporarily affect the scenic quality of the shoreline, but the trenches would be refilled with beachy, sandy soils and there would be no permanent degradation of the scenic quality of the shoreline. Minor vegetation clearing would occur to accommodate trenching, but affected areas would be allowed to revegetate following the completion of these activities. No new construction would occur under the Proposed Action that would introduce visually incongruous elements to the landscape. No natural landforms would be modified under the Proposed Action. No activities would occur that would impede visual access to coastal waters. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Energy and Ice Management Policies

Policy 29: ***The development of offshore uses and resources, including renewable energy resources, shall accommodate New York's long-standing ocean and Great Lakes industries, such as commercial and recreational fishing and maritime commerce, and the ecological functions of habitats important to New York.*** The installation of the undersea utility cable could be considered an offshore use in accordance with

this enforceable policy, but it would be installed underground and submerged at the bottom of Plum Gut. The proposed cable would replace one of the existing utility cables and provide redundancy to Plum Island, which has supported Government programs on the island for decades. The presence of the cable would not interfere with any industries. Underwater installation of the cable may temporarily affect maritime traffic, industries, activities, and recreation, as a buffer zone would be established around the work area to exclude vessels. Other vessel routes and areas around the installation zone would remain available for use. Underwater installation may also impact biological resources, such as aquatic species and their habitat, from temporary changes in vessel activity, ambient noise levels, and water quality.

DHS would adhere to conservation recommendations provided during consultation with the USFWS and NOAA. Undersea trenches would be backfilled to restore sediment, promote species recovery, and ensure that no obstacles remain on the nearshore areas. With adherence to permit conditions and recommendations from USFWS and NOAA, changes to aquatic habitat would remain within the tolerance thresholds of aquatic species. Aquatic habitat would return to its normal, baseline conditions following the completion of proposed installation activities. The abandoned cable is not anticipated to release hazardous substances into the surrounding water, and the new cable would be designed to minimize the potential for deterioration. Corrosion of the CICPs would occur at a slow rate and would be considered harmless for the marine environment. The Proposed Action would not result in the permanent degradation of water quality. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Water and Air Resources Policies

Policy 33: ***Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.*** Cable installation activities would not create new impervious surfaces nor generate new, permanent stormwater discharges to Long Island Sound or Plum Gut. However, due to minimal shoreline disturbance associated with beach trenching at Orient Point and Plum Island, DHS would obtain a NPDES General Permit to manage stormwater discharges resulting from ground disturbance. In addition, a DHS would adhere to the PIADC SWPPP to identify and implement erosion control measures. No structural measures to control stormwater runoff would be constructed under the Proposed Action, and no changes would be made to sewer infrastructure. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 35: ***Dredging and filling in coastal waters and disposal of dredged material will be undertaken in a manner that meets existing State dredging permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands.*** DHS anticipates using low impact in-water trenching methods, such as ploughing or jetting, under the Proposed Action; however, it may be necessary to use traditional trenching methods such as excavation. Excavation would have the potential to result in temporary sediment disturbance and turbidity, loss of nearshore aquatic habitat, and impacts to water quality. Should the use of traditional methods be required, DHS would obtain all applicable state permits related to dredging, such as the Protection of Waters permit, Coastal Erosion Management permit, and CWA Section 404 permit. Adherence to permit requirements would minimize the potential for adverse effects and would ensure that state coastal resources are protected to the extent practicable. Further, DHS would adhere to conservation recommendations provided by USFWS and NOAA during consultation to minimize impacts to species and their habitat. Finally, the potential impacts of the trenching would be limited by the very shallow and narrow dimensions, and

relatively short distance proposed, of the trenches. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 36: ***Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur.*** Under the Proposed Action, hazardous materials, including petroleum, would be used by heavy equipment, vehicles, and vessels to support cable installation. All hazardous materials or waste discovered, generated, or used during cable installation would be handled, containerized, and disposed of in accordance with applicable federal, state, and local regulations. Should any inadvertent spills occur, DHS would implement clean-up and containment procedures in accordance with DHS's existing SPCCP. DHS would also require vessels to develop a Vessel Response Plan to control the discharge of operational wastes into coastal waters and would require vessels to maintain spill containment and response equipment onboard. Vessels would be refueled at marine refueling stations in accordance with standard protocols. Adherence to these regulations and BMPs would minimize the potential for spills or releases into coastal waters. Following cable installation, there would be no potential for additional releases of hazardous materials. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 37: ***Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.*** Some ground disturbance associated with onshore cable trenching at Orient Point and Plum Island would occur under the Proposed Action that could result in non-point discharges of eroded soils and sedimentation into coastal waters. BMPs addressing stormwater runoff would also be applicable to managing erosion and sedimentation, including adherence to a NPDES General Permit and the existing PIADC SWPPP. Adherence to the Coastal Erosion Management permit would minimize the exacerbation of erosion hazards along the coastline. Non-point discharges of eroded soils would cease following the completion of ground-disturbing activities, and disturbed areas would be allowed to revegetate passively, to restore habitat and prevent additional erosion and sedimentation into Plum Gut. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

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.*** No streams are located on Plum Island, although the site itself is located within Long Island Sound. Plum Gut is not listed as impaired under Section 303(d) of the Clean Water Act, although Long Island Sound is considered impaired for dissolved oxygen, and a total maximum daily load (TMDL) addressing nitrogen pollution has been established. Ground-disturbing activities under the Proposed Action would be minimal and limited to the small areas of shoreline on Orient Point and Plum Island where trenching would occur. With implementation of the NPDES General Permit and SWPPP, the Proposed Action would have no effect on the Long Island Sound TMDL or on surface water quality from erosion and sedimentation. Undersea trenching in Plum Gut for cable installation would temporarily affect turbidity within Plum Gut, but disturbed bottom sediments would be expected to settle out of the water column and would not have a permanent impact on surface water quality. Sediment removed from the in-water trench to place the cable would be placed on-shore above the high-water mark or on support vessels, so it does not contribute to sedimentation in Plum Gut. Plum Island and Orient Point are underlain by freshwater aquifers. The Proposed Action is not likely to intersect a freshwater aquifer during trenching activities given that trenching is not estimated to exceed a depth of 30 inches. Accidental spills of petroleum or other hazardous

materials associated with heavy equipment could leach into unconfined aquifers. However, these impacts would be minimized through adherence to BMPs, such as performing routine inspections of equipment, maintaining spill containment materials on-site, and establishing containment structures where necessary. No intentional release or injection of materials into the aquifer would occur, and no aquifer withdrawals would be required under the Proposed Action. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Policy 41: ***Land use or development in the coastal area will not cause national or State air quality standards to be violated.*** Suffolk County is designated as a maintenance area for particulate matter with a size of less than or equal to 2.5 micrometers ($PM_{2.5}$) and a serious nonattainment area for ozone (O_3). Suffolk County is considered in attainment for the remaining criteria pollutants. The Proposed Action would result in emissions from fuel-burning combustion equipment, such as on-road vehicles and in-water vessels. The total anticipated emissions from cable installation activities would not exceed the regulated *de minimis* thresholds for $PM_{2.5}$ or the precursors to O_3. No permanent emissions sources would be established. Throughout the course of the Proposed Action, national and state air quality standards would not be violated. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Wetlands Policy

Policy 44: ***Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.*** Proposed cable installation activities are not anticipated to impact estuarine and marine wetlands present along the shorelines of Orient Point and Plum Island. Trenching to access the cable vaults at Orient Point and Plum Island would be through areas of primarily sand and rock. Prior to beginning cable installation work, a qualified wetland delineator would be contracted to evaluate if estuarine and marine wetlands are present within the Proposed Action area. If wetlands are identified, DHS would adhere to the appropriate permitting process. Ground disturbance may have the potential to result in erosion or sedimentation in nearby estuarine and marine wetlands, but DHS would adhere to erosion control measures included in the project-specific NPDES permit to minimize potential indirect impacts. No freshwater wetlands are present within the vicinity of the Proposed Action area. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Town of Southold LWRP Enforceable Policies

Developed Coast Policies

Policy 2: ***Preserve historic resources of the Town of Southold***. The APE for the Proposed Action contains one aboveground historic resource, the Plum Island Light Station, which is listed in the NRHP and has also been designated as a historically significant navigational aid by the Town of Southold. Proposed cable installation activities would occur within the property boundary of the Plum Island Light Station since the cable vault is also located within that property boundary. No new above-ground components would be constructed, and there would be no impacts to the Plum Island Light Station, including to its historic, scenic character. DHS does not anticipate any adverse effects to archaeological resources, including underwater archaeological resources, as reviews of the belowground APE has not identified significant resources. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy. Additional information on the Proposed Action's consistency with this local enforceable policy is included in the determination of consistency with the New York State CMP Policy 23.

Policy 3: ***Enhance visual quality and protect scenic resources throughout the Town of Southold***. Local scenic resources and surrounding visual quality would not be impacted by the Proposed Action. No construction would occur that could permanently block or modify scenic views from local roads, public parks, or other spaces. Shoreline areas at Orient Point and on Plum Island disturbed from trenching activities would be refilled with beachy, sandy soils, and would be allowed to revegetate passively. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy. Additional information on the Proposed Action's consistency with this local enforceable policy is included in the determination of consistency with the New York State CMP Policy 25.

Natural Coast Policies

Policy 4: ***Minimize loss of life, structures, and natural resources from flooding and erosion***. No shoreline hardening, construction of erosion control structures, or other development activities would occur. Undeveloped portions of the shoreline at Plum Island and Orient Point disturbed during trenching activities would be restored following cable installation, no natural protective features would be degraded, and there would be no loss of public trust lands. The function of the floodplain would not be altered, and potential impacts from erosion would be minimized through adherence to a NPDES General Permit and the Coastal Erosion Management permit. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy. Additional information on the Proposed Action's consistency with this local enforceable policy is included in the determination of consistency with the New York State CMP Policy 14.

Policy 5: ***Protect and improve water quality and supply in the Town of Southold.*** No point source, sanitary sewer, industrial, or other direct discharges containing nitrogen into surface waters would occur as a result of cable installation activities. Any non-point source discharges, such as from stormwater runoff, would be managed through adherence to a NPDES General Permit and existing PIADC SWPPP. Undersea cable installation, including trenching and laydown activities, would have the potential to affect water quality temporarily from local increases in turbidity. Turbidity resulting from trenching and the disturbance of bottom sediment during cable laydown would settle out of the water column and would not permanently change water quality. Sediment removed from the in-water trenches would be placed on-shore or on support vessels. The abandoned cable is not anticipated to release hazardous substances into the surrounding water, and the new cable would be designed to minimize the potential for deterioration. Corrosion of the CICPs would occur at a slow rate and would be considered harmless for the marine environment. Accidental spills of petroleum or other hazardous materials could occur from vessels, potentially affecting surface water quality and leaching into groundwater supplies for the Town of Southold. Potential impacts from spills would be minimized through adherence to an SPCCP and Vessel Response Plan, as well as through BMPs such as maintaining spill response equipment on-board, performing routine inspections, and establishing containment structures as needed. Implementation of these plans and BMPs would ensure that the quality of surface waters and groundwater, and the potability and availability of groundwater for the Town of Southold, would not be substantially reduced. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy. Additional information on the Proposed Action's consistency with this local enforceable policy is included in the determination of consistency with the New York State CMP Policies 7, 8, 36, and 38.

Policy 6: ***Protect and restore the quality and function of the Town of Southold ecosystem***. Plum Island is an important terrestrial habitat for threatened and endangered species and migratory birds, and Plum Gut has also been designated as a significant coastal fish and wildlife habitat. Much of Plum Island remains in

a natural, undeveloped state, and the Proposed Action would not result in any development of these areas. Proposed trenching activities on the shorelines of Plum Island and Orient Point would disturb narrow beach corridors and vegetation that may provide species habitat. While disturbed beach areas would be restored and refilled with beachy soils and allowed to revegetate, ecological quality would be affected until activities under the Proposed Action are complete. DHS would avoid sand dunes to the extent practicable and would adhere to conditions of the Erosion Management Permit, if applicable, to minimize damage to natural protective features and other natural resources. Stormwater discharges that may occur would be minimized through adherence to permits and applicable BMPs to protect and minimize adverse impacts to Plum Gut.

Undersea trenching would result in disturbances to benthic habitat and would temporarily increase turbidity levels. The trenching technique would be selected to minimize adverse impacts to the extent practicable and removed sediment would be managed so turbidity levels do not affect water quality beyond the immediate construction phase or exceed species' tolerance levels. If traditional trenching methods, such as excavation, are required, DHS would obtain and adhere to applicable dredge permit requirements to minimize potential adverse impacts. Temporary changes to physical parameters of the aquatic ecosystems, including turbidity and noise, would occur from the operation of the CLB and other vessels and cable laydown on bottom sediment. Neither of these increases are anticipated to exceed the tolerance thresholds of aquatic species. These habitat impacts would be temporary and are not expected to adversely affect special status species. DHS is consulting with USFWS and NOAA Fisheries Office regarding impacts to federally threatened or endangered species, species protected under the MMPA, and EFH, and would comply with recommendations to protect these species. No permanent physical loss or degradation of the terrestrial and aquatic ecosystems at Plum Island and Orient Point would occur, and no permanent habitat impairment or changes to physical, abiotic ecosystem components would occur. No freshwater wetlands are located within the Proposed Action area, and no estuarine wetlands are expected to be impacted. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy. Additional information on the Proposed Action's consistency with this local enforceable policy is included in the determination of consistency with the New York State CMP Policies 7 and 44.

Policy 7: ***Protect and improve air quality in the Town of Southold.*** The Proposed Action would not result in the introduction of heavy industry, expansion of power plants, or a permanent increase in automobile or vessel traffic. Increased air emissions during proposed cable installation activities would be temporary, and would not exceed applicable regulatory standards. No permanent emissions sources would be established. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy. Additional information on the Proposed Action's consistency with this local enforceable policy is included in the determination of consistency with the New York State CMP Policy 41.

Policy 8: ***Minimize environmental degradation in Town of Southold from solid waste and hazardous substances and wastes***. No landfills, hazardous waste sites, or other waste management or hazardous material storage facilities are located within the Proposed Action area. Installation of the undersea cable would use some hazardous substances to operate heavy equipment, vehicles, and vessels. Accidental discharge or spill of such materials into coastal waters, including diesel, oil, or antifreeze, would be minimized through implementation of an SPCCP and Vessel Response Plan. Vessels would be required to maintain spill containment and response equipment onboard and would refuel at designated marine refueling stations. The proposed cable installation would not create a new permanent source of hazardous material or solid waste generation and would have no potential for environmental contamination once operational. Therefore, the Proposed Action is consistent to the maximum extent practicable with this

enforceable policy. Additional information on the Proposed Action's consistency with this local enforceable policy is included in the determination of consistency with the New York State CMP Policies 8 and 36.

Public Coast Policies

Policy 9: ***Provide for public access to, and recreational use of, coastal waters, public lands, and public resources of the Town of Southold.*** Elements of the Proposed Action would occur within Orient Point County Park, a public waterfront park within the Town of Southold. Proposed trenching activities would temporarily limit public access to a small beachfront area along the western shoreline of Orient Point County Park while the cable is being installed for public safety. Following cable installation, the shoreline area at Orient Point would be reopened. The Proposed Action would not result in a permanent loss or reduction of public access to coastal lands and waters, including visual access, or of recreational opportunities. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy. Additional information on the Proposed Action's consistency with this local enforceable policy is included in the determination of consistency with the New York State CMP Policy 20.

Working Coast Policies

Policy 11: ***Promote sustainable use of living marine resources in Long Island Sound, the Peconic Estuary and Town waters.*** Some in-water trenching to install the undersea cable would occur several hundred feet off the shorelines of Orient Point and Plum Island into Plum Gut, and the cable would be placed on the seafloor of Plum Gut. In-water trenching would avoid, to the extent practicable, benthic habitat and eelgrass beds, and the proposed route for cable laydown is mostly rocky substrate with no ecologically sensitive habitats. Additionally, as the proposed cable route would follow the existing undersea utility corridor, previously undisturbed areas would be avoided. By avoiding sensitive habitat areas, the Proposed Action would minimize adverse impacts on the health and abundance of living marine resources and would not affect the size or continued propagation of native stocks or affect important spawning grounds, shellfish habitat, or the success of marine fisheries. The Proposed Action would have no potential to affect the operation or marketability of commercial or recreational fisheries, the commercial fishing fleet or support facilities, the managed shellfish harvest, or aquaculture. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy. Additional information on the Proposed Action's consistency with this local enforceable policy is included in the determination of consistency with the New York State CMP Policy 7.

Conclusion

Table 1 and **Table 2** summarize the Proposed Action's consistency with or applicability to the enforceable policies of the New York State CMP and the Town of Southold LWRP. DHS has determined that the Proposed Action, which would be implemented in accordance with applicable BMPs and minimization measures, would be consistent to the maximum extent practicable with the enforceable policies and coastal resources of New York State's federally approved CMP, including the Town of Southold's LWRP, pursuant to the Coastal Zone Management Act of 1972, as amended, and in accordance with 15 CFR Part 930, Subpart C.

Table 1. Consistency or Applicability of the Proposed Action to New York CMP Enforceable Policies

Policy	Applicability or Consistency[1]
Development Policies	
Policy 1: Restore, revitalize, and redevelop deteriorated and underutilized waterfront areas for commercial, industrial, cultural, recreations, and other compatible uses.	**N/A**
Policy 2: Facilitate the siting of water dependent uses and facilities on or adjacent to coastal waters.	**N/A**
Policy 3: Further develop the State's major ports of Albany, Buffalo, New York, Ogdensburg, and Oswego as centers of commerce and industry, and encourage the siting, in these port areas, including those under the jurisdiction of State public authorities, of land use and development which is essential to, or in support of, the waterborne transportation of cargo and people.	**N/A**
Policy 4: Strengthen the economic base of smaller harbor areas by encouraging the development and enhancement of those traditional uses and activities which have provided such areas with their unique maritime identity.	**N/A**
Policy 5: Encourage the location of development in areas where public services and facilities essential to such development are adequate.	**N/A**
Policy 6: Expedite permit procedures in order to facilitate the siting of development activities at suitable locations.	**N/A**
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.	**Consistent**
Policy 8: Protect fish and wildlife resources in the coastal area from the introduction of hazardous wastes and other pollutants which bio-accumulate in the food chain or which cause significant sublethal or lethal effect on those resources.	**Consistent**
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.	**N/A**
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.	**N/A**
Flooding and Erosion Hazards	
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.	**N/A**

Table 1. Consistency or Applicability of the Proposed Action to New York CMP Enforceable Policies

Policy	Applicability or Consistency[1]
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.	**Consistent**
Policy 13: The construction or reconstruction of erosion protection structures shall be undertaken only if they have a reasonable probability of controlling erosion for at least thirty years as demonstrated in design and construction standards and/or assured maintenance or replacement programs.	**N/A**
Policy 14: Activities and development, including the construction or reconstruction of erosion protection structures, shall be undertaken so that there will be no measurable increase in erosion or flooding at the site of such activities or development, or at other locations.	**Consistent**
Policy 15: Mining, excavation or dredging in coastal waters shall not significantly interfere with the natural coastal processes which supply beach materials to land adjacent to such waters and shall be undertaken in a manner which will not cause an increase in erosion of such land.	**Consistent**
Policy 16: Public funds shall only be used for erosion protective structures where necessary to protect human life, and new development which requires a location within or adjacent to an erosion hazard area to be able to function, or existing development; and only where the public benefits outweigh the long term monetary and other costs including the potential for increasing erosion and adverse effects on natural protective features.	**N/A**
Policy 17: Non-structural measures to minimize damage to natural resources and property from flooding and erosion shall be used whenever possible.	**N/A**
General Policy	
Policy 18: To safeguard the vital economic, social and environmental interests of the State and of its citizens, proposed major actions in the coastal area must give full consideration to those interests, and to the safeguards which the State has established to protect valuable coastal resource areas.	**Consistent**
Public Access Policies	
Policy 19: Protect, maintain, and increase the level and types of access to public water related recreation resources and facilities.	**N/A**
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.	**Consistent**

Table 1. Consistency or Applicability of the Proposed Action to New York CMP Enforceable Policies

Policy	Applicability or Consistency[1]
Recreation Policies	
Policy 21: Water dependent and water enhanced recreation will be encouraged and facilitated, and will be given priority over non-water-related uses along the coast.	**N/A**
Policy 22: Development when located adjacent to the shore will provide for water-related recreation whenever such use is compatible with reasonably anticipated demand for such activities, and is compatible with the primary purpose of the development.	**N/A**
Historic and Scenic Resources Policies	
Policy 23: Protect, enhance and restore structures, districts, areas or sites that are of significance in the history, architecture, archaeology or culture of the State, its communities, or the Nation.	**Consistent**
Policy 24: Prevent impairment of scenic resources of statewide significance.	**N/A**
Policy 25: Protect, restore or enhance natural and man-made resources which are not identified as being of statewide significance, but which contribute to the overall scenic quality of the coastal area.	**Consistent**
Agricultural Lands Policies	
Policy 26: Conserve and protect agricultural lands in the State's coastal area.	**N/A**
Energy 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.	**N/A**
Policy 28: Ice management practices shall not interfere with the production of hydroelectric power, damage significant fish and wildlife and their habitat, or increase shoreline erosion or flooding.	**N/A**
Policy 29: The development of offshore uses and resources, including renewable energy resources, shall accommodate New York's long-standing ocean and Great Lakes industries, such as commercial and recreational fishing and maritime commerce, and the ecological functions of habitats important to New York.	**Consistent**
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.	**N/A**
Policy 31: State coastal area policies and management objectives of approved local Waterfront Revitalization Program will be considered while	**N/A**

Table 1. Consistency or Applicability of the Proposed Action to New York CMP Enforceable Policies

Policy	Applicability or Consistency[1]
reviewing coastal water classifications and while modifying water quality standards; however, those waters already overburdened with contaminants will be recognized as being a development constraint.	
Policy 32: Encourage the use of alternative or innovative sanitary waste systems in small communities where the costs of conventional facilities are unreasonably high, given the size of the existing tax base of these communities.	**N/A**
Policy 33: Best management practices will be used to ensure the control of stormwater runoff and combined sewer overflows draining into coastal waters.	**Consistent**
Policy 34: Discharge of waste materials into coastal waters from vessels subject to State jurisdiction will be limited so as to protect significant fish and wildlife habitats, recreational areas and water supply areas.	**N/A**
Policy 35: Dredging and filling in coastal waters and disposal of dredged material will be undertaken in a manner that meets existing State dredging permit requirements, and protects significant fish and wildlife habitats, scenic resources, natural protective features, important agricultural lands, and wetlands.	**Consistent**
Policy 36: Activities related to the shipment and storage of petroleum and other hazardous materials will be conducted in a manner that will prevent or at least minimize spills into coastal waters; all practicable efforts will be undertaken to expedite the cleanup of such discharges; and restitution for damages will be required when these spills occur.	**Consistent**
Policy 37: Best management practices will be utilized to minimize the non-point discharge of excess nutrients, organics and eroded soils into coastal waters.	**Consistent**
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.	**Consistent**
Policy 39: The transport, storage, treatment and disposal of solid wastes, particularly hazardous wastes, within coastal areas will be conducted in such a manner so as to protect groundwater and surface water supplies, significant fish and wildlife habitats, recreation areas, important agricultural land, and scenic resources.	**N/A**
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.	**N/A**
Policy 41: Land use or development in the coastal area will not cause national or State air quality standards to be violated.	**Consistent**
Policy 42: Coastal management policies will be considered if the State reclassifies land areas pursuant to the prevention of significant deterioration regulations of the Federal Clean Air Act.	**N/A**

Table 1. Consistency or Applicability of the Proposed Action to New York CMP Enforceable Policies

Policy	Applicability or Consistency[1]
Policy 43: Land use or development in the coastal area must not cause the generation of significant amounts of acid rain precursors: nitrates and sulfates.	**N/A**
Wetlands Policy	
Policy 44: Preserve and protect tidal and freshwater wetlands and preserve the benefits derived from these areas.	**Consistent**

Note:

1. Consistent, to the maximum extent practicable.

Source: *New York State Coastal Management Program and Final Environmental Impact Statement*, 1982.

Table 2. Consistency or Applicability of the Proposed Action to the Town of Southold LWRP Policies

Policy	Applicability or Consistency[1]
Developed Coast Policies	
Policy 1: Foster a pattern of development in the Town of Southold that enhances community character, preserves open space, makes efficient use of infrastructure, makes beneficial use of a coastal location, and minimizes adverse effects of development.	**N/A**
Policy 2: Preserve historic resources of the Town of Southold.	**Consistent**
Policy 3: Enhance visual quality and protect scenic resources throughout the Town of Southold.	**Consistent**
Natural Coast Policies	
Policy 4: Minimize loss of life, structures, and natural resources from flooding and erosion.	**Consistent**
Policy 5: Protect and improve water quality and supply in the Town of Southold.	**Consistent**
Policy 6: Protect and restore the quality and function of the Town of Southold's ecosystem.	**Consistent**
Policy 7: Protect and improve air quality in the Town of Southold.	**Consistent**
Policy 8: Minimize environmental degradation in the Town of Southold from solid waste and hazardous substances and wastes.	**Consistent**
Public Coast Policies	
Policy 9: Provide for public access to, and recreational use of, coastal waters, public lands, and public resources of the Town of Southold.	**Consistent**
Working Coast Policies	
Policy 10: Protect the Town of Southold's water-dependent uses and promote siting of new water-dependent uses in suitable locations.	**N/A**
Policy 11: Promote sustainable use of living marine resources in the Town of Southold.	**Consistent**
Policy 12: Protect agricultural lands in the Town of Southold.	**N/A**
Policy 13: Promote appropriate use and development of energy and mineral resources.	**N/A**

Note:

1. Consistent, to the maximum extent practicable.

Source: *Town of Southold Local Waterfront Revitalization Program*, 2004.

FIGURES

Figure 1: Proposed Action Area Location

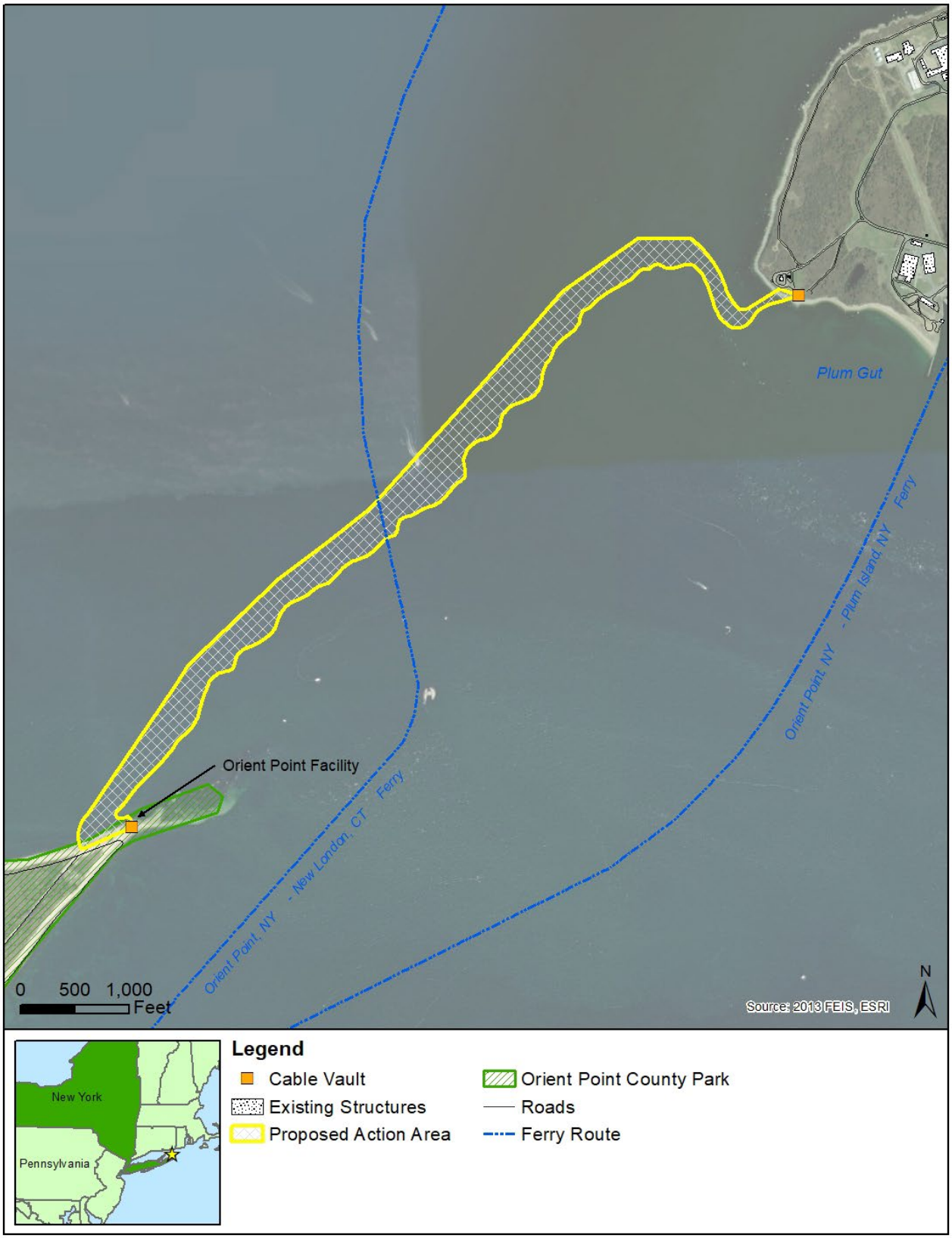


Figure 2: Proposed Undersea Cable Route

Appendix E: Biological Resources Consultations

Science and Technology

October 19, 2023

U.S. Fish and Wildlife Service
Long Island Field Office
340 Smith Road
Shirley, NY 11967

SUBJECT: **Online Informal Consultation Request, Plum Island Animal Disease Center Undersea Cable Installation, Suffolk County, New York, Project Code 2023-0127188**

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and Plum Island, NY. This letter is to request concurrence from your office regarding our *may affect, not likely to adversely affect* determinations for the referenced project under Section 7 of the Endangered Species Act (ESA).

Plum Island Animal Disease Center (PIADC) has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, New York (NY) (**Attachment 1a**). DHS S&T operates PIADC in cooperation with the United States Department of Agriculture (USDA). DHS S&T also owns and operates the supporting Orient Point facility at Orient Point, NY. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island.

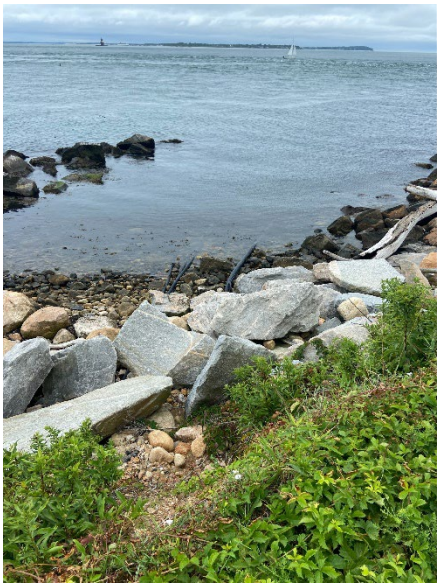
DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts from conducting activities related to the abandonment in place of an existing undersea utility cable and the installation of the new undersea utility cable (Proposed Action). Plum Island currently receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures approximately 11,000 feet long, and together provide for the island's normal electrical requirements. DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, which has exceeded its 25-year lifespan, is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Without the implementation of the Proposed Action, the existing cables would remain in danger of failing, which would significantly constrain PIADC's operational capabilities, including ongoing and planned closure activities, should the cable fail in the near-term.

The new utility cable would be connected within the existing utility vaults located on Orient Point and Plum Island and would be installed using a combination of trenching and/or horizontal directional drilling (HDD), or similar technology, from the shore to below the water line, and then bottom laying the cable through Plum Gut via a cable laying barge (CLB). The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables (**Attachment 1b**). The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. One of the existing cables would be disconnected from the utility vaults on Orient Point and Plum Island and abandoned in place, identical to how previous cable replacement projects have been conducted in the area. The CLB portion of the Proposed Action is anticipated to require a duration of four to seven days, while onshore activities associated with trenching and/or HDD are anticipated to require approximately four to six weeks in each location.

The Proposed Action would include minor ground disturbance associated with trenching and/or installation of the HDD conduit. The onshore areas where the Proposed Action would occur are composed of rocky, sparsely vegetated beaches with some sand (**Photo 1** and **Photo 2**). The Proposed Action may also include minimal vegetation clearing (approximately 200 square feet on Plum Island; none at Orient Point) to facilitate trenching or drilling activities. Both ground disturbance and minimal vegetation clearing would occur entirely within previously disturbed areas between the utility vaults and shorelines of Plum Island and Orient Point County Park that lie within the project area.

Photo 2: Onshore Proposed Action Area at Orient Point

Photo 1: Onshore Proposed Action Area at Plum Island (Representative)



DHS S&T has determined the Proposed Action *may affect but is not likely to adversely affect* the piping plover (*Charadrius melodus*) and the roseate tern (*Sterna dougallii*), and would have *no effect* on all other federally listed species identified within the Proposed Action area. DHS S&T requests your concurrence with this determination. The enclosed project information package provides information about listed species, critical habitat, and bald eagles considered in our review, and the species conclusions table included in the package identifies our determinations (**Attachment 2** and **Attachment 3).** For additional information,

please contact Benjamin Obenland at benjamin.obenland@aecom.com. Email responses are preferred, although letter responses may be submitted to *Benjamin Obenland, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876.*

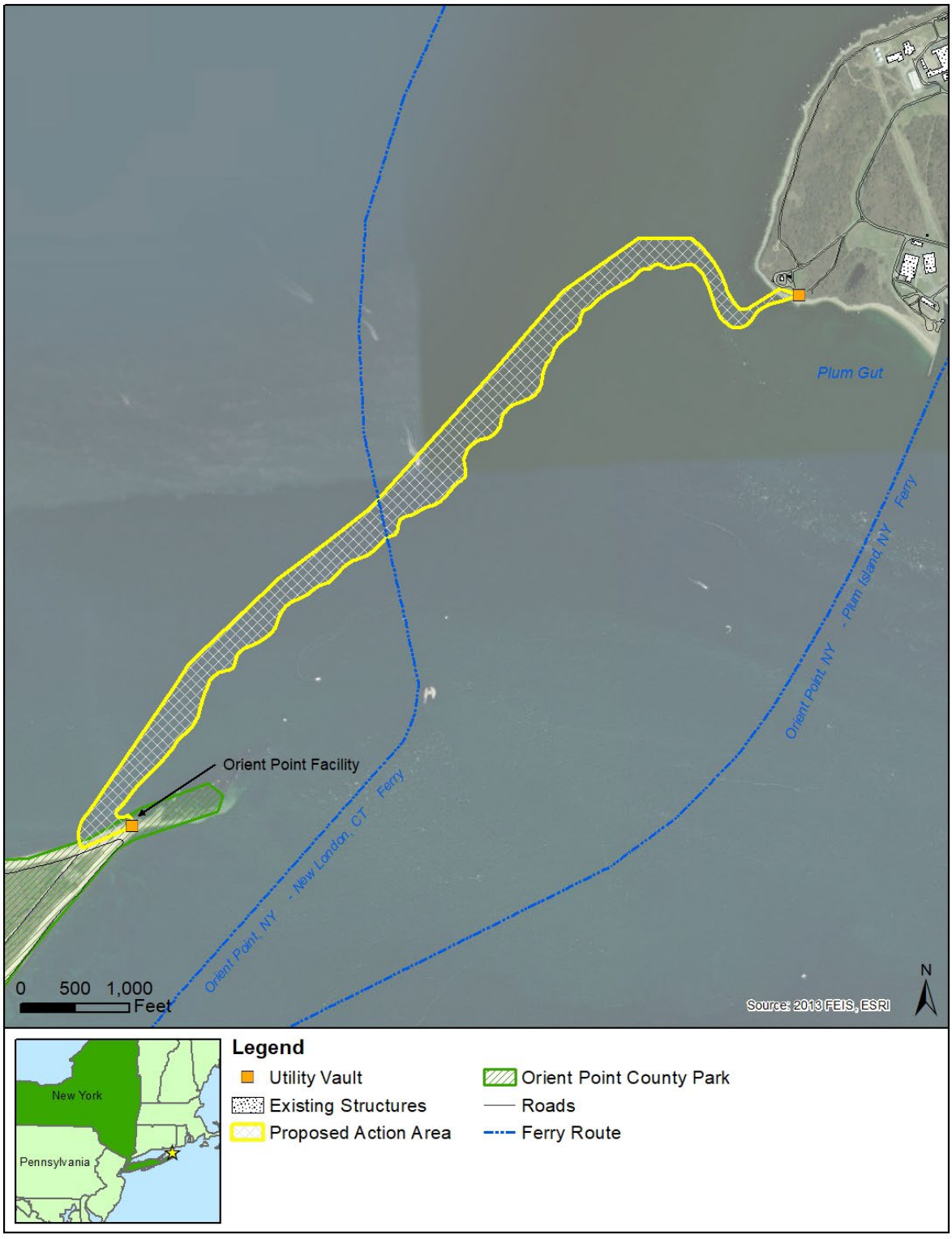
Respectfully,

John M. Searing, PE, PMP
Deputy Center Director
PICS Program Director
Plum Island Animal Disease Center
Office of National Laboratories
Science and Technology Directorate

Attachments:
1a. Proposed Action Location
1b. Proposed Undersea Cable Route

2. Official Species List
3. Species Conclusions Table
4. References

Attachment 1a: Proposed Action Location



Attachment 1b: Proposed Undersea Cable Route

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003

In Reply Refer To: September 14, 2023
Project Code: 2023-0127188
Project Name: Plum Island Undersea Cable Environmental Assessment (EA)

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see https://www.fws.gov/program/migratory-bird-permit/what-we-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

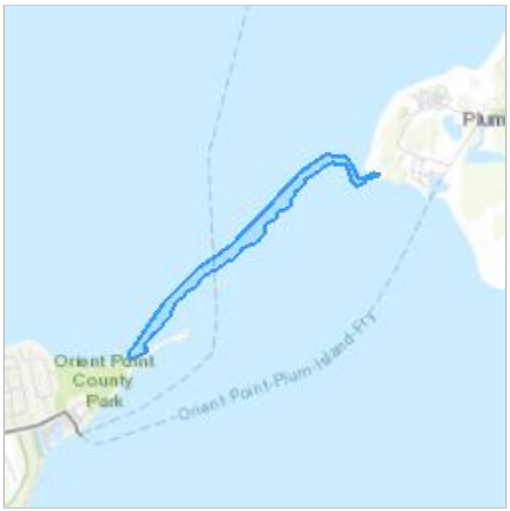
This species list is provided by:

Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
(631) 286-0485

PROJECT SUMMARY

Project Code: 2023-0127188
Project Name: Plum Island Undersea Cable Environmental Assessment (EA)
Project Type: Maintenance/Modification - Below Ground Communications Lines
Project Description: Plum Island undersea cable replacement
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.167311749999996,-72.22609664479408,14z



Counties: Suffolk County, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

BIRDS

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot *Calidris canutus rufa* There is **proposed** critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Roseate Tern *Sterna dougallii dougallii* Population: Northeast U.S. nesting population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: AECOM
Name: Evan Dodd
Address: 4840 Cox Rd
City: Glen Allen
State: VA
Zip: 23060
Email evan.dodd@aecom.com
Phone: 8045158300

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Department of Homeland Security

Attachment 3: Species Conclusions Table

Species Name	Federal Status	Potential Habitat Present?	Species Present?	Effect Determination	Effect Analysis
Northern long-eared bat (*Myotis septentrionalis)*	Endangered	Yes	No	No effect	DHS has determined that the Proposed Action would have **no effect** on the NLEB. Although surveys indicated four historic bunkers on Plum Island with characteristics for bat wintering hibernacula, there are no known occurrences of NLEB on the island. Furthermore, the Proposed Action is not within 0.25 mile of known occurrences of NLEB or within 150 feet of known summer roost occurrences. NLEB are known to occur on nearby Long Island and may travel to Plum Island for foraging; however, bats are nocturnal and forage during the night between dusk and dawn. Proposed ground disturbance would occur during daylight hours, thereby avoiding any disturbance of potential foraging NLEB individuals. Additionally, the Proposed Action is not anticipated to clear any trees or interfere with potential hibernacula. Furthermore, vegetative clearing would be limited to grasses and shrubs, which are not consistent with potential suitable habitat for the NLEB. The majority of the work associated with the Proposed Action occurs beneath the water's surface.
Piping plover (*Charadrius melodus)*[1]	Threatened	Yes	Yes	May affect, but is not likely to adversely affect	The Proposed Action **may affect, but is not likely to adversely affect** the piping plover. This species is commonly observed on Plum Island and may be subjected to increased noise for four to six weeks during trenching and HDD operations, if present during these activities. Proposed ground disturbance would occur outside of suitable habitat for the piping plover. Areas proposed for disturbance include narrow beach corridors between the utility vaults and the waterline, which are dominated by riprap and other erosion control measures on both Orient Point and Plum Island. It is unlikely that these previously disturbed/modified areas would provide suitable nesting habitat for this species. DHS would inspect onshore areas within 660 feet (200 meters) of the Proposed Action area prior to operating heavy machinery and where loud and intrusive noise may be created for threatened and endangered species. If any special status species or migratory nesting birds are observed, modify project activities (e.g., scheduling and phasing) to ensure no adverse impacts to these species.
Roseate tern (*Sterna dougallii dougallii)*	Endangered	Yes	Yes	May affect, but is not likely to adversely affect	The Proposed Action **may affect, but is not likely to adversely affect** the roseate tern. Proposed ground disturbance would occur within a narrow rocky corridor between the utility vaults and the waterline, which may provide foraging habitat for this species, but would be outside of suitable nesting habitat for the roseate tern. This species is known to occur on Plum Island and may be subjected to increased noise for four to six weeks during trenching and HDD operations, if in the vicinity during these activities. This species is most commonly found on the northern tip of the island, over 2.5 miles from where the Proposed Action would take place (NYNHP, 2016). DHS would inspect onshore areas within 660 feet (200 meters) of the Proposed Action area prior to operating heavy machinery and where loud and intrusive noise may be created for threatened and endangered species. If any special status species or migratory nesting birds are observed, modify project activities (e.g., scheduling and phasing) to ensure no adverse impacts to these species.
Red knot (*Calidris canutus rufa)*	Threatened	Yes	Yes	No effect	Audubon New York regularly surveys Plum Island, surveying 16-20 times per year between 2011 and 2015. The red knot was observed once during these surveys, but this observation is considered an accidental occurrence, as it was recorded (NYNHP, 2016). Red knot are not likely present on Plum Island, and any vagrants would be expected to avoid areas where temporary cable installation activities are occurring due to increased noise and human presence. Therefore, the Proposed Action would have **no effect** on the red knot.
Monarch Butterfly (*Danaus plexippus*)	Candidate	Yes	Yes	No effect	While monarch butterflies are a candidate species and have no Section 7 requirement at this time, the Proposed Action would have **no effect** on the monarch butterfly. Both monarchs and milkweed have been known to occur inland on Plum Island and Orient Point, however, are not likely present on the shoreline where the Proposed Action would occur (NYNHP, 2016). It is unlikely that areas where ground disturbance or minimal vegetation clearing would occur (e.g., previously disturbed shoreline areas) would include host milkweed plants nor any other suitable habitat for this species.
Bald eagle (*Haliaeetus leucocephalus*)	Bald and Golden Eagle Protection Act	Yes	Yes	No effect	The Proposed Action would have **no effect** on the bald eagle. Should eagles happen to be present while cable installation activities are occurring, they would be expected to avoid the area due to increased noise and human presence. While bald eagles are occasionally observed and a nest site is present on the north point of the island, this is over 2.5 miles from the stretch of coastline on the western side of the island where proposed cable installation activities would take place. Furthermore, DHS would inspect onshore areas within 660 feet (200 meters) of the Proposed Action area prior to operating heavy machinery for threatened and endangered species. If any eagle nests are found within or near the Proposed Action area, DHS would coordinate with USFWS to avoid impacts on bald eagles and implement measures included in the USFWS's National Bald Eagle Management Guidelines such as establishing buffers around nesting sites or observing seasonal restrictions (USFWS, 2007).

[1] No Piping Plover critical habitat is present in the Proposed Action area.

Attachment 4: References

NYNHP. (2016). *Plum Island Biodiversity Inventory.* Retrieved September 19, 2023, from https://www.nynhp.org/documents/140/plum_island_inventory.pdf

USFWS. (2007). *National Bald Eagle Management Guidelines.* Retrieved September 19, 2023, from https://www.fws.gov/sites/default/files/documents/national-bald-eagle-management-guidelines_0.pdf

Obenland, Benjamin

To: Spiller, Kimberly J
Subject: RE: RE: PIADC Undersea Cable Installation 2023-0127188

From: Spiller, Kimberly J <kimberly_spiller@fws.gov>
Sent: Friday, November 17, 2023 10:04 AM
To: Searing, John <john.searing@st.dhs.gov>
Cc: Obenland, Benjamin <benjamin.obenland@aecom.com>; Buckley, Lisa (CTR) <Lisa.Buckley@ST.DHS.GOV>; Papa, Steve <steve_papa@fws.gov>; Gonzalez-Trelles, Melissa D <melissa_gonzalez-trelles@fws.gov>
Subject: Re: RE: PIADC Undersea Cable Installation 2023-0127188

Dear Mr. Searing,

Based on acceptance of the recommended conservation measures as indicated in your email yesterday, please find attached our concurrence with your determination for this project.

Thank you,

Kim Spiller (she/her)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Long Island Field Office
340 Smith Rd, Shirley, NY 11967
kimberly_spiller@fws.gov

From: Searing, John <John.Searing@ST.DHS.GOV>
Sent: Thursday, November 16, 2023 12:39 PM
To: Spiller, Kimberly J <kimberly_spiller@fws.gov>
Cc: Obenland, Benjamin <Benjamin.Obenland@aecom.com>; Buckley, Lisa (CTR) <Lisa.Buckley@ST.DHS.GOV>; Papa, Steve <steve_papa@fws.gov>
Subject: [EXTERNAL] RE: PIADC Undersea Cable Installation 2023-0127188

DHS acknowledges receipt and the restrictions. We will build them into the plan.

Regards,
John

John M. Searing, PE PMP
Deputy Center Director
Plum Island Animal Disease Center
US Dept of Homeland Security

Program Director – Closure and Transition

John.Searing@ST.DHS.GOV
Office: 631-323-3036
Cell: 631-312-7833

With honor and integrity, we will safeguard the American people, our homeland, and our values.

Science & Technology

From: Spiller, Kimberly J <kimberly_spiller@fws.gov>
Sent: Thursday, November 16, 2023 10:54 AM
To: Searing, John <John.Searing@ST.DHS.GOV>
Cc: Obenland, Benjamin <Benjamin.Obenland@aecom.com>; Buckley, Lisa (CTR) <Lisa.Buckley@ST.DHS.GOV>; Papa, Steve <steve_papa@fws.gov>
Subject: PIADC Undersea Cable Installation 2023-0127188

Dear Mr. Searing,

After reviewing your project, the Service recommends time-of-year restrictions for the onshore construction work in Orient Point and Plum Island to reach a *may affect, not likely to adversely affect* determination. Reports from eBird (www.ebird.org) show observations of piping plovers, roseate terns, and red knots at Orient Point County Park, as well as observations of roseate terns near the Plum Island lighthouse.

To avoid disturbing potentially foraging piping plovers and roseate terns, we recommend the following conservation measure for the onshore work at Orient Point and Plum Island:

- To protect ESA-listed species at the project location, the Department of Homeland Security (DHS) or its contractor shall not conduct construction work on the shoreline from April 1 to September 1 of any calendar year.

Additionally, we recommend the following conservation measure for the onshore work at Orient Point:

- For onshore construction work occurring between September 1 and November 30 of any calendar year: Not more than seven (7) days prior to the commencement of work, DHS or its contractor shall conduct and provide a Red Knot survey by a qualified biologist. In the event

that Red Knot are observed within this period, prior to the start of work, or while work is being performed, DHS or its contractor shall maintain a 500-meter buffer surrounding the location of the Red Knot and notify DHS and the U.S. Fish & Wildlife Service (USFWS), Long Island Field Office (Region 5) at (631) 286- 0485 for further consultation and instructions. The surveys shall be conducted in the following manner:

Inclement Weather: The permittee shall not conduct surveys in weather with strong winds (>24 mph), heavy fog (<200 m visibility), or steady rain.

SURVEY PROTOCOL AND DATA COLLECTION: The permittee shall begin each survey of each area by indicating the start time. The permittee shall count and identify Red Knot (and other species) in the survey area. This includes birds that enter or leave the survey area during the survey. For shorebirds to be considered "using" the survey area, the birds need to be on the ground within the defined survey area for at least part of the time it takes to do the survey. Shorebirds that fly over the survey area but do not land in it should NOT be counted. The permittee shall record numbers as the survey is continued. The permittee shall complete surveys within the optimal 3-hour survey window around peak high tide. Once the area has been thoroughly searched and all birds seen have been recorded, the count is considered complete. At that point, the permittee shall note the end time on the datasheet.

Thank you,

Kim Spiller (she/her)
Fish and Wildlife Biologist
U.S. Fish and Wildlife Service
Long Island Field Office
340 Smith Rd, Shirley, NY 11967
kimberly_spiller@fws.gov

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Field Office
New York Field Office

To: DHS S&T - Plum Island Animal Disease Center Date: 11/16/2023

IPaC File No.: 2023-0127188

Regarding Your: ____ Letter ____ Fax X Email Dated: 10/19/2023

For Project: Plum Island Animal Disease Center Undersea Cable Installation

Located: Plum Island

In Town/County: Southold, Suffolk County

Pursuant to the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq*.), the U.S. Fish and Wildlife Service's (USFWS):

☒ Long Island Field Office (LIFO) (340 Smith Rd., Shirley, NY 11967; 631-286-0485)

☐ New York Field Office (NYFO) (3817 Luker Rd., Cortland, NY 13045; 607-753-9334)

☐ Acknowledges receipt of your no effect/no take/no impact determination. No further ESA coordination or consultation is required.

☐ Acknowledges receipt of your determination. Please provide a copy of your determination and supporting materials to any involved Federal agency for their final ESA determination.

☐ Is taking no action pursuant to the ESA or any legislation at this time but would like to be kept informed of project developments.

☑ Concurs with your federal agency's determination, which includes the implementation of all conservation measures, where noted and applicable, that the proposed action would not be likely to adversely affect the listed species identified in your correspondence.

☐ Northern long-eared bat - Based upon your IPaC submission, a standing analysis, and further review by the office, the proposed project is not reasonably certain to cause incidental take of the northern long-eared bat.

As a reminder, until the proposed project is complete, we recommend that you check our website used for both LIFO and NYFO at https://www.fws.gov/office/new-york-ecological-services-field/new-york-project-reviews regularly from the date of this letter to ensure that listed species presence/probable absence information for the proposed project is current. Should project plans change or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered.

This letter does not exempt the project sponsor or Federal agency from obtaining approvals or permits that may be required by State and/or Federal agencies. Further, this letter does not

convey any authorization for take[1] under the ESA or any other authorities. Any new information regarding the proposed project and its potential to impact listed species should be coordinated with either the LIFO or NYFO, as well as with the New York State Department of Environmental Conservation.

Service Contact(s): Kim Spiller kimberly_spiller@fws.gov; Steve Papa steve_papa@fws.g

Supervisor: IAN DREW Digitally signed by IAN DREW Date: 2023.11.17 09:12:35 -05'00' Date:

[1] Take is defined in section 3 of the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

Science and Technology

October 19, 2023

NOAA Fisheries
Greater Atlantic Regional Fisheries Office
Habitat and Ecosystem Services Division
55 Great Republic Dr
Gloucester, MA 01930

Attn: Karen Greene, Mid-Atlantic Branch Chief and EFH Regional Coordinator; Jessie Murray, Marine Habitat Resources Specialist (New Jersey and New York)

SUBJECT: **Project Review Request, Essential Fish Habitat, Plum Island Animal Disease Center Undersea Cable Installation, Plum Island, New York**

Dear Ms. Greene and Ms. Murray,

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) proposes to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS is the lead agency for the National Environmental Policy Act (NEPA) process and for this Essential Fish Habitat (EFH) consultation.

DHS S&T is preparing an Environmental Assessment (EA) in compliance with NEPA (42 United States Code [USC] §§ 4321 et seq); the White House Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA*, and DHS Instruction 023-01-002-01 rev. 01 *Implementation of the NEPA* – to analyze the potential effects of the Proposed Action on the environment.

The purpose of this letter is to provide information about the Proposed Action and to request your concurrence with our determination regarding potential effects on EFH. DHS S&T has evaluated the potential for the project to adversely affect EFH in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA). DHS S&T used the Greater Atlantic Regional Fisheries Office EFH Assessment Worksheet to evaluate potentially affected EFH (NOAA Fisheries, 2021), and we are submitting our evaluation and findings for your review (**Attachment 1**).

We have determined that the impact of the Proposed Action on EFH would not be substantial and request an abbreviated EFH consultation.

Background

PIADC has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, which is on Long Island's North Fork in Suffolk County, NY (**Attachment 2a**). Plum Island was transferred to the United States Department of Agriculture (USDA) in 1954 and then to DHS in 2003. DHS S&T currently operates PIADC in cooperation with the USDA.

DHS S&T also owns and operates the Orient Point facility at Orient Point, NY, to support Plum Island. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, parking lots, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island. DHS S&T is in the process of closing PIADC and transferring operations to the newly constructed National Bio and Agro-Defense Facility in Manhattan, Kansas. The Plum Island Closure and Support program is anticipated to be completed over the next five to seven years.

Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet, with approximately 9,400 feet submerged underwater, and together provide for the island's normal electrical requirements. The expected lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding.

DHS S&T requires continued electrical and communication capabilities on Plum Island throughout the duration of planned PIADC closure activities (i.e., five to seven years). DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, which has exceeded its planned lifespan, is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island.

Description of the Proposed Action

The Proposed Action is to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point and Plum Island.

The submerged portion of the existing cables extend approximately 9,400 feet under Plum Gut, an area of open water between Orient Point and Plum Island, from the utility vault on Orient Point to the utility vault on Plum Island. Beginning at the Orient Point utility vault, the existing cables are entrenched until reaching Plum Gut. From there, the cables span open water along the seabed of Plum Gut and Long Island Sound until reaching the shoreline of Plum Island where they are then buried until reaching the upland utility vault. One of the existing cables would be disconnected from the utility vaults on Orient Point and Plum Island and abandoned in place.

Installation of the new utility cable would entail connecting the cable to the existing utility vaults located on Orient Point and Plum Island, running the cable underground to well below the water line, and then bottom laying the cable through Plum Gut. The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables (**Attachment 2b**). The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area.

The final design for the proposed cable installation is currently underway. Cable installation is anticipated to involve trenching and horizontal directional drilling (HDD)[1], or similar technology to the greatest extent practicable. At each site, the new cable would be connected to the utility vault and routed below grade and then below sea level for a length typical of similar submarine cable installations (anticipated to be approximately 600 to 1000 feet at each terminus). Between each terminus, the cable would be laid along the seafloor.

From the end of the HDD conduit, a cable-laying barge (CLB), assisted by tugboats and other support craft, would install the remaining approximately 9,400 feet of cable between the HDD terminus points off the shore of Orient Point to Plum Island. Plum Gut has a large range of water depths, though the majority of the action area is 30-50 ft deep. The new cable would be approximately 3.9 inches in diameter and weigh 8.8 pounds per linear foot in saltwater (approximately 14 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. Any potential lateral movement of the cable would be greatly limited due to the rugged and rocky seafloor landscape and changes in depth. The CLB portion of the cable installation is anticipated to require a duration of four to seven days.

Prior to installing the cable, DHS S&T's contractor would perform marine route pre-lay and onshore surveys and would create a hydrographic map showing bottom contours and exact locations of the existing power cables and other obstructions within the proposed cable corridor. The cable would be installed in between or immediately adjacent to the two existing cables connecting Orient Point and Plum Island. There are other abandoned cables in this small area that will remain undisturbed as they have for decades. Additionally, DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur in calendar year (CY) 2024 and require approximately one year to complete, including completion of pre-installation surveys, preparation of HDD conduits, laying of the cable, cable inspection and testing, and preparation of as-built surveys. The construction process would take approximately four to six weeks for each onshore/HDD portion and four to seven days for bottom-laying.

Following completion of the Proposed Action, the new cable would require minimal ongoing operational and maintenance efforts. Areas temporarily disturbed during trenching and installation of the HDD conduit would revegetate passively over time.

Proposed Action In-Water Components

The majority of the project would occur in Plum Gut, which lies between Orient Point and Plum Island. To the north is Long Island Sound. Gardiners Bay is to the south. These water bodies are used extensively for sport and commercial fishing. There are no streams or other sources of freshwater within the project area.

The selected method for laying the cable is bottom laying, which has been used in the past. The power cable would be laid on the floor of the Plum Gut and Long Island Sound from reels or tubs located on a barge.

[1] HDD is a minimal impact method which involves using a dirigible drill head and conduit to bore between two locations such that both direction and depth can be adjusted (U.S. Fish and Wildlife, 2023)

The cable would not be anchored to the bottom as cable lateral movement would be limited by rocks and elevation changes of the seafloor.

The cable would be installed in between or immediately adjacent to the two existing cables connecting Orient Point and Plum Island. Installation would involve marine vessels including a CLB and support craft, such as tugboats. The length of the cable would be approximately 11,000 feet. From the HDD conduit, the cable would be installed underground to an anticipated depth of 30-50 feet below sea level and a length of approximately 600 to 1000 feet from each shoreline. From the end of the HDD conduit, a CLB, assisted by tugboats and other support craft, would install the remaining approximately 9,400 feet of cable between the HDD terminus points off the shore of Orient Point to Plum Island. The total area of seafloor that would be directly within the cable footprint is approximately 3,055 square feet (sq ft). The location of the existing cable was designed to follow the shallowest depths through Plum Gut and Long Island Sound. By installing the cable in an adjacent location, the cable would remain in the shallowest areas thereby reducing the amount of stress placed on the cable.

EFH Assessment

The MSA defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity," and it requires federal agencies to consult with NOAA Fisheries when proposing activities that may adversely affect EFH. To facilitate consultation, NOAA Fisheries provides an online mapping tool (the EFH Mapper) that can be queried to identify designated EFH species and life stages potentially occurring near the project area (NOAA Fisheries, 2022). Information provided by the EFH Mapper for the project area is included in **Attachment 2**.

The information presented in this letter is based on the EFH Assessment Worksheet (NOAA Fisheries, 2021) prepared for this consultation (**Attachment 1**). A description of the Proposed Action is provided above. The remainder of the letter is an analysis of the potential adverse effects of the Proposed Action on EFH and managed species.

EFH in the Project Area

This EFH Assessment analyzes the potential consequences to EFH associated with DHS S&T's Proposed Action described above. The project area evaluated for potential impacts to EFH from cable replacement activities is defined as the stretch of land between the existing utility breaker vault at the Orient Point facility and the coastline of Orient Point, the seafloor corridor of Plum Gut where the cable is to be laid, and the land from the coastline of Plum Island to the island's utility breaker vault (hereafter referred to as the project area; **Attachment 2b**). The Proposed Action is not anticipated to have measurable indirect impacts beyond the immediate project area.

The offshore habitats within the project area are unique due to the combination of deep-water habitats and shoals which creates a productive environment that supports a variety of marine life, including valuable sport fishes. The project area is geographically coincident with EFH for one or more life stages of the species listed in **Table 1**. This table includes those species/life stages at or near both Orient Point and Plum Island, though the lesser mobile species/life stages in these nearshore areas would not likely be impacted as the cable would be horizontally drilled beneath the seafloor and emerge roughly 600 to 1000 feet from each shoreline. In contrast, the EFH mapper results (**Attachment 3**) reflect only those species that would be found in the path of the cable where it is being laid on the seabed (i.e., excluding the subject area nearest each shoreline). The mapper results include three different result print outs: one closer to Orient Point, one

closer to Plum Island, and one in the middle of the planned cable path. This was done in order to create the most accurate list of possible EFH in the waters of the Project Area. Therefore, **Table 1** combines the results of all three mapper results. (*Note*: this is not reflected in the worksheet as there were not enough spaces for the number of species to be recorded.)

Table 1. Species and Life Stages with Designated EFH in Waters of the Project Area

Species	Eggs	Larvae	Juveniles	Adults
Albacore Tuna (*Thunnus obesus*)			X	
Atlantic Butterfish (*Peprilus triacanthus*)	X	X	X	X
Atlantic Herring (*Clupea harengus*)			X	X
Atlantic Mackerel (*Scomber scombrus*)	X	X	X	X
Black Sea Bass (*Centropristis striata*)			X	
Bluefish (*Pomatomus saltatrix*)			X	X
Little Skate (*Leucoraja erinacea*)			X	X
Longfin Inshore Squid (*Doryteuthis pealeii*)	X		X	X
Pollock (*Pollachius virens*)			X	X
Red Hake (*Urophycis chuss*)	X	X	X	X
Sand Tiger Shark (*Carcharias taurus*)		neonate	X	
Scup (*Stenotomus chrysops*)	X	X	X	X
Skipjack Tuna (*Thunnus albacares*)				X
Smoothhound Shark Complex (Atlantic stock) (*Mustelus* spp.)	X	X	X	X
Summer Flounder (*Paralichthys dentatus*)			X	X
Windowpane Flounder (*Scophthalmus aquosus*)	X	X	X	X
Winter Flounder (*Pseudopleuronectes americanus*)	X	X	X	X
Winter Skate (*Leucoraja ocellata*)			X	X
Note: An "X: indicates that EFH has been designated within the project area for that species and life stage.				

The benthic community of the project area may be an important EFH component that provides a food source for managed fish species. A survey of Plum Island's subtidal marine habitats was conducted by the New York Natural Heritage Program (NYNHP) and InnerSpace Scientific Diving for Save the Sound (NYNHP, 2022). The report investigated subtidal nearshore areas in the vicinity of Plum Island. Investigations off the southwest coast of the island, in the vicinity of the project area, found seafloor substrate in this area to be mostly small (<10 cm) to medium sized rocks (>10 cm, <1m). According to the report, prominent vegetation around the island includes eelgrass (*Zostera marina*) in shallower habitats (close to the land masses) and brown and red algae at deeper habitats. The species list for the relevant sample area includes up to 20 species of algae, eelgrass, lion's mane jellyfish (*Cyanea capillata*), 2 bryozoans, 4 polychaetes, 7 gastropods, 2 bivalves, 1 nematode species, and 11 species of crustacean. No mammals or fish were seen during the sampling in this area (NYNHP, 2022).

Construction, Drilling and Cable-Laying Impacts

HDD, or similar technology, is anticipated to be used if, and to the greatest extent practicable, for the sea-to-shore transition area of the cable's route, as other trenching methods would likely be more invasive. HDD is a minimal impact method which involves using a dirigible drill head and conduit to bore between two locations such that both direction and depth can be adjusted (U.S. Fish and Wildlife, 2023). Areas in or near the HDD cable installation could be subject to increased potential for turbidity, erosion, or sedimentation. There will be minimal substrate and ground disturbance due to the use of HDD within the nearshore area; therefore, permanent impacts to the seabed are not anticipated in this area.

HDD usually involves the use of a drilling slurry, which is normally bentonite and water. While bentonite is nontoxic, if released into waterbodies, a process normally referred to as inadvertent returns, it has the potential to adversely impact fish, fish eggs, aquatic plants, and benthic invertebrates. The Proposed Action would have an Inadvertent Return Plan to minimize any impacts on water quality. Any discharges associated with authorized activities would meet all applicable water quality standards pursuant to the Clean Water Act and its implementing regulations, the Section 404(b)(a) guidelines, which are in place to prevent acute or chronic toxic impacts to aquatic life. As there would be minimal to no measurable or detectable permanent change in water quality from the baseline levels, the impacts of HDD on water quality are anticipated to have insignificant impacts to listed species. The zone of passage is not likely to be impacted.

The benthic community and associated EFH of Plum Gut and Long Island Sound would be temporarily impacted during construction by an increase in turbidity caused by the laying of the cable. Similarly, habitat may be disturbed in the vicinity where the cable emerges from the ocean floor at both the Orient Point and Plum Island endpoints. Increased turbidity and possible habitat disruption would be temporary and not likely to have impacts post-construction. Following installation of the cable, these sediments are anticipated to settle within a few hours. It is possible that species within the EFH may use the sandy shoal of Orient Point for foraging and breeding purposes. However, due to the temporary nature of the anticipated turbidity impacts, permanent impacts to EFH within the nearshore area is not anticipated.

EFH impacts associated with the cable laying portion of the project are approximately 3,055 sq ft. Given habitat would only be impacted temporarily, with minimal impact to the already disturbed sea floor as the route is adjacent to previously laid cables, there will likely be negligible impact to EFH. The square footage of permanent impacts (the amount of sea floor that the cable coverage will permanently make unavailable as habitat) is insignificant in the context of the rest of the available seafloor habitat available in Plum Gut.

Summer Flounder Habitat Areas of Particular Concern (HPAC) is defined as all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH. While this HPAC occurs within the ROI, impacts to these habitats would be avoided via HDD, as cable will be under this habitat, and the egress of the cable onto the seafloor will be past the areas where this HPAC is likely to occur.

Noise Impacts

Noise generating equipment associated with HDD would be located onshore. Noise would be limited to the duration of cable installation and would cease once installation is complete. Onshore activities associated with trenching and/or HDD are anticipated to require approximately four to six weeks in each location. The

Proposed Action would have no permanent change in baseline noise conditions, making impacts to EFH negligible.

Another potential source of noise would be vessels used for cable installation. This includes a CLB and support craft, such as tugboats, which would install up to approximately 10,200 feet of cable between the HDD terminus points off the shores of Orient Point and Plum Island. The use of a CLB and support craft would cause a small, localized (Plum Gut), temporary increase in vessel traffic for four to seven days. During installation of the cable the CLB would likely move slowly (<6 knots or 3 m/s), meaning its engine and propeller would generate less noise than other vessels. The level of noise exuded by a CLB (depending on its length it could be the largest of the vessels that would be in the area, though it may be smaller than the ferries that cross regularly) or similar vessel is typically 155 to 170 dB. This would mean an increase above the ambient baseline for the duration of the cable laying (four to seven days) and at intermittent intervals.

The majority of fish are highly mobile species and are unlikely to stay in a stationary position or within a given radius of a vessel or other noise source for 24 hours. Sound produced by the Proposed Action would not likely cause injury to EFH species, but the threshold for change in behavior may be met (150 dB) (GARFO, 2023). These temporary behavioral effects may include avoidance or disruption of foraging activities, leading the fish species to move away from the activity. The noise from the CLB would not appreciably add to baseline noise created by other vessels in the area (ferries and recreation fishing vessels); therefore, it is unlikely there would be a measurable disturbance to behavior. When this project is completed, ambient noise levels would return to baseline levels.

Conclusions

Based on this assessment, DHS S&T has determined that the adverse effects of the Proposed Action on EFH would not be substantial. The Proposed Action would provide DHS S&T with reliable electrical and communications capabilities with no net loss in the capacity of DHS S&T to perform required operations at PIADC; would minimize environmental impacts through abandonment in-place of an existing cable and through use of HDD, which would minimize disturbance to on and near-shore areas; can be completed in a timely fashion; and would minimize impediments to vessel traffic to the maximum extent practicable.

We certify that we have used the best scientific and commercial data available to complete this analysis. We request your concurrence with this determination. For additional information, please contact Benjamin Obenland at benjamin.obenland@aecom.com. Email responses are preferred, although letter responses may be submitted to *Benjamin Obenland, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876.*

Respectfully,

John M. Searing, PE, PMP Deputy Center Director
PICS Program Director
Plum Island Animal Disease Center Office of National Laboratories
Science and Technology Directorate

Attachments:

1. EFH Worksheet
2a. Proposed Action Location
2b. Proposed Undersea Cable Route
3. EFH Habitat Mapper Results
4. References

NOAA Fisheries Greater Atlantic Regional Fisheries Office Essential Fish Habitat (EFH) Assessment & Fish and Wildlife Coordination Act (FWCA) Consultation Worksheet

August 2021 rev.

Authorities

The Magnuson Stevens Fishery Conservation and Management Act (MSA) requires federal agencies to consult with NOAA Fisheries on any action or proposed action authorized, funded, or undertaken by such agency that may adversely affect essential fish habitat (EFH) identified under the MSA. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in the consultation process.

The Fish and Wildlife Coordination Act (FWCA) requires that all federal agencies consult with NOAA Fisheries when proposed actions might result in modifications to a natural stream or body of water. The FWCA also requires that federal agencies consider the effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under the FWCA, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not federally managed and do not have designated EFH.

It is important to note that these consultations take place between NOAA Fisheries and federal action agencies. **As a result, EFH assessments, including this worksheet, must be provided to us by the federal agency, not by permit applicants or consultants.**

Use of the Worksheet

This worksheet can serve as an EFH assessment for **Abbreviated EFH Consultations**, and as a means to provide information on potential effects to other NOAA trust resources considered under the FWCA. An abbreviated consultation allows us to determine quickly whether, and to what degree, a federal action may adversely affect EFH. Abbreviated consultation procedures can be used when federal actions do not have the potential to cause substantial adverse effects on EFH and when adverse effects could be alleviated through minor modifications.

The intent of the EFH worksheet is to provide a guide for determining the information needed to fully assess the effects of a proposed action on EFH. In addition, the worksheet may be used as a tool to assist you in developing a more comprehensive EFH assessment for larger projects that may have more substantial adverse effects to EFH. However, for large, complex projects that have the potential for significant adverse effects, an **Expanded EFH Consultation** may be warranted and the use of this worksheet alone is not appropriate as your EFH assessment.

An **adverse effect** is any impact that reduces the quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Consultation under the MSA is not required if there is no adverse effect on EFH or if no EFH has been designated in the project area. However, because the definition of "adverse effect" is very broad, most in-water work will result in some level of adverse effect requiring consultation with us, even if the impact is temporary or the overall result of the project is habitat restoration or enhancement. It is important to remember that an adverse effect determination is a trigger to consult with us. It does not mean that a project cannot proceed as proposed, or that project modifications are necessary. An adverse effect determination under the EFH provisions of the MSA simply means that the effects of the proposed action on EFH must be evaluated to determine if there are ways to avoid, minimize, or offset adverse effects. Additional details on EFH consultations, tools, and resources, including frequently asked questions can be found on our website.

Instructions

This worksheet should be used as your EFH assessment for **Abbreviated EFH Consultations** or as a guide to develop your EFH assessment. It is not appropriate to use this worksheet as your EFH assessment for large, complex projects, or those requiring an Expanded EFH Consultation.

When completed fully and with sufficient information to clearly describe the activities proposed, habitats affected, and project impacts, as well as the measures taken to avoid, minimize or offset any unavoidable adverse effects, this worksheet provides us with required components of an EFH assessment including:

1. A description of the proposed action.
2. An analysis of the potential adverse effects on EFH and the federally managed species.
3. The federal agency's conclusions regarding the effects of the action on EFH.
4. Proposed mitigation, if applicable.

When completing this worksheet and submitting information to us, it is important to ensure that sufficient information is provided to clearly describe the proposed project and the activities proposed. At a minimum, this should include the public notice (if applicable) or project application and project plans showing:

- location map of the project site with area of impact.
- existing and proposed conditions.
- all in-water work and the location of all proposed structures and/or fill.
- all waters of the U.S. on the project site with mean low water (MLW), mean high water (MHW), high tide line (HTL), and water depths clearly marked.
- Habitat Areas of Particular Concern (HAPCs).
- sensitive habitats mapped, including special aquatic sites (submerged aquatic vegetation, saltmarsh, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges), hard bottom or natural rocky habitat areas, and shellfish beds.
- site photographs, if available.

Your analysis of effects **should focus on impacts that reduce the quality and/or quantity of the habitat or result in conversion to a different habitat type** for all life stages of species with designated EFH within the action area. Simply stating that fish will move away or that the project

will only affect a small percentage of the overall population is not a sufficient analysis of the effects of an action on EFH. Also, since the intent of the EFH consultation is to evaluate the direct, indirect, individual and cumulative effects of a particular federal action on EFH and to identify options to avoid, minimize or offset the adverse effects of that action, is it not appropriate to conclude that an impact is minimal just because the area affected is a small percentage of the total area of EFH designated. The focus of the consultation is to reduce impacts resulting from the activities evaluated in the assessment. Similarly, a large area of distribution or range of the fish species is also not appropriate rationale for concluding the impacts of a particular project are minimal.

Use the information on the our EFH consultation website and NOAA's EFH Mapper to complete this worksheet. The mapper is a useful tool for viewing the spatial distribution of designated EFH and HAPCs. Because summer flounder HAPC (defined as: " all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH") does not have region-wide mapping, local sources and on-site surveys may be needed to identify submerged aquatic vegetation beds within the project area. The full designations for each species may be viewed as PDF links provided for each species within the Mapper, or via our website links to the New England Fishery Management Councils Omnibus Habitat Amendment 2 (Omnibus EFH Amendment), the Mid-Atlantic Fishery Management Councils FMPs (MAMFC - Fish Habitat), or the Highly Migratory Species website. Additional information on species specific life histories can be found in the EFH source documents accessible through the Habitat and Ecosystem Services Division website. This information can be useful in evaluating the effects of a proposed action. Habitat and Ecosystem Services Division (HESD) staff have also developed a technical memorandum *Impacts to Marine Fisheries Habitat from Non-fishing Activities in the Northeastern United States,* NOAA Technical Memorandum NMFS-NE-209 to assist in evaluating the effects of non-fishing activities on EFH. If you have questions, please contact the HESD staff member in your area to assist you.

Federal agencies or their non-federal designated lead agency should email the completed worksheet and necessary attachments to the HESD New England (ME, NH, MA, CT, RI) or Mid- Atlantic (NY, NJ, PA, DE, MD, VA) Branch Chief and the regional biologist listed on the Contact Regional Office Staff section on our EFH consultation website and listed below.

We will provide our EFH conservation recommendations under the MSA, and recommendations under the FWCA, as appropriate, within 30 days of receipt of a **complete** EFH assessment for an abbreviated consultation. Please ensure that the EFH worksheet is completed in full and includes detail to minimize delays in completing the consultation. If we are unable to assess potential impacts based on the information provided, we may request additional information necessary to assess the effects of the proposed action on our trust resources before we can begin a consultation. If the worksheet is not completely filled out, it may be returned to you for completion. **The EFH consultation and our response clock does not begin until we have sufficient information upon which to consult**.

If this worksheet is not used, you should include all the information required to complete this worksheet in your EFH assessment. The level of detail that you provide should be commensurate with the magnitude of impacts associated with the proposed project. You may need to prepare a more detailed EFH assessment for more substantial or complex projects to fully characterize the effects of the project and the avoidance and minimization of impacts to EFH. The format of the EFH worksheet may not be sufficient to incorporate the extent of detail required for large-scale projects, and a separate EFH assessment may be required.

Regardless of the format, you should include an analysis as outlined in this worksheet for an expanded EFH assessment, along with any additional necessary information including:

- the results of on-site inspections to evaluate habitat and site-specific effects.
- the views of recognized experts on habitat or the species that may be affected.
- a review of pertinent literature and related information.
- an analysis of alternatives that could avoid or minimize adverse effects on EFH.

For these larger scale projects, interagency coordination meetings should be scheduled to discuss the contents of the EFH consultation and the site-specific information that may be needed in order to initiate the consultation.

Please contact our Greater Atlantic Regional Fisheries Office, Protected Resources Division regarding potential impacts to marine mammals or threatened and endangered species and the appropriate consultation procedures.

HESD Contacts*

New England - ME, NH, MA, RI, CT

Chris Boelke, Branch Chief	christopher.boelke@noaa.gov
Mike Johnson - ME, NH	mike.r.johnson@noaa.gov
Kaitlyn Shaw - ME, NH, MA	kaitlyn.shaw@noaa.gov
Sabrina Pereira -RI, CT	sabrina.pereira@noaa

Mid-Atlantic - NY, NJ, PA, MD, VA

Karen Greene, Branch Chief	karen.greene@noaa.gov
Jessie Murray - NY, Northern NJ (Monmouth Co. and north)	jessie.murray@noaa.gov
Keith Hanson - NJ (Ocean Co. and south), DE and PA, Mid-Altantic wind	keith.hanson@noaa.gov
Maggie Sager - NJ (Ocean Co. and south), DE and PA	lauren.m.sager@noaa.gov
Jonathan Watson - MD, DC	jonathan.watson@noaa.gov
David O'Brien - VA	david.l.obrien@noaa.gov

Ecosystem Management (Wind/Aquaculture)

Peter Burns, Branch Chief	peter.burns@noaa.gov
Alison Verkade (NE Wind)	alison.verkade@noaa.gov
Susan Tuxbury (wind coordinator)	susan.tuxbury@noaa.gov

***Please check for the most current staffing list on our contact us page prior to submitting your assessment.**

EFH Assessment Worksheet rev. August 2021

Please read and follow all of the directions provided when filling out this form.

1. General Project Information

Date Submitted: 10/11/2023

Project/Application Number:

Project Name: Plum Island Animal Disease Center Undersea Cable Installation

Project Sponsor/Applicant: Department of Homeland Security Science and Technology Directorate (DHS S&T)

Federal Action Agency (or state agency if the federal agency has provided written notice delegating the authority[1]): DHS S&T

Fast-41: Yes ☐ No ☑

Action Agency Contact Name: Benjamin Obenland (AECOM)

Contact Phone: 240-529-3224 Contact Email: benjamin.obenland@aecom.com

Address, City/Town, State:

12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876

2. Project Description

[2]Latitude: 41°10'23.23" N Longitude: 72°12'39.42" W

Body of Water (e.g., HUC 6 name): Long Island, 020302 (Plum Gut)

Project Purpose:

DHS S&T requires continued electrical and communication capabilities on Plum Island throughout the duration of planned PIADC closure activities (i.e., five to seven years). DHS S&T conducted an inspection of the undersea cables serving Plum Island in March 2022. The inspection determined that the oldest of the two existing cables, M1, which has reached the end of its planned lifespan, is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Therefore, the purpose of the Proposed Action is to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is needed to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC.

Project Description:

Installation of the new utility cable would entail connecting the cable to the existing utility vaults located on Orient Point and Plum Island, running the cable underground to well below the water line, and then bottom laying the cable through Plum Gut. The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables. The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area.

Final design for the proposed cable installation is currently underway. Cable installation is anticipated to involve trenching and horizontal directional drilling (HDD). At each site, the new cable would be connected in the utility vault and trenched up to approximately 500 feet to the HDD conduit at Orient Point and 200 feet at Plum Island. At that location on the beach, an HDD pit would be installd, from which the cable would be drilled underground to an anticipated depth of 30-50 feet below sea level and a length of approximately 400 feet from each shoreline (800 feet total), to exit underwate.

From the end of the HDD conduit a cable-laying barge (CLB), assisted by tugboats and other support craft, would install the remaining approximately 10,200 feet of cable between the HDD terminus points off the shore of Orient Point to Plum Island. The new cable would be approximately 3.9 inches in diameter and weigh 8.8 pounds per linear foot in saltwater (approximately 14 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. Any potential lateral movement of the cable would be greatly limited due to the rugged and rocky seafloor landscape and changes in depth. The CLB portion of the cable installation is anticipated to require a duration of four to seven days.

Anticipated Duration of In-Water Work including planned Start/End Dates and any seasonal restrictions proposed to be included in the schedule:

The Proposed Action is anticipated to occur in calendar year (CY) 2024. The CLB portion of the cable installation is anticipated to require a duration of four to seven days.

[1] A federal agency may designate a non-Federal representative to conduct an EFH consultation by giving written notice of such designation to NMFS. If a non-federal representative is used, the Federal action agency remains ultimately responsible for compliance with sections 305(b)(2) and 305(b)(4)(B) of the Magnuson-Stevens Act. [2] Provide the decimal, or the degrees, minutes, seconds values for latitude and longitude using the World Geodetic System 1984 (WGS84) and negative degree values where applicable.

3. Site Description

EFH includes the biological, chemical, and physical components of the habitat. This includes the substrate and associated biological resources (e.g., benthic organisms, submerged aquatic vegetation, shellfish beds, salt marsh wetlands), the water column, and prey species.

Is the project in designated EFH[3]?	☑ Yes	☐ No
Is the project in designated HAPC?	☑ Yes	☐ No
Does the project contain any Special Aquatic Sites[4]?	☐ Yes	☑ No
Is this coordination under FWCA only?	☐ Yes	☑ No
Total area of impact to EFH (indicate sq ft or acres):	3,400 sq ft	
Total area of impact to HAPC (indicate sq ft or acres):	3,400 sq ft	

Current range of water depths at MLW	Salinity range (PPT):	Water temperature range (°F):
20-60 m	23-33	37(winter)-69(summer)

[3]Use the tables in Sections 5 and 6 to list species within designated EFH or the type of designated HAPC present. See the worksheet instructions to find out where EFH and HAPC designations can be found. [4] Special aquatic sites (SAS) are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. They include sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, and riffle and pool complexes (40 CFR Subpart E). If the project area contains SAS (i.e. sanctuaries and refuges, wetlands, mudflats, vegetated shallows/SAV, coral reefs, and/or riffle and pool complexes, describe the SAS, species or habitat present, and area of impact.

4. Habitat Types

In the table below, select the location and type(s) for each habitat your project overlaps. For each habitat type selected, indicate the total area of expected impacts, then what portion of the total is expected to be temporary (less than 12 months) and what portion is expected to be permanent (habitat conversion), and if the portion of temporary impacts will be actively restored to pre- construction conditions by the project proponent or not. A project may overlap with multiple habitat types.

Habitat Location	Habitat Type	Total impacts (lf/ft²/ft³)	Temporary impacts (lf/ft²/ft³)	Permanent impacts (lf/ft²/ft³)	Restored to pre-existing conditions?*
Marine	Substrate (sand/shell)				Select one
Marine	Substrate (cobble/gravel)3				Select one
Marine	Rocky (coral/rock)*				Select one
Marine	Submerged aquatic vegetati				Select one
Marine	Shore (rock)				Select one
Marine	Water column			0	Select one
Select one	Select One				Select one
Select one	Select One				Select one

*Restored to pre-existing conditions means that as part of the project, the temporary impacts will be actively restored,such as restoring the project elevations to pre-existing conditions and replanting. It does not include natural restoration or compensatory mitigation.

Site-specific benthic habitat data is unavailable. DHS S&T understands the bottom of Plum Gut to consist primarily of rocks between 10 cm and 1 m in size, but cannot identify how many linear feet of the cable would be bottom-laid in each specific type of benthic habitat.

Submerged Aquatic Vegetation (SAV) Present?:

Yes: ☑ No: ☐

If the project area contains SAV, or has historically contained SAV, list SAV species and provide survey results including plans showing its location, years present and densities if available. Refer to Section 12 below to determine if local SAV mapping resources are available for your project area.

Summer Flounder SAV. Eelgrass meadows are well established in relatively shallow, nearer shore areas. However, it is anticipated that the cable would emerge from HDD about 400 feet off each shoreline.

Sediment Characteristics:

The level of detail required is dependent on your project – e.g., a grain size analysis may be necessary for dredging. In addition, if the project area contains rocky/hard bottom habitat [6](pebble, cobble, boulder, bedrock outcrop/ledge) identified as Rocky (coral/rock), Substrate (cobble/gravel), or Substrate (rock) above, describe the composition of the habitat using the following table.

Substrate Type* (grain size)	Present at Site? (Y/N)	Approximate Percentage of Total Substrate on Site
Silt/Mud (<0.063mm)	No	unknown
Sand (0.063-2mm)	Yes	unknown
Rocky: Pebble/Gravel /Cobble(2-256mm)**	Yes	unknown
Rocky: Boulder (256-4096mm)**	Yes	unknown
Rocky: Coral	No	unknown
Bedrock**	No	unknown

[6]The type(s) of rocky habitat will help you determine if the area is cod HAPC.

* Grain sizes are based on Wentworth grain size classification scale for granules, pebbles, cobbles, and boulders.

** Sediment samples with a content of 10% or more of pebble-gravel-cobble and/or boulder in the top layer (6-12 inches) should be delineated and material with epifauna/macroalgae should be differentiated from bare pebble-gravel-cobble and boulder.

If no grain size analysis has been conducted, please provide a general description of the composition of the sediment. If available please attach images of the substrate.

A survey of Plum Island's subtidal marine habitats was conducted by the New York Natural Heritage Program (NYNHP) for Save the Sound, published in March 2022. The report investigated subtidal nearshore areas in the vicinity of Plum Island. Investigations off the southwest coast of the island, in vicinity of the Proposed Action area, found seafloor substrate in this area to be mostly small (<10 cm) to medium sized rocks (>10 cm, <1m).

Diadromous Fish (migratory or spawning habitat- identify species under Section 10 below):

Yes: ☑ No: ☐

5. EFH and HAPC Designations

Within the Greater Atlantic Region, EFH has been designated by the New England, Mid-Atlantic, and South Atlantic Fisheries Management Councils and NOAA Fisheries. Use the EFH mapper to determine if EFH may be present in the project area and enter all species and life stages that have designated EFH. Optionally, you may review the EFH text descriptions linked to each species in the EFH mapper and use them to determine if the described habitat is present at your project site. If the habitat characteristics described in the text descriptions do not exist at your site, you may be able to exclude some species or life stages from additional consideration. For example, the water depths at your site are shallower that those described in the text description for a particular species or life stage. We recommend this for larger projects to help you determine what your impacts are.

Note: Full list for the project area is included in Attachment 2. (18 species total - not listed here Bluefish, Little Skate, Pollock, Red Hake, Scup, Summer Flounder, Winter Skate)

) **Species Present**	**EFH is designated/mapped for:**				**What is the source of the EFH information included?**
	EFH: eggs	**EFH: larvae**	**EFH: juvenile**	**EFH: adults/ spawning adults**	
albacore tuna	☐	☐	☑	☐	EFH Mapper c
Atlantic herring	☐	☐	☑	☑	EFH Mapper c
long-finned squid	☑	☐	☑	☑	EFH Mapper c
sand tiger shark	☐	☑	☑	☐	EFH Mapper c
skipjack tuna	☐	☐	☐	☑	EFH Mapper c
smoothhound shark (Atlantic stock)	☑	☑	☑	☑	EFH Mapper c
windowpane flounder	☑	☑	☑	☑	EFH Mapper c
winter flounder	☑	☑	☑	☑	EFH Mapper c
Atlantic butterfish	☑	☑	☑	☑	EFH Mapper c
Atlantic mackerel	☑	☑	☑	☑	EFH Mapper c
Black sea bass	☐	☐	☑	☐	EFH Mapper c

6. Habitat Areas of Particular Concern (HAPCs)

HAPCs are subsets of EFH that are important for long-term productivity of federally managed species. HAPCs merit special consideration based their ecological function (current or historic), sensitivity to human-induced degradation, stresses from development, and/or rarity of the habitat. While many HAPC designations have geographic boundaries, there are also habitat specific HAPC designations for certain species, see note below. Use the EFH mapper to identify HAPCs within your project area. Select all that apply.

☑	Summer flounder: SAV[7]	☐	Alvin & Atlantis Canyons
☐	Sandbar shark	☐	Baltimore Canyon
☐	Sand Tiger Shark (Delaware Bay)	☐	Bear Seamount
☐	Sand Tiger Shark (Plymouth-Duxbury-Kingston Bay)	☐	Heezen Canyon
☐	Inshore 20m Juvenile Cod[8]	☐	Hudson Canyon
☐	Great South Channel Juvenile Cod	☐	Hydrographer Canyon
☐	Northern Edge Juvenile Cod	☐	Jeffreys & Stellwagen
☐	Lydonia Canyon	☐	Lydonia, Gilbert & Oceanographer Canyons
☐	Norfolk Canyon (Mid-Atlantic)	☐	Norfolk Canyon (New England)
☐	Oceanographer Canyon	☐	Retriever Seamount
☐	Veatch Canyon (Mid-Atlantic)	☐	Toms, Middle Toms & Hendrickson Canyons
☐	Veatch Canyon (New England)	☐	Washington Canyon
☐	Cashes Ledge	☐	Wilmington Canyon
☐	**Atlantic Salmon**		

[7] Summer flounder HAPC is defined as all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH. In locations where native species have been eliminated from an area, then exotic species are included. Use local information to determine the locations of HAPC.

[8] The purpose of this HAPC is to recognize the importance of inshore areas to juvenile Atlantic cod. The coastal areas of the Gulf of Maine and Southern New England contain structurally complex rocky-bottom habitat that supports a wide variety of emergent epifauna and benthic invertebrates. Although this habitat type is not rare in the coastal Gulf of Maine, it provides two key ecological functions for juvenile cod: protection from predation, and readily available prey. See EFH mapper for links to text descriptions for HAPCs.

7. **Activity Details**

Select all that apply	Project Type/Category
☐	Agriculture
☐	Aquaculture - List species here:
☐	Bank/shoreline stabilization (e.g., living shoreline, groin, breakwater, bulkhead)
☐	Beach renourishment
☑	Dredging/excavation - HDD at/near shore
☐	Energy development/use e.g., hydropower, oil and gas, pipeline, transmission line, tidal or wave power, wind
☐	Fill
☐	Forestry
☐	Infrastructure/transportation (e.g., culvert construction, bridge repair, highway, port, railroad)
☐	Intake/outfall
☐	Military (e.g., acoustic testing, training exercises)
☐	Mining (e.g., sand, gravel)
☐	Overboard dredged material placement
☐	Piers, ramps, floats, and other structures
☐	Restoration or fish/wildlife enhancement (e.g., fish passage, wetlands, mitigation bank/ILF creation)
☑	Survey (e.g., geotechnical, geophysical, habitat, fisheries)
☐	Water quality (e.g., storm water drainage, NPDES, TMDL, wastewater, sediment remediation)
☑	Other: Cable laid on top of ocean floor

8. Effects Evaluation

Select all that apply	Potential Stressors Caused by the Activity HDD, cable laying	Select all that apply and if temporary[9] or permanent		Habitat alterations caused by the activity
		Temp	Perm	
☑	Underwater noise	☐	☐	Water depth change
☑	Water quality/turbidity/ contaminant release	☐	☐	Tidal flow change
☑	Vessel traffic/barge grounding	☐	☐	Fill
☐	Impingement/entrainment	☐	☐	Habitat type conversion
☐	Prevent fish passage/spawning	☐	☐	Other: increased turbidity
☑	Benthic community disturbance	☑	☐	Other: minimal removal of be
☐	Impacts to prey species	☐	☑	

[9] Temporary in this instance means during construction. [10] Entrainment is the voluntary or involuntary movement of aquatic organisms from a water body into a surface diversion or through, under, or around screens and results in the loss of the organisms from the population. Impingement is the involuntary contact and entrapment of aquatic organisms on the surface of intake screens caused when the approach velocity exceeds the swimming capability of the organism.

Details - project impacts and mitigation

Briefly describe how the project would impact each of the habitat types selected above and the amount (i.e., acreage or sf) of each habitat impacted. Include temporary and permanent impact descriptions and direct and indirect impacts. For example, dredging has a direct impact on bottom sediments and associated benthic communities. The turbidity generated can result in a temporary impact to water quality which may have an indirect effect on some species and habitats such as winter flounder eggs, SAV or rocky habitats. The level of detail that you provide should be commensurate with the magnitude of impacts associated with the proposed project. Attach supplemental information if necessary.

A detailed impacts discussion can be found in the cover letter.

The new utility cable would be installed using a combination of trenching onshore and horizontal directional drilling (HDD) from the shore to below the water line, creating minor ground disturbance, and then bottom laying the cable through Plum Gut. Impacts to the water column from descending cable would be minor and temporary. The existing cable at the bottom of Plum Gut would be abandoned in place. This would mean that permanent disturbance to previously disturbed areas would be minimal and therefore have insignificant impacts on EFH. The habitat where the cable emerges from the the substrate and enters the ocean (i.e., from HDD) may be disturbed and/or have indirect effects on species and habitats surrounding the area, but would likely not have large or long-term impacts as the habitat settles and returns to its previous state. There is not currently a route to go through eelgrass habitat, meaning no aquaculture habitat would likely be disturbed, thereby not impacting SAV. Given that habitat would only be impacted temporarily, with minimal impact to the already disturbed sea floor, there will likely be negligible impact to EFH.

What specific measures will be used to avoid and minimize impacts, including project design, turbidity controls, acoustic controls, and time of year restrictions? If impacts cannot be avoided or minimized, why not?

HDD under the nearshore habitat (i.e., to 400 feet offshore of both Orient Point and Plum Island) would help to minimize impacts to EFH. DHS S&T also plans to lay the cable through the same corridor as the two existing cables.

Is compensatory mitigation proposed? Yes ☐ No ☑

If compensatory mitigation is not proposed, why not? If yes, describe plans for compensatory mitigation (e.g. permittee responsible, mitigation bank, in-lieu fee) and how this will offset impacts to EFH and other aquatic resources. Include a proposed compensatory mitigation and monitoring plan as applicable.

Compensatory mitigation is not proposed, as effects to species would be temporary and negligible. The proposed route of cable follows pre-existing cables and would therefore not create additional changes to the habitat. There may be eelgrass restoration if habitat is disturbed, but it is not currently planned.

9. Effects of Climate Change

Effects of climate change should be included in the EFH assessment if the effects of climate change may amplify or exacerbate the adverse effects of the proposed action on EFH. Use the Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathways (RCP) 8.5/high greenhouse gas emission scenario (IPCC 2014), at a minimum, to evaluate the future effects of climate change on the proposed projections. For sea level rise effects, use the intermediate-high and extreme scenario projections as defined in Sweet et al. (2017). For more information on climate change effects to species and habitats relative to NMFS trust resources, see Guidance for Integrating Climate Change Information in Greater Atlantic Region Habitat Conservation Division Consultation Processes.

1. Could species or habitats be adversely affected by the proposed action due to projected changes in the climate?If yes, please describe how:

No. Projected changes in the climate, including warming and sea level rise, would not be meaningfully impacted by the Proposed Action.

2. Is the expected lifespan of the action greater than 10 years? If yes, please describe project lifespan:

The lifespan of the cable would be about 25 years. However, construction would take less than two weeks, and there would be no operational impacts.

3. Is climate change currently affecting vulnerable species or habitats, and would the effects of a proposed action be amplified by climate change? If yes, please describe how:

Climate change may be impacting species though sea level rise and sea temperature changes. These effects would not be amplified by potential noise, turbidity, or vessel traffic impacts resulting

4. Do the results of the assessment indicate the effects of the action on habitats and species will be amplified by climate change? If yes, please describe how:

No

5. Can adaptive management strategies (AMS) be integrated into the action to avoid or minimize adverse effects of the proposed action as a result of climate? If yes, please describe how:

N/A

10. Federal Agency Determination

Federal Action Agency's EFH determination (select one)	
☐	There is no adverse effect[7] on EFH or EFH is not designated at the project site. EFH Consultation is not required. This is a FWCA only request.
☑	The adverse effect[7] on EFH is not substantial. This means that the adverse effects are no more than minimal, temporary, or can be alleviated with minor project modifications or conservation recommendations. This is a request for an abbreviated EFH consultation.
☐	The adverse effect[7] on EFH is substantial. This is a request for an expanded EFH consultation. We will provide more detailed information, including an alternatives analysis and NEPA documents, if applicable.

[7] An adverse effect is any impact that reduces the quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

11. Fish and Wildlife Coordination Act

Under the FWCA, federal agencies are required to consult with us if actions that the authorize, fund, or undertake will result in modifications to a natural stream or body of water. Federal agencies are required to consider the effects these modifications may have on fish and wildlife resources, as well as provide for the improvement of those resources. Under this authority, we consider the effects of actions on NOAA-trust resources, such as anadromous fish, shellfish, crustaceans, or their habitats, that are not managed under a federal fisheries management plan. Some examples of other NOAA-trust resources are listed below. Some of these species, including diadromous fishes, serve as prey for a number of federally-managed species and are therefore considered a component of EFH pursuant to the MSA. We will be considering the effects of your project on these species and their habitats as part of the EFH/FWCA consultation process and may make recommendations to avoid, minimize or offset and adverse effects concurrently with our EFH conservation recommendations.

Please contact our Greater Atlantic Regional Fisheries Office, Protected Resources Division regarding potential impacts to marine mammals or species listed under the Endangered Species Act and the appropriate consultation procedures.

Fish and Wildlife Coordination Act Resources	
Species known to occur at site (list others that may apply)	**Describe habitat impact type (i.e., physical, chemical, or biological disruption of spawning and/or egg development habitat, juvenile nursery and/or adult feeding or migration habitat). Please note, impacts to federally listed species of fish, sea turtles, and marine mammals must be coordinated with the GARFO Protected Resources Division.**
alewife	
American eel	
American shad	
Atlantic menhaden	
blue crab	
blue mussel	
blueback herring	
Eastern oyster	
horseshoe crab	
quahog	
soft-shell clams	
striped bass	
other species:	
other species:	
other species:	

12. Useful Links

National Wetland Inventory Maps
EPA's National Estuary Program (NEP)
Northeast Regional Ocean Council (NROC) Data Portal
Mid-Atlantic Regional Council on the Ocean (MARCO) Data Portal

Resources by State

Maine
Maine Office of GIS Data Catalog
Town shellfish information including shellfish conservation area maps
State of Maine Shellfish Sanitation and Management
Eelgrass maps
Casco Bay Estuary Partnership
Maine GIS Stream Habitat Viewer

New Hampshire
NH Statewide GIS Clearinghouse, NH GRANIT
NH Coastal Viewer
State of NH Shellfish Program

Massachusetts
MA DMF Shellfish Sanitation and Management Program
MassGIS Data (Including Eelgrass Maps)
MA DMF Recommended TOY Restrictions Document Massachusetts
Bays National Estuary Program
Buzzards Bay National Estuary Program
Massachusetts Division of Marine Fisheries
Massachusetts Office of Coastal Zone Management

Rhode Island
RI Shellfish and Aquaculture
RI Shellfish Management Plan
RI Eelgrass Maps
Narragansett Bay Estuary Program
Rhode Island Division of Marine Fisheries
Rhode Island Coastal Resources Management Council

Connecticut

CT Bureau of Aquaculture
Natural Shellfish Beds in CT
Eelgrass Maps
Long Island Sound Study
CT GIS Resources
CT DEEP Office of Long Island Sound Programs and Fisheries
CT River Watershed Council

New York

Eelgrass Report
Peconic Estuary Program
NY/NJ Harbor Estuary Program
New York GIS Clearinghouse

New Jersey

Submerged Aquatic Vegetation Mapping
Barnegat Bay Partnership
NJ GeoWeb
NJ DEP Shellfish Maps

Pennsylvania

Delaware River Management Plan
PA DEP Coastal Resources Management Program
PA DEP GIS Mapping Tools

Delaware

Partnership for the Delaware Estuary
Center for Delaware Inland Bays
Delaware FirstMap

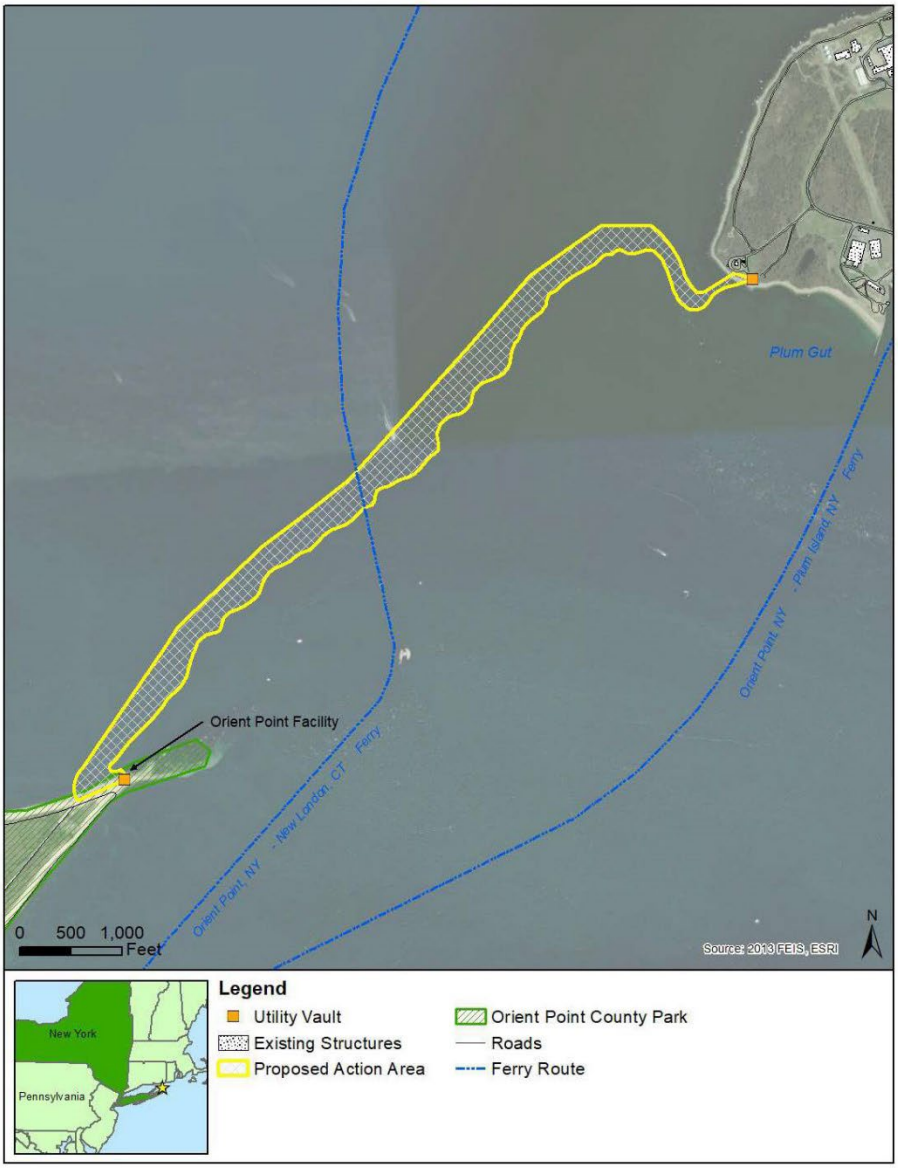
Maryland

Submerged Aquatic Vegetation Mapping
MERLIN (Maryland's Environmental Resources and Land Information Network)
Maryland Coastal Atlas
Maryland Coastal Bays Program

Virginia

VMRC Habitat Management Division
Submerged Aquatic Vegetation mapping

Attachment 2a: Proposed Action Location



Attachment 2b: Proposed Undersea Cable Route

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 41° 9' 57" N, Longitude = 73° 46' 52" W
Decimal Degrees: Latitude = 41.166, Longitude = -72.219

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Albacore Tuna	Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Atlantic Herring	Adult	New England	Amendment 3 to the Atlantic Herring FMP
		Longfin Inshore Squid	Eggs	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Sand Tiger Shark	Neonate/Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Skipjack Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Smoothhound Shark Complex (Atlantic Stock)	ALL	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Windowpane Flounder	Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs	New England	Amendment 14 to the Northeast Multispecies FMP

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

All EFH species have been mapped for the Greater Atlantic region,
Atlantic Highly Migratory Species EFH,
Bigeye Sand Tiger Shark,
Bigeye Sixgill Shark,
Caribbean Sharpnose Shark,
Galapagos Shark,
Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 41° 9' 43" N, Longitude = 73° 46' 4" W
Decimal Degrees: Latitude = 41.162, Longitude = -72.232

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Albacore Tuna	Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Atlantic Butterfish	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Atlantic Herring	Adult, Juvenile	New England	Amendment 3 to the Atlantic Herring FMP
		Atlantic Mackerel	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Black Sea Bass	Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Bluefish	Adult, Juvenile	Mid-Atlantic	Bluefish

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Little Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Longfin Inshore Squid	Adult, Eggs, Juvenile	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Pollock	Adult, Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Red Hake	Adult, Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Sand Tiger Shark	Neonate/Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Scup	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Skipjack Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Smoothhound Shark Complex (Atlantic Stock)	ALL	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Summer Flounder	Adult, Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Windowpane Flounder	Adult, Eggs, Juvenile, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs, Juvenile, Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

Link	Data Caveats	HAPC Name	Management Council

Link	Data Caveats	HAPC Name	Management Council
⚠	ⓘ	Summer Flounder SAV	Mid-Atlantic Fishery Management Council

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

All EFH species have been mapped for the Greater Atlantic region,
Atlantic Highly Migratory Species EFH,
Bigeye Sand Tiger Shark,
Bigeye Sixgill Shark,
Caribbean Sharpnose Shark,
Galapagos Shark,
Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 41° 10' 18" N, Longitude = 73° 47' 28" W
Decimal Degrees: Latitude = 41.172, Longitude = -72.209

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Albacore Tuna	Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Atlantic Butterfish	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Atlantic Herring	Adult, Juvenile	New England	Amendment 3 to the Atlantic Herring FMP
		Atlantic Mackerel	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Black Sea Bass	Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Bluefish	Adult, Juvenile	Mid-Atlantic	Bluefish

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Little Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Longfin Inshore Squid	Adult, Eggs, Juvenile	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Pollock	Adult, Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Red Hake	Adult, Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Sand Tiger Shark	Neonate/Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Scup	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Skipjack Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Smoothhound Shark Complex (Atlantic Stock)	ALL	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Summer Flounder	Adult, Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Windowpane Flounder	Adult, Eggs, Juvenile, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs, Juvenile, Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

Link	Data Caveats	HAPC Name	Management Council

Link	Data Caveats	HAPC Name	Management Council
⚠	ⓘ	Summer Flounder SAV	Mid-Atlantic Fishery Management Council

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

All EFH species have been mapped for the Greater Atlantic region,
Atlantic Highly Migratory Species EFH,
Bigeye Sand Tiger Shark,
Bigeye Sixgill Shark,
Caribbean Sharpnose Shark,
Galapagos Shark,
Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark

NOAA FISHERIES
National Oceanic and Atmospheric Administration

QR code Share link

☰ MENU

Essential Fish Habitat Mapper

New England / Mid-Atlantic

? View Legend

Contents

- EFH Areas Protected From Fishing ...
- Habitat Areas of Particular Concern ...
  - New England / Mid-Atlantic HAPC
  - Atlantic salmon HAPC
  - Highly Migratory Species HAPC
- Essential Fish Habitat ...
- Reference Data ...

Zoom to

New England/ Mid-Atlantic HAPC

Site Name	Summer Flounder SAV
Species	Summer Flounder
Habitat	Submerged Aquatic Vegetation
Fishery Management Plan	
Link to Fishery Management Plan	
Link to Federal Regulation	
Data Caveat	Due to the dynamic nature of submerged aquatic vegetation and the differences in local mapping, detailed region-wide mapping of this HAPC is not available. Local mapping must be used to determine its presence in a particular project area.

Choose Another Council | Generate Report

0.6 km
0.4 mi

Esri, HERE, Garmin, ... Powered by Esri

Attachment 4: References

GARFO. (2023). *Section 7 Effects Analysis: Acoustics in the Greater Atlantic Region*. Retrieved from NOAA Fisheries GARFO: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effects-analysis-acoustics-greater-atlantic-region

NOAA Fisheries. (2021, August). *Essential Fish Habitat (EFH) Assessment & Fish and Wildlife Coordination Act (FWCA) Consultation Worksheet.* Retrieved from NOAA Fisheries Greater Atlantic Regional Fisheries Office Essential Fish Habitat Assessment for Consultations: https://media.fisheries.noaa.gov/2021-08/EFHWorksheet-fillable%20form-aug%202021-final.pdf

NOAA Fisheries. (2022). *Essential Fish Habitat Mapper*. Retrieved from https://www.habitat.noaa.gov/apps/efhmapper/

NYNHP. (2022, March). *New York Natural Heritage Program (NYNHP) and InnerSpace Scientific Diving Survey of Plum Island's Subtidal Marine Habitats: Report to Save the Sound.* Retrieved from New York Natural Heritage Program, Albany, NY: https://www.nynhp.org/projects/plum-islandinventory/

U.S. Fish and Wildlife. (2023). *The Horizontal Directional Drilling Process*. Retrieved August 30, 2023, from https://www.fws.gov/sites/default/files/documents/NiSourceHCPfinalAppndxJ_HDD.pdf

Science and Technology

December 6, 2023

NOAA Fisheries
Greater Atlantic Regional Fisheries Office
Habitat and Ecosystem Services Division
55 Great Republic Dr
Gloucester, MA 01930

Attn: Karen Greene, Mid-Atlantic Branch Chief and EFH Regional Coordinator; Jessie Murray, Marine Habitat Resources Specialist (New Jersey and New York)

SUBJECT: **Project Review Request, Essential Fish Habitat, Plum Island Animal Disease Center Undersea Cable Installation, Plum Island, New York**

Dear Ms. Greene and Ms. Murray,

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) proposes to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action). DHS is the lead agency for the National Environmental Policy Act (NEPA) process and for this Essential Fish Habitat (EFH) consultation.

DHS S&T is preparing an Environmental Assessment (EA) in compliance with NEPA (42 United States Code [USC] §§ 4321 et seq); the White House Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508); DHS Management Directive 023-01, rev. 01 *Implementation of the NEPA*, and DHS Instruction 023-01-002-01 rev. 01 *Implementation of the NEPA* – to analyze the potential effects of the Proposed Action on the environment.

DHS S&T previously submitted initial consultation to your office on October 19, 2023, with a determination of no adverse effect on EFH. Since that date, however, the proposed construction methodologies have been revised. Specifically, DHS S&T now anticipates cable installation would not include horizontal directional drilling (HDD); rather, the cable would be trenched from the cable vault to several hundred feet offshore. Additionally, we have noted that about 0.5 acre would be used for staging equipment at each trenching location. These changes are discussed in greater detail below.

The purpose of this letter is to submit our EFH Assessment and request consultation regarding potential effects on EFH. DHS S&T has evaluated the potential for the project to adversely affect EFH in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA). DHS S&T used the Greater Atlantic Regional Fisheries Office

EFH Assessment Worksheet to evaluate potentially affected EFH (NOAA Fisheries, 2021), and we are submitting our evaluation and findings for your review (**Attachment 1**).

We have determined that the impact of the Proposed Action on EFH would not be substantial and request an abbreviated EFH consultation.

Background

PIADC has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases into the United States since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, which is on Long Island's North Fork in Suffolk County, NY (**Attachment 2a**). Plum Island was transferred to the United States Department of Agriculture (USDA) in 1954 and then to DHS in 2003. DHS S&T currently operates PIADC in cooperation with the USDA.

DHS S&T also owns and operates the Orient Point facility at Orient Point, NY, to support Plum Island. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, parking lots, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island. The DHS S&T is in the process of closing PIADC and transferring operations to the newly constructed National Bio and Agro-Defense Facility in Manhattan, Kansas. The Plum Island Closure and Support program is anticipated to be completed over the next five to seven years.

Plum Island receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable supports 13.2 kilovolts service, measures up to approximately 11,000 feet, with approximately 10,000 feet submerged underwater, and together provide for the island's normal electrical requirements. The expected lifespan of these cables is approximately 25 years, which the M1 cable has exceeded and the M2 cable is near exceeding.

DHS S&T requires continued electrical and communication capabilities on Plum Island throughout the duration of planned PIADC closure activities (i.e., five to seven years). DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, which has exceeded its planned lifespan, is degrading to such an extent that it is at risk of failing.

Description of the Proposed Action

The Proposed Action is to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, NY and the PIADC on Plum Island, NY. The submerged portions of the existing cables under Plum Gut extend up to approximately 11,000 feet from the cable vault on Orient Point to the cable vault on Plum Island. Beginning at the Orient Point cable vault, the existing cables (M1 and M2) are entrenched under a rock bed until reaching Plum Gut. From there, the cables span open water along the seabed of Plum Gut and Long Island Sound until reaching the shoreline of Plum Island where they are then buried until reaching the upland cable vault.

The new undersea utility cable would replace one of the existing cables. The cable (M1 or M2) chosen for replacement would be disconnected from the cable vaults on Orient Point and Plum Island and abandoned in place. The other cable would remain in use. Installation of the new utility cable would entail connecting the cable to the existing cable vaults located on Orient Point and Plum Island, running the cable underground, and then bottom laying the cable through Plum Gut. The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables (**Attachment 2b**). The path taken by the existing cables was determined to be the most suitable route due to ocean depth in the area; therefore, the new cable would also follow the existing cable route.

The final design for the proposed cable installation is currently underway. The new cable would support 13.2 kilovolt service, identical to the existing cables, and would be connected within each cable vault and entrenched along the beach (up to approximately 500 feet at Orient Point and 200 feet at Plum Island), through the existing shoreline riprap, and into the water (laid on the seafloor). Existing soil, sand, and riprap would be temporarily excavated and stored on the shoreline adjacent to the trench line as the trench is constructed. Following cable installation, the excavated soil and sand would be used to backfill the trench and the riprap would be replaced above the trench.

The new cable is expected to be trenched to a depth similar to the existing cables (approximately 30 inches) using a small excavator (e.g., Bobcat). In-water trenching is also anticipated and could occur up to several hundred feet along the seafloor before the bottom lay portion of the cable installation begins. DHS S&T anticipates using low impact in-water trenching methods, such as jetting or ploughing to minimize adverse impacts to nearshore areas to the extent practicable; however, traditional trenching methods utilizing a barge and excavator/hydraulic dredge may be required. Approximately 100 feet of Cast Iron Cable Protectors (CICP) would also be installed around the cable at each landing point during trenching. A portion of the total CICP length would be installed around the length of cable that is entrenched within the surf zone, with the remainder of the CICP length continuing along the length of cable that would be bottom laid along the surface of the seafloor.

Approximately 0.5 acre on Plum Island and approximately 0.5 acre at Orient Point would be used to stage equipment at each respective cable terminus location. No land disturbance is planned at these areas except for the trenches between the cable vaults and the shoreline. Trenching work would be anticipated to take four to six weeks to complete at each site.

From where the cable exits the trench, along the seafloor of Plum Gut, a cable-laying barge (CLB), assisted by tugboats and other support craft, would install the remaining cable between Orient Point and Plum Island. The use of a CLB and support craft would cause a small, localized (Plum Gut), temporary increase in vessel traffic for up to seven days. During installation of the cable, the CLB would likely move slowly (<6 knots or 3 m/s) on its path and not interfere with regular ferry trips. Home port locations for the CLB and support vessels are not known at this time. Plum Gut has a large range of water depths, though the majority of the action area is 30-50 ft deep. The new cable would be approximately 3.5 inches in diameter and weigh 6.2 pounds per linear foot in saltwater (approximately 10.3 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. Any potential lateral movement of the cable would be greatly limited due to the rugged and rocky seafloor landscape and changes in depth.

Prior to installing the cable, DHS S&T's contractor would perform marine route pre-lay and onshore surveys and would create a hydrographic map showing bottom contours and exact locations of the existing power cables and other obstructions within the proposed cable corridor. The pre-lay and onshore surveys are not anticipated to include sediment sampling, but may include the use of sonar within an approximately 300-foot-wide corridor. The cable would be installed in between or immediately adjacent to the two existing cables connecting Orient Point and Plum Island. There are other abandoned cables in this small area that will remain undisturbed as they have for decades. Additionally, DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur either in 2024 or 2025, between the months of September and March. No work would occur between April 1 and September 1. Work would require approximately one year to complete, including completion of pre-installation surveys, installation and laying of the cable, cable inspection and testing, and preparation of as-built surveys. The construction process would take approximately four to six weeks for each onshore/trenching portion and four to seven days for bottom-laying. Areas temporarily disturbed during trenching and installation would revegetate passively over time.

Proposed Action In-Water Components

The majority of the project would occur in Plum Gut, which lies between Orient Point and Plum Island. To the north is Long Island Sound. Gardiners Bay is to the south. These water bodies are used extensively for sport and commercial fishing. There are no streams or other sources of freshwater within the Project Area.

The selected method for laying the cable is bottom laying, which has been used in the past. The power cable would be laid on the floor of Plum Gut and Long Island Sound from reels or tubs located on a barge. The cable would not be anchored to the bottom as cable lateral movement would be limited by rocks and elevation changes of the seafloor.

The cable would be installed in between or immediately adjacent to the two existing cables connecting Orient Point and Plum Island. The length of the cable would be approximately 11,000 feet and would support 13.2 kilovolt service, identical to the existing cables. In-water trenching is anticipated and could occur up to several hundred feet along the seafloor before the bottom lay portion of the cable installation begins. A CLB, assisted by tugboats and other support craft, would install the remaining length of the cable between Orient Point and Plum Island. The total area of seafloor that would be directly within the cable footprint is approximately 3,000 square feet (sq ft). The location of the existing cable was designed to follow the shallowest depths through Plum Gut and Long Island Sound. By installing the cable in an adjacent location, the cable would remain in the shallowest areas thereby reducing the amount of stress placed on the cable.

EFH Assessment

The MSA defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity," and it requires federal agencies to consult with NOAA Fisheries when proposing activities that may adversely affect EFH. To facilitate consultation, NOAA Fisheries provides an online mapping tool (the EFH Mapper) that can be queried to identify designated EFH species and life stages potentially occurring near the Project Area (NOAA Fisheries, 2022). Information provided by the EFH Mapper for the Project Area is included in **Attachment 3**.

The information presented in this letter is based on the EFH Assessment Worksheet (NOAA Fisheries, 2021) prepared for this consultation (**Attachment 1**). A description of the Proposed Action is provided above. The remainder of the letter is an analysis of the potential adverse effects of the Proposed Action on EFH and managed species.

EFH in the Project Area

This EFH Assessment analyzes the potential consequences to EFH associated with DHS S&T's Proposed Action described above. The Project Area evaluated for potential impacts to EFH from cable replacement activities is defined as the stretch of land between the existing cable vault at the Orient Point facility and the coastline of Orient Point, the seafloor corridor of Plum Gut where the cable is to be laid, and the land from the coastline of Plum Island to the island's cable vault (hereafter referred to as the Project Area; **Attachment 2b**). The Proposed Action is not anticipated to have measurable indirect impacts beyond the immediate Project Area.

The offshore habitats within the Project Area are unique due to the combination of deep-water habitats and shoals which creates a productive environment that supports a variety of marine life, including valuable sport fishes. The Project Area is geographically coincident with EFH for one or more life stages of the species listed in **Table 1**. This table includes those species/life stages at or near both Orient Point and Plum Island and along the path that the cable would take, and reflects the EFH mapper results (**Attachment 3**) to list only those species that would be found in the path of the cable where it is being laid on the seabed and trenching may occur. The mapper results include three different result print outs: one closer to Orient Point, one closer to Plum Island, and one in the middle of the planned cable path. This was done in order to create the most accurate list of possible EFH in the waters of the Project Area. Therefore, **Table 1** combines the results of all three mapper results. (*Note*: this is not reflected in the worksheet as there were not enough spaces for the number of species to be recorded.)

Table 1. Species and Life Stages with Designated EFH in Waters of the Project Area

Species	Eggs	Larvae	Juveniles	Adults
Albacore Tuna (*Thunnus obesus*)			X	
Atlantic Butterfish (*Peprilus triacanthus*)	X	X	X	X
Atlantic Herring (*Clupea harengus*)			X	X
Atlantic Mackerel (*Scomber scombrus*)	X	X	X	X
Black Sea Bass (*Centropristis striata*)			X	X

Species	Eggs	Larvae	Juveniles	Adults
Bluefish (*Pomatomus saltatrix*)			X	X
Little Skate (*Leucoraja erinacea*)			X	X
Longfin Inshore Squid (*Doryteuthis pealeii*)	X		X	X
Pollock (*Pollachius virens*)			X	X
Red Hake (*Urophycis chuss*)	X	X	X	X
Sand Tiger Shark (*Carcharias taurus*)		neonate	X	
Scup (*Stenotomus chrysops*)	X	X	X	X
Skipjack Tuna (*Thunnus albacares*)				X
Smoothhound Shark Complex (Atlantic stock) (*Mustelus* spp.)	X	X	X	X
Spiny Dogfish (*Squalus acanthias*)				females
Summer Flounder (*Paralichthys dentatus*)			X	X
Windowpane Flounder (*Scophthalmus aquosus*)	X	X	X	X
Winter Flounder (*Pseudopleuronectes americanus*)	X	X	X	X
Winter Skate (*Leucoraja ocellata*)			X	X
Note: An "X: indicates that EFH has been designated within the Project Area for that species and life stage.				

The benthic community of the Project Area may be an important EFH component that provides a food source for managed fish species. A survey of Plum Island's subtidal marine habitats was conducted by the New York Natural Heritage Program (NYNHP) and InnerSpace Scientific Diving for Save the Sound (NYNHP, 2022). The report investigated subtidal nearshore areas in the vicinity of Plum Island. Investigations off the southwest coast of the island, in the vicinity of the Project Area, found seafloor substrate in this area to be mostly small (<10 cm) to medium sized rocks (>10 cm, <1m). According to the report, prominent vegetation around the island includes eelgrass (*Zostera marina*) in shallower habitats (close to the land masses) and brown and red algae at deeper habitats. The species list for the relevant sample area includes up to 20 species of algae, eelgrass, lion's mane jellyfish (*Cyanea capillata*), two bryozoans, four polychaetes, seven gastropods, two bivalves, one nematode species, and 11 species of crustacean. No mammals or fish were seen during the sampling in this area (NYNHP, 2022).

Construction, Trenching and Cable-Laying Impacts

The benthic community and associated EFH of Plum Gut and Long Island Sound would be temporarily impacted during construction by an increase in turbidity caused by in-water trenching and the laying of the cable through the displacement of substrate. Any sediment plume caused by in-water trenching or cable laydown would likely be composed of sand, with little silt, from the ocean floor. These activities could produce total suspended solids (TSS) concentrations averaging 210 mg/L above baseline levels, across depths, and up to 445 mg/L based on similar construction actions (mechanical dredging) (ACOE, 2001;

GARFO, 2023a). Monitoring performed by the USACE, in support of the New York/New Jersey Harbor Deepening Project, shows that mechanical dredge plumes dissipated to background levels within 600 feet of the source in the upper water column and 2,400 feet in the lower water column (ACOE, 2015).

The zone of passage is not likely to be impacted by these actions, and the resulting sediment plume from both trenching and laydown is expected to settle out of the water column rapidly within a 2,400-foot radius, based on previous studies (GARFO, 2023a). The TSS levels expected are below those shown to have adverse effects on fish (typically up to 1,000.0 mg/L; see summary of scientific literature in Burton (1993) and Wilber & Clarke (2001)) and benthic communities (390.0 mg/L (EPA, 1986)). Fish would be able to swim away from the turbidity plume and would not be adversely affected by passing through the temporary increase in TSS, nor would it cause a barrier to normal behaviors, though some species may swim through the plume to avoid the area with no adverse effects. It is possible that species within the EFH may use the sandy shoal of Orient Point for foraging and breeding purposes. However, when added to baseline conditions, permanent increases in TSS would be too small to be meaningfully measured or detected, and therefore, potential increases in TSS would be insignificant. Increased turbidity and possible habitat disruption would be temporary and not likely have impacts post-construction, meaning permanent impacts to EFH within the nearshore area is not anticipated.

EFH impacts associated with the cable laying portion of the project are approximately 3,000 sq ft. Given habitat would only be impacted temporarily, with minimal impact to the already disturbed sea floor as the route is adjacent to previously laid cables, there will likely be negligible impact to EFH. The square footage of permanent impacts (the amount of sea floor that the cable coverage will permanently make unavailable as habitat) is insignificant in the context of the rest of the available seafloor habitat available in Plum Gut.

Summer Flounder Habitat Areas of Particular Concern (HPAC) is defined as all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH. While this HPAC occurs within the ROI, impacts to these habitats would be temporary, as backfilling will occur after trenching is complete and resettlement is expected after construction is complete. Additionally, the planned cable route does not run through known eelgrass habitat, including areas near Plum Island's shoreline.

Noise Impacts

Noise generating equipment associated with trenching would be mostly located onshore or above water, although equipment used to trench the short distance from the shoreline along the seafloor would generate some noise underwater. Noise would be limited to the duration of cable installation and would cease once installation is complete. Onshore and offshore activities associated with trenching are anticipated to require approximately four to six weeks in each location. There is some potential for impacts to EFH from underwater noise; however, in-water trenching would only constitute a short portion of the anticipated timeframe and is not anticipated to result in significant underwater noise disturbance. The Proposed Action would have no permanent change in baseline noise conditions, making impacts to EFH negligible.

Another potential source of noise would be vessels used for cable installation. This includes a CLB and support craft, such as tugboats, which would bottom-lay the cable between the trench terminus points off the shores of Orient Point and Plum Island. The use of a CLB and support craft would cause a small, localized (Plum Gut), temporary increase in vessel traffic for four to seven days. During installation of the cable the CLB would likely move slowly (<6 knots or 3 m/s), meaning its engine and propeller would generate less noise than other vessels. The level of noise exuded by a CLB (depending on its length it could be the largest of the vessels that would be in the area, though it may be smaller than the ferries that cross regularly) or similar vessel is typically 155 to 170 dB. This would mean an increase above the ambient baseline for the duration of the cable laying (up to seven days) and at intermittent intervals.

The majority of fish are highly mobile species and are unlikely to stay in a stationary position or within a given radius of a vessel or other noise source for 24 hours. Sound produced by the Proposed Action would not likely cause injury to EFH species, but the threshold for change in behavior may be met (150 dB) (GARFO, 2023b). These temporary behavioral effects may include avoidance or disruption of foraging activities, leading the fish species to move away from the activity. The noise from the CLB would not appreciably add to baseline noise created by other vessels in the area (ferries and recreation fishing vessels); therefore, it is unlikely there would be a measurable disturbance to behavior. When this project is completed, ambient noise levels would return to baseline levels.

Conclusions

Based on this assessment, DHS S&T has determined that the adverse effects of the Proposed Action on EFH would not be substantial. The Proposed Action would provide DHS S&T with reliable electrical and communications capabilities with no net loss in the capacity of DHS S&T to perform required operations at PIADC; would minimize environmental impacts through abandonment in-place of an existing cable and low-impact in-water trenching methods to the extent possible, such as jetting or ploughing, which would minimize disturbance to on and near-shore areas; can be completed in a timely fashion; and would minimize impediments to vessel traffic to the maximum extent practicable.

We certify that we have used the best scientific and commercial data available to complete this analysis. We look forward to receiving conservation recommendations, if any are appropriate. For additional information, please contact Natalie Kisak at natalie.kisak@aecom.com. Email responses are preferred, although letter responses may be submitted to *Natalie Kisak, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876.*

Respectfully,

JOHN M SEARING

Digitally signed by JOHN M SEARING
Date: 2023.12.06 16:18:12 -05'00'

John M. Searing, PE, PMP
Deputy Center Director
PICS Program Director
Plum Island Animal Disease Center

Office of National Laboratories
Science and Technology Directorate

Attachments:
1. EFH Worksheet
2a. Proposed Action Location
2b. Proposed Undersea Cable Route
3. EFH Habitat Mapper Results
4. References

NOAA Fisheries Greater Atlantic Regional Fisheries Office Essential Fish Habitat (EFH) Assessment & Fish and Wildlife Coordination Act (FWCA) Consultation Worksheet

August 2021 rev.

Authorities

The Magnuson Stevens Fishery Conservation and Management Act (MSA) requires federal agencies to consult with NOAA Fisheries on any action or proposed action authorized, funded, or undertaken by such agency that may adversely affect essential fish habitat (EFH) identified under the MSA. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in the consultation process.

The Fish and Wildlife Coordination Act (FWCA) requires that all federal agencies consult with NOAA Fisheries when proposed actions might result in modifications to a natural stream or body of water. The FWCA also requires that federal agencies consider the effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under the FWCA, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not federally managed and do not have designated EFH.

It is important to note that these consultations take place between NOAA Fisheries and federal action agencies. **As a result, EFH assessments, including this worksheet, must be provided to us by the federal agency, not by permit applicants or consultants.**

Use of the Worksheet

This worksheet can serve as an EFH assessment for **Abbreviated EFH Consultations**, and as a means to provide information on potential effects to other NOAA trust resources considered under the FWCA. An abbreviated consultation allows us to determine quickly whether, and to what degree, a federal action may adversely affect EFH. Abbreviated consultation procedures can be used when federal actions do not have the potential to cause substantial adverse effects on EFH and when adverse effects could be alleviated through minor modifications.

The intent of the EFH worksheet is to provide a guide for determining the information needed to fully assess the effects of a proposed action on EFH. In addition, the worksheet may be used as a tool to assist you in developing a more comprehensive EFH assessment for larger projects that may have more substantial adverse effects to EFH. However, for large, complex projects that have the potential for significant adverse effects, an **Expanded EFH Consultation** may be warranted and the use of this worksheet alone is not appropriate as your EFH assessment.

An **adverse effect** is any impact that reduces the quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

Consultation under the MSA is not required if there is no adverse effect on EFH or if no EFH has been designated in the project area. However, because the definition of "adverse effect" is very broad, most in-water work will result in some level of adverse effect requiring consultation with us, even if the impact is temporary or the overall result of the project is habitat restoration or enhancement. It is important to remember that an adverse effect determination is a trigger to consult with us. It does not mean that a project cannot proceed as proposed, or that project modifications are necessary. An adverse effect determination under the EFH provisions of the MSA simply means that the effects of the proposed action on EFH must be evaluated to determine if there are ways to avoid, minimize, or offset adverse effects. Additional details on EFH consultations, tools, and resources, including frequently asked questions can be found on our website.

Instructions

This worksheet should be used as your EFH assessment for **Abbreviated EFH Consultations** or as a guide to develop your EFH assessment. It is not appropriate to use this worksheet as your EFH assessment for large, complex projects, or those requiring an Expanded EFH Consultation.

When completed fully and with sufficient information to clearly describe the activities proposed, habitats affected, and project impacts, as well as the measures taken to avoid, minimize or offset any unavoidable adverse effects, this worksheet provides us with required components of an EFH assessment including:

1. A description of the proposed action.
2. An analysis of the potential adverse effects on EFH and the federally managed species.
3. The federal agency's conclusions regarding the effects of the action on EFH.
4. Proposed mitigation, if applicable.

When completing this worksheet and submitting information to us, it is important to ensure that sufficient information is provided to clearly describe the proposed project and the activities proposed. At a minimum, this should include the public notice (if applicable) or project application and project plans showing:

- location map of the project site with area of impact.
- existing and proposed conditions.
- all in-water work and the location of all proposed structures and/or fill.
- all waters of the U.S. on the project site with mean low water (MLW), mean high water (MHW), high tide line (HTL), and water depths clearly marked.
- Habitat Areas of Particular Concern (HAPCs).
- sensitive habitats mapped, including special aquatic sites (submerged aquatic vegetation, saltmarsh, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges), hard bottom or natural rocky habitat areas, and shellfish beds.
- site photographs, if available.

Your analysis of effects **should focus on impacts that reduce the quality and/or quantity of the habitat or result in conversion to a different habitat type** for all life stages of species with designated EFH within the action area. Simply stating that fish will move away or that the project

will only affect a small percentage of the overall population is not a sufficient analysis of the effects of an action on EFH. Also, since the intent of the EFH consultation is to evaluate the direct, indirect, individual and cumulative effects of a particular federal action on EFH and to identify options to avoid, minimize or offset the adverse effects of that action, is it not appropriate to conclude that an impact is minimal just because the area affected is a small percentage of the total area of EFH designated. The focus of the consultation is to reduce impacts resulting from the activities evaluated in the assessment. Similarly, a large area of distribution or range of the fish species is also not appropriate rationale for concluding the impacts of a particular project are minimal.

Use the information on the our EFH consultation website and NOAA's EFH Mapper to complete this worksheet. The mapper is a useful tool for viewing the spatial distribution of designated EFH and HAPCs. Because summer flounder HAPC (defined as: " all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH") does not have region-wide mapping, local sources and on-site surveys may be needed to identify submerged aquatic vegetation beds within the project area. The full designations for each species may be viewed as PDF links provided for each species within the Mapper, or via our website links to the New England Fishery Management Councils Omnibus Habitat Amendment 2 (Omnibus EFH Amendment), the Mid-Atlantic Fishery Management Councils FMPs (MAMFC - Fish Habitat), or the Highly Migratory Species website. Additional information on species specific life histories can be found in the EFH source documents accessible through the Habitat and Ecosystem Services Division website. This information can be useful in evaluating the effects of a proposed action. Habitat and Ecosystem Services Division (HESD) staff have also developed a technical memorandum *Impacts to Marine Fisheries Habitat from Non-fishing Activities in the Northeastern United States,* NOAA Technical Memorandum NMFS-NE-209 to assist in evaluating the effects of non-fishing activities on EFH. If you have questions, please contact the HESD staff member in your area to assist you.

Federal agencies or their non-federal designated lead agency should email the completed worksheet and necessary attachments to the HESD New England (ME, NH, MA, CT, RI) or Mid- Atlantic (NY, NJ, PA, DE, MD, VA) Branch Chief and the regional biologist listed on the Contact Regional Office Staff section on our EFH consultation website and listed below.

We will provide our EFH conservation recommendations under the MSA, and recommendations under the FWCA, as appropriate, within 30 days of receipt of a **complete** EFH assessment for an abbreviated consultation. Please ensure that the EFH worksheet is completed in full and includes detail to minimize delays in completing the consultation. If we are unable to assess potential impacts based on the information provided, we may request additional information necessary to assess the effects of the proposed action on our trust resources before we can begin a consultation. If the worksheet is not completely filled out, it may be returned to you for completion. **The EFH consultation and our response clock does not begin until we have sufficient information upon which to consult**.

If this worksheet is not used, you should include all the information required to complete this worksheet in your EFH assessment. The level of detail that you provide should be commensurate with the magnitude of impacts associated with the proposed project. You may need to prepare a more detailed EFH assessment for more substantial or complex projects to fully characterize the effects of the project and the avoidance and minimization of impacts to EFH. The format of the EFH worksheet may not be sufficient to incorporate the extent of detail required for large-scale projects, and a separate EFH assessment may be required.

Regardless of the format, you should include an analysis as outlined in this worksheet for an expanded EFH assessment, along with any additional necessary information including:

- the results of on-site inspections to evaluate habitat and site-specific effects.
- the views of recognized experts on habitat or the species that may be affected.
- a review of pertinent literature and related information.
- an analysis of alternatives that could avoid or minimize adverse effects on EFH.

For these larger scale projects, interagency coordination meetings should be scheduled to discuss the contents of the EFH consultation and the site-specific information that may be needed in order to initiate the consultation.

Please contact our Greater Atlantic Regional Fisheries Office, Protected Resources Division regarding potential impacts to marine mammals or threatened and endangered species and the appropriate consultation procedures.

HESD Contacts*

New England - ME, NH, MA, RI, CT

Chris Boelke, Branch Chief	christopher.boelke@noaa.gov
Mike Johnson - ME, NH	mike.r.johnson@noaa.gov
Kaitlyn Shaw - ME, NH, MA	kaitlyn.shaw@noaa.gov
Sabrina Pereira -RI, CT	sabrina.pereira@noaa

Mid-Atlantic - NY, NJ, PA, MD, VA

Karen Greene, Branch Chief	karen.greene@noaa.gov
Jessie Murray - NY, Northern NJ (Monmouth Co. and north)	jessie.murray@noaa.gov
Keith Hanson - NJ (Ocean Co. and south), DE and PA, Mid-Altantic wind	keith.hanson@noaa.gov
Maggie Sager - NJ (Ocean Co. and south), DE and PA	lauren.m.sager@noaa.gov
Jonathan Watson - MD, DC	jonathan.watson@noaa.gov
David O'Brien - VA	david.l.obrien@noaa.gov

Ecosystem Management (Wind/Aquaculture)

Peter Burns, Branch Chief	peter.burns@noaa.gov
Alison Verkade (NE Wind)	alison.verkade@noaa.gov
Susan Tuxbury (wind coordinator)	susan.tuxbury@noaa.gov

***Please check for the most current staffing list on our contact us page prior to submitting your assessment.**

Attachment 4: References

ACOE. (2001). *Monitoring of Boston Harbor confined aquatic disposal cells.* ERDC/CHL TR-01-27: Compiled by L.Z. Hales, Army Corps of Engineers Coastal and Hydraulics Laboratory.

ACOE. (2015). *Dredging and dredged material management.* Washington D.C.: 568 pp: Army Corps of Engineers. Engineer Manual.

Burton, W. H. (1993). *Effects of bucket dredging on water quality in the Delaware River and the potential for effects on fisheries resources.* Columbia, Maryland: Versar, Inc.

EPA. (1986). *Quality Criteria for Water.* EPA 440/5-86-001.

GARFO. (2023a). *Section 7 Effects Analysis: Turbidity in the Greater Atlantic Region*. Retrieved from NOAA Fisheries GARFO: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effects-analysis-turbidity-greater-atlantic-region

GARFO. (2023b). *Section 7 Effects Analysis: Acoustics in the Greater Atlantic Region*. Retrieved from NOAA Fisheries GARFO: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effects-analysis-acoustics-greater-atlantic-region

NOAA Fisheries. (2021, August). *Essential Fish Habitat (EFH) Assessment & Fish and Wildlife Coordination Act (FWCA) Consultation Worksheet.* Retrieved from NOAA Fisheries Greater Atlantic Regional Fisheries Office Essential Fish Habitat Assessment for Consultations: https://media.fisheries.noaa.gov/2021-08/EFHWorksheet-fillable%20form-aug%202021-final.pdf

NOAA Fisheries. (2022). *Essential Fish Habitat Mapper*. Retrieved from https://www.habitat.noaa.gov/apps/efhmapper/

NYNHP. (2022, March). *New York Natural Heritage Program (NYNHP) and InnerSpace Scientific Diving Survey of Plum Island's Subtidal Marine Habitats: Report to Save the Sound.* Retrieved from New York Natural Heritage Program, Albany, NY: https://www.nynhp.org/projects/plum-islandinventory/

Wilber, D. H., & Clarke, D. G. (2001). Biological effects of suspended sediments: A review of suspended sediment impacts on fish and shellfish with relation to dredging activities in estuaries. *North American Journal of Fisheries Management*, 21(4):855-875.

Science and Technology

October 19, 2023

NOAA Fisheries
Greater Atlantic Regional Fisheries Office
Protected Resources Division
55 Great Republic Dr
Gloucester, MA 01930

Attn: Colleen Coogan, Marine Mammal & Sea Turtle Branch Chief

SUBJECT: Technical Assistance Request, Marine Mammals Protection Act, Plum Island Animal Disease Center Undersea Cable Installation, Plum Island, New York

Dear Ms. Coogan:

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and Plum Island, NY. This letter is to request technical assistance from your office regarding potential impacts for the referenced project under the Marine Mammal Protection Act (MMPA).

Proposed Project

The Proposed Action is to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, NY, and the PIADC on Plum Island, NY (Proposed Action).

Plum Island Animal Disease Center (PIADC) has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, New York (NY) (**Attachment 1**). DHS S&T operates PIADC in cooperation with the United States Department of Agriculture (USDA). DHS S&T also owns and operates the supporting Orient Point facility at Orient Point, NY. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island.

DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the Proposed Action. Plum Island currently receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet long, with approximately 9,400 feet submerged underwater, and together provide for the island's normal electrical requirements. DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, which has exceeded the end of its 25-year lifespan, is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Without implementation of the Proposed Action, the existing cables would remain in danger of failing, which would significantly constrain PIADC's operational capabilities, including ongoing and planned closure activities, should one of the cables fail in the near-term.

Final design for the proposed cable installation is currently underway. Cable installation is anticipated to involve trenching and horizontal directional drilling (HDD)[1], or similar technology to the greatest extent practicable. At each site, the new cable would be connected in the utility vault and routed below grade and then below sea level for a length typical of similar submarine cable installations (anticipated to be approximately 600 to 1000 feet at each terminus). Between each terminus, the cable would be laid along the seafloor.

Prior to installing the cable, DHS S&T's contractor would perform marine route pre-lay and onshore surveys and would create a hydrographic map showing bottom contours and exact locations of the existing power cables and other obstructions within the proposed cable corridor. Additionally, DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur in calendar year (CY) 2024 and require approximately one year to complete, including completion of pre-installation surveys, preparation of HDD conduits, laying of the cable, cable inspection and testing, and preparation of as-built surveys. However, in-water work for the Proposed Action – bottom laying – would likely only last four to seven days. The proposed undersea cable route is included (**Attachment 2**).

Following completion of the Proposed Action, the new cable would require minimal ongoing operational and maintenance efforts. Areas temporarily disturbed during trenching and installation of the HDD conduit would revegetate passively over time.

Description of the Proposed Action Area

The action area includes the stretch of land between the existing utility vault at the Orient Point facility and the coastline of Orient Point, the seafloor corridor of Plum Gut where the cable is to be laid, and the land from the coastline of Plum Island to the Island's utility breaker vault. This area is expected to encompass all of the effects of the Proposed Action.

[1] HDD is a minimal impact method which involves using a dirigible drill head and conduit to bore between two locations such that both direction and depth can be adjusted (U.S. Fish and Wildlife, 2023)

The offshore habitats within the action area are unique due to the combination of deep-water habitats and shoals, which create a productive environment that supports a variety of marine life, including valuable sport fishes. Plum Gut has a large range of water depths, though the majority of the action area is 30-50 ft deep. Temperatures in Long Island Sound range from 37 degrees Fahrenheit (°F) in the winter to 69°F in the summer.

A recent survey of Plum Island's subtidal marine habitats, parts of which were completed on the southwest coast of the island in the vicinity of the Proposed Action area, found seafloor substrate in this area to be mostly small (<10 centimeter [cm]) to medium sized rocks (>10 cm, <1 meter [m]). Prominent vegetation in this area includes eelgrass in shallower habitats and brown and red algae in deeper habitats (NYNHP, 2022).

Species Protected Under the Marine Mammal Protection Act (MMPA)

Long Island Sound and the area around Orient Point and Plum Island are home to marine mammals protected under the MMPA. Notably, in 2019 the State of New York designated the waters surrounding Plum Island from the mean high-water line seaward to a distance of 1,500 feet a Marine Mammal and Sea Turtle Protection Area (NYNHP, 2022). The southeast shore of Plum Island is one of the largest winter haul-out sites in New York State. Harbor seals (*Phoca vitulina*) are most observed, while small numbers of gray seals (*Halichoerus grypus*) also occur (NYNHP, 2016). The seals are active year-round, but typically forage at sea, though they do "haul-out" in some locations in winter to give birth, nurse pups, regulate their body temperature, or simply interact with other seals (NOAA Fisheries, 2022a; NOAA Fisheries, 2022b). The Proposed Action area is not commonly used as a seal haul-out site. As they are a mobile species and would likely avoid foraging or swimming in or near disturbed areas, the Proposed Action is not expected to impact marine mammals.

Possible Stressors in Relation to Marine Mammals

This section describes stressors from the Proposed Action and the possible effects of the Proposed Action on MMPA species in the action area.

Sound

Possible sources of noise that could impact marine mammals may come from HDD machinery or vessels used during installation. It is likely that HDD would be used for the sea-to-shore transition area, and any noise generating equipment associated with HDD would be onshore. Noise from vessels may include noise created by operation of a cable-laying barge (CLB) and support craft. The use of a CLB and support craft would cause a small, localized (Plum Gut), temporary increase in vessel traffic. During installation of the cable, the CLB would likely move slowly (<6 knots or 3 m/s), meaning its engine and propeller would generate less noise than other vessels. The level of noise exuded by a CLB (depending on its length it could be the largest of the vessels that would be in the area, though it may be smaller than the ferries that cross regularly) or similar vessel is typically 155 to 170 dB. This would mean an increase above the ambient baseline for the duration of the cable laying and at intermittent intervals.

Marine mammals are highly mobile and unlikely to stay in a stationary position or within a given radius of a vessel or other noise source for 24 hours; therefore, any resulting injury zones should be treated as a worst-case scenario. Acoustic thresholds for whales in the action area (i.e., low-frequency cetaceans) would not be met for injury or threshold shifts (injury: 237 dB; temporary or permanent shifts: 179 dB), but the behavioral threshold could be met (160 dB). However, as whales are mobile and could easily avoid the

area, impacts are unlikely to occur (NMFS, 2018). Also, noise from the CLB would not appreciably add to baseline noise created by other vessels in the area (ferries and recreational fishing vessels); it is therefore unlikely there would be a measurable disturbance to behavior.

When this project is completed, ambient noise levels would return to baseline levels. There is also a significant zone of passage surrounding vessels so that species could easily avoid vessel noise. Given that the time dedicated to laying the cable would be short and the species that would be present are transient, the effects of underwater noise on marine mammals would be too small to be meaningfully measured or detected and would be insignificant.

Habitat Structure and Disturbance

In-water installation of the new utility cable may create minor ground disturbance from the egress of the cable into the water, and then from bottom laying the cable through Plum Gut. The new cable would be installed between, or immediately adjacent to, the existing M1 and M2 cables. The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. Impacts to the water column from descending cable would be minor and temporary. The remaining length of cable under Plum Gut would be abandoned in place, identical to how previous cable replacement projects have been conducted in the area. This would mean that permanent disturbance to previously disturbed areas would be minimal and therefore have insignificant impacts on marine mammals. None of the marine mammals are known to utilize benthic habitat that may be impacted; thus, any disturbance would be unlikely to impact those species.

Water Quality

Due to the nature of the installation, both the egress from HDD and cable laying, a temporary increase in suspended sediment in the action area may occur, increasing turbidity through the displacement of substrate. Any sediment plume would likely be composed of sand, with little silt, from the ocean floor. The small resulting sediment plume is expected to settle out of the water column within a few hours. These activities are expected to produce total suspended solids (TSS) levels below those shown to have adverse effects on fish and benthic communities, and when added to baseline conditions would be too small to be meaningfully measured or detected.

HDD usually involves the use of a drilling slurry, which is normally bentonite and water. While bentonite is nontoxic, if released into waterbodies, a process normally referred to as inadvertent returns, it has the potential to adversely impact fish, fish eggs, aquatic plants, and benthic invertebrates. The Proposed Action would have an Inadvertent Return Plan to minimize any impacts on water quality. Any discharges associated with authorized activities would meet all applicable water quality standards pursuant to the Clean Water Act and its implementing regulations, the Section 404(b)(a) guidelines, which are in place to prevent acute or chronic toxic impacts to aquatic life. As there would be no measurable or detectable permanent change in water quality from the baseline levels, the impacts of HDD on water quality are anticipated to have insignificant impacts to marine mammals with the zone of passage not likely to be impacted.

No other water quality parameters are expected to be impacted by the Proposed Action, and all impacts are anticipated to be within the immediate area of the Proposed Action. The probability of marine mammals being impacted by any temporary shifts in water quality is extremely unlikely because of the short time of the disturbance and the large water body in which the Proposed Action would take place.

Prey Quantity/Quality

The proposed action is unlikely to result in reductions in the quality or quantity of prey currently available. Actions from HDD and cable laying may increase turbidity and temporary disturbance of benthic habitat, but as marine mammals eat a variety of prey and usually forage from the water column, this would not have direct or indirect impacts on them.

Vessels

A source of anthropogenic mortality and injury for marine mammals is boat hull or propeller strikes that are a result of vessel collisions with project vessels coming and going or doing the project work. Encouraging responsible vessel practices, following NOAA guidelines for vessel avoidance measures (NOAA Fisheries, 2021), and understanding the distribution of marine mammals are key components to reducing the risk of vessel strikes. DHS S&T will heed all regulations and guidelines regarding safe operation of vessels around marine animals and other protected species. There is currently no plan to have additional observers on deck to watch for potential species in the area during the Proposed Action. However, if a marine mammal is observed in the vicinity of our vessel, we will travel at a slow, safe speed (i.e., less than 10 knots) when in the proximity and/or path of the whale or turtle and leave the area if possible.

Proposed Action would not permanently alter vessel traffic in the action area, though an increase in vessel traffic related to the Proposed Action, however negligible, could increase the risk of interactions between marine mammals and vessels in the action area, in addition to baseline conditions. Vessels would only be those laying cable between Orient Point and Plum Island. The use of a CLB and support craft would cause a small, localized, temporary increase in vessel traffic lasting a duration of four to seven days. The area of Plum Gut, where the Proposed Action would occur, is commonly trafficked by recreational boaters and the Plum Island and Cross Sound Ferries. Vessel traffic associated with the Proposed Action would be negligible in context of baseline vessel traffic in the area. As such, any increased risk of a vessel strike caused by the project would be too small to be meaningfully measured or detected.

Conclusions

Since marine mammal species would likely avoid temporary construction areas/cable laying, and risks associated with vessel strikes and noise are discountable, we have determined that Plum Island Animal Disease Center Undersea Cable Installation would not impact marine mammals under NOAA Fisheries' jurisdiction. There would also be no effect on designated marine mammal critical habitat, as none is present in the action area. We certify that we have used the best scientific and commercial data available to complete this analysis. At this time, we do not anticipate the need to submit for an Incidental Take authorization as MMPA protected species are not anticipated to be impacted by the Proposed Action. However, should additional measures be considered to avoid or minimize impacts, we request your technical assistance on this matter. For additional information, please contact Benjamin Obenland at benjamin.obenland@aecom.com. Email responses are preferred, although letter responses may be submitted to *Benjamin Obenland, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876.*

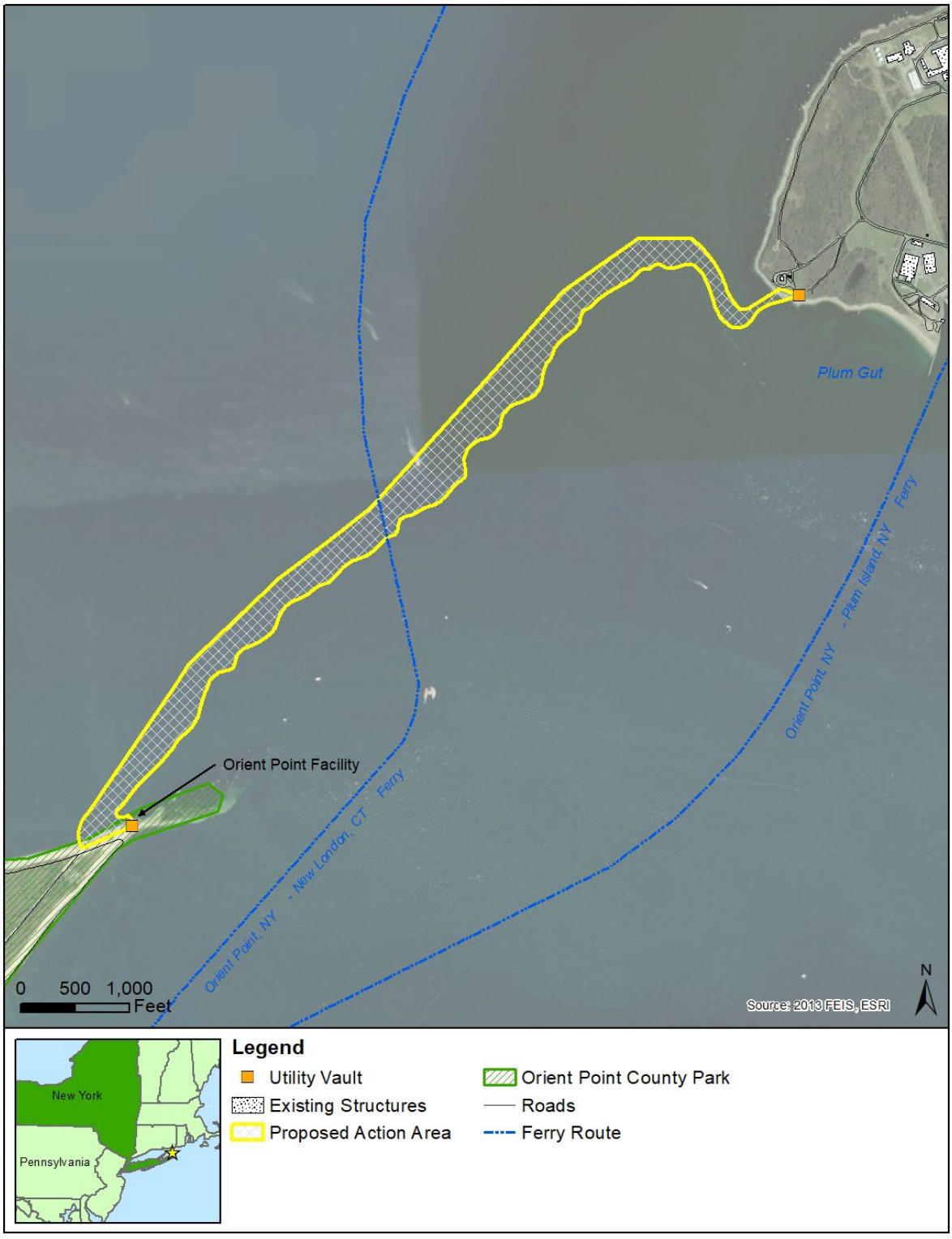
Respectfully,

John M. Searing, PE, PMP Deputy
Center Director
PICS Program Director
Plum Island Animal Disease Center
Office of National Laboratories
Science and Technology Directorate

Attachments:

1. Proposed Action Location
2. Proposed Undersea Cable Route
3. References

Attachment 1: Proposed Action Location



Attachment 2: Proposed Undersea Cable Route

Attachment 3: References

NOAA Fisheries. (2022a). *Harbor Seal*. Retrieved from NOAA Fisheries Species Directory: https://www.fisheries.noaa.gov/species/harbor-seal

NOAA Fisheries. (2022b). *Gray Seal*. Retrieved from NOAA Fisheries Species Directory: https://www.fisheries.noaa.gov/species/gray-seal

NYNHP. (2016). *Plum Island Biodiversity Inventory.* Retrieved September 19, 2023, from https://www.nynhp.org/documents/140/plum_island_inventory.pdf

NYNHP. (2022). *Survey of Plum Island's Subtidal Marine Habitats.* Retrieved September 22, 2023, from https://www.nynhp.org/documents/177/Plum_Island_Marine_Subtidal_Habitats_March_2022.pdf

U.S. Fish and Wildlife. (2023). *The Horizontal Directional Drilling Process*. Retrieved August 30, 2023, from https://www.fws.gov/sites/default/files/documents/NiSourceHCPfinalAppndxJ_HDD.pdf

Science and Technology

December 6, 2023

NOAA Fisheries
Greater Atlantic Regional Fisheries Office
Protected Resources Division
55 Great Republic Dr
Gloucester, MA 01930

Attn: Colleen Coogan, Marine Mammal & Sea Turtle Branch Chief

SUBJECT: Technical Assistance Request, Marine Mammals Protection Act, Plum Island Animal Disease Center Undersea Cable Installation, Plum Island, New York

Dear Ms. Coogan:

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and Plum Island, NY. This letter requests technical assistance from your office regarding potential impacts for the referenced project under the Marine Mammal Protection Act (MMPA).

DHS S&T previously submitted initial consultation to your office on October 19, 2023, with a determination of no impact to marine mammals. Since that date, however, the proposed construction methodologies have been revised. Specifically, DHS S&T now anticipates cable installation would not include horizontal directional drilling (HDD); rather, the cable would be trenched from the cable vault to several hundred feet offshore. Additionally, we have noted that about 0.5 acre would be used for staging equipment at each trenching location. These changes are discussed in greater detail below.

Proposed Project

The Proposed Action is to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, NY, and the PIADC on Plum Island, NY (Proposed Action).

Plum Island Animal Disease Center (PIADC) has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, NY (**Attachment 1**). DHS S&T operates PIADC in cooperation with the United States Department of Agriculture (USDA). DHS S&T also owns and operates the supporting Orient Point facility at Orient Point, NY. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, and ferry docking facilities; and a 0.5-acre parcel of land within Orient

Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island.

DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the Proposed Action. Plum Island currently receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable supports 13.2 kilovolt service, measures up to approximately 11,000 feet long, with approximately 10,000 feet submerged underwater, and together provide for the island's normal electrical requirements. DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, which has exceeded its 25-year lifespan, is degrading to such an extent that it is at risk of failing. Without implementation of the Proposed Action, the existing cables would remain in danger of failing, which would significantly constrain PIADC's operational capabilities, including ongoing and planned closure activities, should one of the cables fail in the near-term.

Final design for the proposed cable installation is currently underway. The new cable would support 13.2 kilovolt service, identical to the existing cables, and would be connected within each cable vault and entrenched along the beach (up to approximately 500 feet at Orient Point and 200 feet at Plum Island), through the existing shoreline riprap, and into the water (laid on the seafloor). Existing soil, sand, and riprap would be temporarily excavated and stored on the shoreline adjacent to the trench line as the trench is constructed. Following cable installation, the excavated soil and sand would be used to backfill the trench and the existing riprap would be replaced above the trench.

The new cable is expected to be trenched to a depth similar to the existing cables (approximately 30 inches) using a small excavator (e.g., Bobcat). In-water trenching is also anticipated and could occur up to several hundred feet along the seafloor before the bottom lay portion of the cable installation begins. DHS S&T anticipates using low impact in-water trenching methods, such as jetting or ploughing to minimize adverse impacts to nearshore areas to the extent practicable; however, traditional trenching methods utilizing a barge and excavator/hydraulic dredge may be required.

Approximately 100 feet of Cast Iron Cable Protectors (CICP) would also be installed around the cable at each landing point during trenching. A portion of the total CICP length would be installed around the length of cable that is entrenched within the surf zone, with the remainder of the CICP length continuing along the length of cable that would be bottom laid along the surface of the seafloor.

Approximately 0.5 acre on Plum Island and approximately 0.5 acre at Orient Point would be used to stage equipment at each respective cable terminus location. No land disturbance is planned at these areas except for the trenches between the cable vaults and the shoreline. Trenching work would be anticipated to take four to six weeks to complete at each site.

From where the cable exits the trench, along the seafloor of Plum Gut, a cable-laying barge (CLB), assisted by tugboats and other support craft, would lay the remaining cable along the seafloor. The use of a CLB and support craft would cause a small, localized (Plum Gut), temporary increase in vessel traffic for up to seven days. During installation of the cable, the CLB would likely move slowly (<6 knots or 3 m/s) on its path and not interfere with regular ferry trips. Home port locations for the CLB and support vessels are not known at this time.

The new cable would be approximately 3.5 inches in diameter and weigh approximately 6.2 pounds per linear foot in saltwater (approximately 10.3 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. Any potential lateral movement of the cable would be greatly limited due to the rugged and rocky seafloor landscape and changes in depth.

Prior to installing the cable, DHS S&T's contractor would perform marine route pre-lay and onshore surveys and would create a hydrographic map showing bottom contours and exact locations of the existing power cables and other obstructions within the proposed cable corridor. The pre-lay and onshore surveys are not anticipated to include sediment sampling but may include the use of sonar within an approximately 300-foot-wide corridor. Additionally, DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur either in 2024 or 2025, between the months of September and March. No work would occur between April 1 and September 1. Work would require approximately one year to complete, including completion of pre-installation surveys, installation and laying of the cable, cable inspection and testing, and preparation of as-built surveys. The bottom laying portion of the Proposed Action would likely only last four to seven days. The proposed undersea cable route is included (**Attachment 2**).

Following completion of the Proposed Action, the new cable would require minimal ongoing operational and maintenance efforts. Areas temporarily disturbed during trenching would revegetate passively over time.

Description of the Proposed Action Area

The action area includes the stretch of land between the existing cable vault at the Orient Point facility and the coastline of Orient Point, the seafloor corridor of Plum Gut where the cable is to be laid, and the land from the coastline of Plum Island to the Island's utility breaker vault. This area is expected to encompass all of the effects of the Proposed Action.

The offshore habitats within the action area are unique due to the combination of deep-water habitats and shoals, which create a productive environment that supports a variety of marine life, including valuable sport fishes. Plum Gut has a large range of water depths, though the majority of the action area is 30-50 ft deep. Temperatures in Long Island Sound range from 37 degrees Fahrenheit (°F) in the winter to 69°F in the summer.

A 2021 survey of Plum Island's subtidal marine habitats, parts of which were completed on the southwest coast of the island in the vicinity of the Proposed Action area, found seafloor substrate in this area to be mostly small (<10 centimeter [cm]) to medium sized rocks (>10 cm, <1 meter [m]). Prominent vegetation in this area includes eelgrass in shallower habitats and brown and red algae in deeper habitats (NYNHP, 2022).

Species Protected Under the Marine Mammal Protection Act (MMPA)

Long Island Sound and the area around Orient Point and Plum Island are home to marine mammals protected under the MMPA. Notably, in 2019 the State of New York designated the waters surrounding Plum Island from the mean high-water line seaward to a distance of 1,500 feet a Marine Mammal and Sea Turtle Protection Area (NYNHP, 2022). The southeast shore of Plum Island is one of the largest winter haul-out sites in New York State. Harbor seals (*Phoca vitulina*) are most observed, while small numbers of gray seals (*Halichoerus grypus*) also occur (NYNHP, 2016). The seals are active year-round, but typically forage at sea, though they do "haul-out" in some locations in winter to give birth, nurse pups, regulate their body temperature, or simply interact with other seals (NOAA Fisheries, 2022a; NOAA Fisheries, 2022b). The Proposed Action area is not commonly used as a seal haul-out site. As they are a mobile species and would likely avoid foraging or swimming in or near disturbed areas, the Proposed Action is not expected to impact marine mammals.

Possible Stressors in Relation to Marine Mammals

This section describes stressors from the Proposed Action and the possible effects of the Proposed Action on MMPA species in the action area.

Sound

Possible sources of noise that could impact marine mammals may come from trenching machinery or vessels used during installation. Noise generating equipment associated with trenching would be mostly onshore or above water, although equipment used to trench the short distance from the shoreline along the seafloor would generate some noise underwater. Noise from trenching would be limited to the duration of cable installation (i.e., four to six weeks, although underwater noise would not be generated during this entire time period, and would cease once installation is complete. Due to the proximity of in-water trenching to the shoreline and relatively shallow depths, there is limited habitat for marine mammals, and it is unlikely that any marine mammals would be significantly disturbed.

Noise from vessels may include noise created by operation of a CLB and support craft. The use of a CLB and support craft would cause a small, localized (Plum Gut), temporary increase in vessel traffic. During installation of the cable, the CLB would likely move slowly (<6 knots or 3 m/s), meaning its engine and propeller would generate less noise than other vessels. The level of noise exuded by a CLB (depending on its length it could be the largest of the vessels that would be in the area, though it may be smaller than the ferries that cross regularly) or similar vessel is typically 155 to 170 dB. This would mean an increase above the ambient baseline for the duration of the cable laying and at intermittent intervals.

Marine mammals are highly mobile and unlikely to stay in a stationary position or within a given radius of a vessel or other noise source for 24 hours. Acoustic thresholds for whales in the action area (i.e., low-frequency cetaceans) would not be met for injury or threshold shifts (injury: 237 dB; temporary or permanent shifts: 179 dB), but the behavioral threshold could be met (160 dB). However, as whales are mobile and could easily avoid the area, impacts are unlikely to occur (NMFS, 2018). Also, noise from the CLB would not appreciably add to baseline noise created by other vessels in the area (ferries and recreational fishing vessels); it is therefore unlikely there would be a measurable disturbance to behavior.

When this project is completed, ambient noise levels would return to baseline levels. There is also a significant zone of passage surrounding vessels so that species could easily avoid vessel noise. Given that the time dedicated to laying the cable would be short and the species that would be present are transient, the effects of underwater noise on marine mammals would be too small to be meaningfully measured or detected and would be insignificant.

Habitat Structure and Disturbance

In-water installation of the new utility cable may create ground disturbance from trenching, and then from bottom laying the cable through Plum Gut. The new cable would be installed between, or immediately adjacent to, the existing M1 and M2 cables. The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. Impacts to the water column from descending cable would be minor and temporary. The remaining length of cable under Plum Gut would be abandoned in place, identical to how previous cable replacement projects have been conducted in the area. This would mean that permanent disturbance to previously disturbed areas would be minimal and therefore have insignificant impacts on marine mammals. None of the marine mammals are known to utilize benthic habitat that may be impacted; thus, any disturbance would be unlikely to impact those species.

Water Quality

Due to the nature of the installation, both trenching and cable laying, a temporary increase in suspended sediment in the action area may occur, increasing turbidity through the displacement of substrate. Any sediment plume would likely be composed of sand, with little silt, from the ocean floor. The small resulting sediment plume is expected to settle out of the water column within a few hours. These activities are expected to produce total suspended solids (TSS) levels below those shown to have adverse effects on fish and benthic communities, and when added to baseline conditions would be too small to be meaningfully measured or detected.

As there would be no measurable or detectable permanent change in water quality from the baseline levels, the impacts of trenching on water quality are anticipated to have insignificant impacts to marine mammals with the zone of passage not likely to be impacted.

No other water quality parameters are expected to be impacted by the Proposed Action, and all impacts are anticipated to be within the immediate area of the Proposed Action. The probability of marine mammals being impacted by any temporary shifts in water quality is extremely unlikely because of the short time of the disturbance and the large water body in which the Proposed Action would take place.

Prey Quantity/Quality

The proposed action is unlikely to result in reductions in the quality or quantity of prey currently available. Actions from trenching and cable laying may increase turbidity and temporary disturbance of benthic habitat, but as marine mammals eat a variety of prey and usually forage from the water column, this would not have direct or indirect impacts on them.

Vessels

A source of anthropogenic mortality and injury for marine mammals is boat hull or propeller strikes that are a result of vessel collisions with project vessels coming and going or doing the project work. Encouraging responsible vessel practices, following NOAA guidelines

for vessel avoidance measures (NOAA Fisheries, 2021), and understanding the distribution of marine mammals are key components to reducing the risk of vessel strikes. DHS S&T will heed all regulations and guidelines regarding safe operation of vessels around marine animals and other protected species. Vessel operators and crew would monitor the area for presence of marine mammals. There is currently no plan to have additional observers on deck to watch for potential species in the area during the Proposed Action. However, if a marine mammal is observed in the vicinity of the vessel, the vessel would travel at a slow, safe speed (i.e., less than 10 knots) when in the proximity and/or path of the whale or turtle and leave the area if possible.

The Proposed Action would not permanently alter vessel traffic in the action area, although an increase in vessel traffic related to the Proposed Action, however negligible, could increase the risk of interactions between marine mammals and vessels in the action area, in addition to baseline conditions. Vessels would only be those laying cable between Orient Point and Plum Island. The use of a CLB and support craft would cause a small, localized, temporary increase in vessel traffic lasting a duration of four to seven days. The area of Plum Gut, where the Proposed Action would occur, is commonly trafficked by recreational boaters and the Plum Island and Cross Sound Ferries. Vessel traffic associated with the Proposed Action would be negligible in context of baseline vessel traffic in the area. As such, any increased risk of a vessel strike caused by the project would be too small to be meaningfully measured or detected.

Conclusions

Since marine mammal species would likely avoid temporary construction areas/cable laying, and risks associated with vessel strikes and noise are discountable, we have determined that Plum Island Animal Disease Center Undersea Cable Installation would not impact marine mammals under NOAA Fisheries' jurisdiction. There would also be no effect on designated marine mammal critical habitat, as none is present in the action area. We certify that we have used the best scientific and commercial data available to complete this analysis. At this time, we do not anticipate the need to submit an Incidental Take authorization as MMPA protected species are not anticipated to be impacted by the Proposed Action. However, should additional measures be considered to avoid or minimize impacts, we request your technical assistance on this matter. For additional information, please contact Natalie Kisak at natalie.kisak@aecom.com. Email responses are preferred, although letter responses may be submitted to *Natalie Kisak, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876.*

Respectfully,

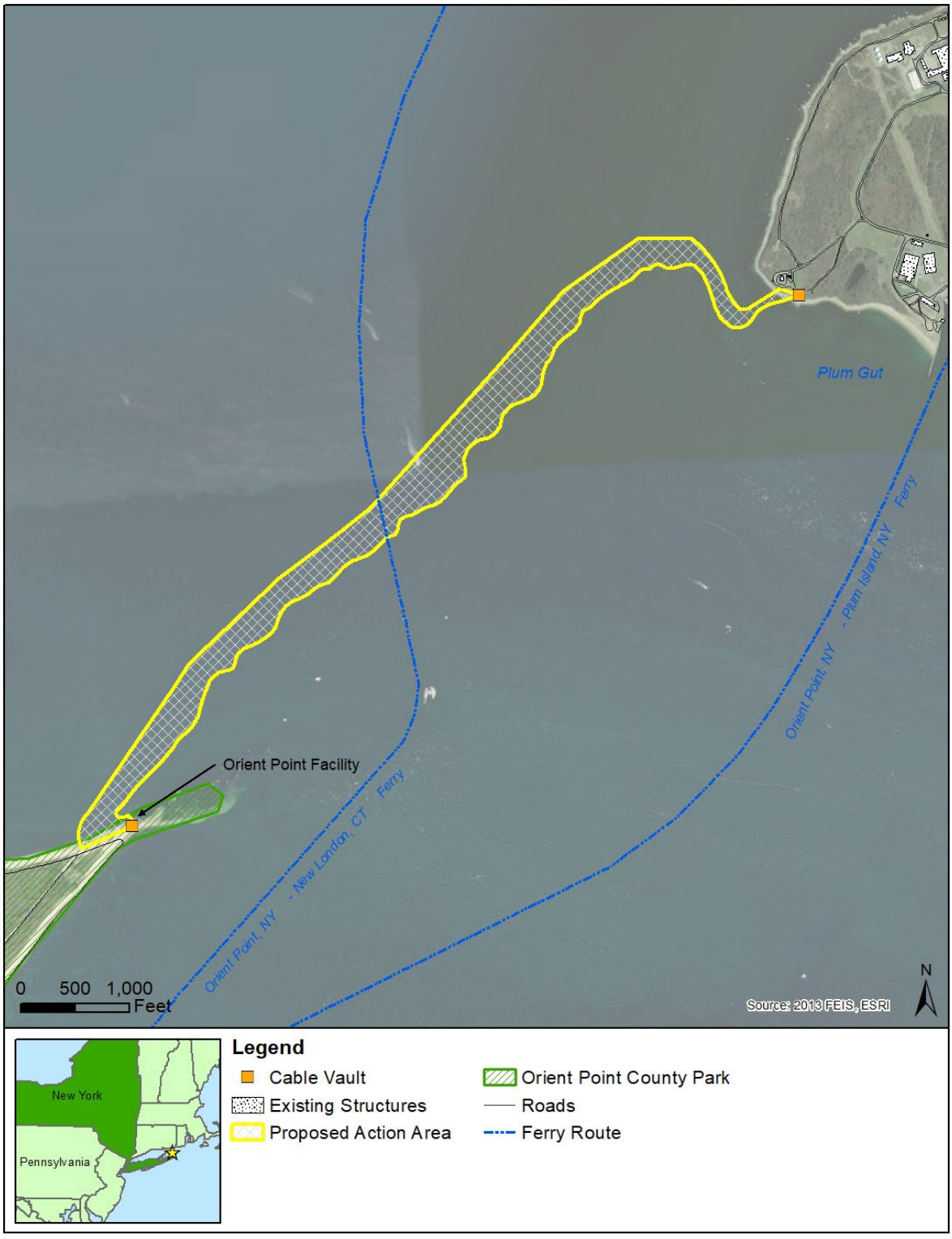
JOHN M SEARING

Digitally signed by JOHN M SEARING
Date: 2023.12.06 19:09:39 -05'00'

John M. Searing, PE, PMP
Deputy Center Director
PICS Program Director
Plum Island Animal Disease Center
Office of National Laboratories
Science and Technology Directorate

Attachments:
1. Proposed Action Location
2. Proposed Undersea Cable Route
3. References

Attachment 1: Proposed Action Location



Attachment 2: Proposed Undersea Cable Route

EFH Assessment Worksheet rev. August 2021

Please read and follow all of the directions provided when filling out this form.

1. General Project Information

Date Submitted: 10/11/2023

Project/Application Number:

Project Name: Plum Island Animal Disease Center Undersea Cable Installation

Project Sponsor/Applicant: Department of Homeland Security Science and Technology Directorate (DHS S&T)

Federal Action Agency (or state agency if the federal agency has provided written notice delegating the authority[1]): DHS S&T

Fast-41: Yes ☐ No ☑

Action Agency Contact Name: Benjamin Obenland (AECOM)

Contact Phone: 240-529-3224 Contact Email: benjamin.obenland@aecom.com

Address, City/Town, State:

12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876

2. Project Description

[2]Latitude: 41°10'23.23" N Longitude: 72°12'39.42" W

Body of Water (e.g., HUC 6 name): Long Island, 020302 (Plum Gut)

Project Purpose:

DHS S&T requires continued electrical and communication capabilities on Plum Island throughout the duration of planned PIADC closure activities (i.e., five to seven years). DHS S&T conducted an inspection of the undersea cables serving Plum Island in March 2022. The inspection determined that the oldest of the two existing cables, M1, which has reached the end of its planned lifespan, is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Therefore, the purpose of the Proposed Action is to replace an existing cable with a new undersea cable to supply Plum Island with mission-critical electrical and communication capabilities. The Proposed Action is needed to prevent any adverse effects that a potential loss of electrical or communication services may have on required operations at PIADC.

Project Description:

Installation of the new utility cable would entail connecting the cable to the existing utility vaults located on Orient Point and Plum Island, running the cable underground to well below the water line, and then bottom laying the cable through Plum Gut. The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables. The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area.

Final design for the proposed cable installation is currently underway. Cable installation is anticipated to involve trenching and horizontal directional drilling (HDD). At each site, the new cable would be connected in the utility vault and trenched up to approximately 500 feet to the HDD conduit at Orient Point and 200 feet at Plum Island. At that location on the beach, an HDD pit would be installd, from which the cable would be drilled underground to an anticipated depth of 30-50 feet below sea level and a length of approximately 400 feet from each shoreline (800 feet total), to exit underwate.

From the end of the HDD conduit a cable-laying barge (CLB), assisted by tugboats and other support craft, would install the remaining approximately 10,200 feet of cable between the HDD terminus points off the shore of Orient Point to Plum Island. The new cable would be approximately 3.9 inches in diameter and weigh 8.8 pounds per linear foot in saltwater (approximately 14 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. Any potential lateral movement of the cable would be greatly limited due to the rugged and rocky seafloor landscape and changes in depth. The CLB portion of the cable installation is anticipated to require a duration of four to seven days.

Anticipated Duration of In-Water Work including planned Start/End Dates and any seasonal restrictions proposed to be included in the schedule:

The Proposed Action is anticipated to occur in calendar year (CY) 2024. The CLB portion of the cable installation is anticipated to require a duration of four to seven days.

[1] A federal agency may designate a non-Federal representative to conduct an EFH consultation by giving written notice of such designation to NMFS. If a non-federal representative is used, the Federal action agency remains ultimately responsible for compliance with sections 305(b)(2) and 305(b)(4)(B) of the Magnuson-Stevens Act. [2] Provide the decimal, or the degrees, minutes, seconds values for latitude and longitude using the World Geodetic System 1984 (WGS84) and negative degree values where applicable.

3. Site Description

EFH includes the biological, chemical, and physical components of the habitat. This includes the substrate and associated biological resources (e.g., benthic organisms, submerged aquatic vegetation, shellfish beds, salt marsh wetlands), the water column, and prey species.

Is the project in designated EFH[3]?	☑ Yes	☐ No
Is the project in designated HAPC?	☑ Yes	☐ No
Does the project contain any Special Aquatic Sites[4]?	☐ Yes	☑ No
Is this coordination under FWCA only?	☐ Yes	☑ No
Total area of impact to EFH (indicate sq ft or acres):	3,400 sq ft	
Total area of impact to HAPC (indicate sq ft or acres):	3,400 sq ft	

Current range of water depths at MLW	Salinity range (PPT):	Water temperature range (°F):
20-60 m	23-33	37(winter)-69(summer)

[3]Use the tables in Sections 5 and 6 to list species within designated EFH or the type of designated HAPC present. See the worksheet instructions to find out where EFH and HAPC designations can be found. [4] Special aquatic sites (SAS) are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. They include sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, and riffle and pool complexes (40 CFR Subpart E). If the project area contains SAS (i.e. sanctuaries and refuges, wetlands, mudflats, vegetated shallows/SAV, coral reefs, and/or riffle and pool complexes, describe the SAS, species or habitat present, and area of impact.

4. Habitat Types

In the table below, select the location and type(s) for each habitat your project overlaps. For each habitat type selected, indicate the total area of expected impacts, then what portion of the total is expected to be temporary (less than 12 months) and what portion is expected to be permanent (habitat conversion), and if the portion of temporary impacts will be actively restored to pre- construction conditions by the project proponent or not. A project may overlap with multiple habitat types.

Habitat Location	Habitat Type	Total impacts (lf/ft²/ft³)	Temporary impacts (lf/ft²/ft³)	Permanent impacts (lf/ft²/ft³)	Restored to pre-existing conditions?*
Marine	Substrate (sand/shell)				Select one
Marine	Substrate (cobble/gravel)3				Select one
Marine	Rocky (coral/rock)*				Select one
Marine	Submerged aquatic vegetati				Select one
Marine	Shore (rock)				Select one
Marine	Water column			0	Select one
Select one	Select One				Select one
Select one	Select One				Select one

*Restored to pre-existing conditions means that as part of the project, the temporary impacts will be actively restored,such as restoring the project elevations to pre-existing conditions and replanting. It does not include natural restoration or compensatory mitigation.

Site-specific benthic habitat data is unavailable. DHS S&T understands the bottom of Plum Gut to consist primarily of rocks between 10 cm and 1 m in size, but cannot identify how many linear feet of the cable would be bottom-laid in each specific type of benthic habitat.

Submerged Aquatic Vegetation (SAV) Present?:

Yes: ☑ No: ☐

If the project area contains SAV, or has historically contained SAV, list SAV species and provide survey results including plans showing its location, years present and densities if available. Refer to Section 12 below to determine if local SAV mapping resources are available for your project area.

Summer Flounder SAV. Eelgrass meadows are well established in relatively shallow, nearer shore areas. However, it is anticipated that the cable would emerge from HDD about 400 feet off each shoreline.

Sediment Characteristics:

The level of detail required is dependent on your project – e.g., a grain size analysis may be necessary for dredging. In addition, if the project area contains rocky/hard bottom habitat [6](pebble, cobble, boulder, bedrock outcrop/ledge) identified as Rocky (coral/rock), Substrate (cobble/gravel), or Substrate (rock) above, describe the composition of the habitat using the following table.

Substrate Type* (grain size)	Present at Site? (Y/N)	Approximate Percentage of Total Substrate on Site
Silt/Mud (<0.063mm)	No	unknown
Sand (0.063-2mm)	Yes	unknown
Rocky: Pebble/Gravel /Cobble(2-256mm)**	Yes	unknown
Rocky: Boulder (256-4096mm)**	Yes	unknown
Rocky: Coral	No	unknown
Bedrock**	No	unknown

[6]The type(s) of rocky habitat will help you determine if the area is cod HAPC.

* Grain sizes are based on Wentworth grain size classification scale for granules, pebbles, cobbles, and boulders.

** Sediment samples with a content of 10% or more of pebble-gravel-cobble and/or boulder in the top layer (6-12 inches) should be delineated and material with epifauna/macroalgae should be differentiated from bare pebble-gravel-cobble and boulder.

If no grain size analysis has been conducted, please provide a general description of the composition of the sediment. If available please attach images of the substrate.

A survey of Plum Island's subtidal marine habitats was conducted by the New York Natural Heritage Program (NYNHP) for Save the Sound, published in March 2022. The report investigated subtidal nearshore areas in the vicinity of Plum Island. Investigations off the southwest coast of the island, in vicinity of the Proposed Action area, found seafloor substrate in this area to be mostly small (<10 cm) to medium sized rocks (>10 cm, <1m).

Diadromous Fish (migratory or spawning habitat- identify species under Section 10 below):

Yes: ☑ No: ☐

5. EFH and HAPC Designations

Within the Greater Atlantic Region, EFH has been designated by the New England, Mid-Atlantic, and South Atlantic Fisheries Management Councils and NOAA Fisheries. Use the EFH mapper to determine if EFH may be present in the project area and enter all species and life stages that have designated EFH. Optionally, you may review the EFH text descriptions linked to each species in the EFH mapper and use them to determine if the described habitat is present at your project site. If the habitat characteristics described in the text descriptions do not exist at your site, you may be able to exclude some species or life stages from additional consideration. For example, the water depths at your site are shallower that those described in the text description for a particular species or life stage. We recommend this for larger projects to help you determine what your impacts are.

Note: Full list for the project area is included in Attachment 2. (18 species total - not listed here Bluefish, Little Skate, Pollock, Red Hake, Scup, Summer Flounder, Winter Skate)

) **Species Present**	**EFH is designated/mapped for:**				**What is the source of the EFH information included?**
	EFH: eggs	**EFH: larvae**	**EFH: juvenile**	**EFH: adults/ spawning adults**	
albacore tuna	☐	☐	☑	☐	EFH Mapper c
Atlantic herring	☐	☐	☑	☑	EFH Mapper c
long-finned squid	☑	☐	☑	☑	EFH Mapper c
sand tiger shark	☐	☑	☑	☐	EFH Mapper c
skipjack tuna	☐	☐	☐	☑	EFH Mapper c
smoothhound shark (Atlantic stock)	☑	☑	☑	☑	EFH Mapper c
windowpane flounder	☑	☑	☑	☑	EFH Mapper c
winter flounder	☑	☑	☑	☑	EFH Mapper c
Atlantic butterfish	☑	☑	☑	☑	EFH Mapper c
Atlantic mackerel	☑	☑	☑	☑	EFH Mapper c
Black sea bass	☐	☐	☑	☐	EFH Mapper c

6. Habitat Areas of Particular Concern (HAPCs)

HAPCs are subsets of EFH that are important for long-term productivity of federally managed species. HAPCs merit special consideration based their ecological function (current or historic), sensitivity to human-induced degradation, stresses from development, and/or rarity of the habitat. While many HAPC designations have geographic boundaries, there are also habitat specific HAPC designations for certain species, see note below. Use the EFH mapper to identify HAPCs within your project area. Select all that apply.

☑	Summer flounder: SAV[7]	☐	Alvin & Atlantis Canyons
☐	Sandbar shark	☐	Baltimore Canyon
☐	Sand Tiger Shark (Delaware Bay)	☐	Bear Seamount
☐	Sand Tiger Shark (Plymouth-Duxbury-Kingston Bay)	☐	Heezen Canyon
☐	Inshore 20m Juvenile Cod[8]	☐	Hudson Canyon
☐	Great South Channel Juvenile Cod	☐	Hydrographer Canyon
☐	Northern Edge Juvenile Cod	☐	Jeffreys & Stellwagen
☐	Lydonia Canyon	☐	Lydonia, Gilbert & Oceanographer Canyons
☐	Norfolk Canyon (Mid-Atlantic)	☐	Norfolk Canyon (New England)
☐	Oceanographer Canyon	☐	Retriever Seamount
☐	Veatch Canyon (Mid-Atlantic)	☐	Toms, Middle Toms & Hendrickson Canyons
☐	Veatch Canyon (New England)	☐	Washington Canyon
☐	Cashes Ledge	☐	Wilmington Canyon
☐	**Atlantic Salmon**		

[7] Summer flounder HAPC is defined as all native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH. In locations where native species have been eliminated from an area, then exotic species are included. Use local information to determine the locations of HAPC.

[8] The purpose of this HAPC is to recognize the importance of inshore areas to juvenile Atlantic cod. The coastal areas of the Gulf of Maine and Southern New England contain structurally complex rocky-bottom habitat that supports a wide variety of emergent epifauna and benthic invertebrates. Although this habitat type is not rare in the coastal Gulf of Maine, it provides two key ecological functions for juvenile cod: protection from predation, and readily available prey. See EFH mapper for links to text descriptions for HAPCs.

7. **Activity Details**

Select all that apply	Project Type/Category
☐	Agriculture
☐	Aquaculture - List species here:
☐	Bank/shoreline stabilization (e.g., living shoreline, groin, breakwater, bulkhead)
☐	Beach renourishment
☑	Dredging/excavation - HDD at/near shore
☐	Energy development/use e.g., hydropower, oil and gas, pipeline, transmission line, tidal or wave power, wind
☐	Fill
☐	Forestry
☐	Infrastructure/transportation (e.g., culvert construction, bridge repair, highway, port, railroad)
☐	Intake/outfall
☐	Military (e.g., acoustic testing, training exercises)
☐	Mining (e.g., sand, gravel)
☐	Overboard dredged material placement
☐	Piers, ramps, floats, and other structures
☐	Restoration or fish/wildlife enhancement (e.g., fish passage, wetlands, mitigation bank/ILF creation)
☑	Survey (e.g., geotechnical, geophysical, habitat, fisheries)
☐	Water quality (e.g., storm water drainage, NPDES, TMDL, wastewater, sediment remediation)
☑	Other: Cable laid on top of ocean floor

8. Effects Evaluation

Select all that apply	Potential Stressors Caused by the Activity HDD, cable laying	Select all that apply and if temporary[9] or permanent		Habitat alterations caused by the activity
		Temp	Perm	
☑	Underwater noise	☐	☐	Water depth change
☑	Water quality/turbidity/ contaminant release	☐	☐	Tidal flow change
☑	Vessel traffic/barge grounding	☐	☐	Fill
☐	Impingement/entrainment	☐	☐	Habitat type conversion
☐	Prevent fish passage/spawning	☐	☐	Other: increased turbidity
☑	Benthic community disturbance	☑	☐	Other: minimal removal of be
☐	Impacts to prey species	☐	☑	

[9] Temporary in this instance means during construction. [10] Entrainment is the voluntary or involuntary movement of aquatic organisms from a water body into a surface diversion or through, under, or around screens and results in the loss of the organisms from the population. Impingement is the involuntary contact and entrapment of aquatic organisms on the surface of intake screens caused when the approach velocity exceeds the swimming capability of the organism.

Details - project impacts and mitigation

Briefly describe how the project would impact each of the habitat types selected above and the amount (i.e., acreage or sf) of each habitat impacted. Include temporary and permanent impact descriptions and direct and indirect impacts. For example, dredging has a direct impact on bottom sediments and associated benthic communities. The turbidity generated can result in a temporary impact to water quality which may have an indirect effect on some species and habitats such as winter flounder eggs, SAV or rocky habitats. The level of detail that you provide should be commensurate with the magnitude of impacts associated with the proposed project. Attach supplemental information if necessary.

A detailed impacts discussion can be found in the cover letter.

The new utility cable would be installed using a combination of trenching onshore and horizontal directional drilling (HDD) from the shore to below the water line, creating minor ground disturbance, and then bottom laying the cable through Plum Gut. Impacts to the water column from descending cable would be minor and temporary. The existing cable at the bottom of Plum Gut would be abandoned in place. This would mean that permanent disturbance to previously disturbed areas would be minimal and therefore have insignificant impacts on EFH. The habitat where the cable emerges from the the substrate and enters the ocean (i.e., from HDD) may be disturbed and/or have indirect effects on species and habitats surrounding the area, but would likely not have large or long-term impacts as the habitat settles and returns to its previous state. There is not currently a route to go through eelgrass habitat, meaning no aquaculture habitat would likely be disturbed, thereby not impacting SAV. Given that habitat would only be impacted temporarily, with minimal impact to the already disturbed sea floor, there will likely be negligible impact to EFH.

What specific measures will be used to avoid and minimize impacts, including project design, turbidity controls, acoustic controls, and time of year restrictions? If impacts cannot be avoided or minimized, why not?

HDD under the nearshore habitat (i.e., to 400 feet offshore of both Orient Point and Plum Island) would help to minimize impacts to EFH. DHS S&T also plans to lay the cable through the same corridor as the two existing cables.

Is compensatory mitigation proposed? Yes ☐ No ☑

If compensatory mitigation is not proposed, why not? If yes, describe plans for compensatory mitigation (e.g. permittee responsible, mitigation bank, in-lieu fee) and how this will offset impacts to EFH and other aquatic resources. Include a proposed compensatory mitigation and monitoring plan as applicable.

Compensatory mitigation is not proposed, as effects to species would be temporary and negligible. The proposed route of cable follows pre-existing cables and would therefore not create additional changes to the habitat. There may be eelgrass restoration if habitat is disturbed, but it is not currently planned.

9. Effects of Climate Change

Effects of climate change should be included in the EFH assessment if the effects of climate change may amplify or exacerbate the adverse effects of the proposed action on EFH. Use the Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathways (RCP) 8.5/high greenhouse gas emission scenario (IPCC 2014), at a minimum, to evaluate the future effects of climate change on the proposed projections. For sea level rise effects, use the intermediate-high and extreme scenario projections as defined in Sweet et al. (2017). For more information on climate change effects to species and habitats relative to NMFS trust resources, see Guidance for Integrating Climate Change Information in Greater Atlantic Region Habitat Conservation Division Consultation Processes.

1. Could species or habitats be adversely affected by the proposed action due to projected changes in the climate?If yes, please describe how:

No. Projected changes in the climate, including warming and sea level rise, would not be meaningfully impacted by the Proposed Action.

2. Is the expected lifespan of the action greater than 10 years? If yes, please describe project lifespan:

The lifespan of the cable would be about 25 years. However, construction would take less than two weeks, and there would be no operational impacts.

3. Is climate change currently affecting vulnerable species or habitats, and would the effects of a proposed action be amplified by climate change? If yes, please describe how:

Climate change may be impacting species though sea level rise and sea temperature changes. These effects would not be amplified by potential noise, turbidity, or vessel traffic impacts resulting

4. Do the results of the assessment indicate the effects of the action on habitats and species will be amplified by climate change? If yes, please describe how:

No

5. Can adaptive management strategies (AMS) be integrated into the action to avoid or minimize adverse effects of the proposed action as a result of climate? If yes, please describe how:

N/A

10. Federal Agency Determination

Federal Action Agency's EFH determination (select one)	
☐	There is no adverse effect[7] on EFH or EFH is not designated at the project site. EFH Consultation is not required. This is a FWCA only request.
☑	The adverse effect[7] on EFH is not substantial. This means that the adverse effects are no more than minimal, temporary, or can be alleviated with minor project modifications or conservation recommendations. This is a request for an abbreviated EFH consultation.
☐	The adverse effect[7] on EFH is substantial. This is a request for an expanded EFH consultation. We will provide more detailed information, including an alternatives analysis and NEPA documents, if applicable.

[7] An adverse effect is any impact that reduces the quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

11. Fish and Wildlife Coordination Act

Under the FWCA, federal agencies are required to consult with us if actions that the authorize, fund, or undertake will result in modifications to a natural stream or body of water. Federal agencies are required to consider the effects these modifications may have on fish and wildlife resources, as well as provide for the improvement of those resources. Under this authority, we consider the effects of actions on NOAA-trust resources, such as anadromous fish, shellfish, crustaceans, or their habitats, that are not managed under a federal fisheries management plan. Some examples of other NOAA-trust resources are listed below. Some of these species, including diadromous fishes, serve as prey for a number of federally-managed species and are therefore considered a component of EFH pursuant to the MSA. We will be considering the effects of your project on these species and their habitats as part of the EFH/FWCA consultation process and may make recommendations to avoid, minimize or offset and adverse effects concurrently with our EFH conservation recommendations.

Please contact our Greater Atlantic Regional Fisheries Office, Protected Resources Division regarding potential impacts to marine mammals or species listed under the Endangered Species Act and the appropriate consultation procedures.

Fish and Wildlife Coordination Act Resources	
Species known to occur at site (list others that may apply)	**Describe habitat impact type (i.e., physical, chemical, or biological disruption of spawning and/or egg development habitat, juvenile nursery and/or adult feeding or migration habitat). Please note, impacts to federally listed species of fish, sea turtles, and marine mammals must be coordinated with the GARFO Protected Resources Division.**
alewife	
American eel	
American shad	
Atlantic menhaden	
blue crab	
blue mussel	
blueback herring	
Eastern oyster	
horseshoe crab	
quahog	
soft-shell clams	
striped bass	
other species:	
other species:	
other species:	

12. Useful Links

National Wetland Inventory Maps
EPA's National Estuary Program (NEP)
Northeast Regional Ocean Council (NROC) Data Portal
Mid-Atlantic Regional Council on the Ocean (MARCO) Data Portal

Resources by State

Maine
Maine Office of GIS Data Catalog
Town shellfish information including shellfish conservation area maps
State of Maine Shellfish Sanitation and Management
Eelgrass maps
Casco Bay Estuary Partnership
Maine GIS Stream Habitat Viewer

New Hampshire
NH Statewide GIS Clearinghouse, NH GRANIT
NH Coastal Viewer
State of NH Shellfish Program

Massachusetts
MA DMF Shellfish Sanitation and Management Program
MassGIS Data (Including Eelgrass Maps)
MA DMF Recommended TOY Restrictions Document Massachusetts
Bays National Estuary Program
Buzzards Bay National Estuary Program
Massachusetts Division of Marine Fisheries
Massachusetts Office of Coastal Zone Management

Rhode Island
RI Shellfish and Aquaculture
RI Shellfish Management Plan
RI Eelgrass Maps
Narragansett Bay Estuary Program
Rhode Island Division of Marine Fisheries
Rhode Island Coastal Resources Management Council

Connecticut

CT Bureau of Aquaculture
Natural Shellfish Beds in CT
Eelgrass Maps
Long Island Sound Study
CT GIS Resources
CT DEEP Office of Long Island Sound Programs and Fisheries
CT River Watershed Council

New York

Eelgrass Report
Peconic Estuary Program
NY/NJ Harbor Estuary Program
New York GIS Clearinghouse

New Jersey

Submerged Aquatic Vegetation Mapping
Barnegat Bay Partnership
NJ GeoWeb
NJ DEP Shellfish Maps

Pennsylvania

Delaware River Management Plan
PA DEP Coastal Resources Management Program
PA DEP GIS Mapping Tools

Delaware

Partnership for the Delaware Estuary
Center for Delaware Inland Bays
Delaware FirstMap

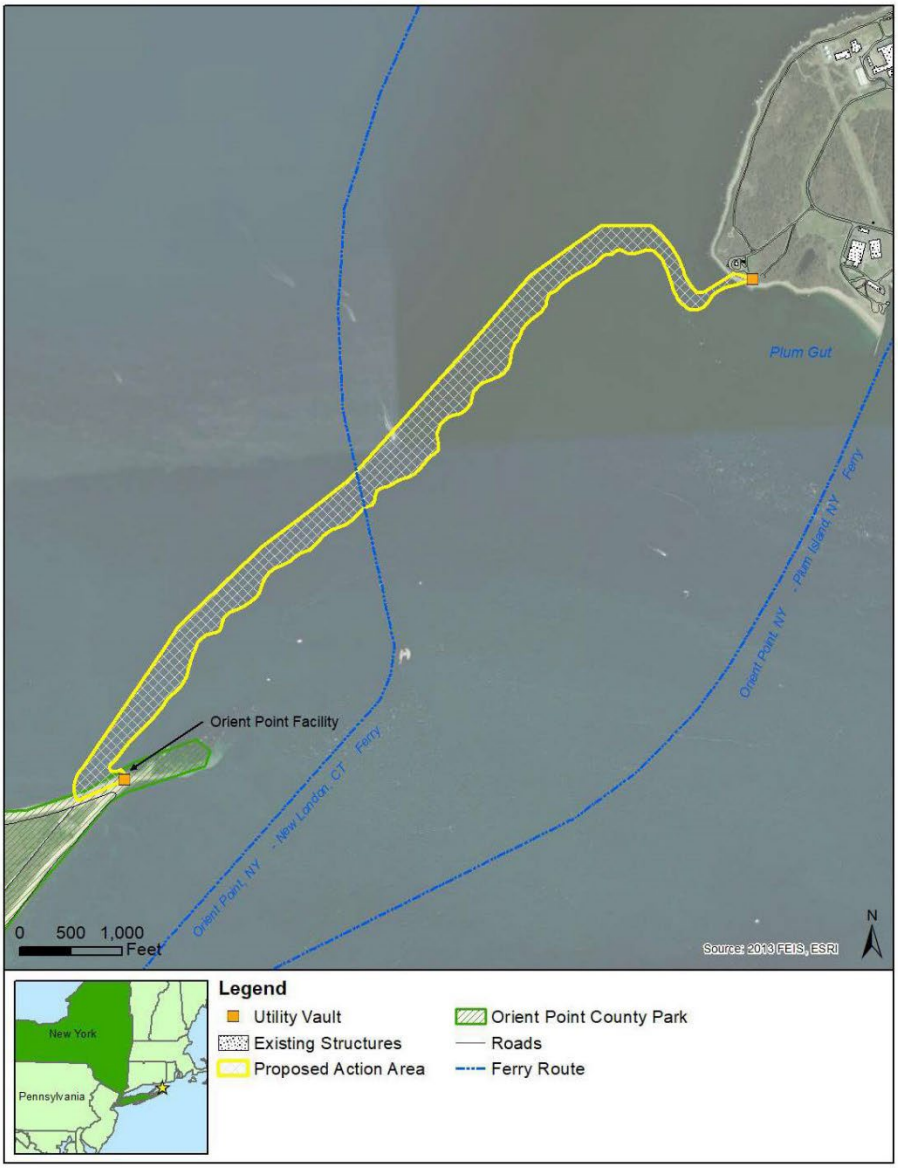
Maryland

Submerged Aquatic Vegetation Mapping
MERLIN (Maryland's Environmental Resources and Land Information Network)
Maryland Coastal Atlas
Maryland Coastal Bays Program

Virginia

VMRC Habitat Management Division
Submerged Aquatic Vegetation mapping

Attachment 2a: Proposed Action Location



Attachment 2b: Proposed Undersea Cable Route

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 41° 9' 57" N, Longitude = 73° 46' 52" W
Decimal Degrees: Latitude = 41.166, Longitude = -72.219

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Albacore Tuna	Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Atlantic Herring	Adult	New England	Amendment 3 to the Atlantic Herring FMP
		Longfin Inshore Squid	Eggs	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Sand Tiger Shark	Neonate/Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Skipjack Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Smoothhound Shark Complex (Atlantic Stock)	ALL	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Windowpane Flounder	Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs	New England	Amendment 14 to the Northeast Multispecies FMP

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

All EFH species have been mapped for the Greater Atlantic region,
Atlantic Highly Migratory Species EFH,
Bigeye Sand Tiger Shark,
Bigeye Sixgill Shark,
Caribbean Sharpnose Shark,
Galapagos Shark,
Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 41° 9' 43" N, Longitude = 73° 46' 4" W
Decimal Degrees: Latitude = 41.162, Longitude = -72.232

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Albacore Tuna	Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Atlantic Butterfish	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Atlantic Herring	Adult, Juvenile	New England	Amendment 3 to the Atlantic Herring FMP
		Atlantic Mackerel	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Black Sea Bass	Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Bluefish	Adult, Juvenile	Mid-Atlantic	Bluefish

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Little Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Longfin Inshore Squid	Adult, Eggs, Juvenile	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Pollock	Adult, Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Red Hake	Adult, Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Sand Tiger Shark	Neonate/Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Scup	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Skipjack Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Smoothhound Shark Complex (Atlantic Stock)	ALL	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Summer Flounder	Adult, Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Windowpane Flounder	Adult, Eggs, Juvenile, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs, Juvenile, Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

Link	Data Caveats	HAPC Name	Management Council

Link	Data Caveats	HAPC Name	Management Council
⚠	ⓘ	Summer Flounder SAV	Mid-Atlantic Fishery Management Council

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

All EFH species have been mapped for the Greater Atlantic region,
Atlantic Highly Migratory Species EFH,
Bigeye Sand Tiger Shark,
Bigeye Sixgill Shark,
Caribbean Sharpnose Shark,
Galapagos Shark,
Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

Query Results

Degrees, Minutes, Seconds: Latitude = 41° 10' 18" N, Longitude = 73° 47' 28" W
Decimal Degrees: Latitude = 41.172, Longitude = -72.209

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Albacore Tuna	Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Atlantic Butterfish	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Atlantic Herring	Adult, Juvenile	New England	Amendment 3 to the Atlantic Herring FMP
		Atlantic Mackerel	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Black Sea Bass	Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Bluefish	Adult, Juvenile	Mid-Atlantic	Bluefish

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Little Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP
		Longfin Inshore Squid	Adult, Eggs, Juvenile	Mid-Atlantic	Atlantic Mackerel, Squid,& Butterfish Amendment 11
		Pollock	Adult, Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Red Hake	Adult, Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Sand Tiger Shark	Neonate/Juvenile	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Scup	Adult, Eggs, Juvenile, Larvae	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Skipjack Tuna	Adult	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Smoothhound Shark Complex (Atlantic Stock)	ALL	Secretarial	Amendment 10 to the 2006 Consolidated HMS FMP: EFH
		Summer Flounder	Adult, Juvenile	Mid-Atlantic	Summer Flounder, Scup, Black Sea Bass
		Windowpane Flounder	Adult, Eggs, Juvenile, Larvae	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Flounder	Eggs, Juvenile, Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Winter Skate	Adult, Juvenile	New England	Amendment 2 to the Northeast Skate Complex FMP

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

Link	Data Caveats	HAPC Name	Management Council

Link	Data Caveats	HAPC Name	Management Council
⚠	ⓘ	Summer Flounder SAV	Mid-Atlantic Fishery Management Council

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.
****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**

All EFH species have been mapped for the Greater Atlantic region,
Atlantic Highly Migratory Species EFH,
Bigeye Sand Tiger Shark,
Bigeye Sixgill Shark,
Caribbean Sharpnose Shark,
Galapagos Shark,
Narrowtooth Shark,
Sevengill Shark,
Sixgill Shark,
Smooth Hammerhead Shark,
Smalltail Shark

Attachment 3: References

NMFS. (2018). *2018 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts.* U.S. Dept. of Commerce. NOAA. NOAA Technical Memorandum NMFS-OPR-59, 167 p.

NOAA Fisheries. (2021). *Vessel Strike Avoidance Measures.* Retrieved from NOAA Fisheries Southeast Regional Office: https://media.fisheries.noaa.gov/2021-06/Vessel_Strike_Avoidance_Measures.pdf

NOAA Fisheries. (2022a). *Harbor Seal*. Retrieved from NOAA Fisheries Species Directory: https://www.fisheries.noaa.gov/species/harbor-seal

NOAA Fisheries. (2022b). *Gray Seal*. Retrieved from NOAA Fisheries Species Directory: https://www.fisheries.noaa.gov/species/gray-seal

NYNHP. (2016). *Plum Island Biodiversity Inventory.* Retrieved September 19, 2023, from https://www.nynhp.org/documents/140/plum_island_inventory.pdf

NYNHP. (2022). *Survey of Plum Island's Subtidal Marine Habitats.* Retrieved September 22, 2023, from https://www.nynhp.org/documents/177/Plum_Island_Marine_Subtidal_Habitats_March_2022.pdf

Science and Technology

October 19, 2023

NOAA Fisheries
Greater Atlantic Regional Fisheries Office
Protected Resources Division
55 Great Republic Dr
Gloucester, MA 01930

Attn: Dan Tierney, Acting ESA Section 7 Coordinator

SUBJECT: Project Review Request, Endangered Species Act Section 7, Plum Island Animal Disease Center Undersea Cable Installation, Plum Island, New York

Dear Mr. Tierney:

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and Plum Island, NY. This letter is to request concurrence from your office regarding our effect determinations for the referenced project under Section 7 of the Endangered Species Act (ESA). We have made the determination that the proposed activity *may affect but is not likely to adversely affect* species listed as threatened or endangered by National Marine Fisheries Service (NMFS) under the ESA within the action area. Our supporting analysis is provided below following "Section 7: Consultation Technical Guidance in the Greater Atlantic Region" (GARFO, 2023a).

Proposed Project

The Proposed Action is to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, NY, and the PIADC on Plum Island, NY (Proposed Action).

Plum Island Animal Disease Center (PIADC) has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, New York (NY) (**Attachment 1a**). DHS S&T operates PIADC in cooperation with the United States Department of Agriculture (USDA). DHS S&T also owns and operates the supporting Orient Point facility at Orient Point, NY. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island.

DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the Proposed Action. Plum Island currently receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable contains 13.2 kilovolts, measures up to approximately 11,000 feet long, with approximately 9,400 feet submerged underwater, and together provide for the island's normal electrical requirements. DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, which has exceeded the end of its 25-year lifespan, is degrading to such an extent that it is in danger of failing. Additionally, the island's fiber optic communications capabilities lack redundancy, as the M2 cable is the sole source of fiber optic communication for the island. Without implementation of the Proposed Action, the existing cables would remain in danger of failing, which would significantly constrain PIADC's operational capabilities, including ongoing and planned closure activities, should one of the cables fail in the near-term.

Final design for the proposed cable installation is currently underway. Cable installation is anticipated to involve trenching and horizontal directional drilling (HDD)[1], or similar technology to the greatest extent practicable. At each site, the new cable would be connected in the utility vault and routed below grade and then below sea level for a length typical of similar submarine cable installations (anticipated to be approximately 600 to 1000 feet at each terminus). Between each terminus, the cable would be laid along the seafloor.

Prior to installing the cable, DHS S&T's contractor would perform marine route pre-lay and onshore surveys and would create a hydrographic map showing bottom contours and exact locations of the existing power cables and other obstructions within the proposed cable corridor. Additionally, DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur in calendar year (CY) 2024 and require approximately one year to complete, including completion of pre-installation surveys, preparation of HDD conduits, laying of the cable, cable inspection and testing, and preparation of as-built surveys. However, in-water work for the Proposed Action – bottom laying – would likely only last four to seven days.

Following completion of the Proposed Action, the new cable would require minimal ongoing operational and maintenance efforts. Areas temporarily disturbed during trenching and installation of the HDD conduit would revegetate passively over time.

[1] HDD is a minimal impact method which involves using a dirigible drill head and conduit to bore between two locations such that both direction and depth can be adjusted (U.S. Fish and Wildlife, 2023)

Description of the Action Area

The action area includes the stretch of land between the existing utility breaker vault at the Orient Point facility and the coastline of Orient Point (41° 9'34.74"N, 72°14'7.40"W), the seafloor corridor of Plum Gut where the cable is to be laid (41°10'7.76"N, 72°13'25.85"W), and the land from the coastline of Plum Island to the Island's utility breaker vault (41°10'23.82"N, 72°12'39.29"W) (**Attachment 1b**). This area is expected to encompass all of the effects of the Proposed Action.

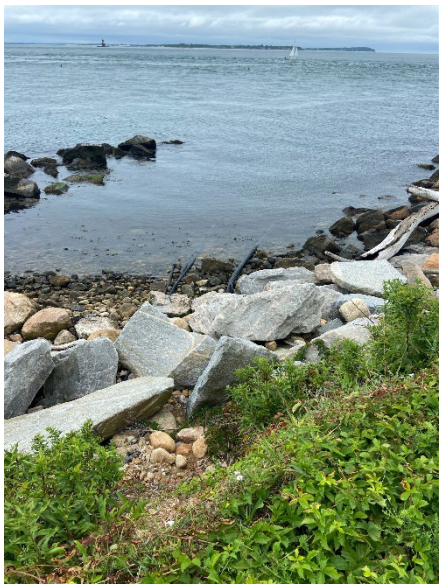
The offshore habitats within the action area are unique due to the combination of deep-water habitats and shoals, which create a productive environment that supports a variety of marine life, including valuable sport fishes. Plum Gut has a large range of water depths, though the majority of the action area is 30-50 ft deep. Salinity in Long Island Sound – the larger body of water around Plum Gut – ranges from 23-33 parts per thousand. Temperatures in Long Island Sound range from 37 degrees Fahrenheit (°F) in the winter to 69°F in the summer.

A survey of Plum Island's subtidal marine habitats was conducted in 2022 by the New York Natural Heritage Program (NYNHP) and InnerSpace Scientific Diving for Save the Sound (NYNHP, 2022). The report investigated subtidal nearshore areas in the vicinity of Plum Island. Investigations off the southwest coast of the island, in the vicinity of the Proposed Action area, found seafloor substrate in this area to be mostly small (<10 centimeter [cm]) to medium sized rocks (>10 cm, <1 meter [m]). Prominent vegetation in this area includes eelgrass in shallower habitats and brown and red algae in deeper habitats (NYNHP, 2022). The eelgrass habitat is submerged aquatic vegetation (SAV) habitat for summer flounder.

Onshore areas where the Proposed Action would occur are composed of a narrow corridor of sparsely vegetated rocky beach (**Photo 1** and **Photo 2**).

Photo 2: Onshore Proposed Action Area at Orient Point

Photo 2: Onshore Proposed Action Area at Plum Island (Representative)



NMFS Listed Species in the Action Area

NMFS Listed Species that may occur in the Action Area are identified and discussed in **Table 1**.

Table 1: NMFS Listed Species in the Action Area

Name	Federal Status/ Federal Register citation/ Species Recovery Plan	Life Stage(s)	Action	Seasonality/ Duration	Habitat/Reason in Action Area	Possible Stressors	Effects Determination
Mammals							
Fin whale *Balaenoptera physalus*	Endangered 35 FR 18319 NMFS 2010a	Adults and juveniles	Migrating	Nov – Apr	Inhabits deep offshore waters in oceans around the world, commonly found north of 30º North latitude. Migratory pathway generally moves from northern latitudes for foraging, where there are high concentration areas of food, to southern latitudes for calving grounds. Could pass through, though action area is shallower than this species prefers.	Sound (vessels) Vessels (strike)	***Not likely to adversely affect*** Species would likely avoid temporary construction/cable laying areas. Risks associated with vessel strikes and noise are discountable.
		Adults and juveniles	Overwintering	Winter	Evidence of wintering in mid-shelf areas east of New Jersey. Not likely to occur in action area.		
		Adults and juveniles	Foraging	Year round	Year round in the mid-shelf area off the east end of Long Island. The action area is not close to the shelf.		
		Adult	Calving	Oct – Jan	Possible offshore calving area. Not likely to occur in action area as it is too close to shore.		
North Atlantic right whale *Eubalaena glacialis*	Endangered 73 FR 12024 NMFS 2005	Adults and juveniles	Migrating	Nov – Apr	Highly migratory whale that commonly inhabits the coastal waters of eastern North America and the Gulf of Mexico. This whale spends much of its time at or near the water surface. Migratory pathway to/from northern latitude foraging and southern calving grounds. May briefly utilize deeper portions of Plum Gut adjacent to the action area as stopover habitat during migration.	Sound (vessels) Vessels (strike)	***Not likely to adversely affect*** Species would likely avoid temporary construction/cable-laying areas. Risks associated with vessel strikes and noise are discountable.

Name	Federal Status/ Federal Register citation/ Species Recovery Plan	Life Stage(s)	Action	Seasonality/ Duration	Habitat/Reason in Action Area	Possible Stressors	Effects Determination
Reptiles							
All Sea Turtle Species	See below for each species	See below for each species	See below for each species	See below for each species	In general, juveniles and adults migrate north in the spring as water temperatures warm, arriving in mid-Atlantic waters in May. As the waters cool in the fall, most sea turtles leave the area by the end of November.	See below for each species	See below for each species
Green sea turtle *Chelonia mydas*	Threatened [a] 81 FR 20057 NMFS & USFWS 1991	Adults and juveniles	Migrating & Foraging	May – Nov	Inhabits shallow waters inside reefs, bays, and inlets unless migrating. Commonly observed in lagoons and shoals with marine grass and algae. Hatchlings seek refuge and food in sargassum habitat. May be in shallower parts of action area where there is more abundance of food.	Sound (vessels) Vessels (strike) Habitat Disturbance	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas and could be temporarily displaced from suitable foraging habitat, but effects would be insignificant. Risks associated with vessel strikes and noise are discountable.
Kemp's ridley sea turtle *Lepidochelys kempi*	Endangered 35 FR 18319 NMFS et al. 2011	Adults and juveniles	Migrating & Foraging	May – Nov	Inhabits nearshore muddy or sandy bottom waters less than 120 feet deep. Moves to deeper offshore waters as water temperature drops. May be in shallower parts of action area where there is more abundance of food.	Sound (vessels) Vessels (strike) Habitat Disturbance	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas and could be temporarily displaced from suitable foraging habitat, but effects would be insignificant. Risks associated with vessel strikes and vessel noise are discountable.
Leatherback sea turtle *Dermochelys coriacea*	Endangered 35 FR 8491 NMFS & USFWS 1992a	Adults and juveniles	Migrating & Foraging	May – Nov	Inhabits the tropical and temperate open oceans worldwide but typically feeds just offshore. Active in waters below 40º F. Likely to be further offshore than the action area.	Sound (vessels) Vessels (strike)	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas; as species prefers deeper waters, effects would be insignificant. Risks associated with vessel strikes and noise are discountable.

Name	Federal Status/ Federal Register citation/ Species Recovery Plan	Life Stage(s)	Action	Seasonality/ Duration	Habitat/Reason in Action Area	Possible Stressors	Effects Determination
Loggerhead sea turtle *Caretta caretta*	Threatened [b] 76 FR 58868 NMFS & USFWS 2008	Adults and juveniles	Migrating & Foraging	May – Nov	Inhabits a wide range of habitats, from hundreds of miles out to sea, to inshore areas like bays, lagoons, marshes, creeks, ship channels, and mouths of large rivers. Commonly uses coral reefs and rocky areas for feeding. May be in action area, passing through on migration.	Sound (vessels) Vessels (strike) Habitat Disturbance	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas and could be temporarily displaced from suitable foraging habitat, but effects would be insignificant. Risks associated with vessel strikes and vessel noise are discountable
Fish							
Atlantic sturgeon *Acipenser oxyrinchus oxyrinchus*	Threatened/ Endangered 77 FR 5880 and 77 FR 5914 No Plan Listed	Subadult	Migrating & Foraging	Year round/ late spring – fall	Opportunistically forage in Long Island Sound year-round; 85% of Atlantic sturgeon caught in Long Island Sound are over mud/transitional bottoms of 88-122 feet deep in the central basin, likely outside of /deeper than the action area. The action area consists of rocky glacial moraine deposits.	Sound (vessels) Water quality Habitat Disturbance	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas and would opportunistically forage elsewhere due to possible foraging grounds disturbances, so that effects would be insignificant. Risks associated with vessel strikes and vessel noise are discountable.
		Adult	Migrating & Foraging	Year round/ late spring – fall			

Sources: (GARFO, 2022) (GARFO, 2023b)
a North Atlantic Distinct Population Segments
b Northwest Atlantic Distinct Population Segment

Effects Determination

Following Section 7 Consultation Technical Guidance, this section describes stressors from the Proposed Action and the possible effects of the Proposed Action on listed species in the action area under NOAA jurisdiction. This section is organized by stressor and their possible impacts on each listed species determined to be in the area using the NOAA Fisheries Greater Atlantic Region ESA Section 7 Mapper (GARFO, 2022). For each stressor we considered three elements: (1) the existing baseline conditions; (2) the action and what it adds to existing baseline conditions; and, (3) new baseline conditions (the existing baseline conditions and the action combined). Effects determinations are included and summarized in **Table 1**.

Sound

It is likely that horizontal directional drilling (HDD) would be used for the sea-to-shore transition area. HDD is a minimal impact method which involves using a dirigible drill head and conduit to bore between two locations such that both direction and depth can be adjusted (U.S. Fish and Wildlife, 2023). Noise generating equipment associated with HDD would be onshore. Noise would be limited to the duration of cable installation (i.e., four to six weeks for HDD activities and four to seven days for cable laying) and would cease once installation is complete. The Proposed Action would have no long-term change on baseline noise conditions, making impacts to listed species negligible.

Another potential source of noise would be vessels used for cable installation. This includes a cable-laying barge (CLB) and support craft, such as tugboats, which would install up to approximately 9,400 feet of cable between the HDD terminus points off the shore of Orient Point and Plum Island. The use of a CLB and support craft would cause a small, localized (Plum Gut), temporary increase in vessel traffic for four to seven days. During installation of the cable, the CLB would likely move slowly (<6 knots or 3 m/s), meaning its engine and propeller would generate less noise than other vessels. The level of noise exuded by a CLB (depending on its length it could be the largest of the vessels that would be in the area, though it may be smaller than the ferries that cross regularly) or similar vessel is typically 155 to 170 dB. This would mean an increase above the ambient baseline for the duration of the cable laying (four to seven days) and at intermittent intervals.

The listed species are highly mobile and are unlikely to stay in a stationary position or within a given radius of a vessel or other noise source for 24 hours; therefore, any resulting injury zones should be treated as a worst-case scenario. Sea turtles are not likely to be impacted at all given their acoustic thresholds (behavioral:175 dB; injury: 237 dB; temporary or permanent shifts: 200 dB) (NMFS, 2023). Acoustic thresholds for whales in the action area (i.e., low-frequency cetaceans) would also not be met for injury or threshold shifts (injury: 237 dB; temporary or permanent shifts: 179 dB), but the behavioral threshold could be met (160 dB). However, as whales are mobile and could easily avoid the area, impacts are unlikely to occur (NMFS, 2018). Sound produced by the Proposed Action would not likely cause injury to sturgeon, but the threshold for change in behavior may be met (150 dB) (GARFO, 2023c). These behavioral effects may include avoidance or disruption of foraging activities, leading the sturgeon away from the activity. However, as the noise from the CLB would not appreciably add to baseline noise created by other vessels in the area (ferries and recreational fishing vessels), it is unlikely there would be a measurable disturbance to behavior.

When this project is completed, ambient noise levels would return to baseline levels. There is also a significant zone of passage surrounding vessels so that species could easily avoid vessel noise. Given that the time dedicated to laying the cable would be short and the species that would be present are transient, the effects of underwater noise on ESA species would be too small to be meaningfully measured or detected and would be insignificant. Therefore, sound stressors possibly associated with the Proposed Action are *not likely to adversely affect* any of the listed species. Possible physical injuries caused by vessels are addressed in the "Vessels" section.

Habitat Structure and Disturbance

The new utility cable would be installed using a combination of trenching onshore and HDD from the shore to below the water line, creating minor ground disturbance, and then bottom laying the cable through Plum Gut. The new cable would be installed between, or immediately adjacent to, the existing M1 and M2 cables. The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. Impacts to the water column from descending cable would be minor and temporary. The remaining length of cable under Plum Gut would be abandoned in place, identical to how previous cable replacement projects have been conducted in the area. This would mean that permanent disturbance to previously disturbed areas would be minimal and therefore have insignificant impacts on listed species.

Benthic habitat where the cable is to be laid is likely rocky, with rocks >10 cm and <1 m in size (NYNHP, 2022). None of the species listed are known to utilize this habitat type, thus any disturbance would be unlikely to impact those species. The habitat where the cable emerges from the substrate and enters the ocean may be disturbed and/or have indirect effects on species and habitats surrounding the area, but would likely not have large or long-term impacts as the habitat settles and returns to its previous state. The current planned cable route does not run through eelgrass habitat, meaning no aquaculture habitat would likely be disturbed, thereby not impacting SAV. Given that habitat would only be impacted temporarily, with minimal impact to the already disturbed seafloor areas, the Proposed Action *may affect but is not likely to adversely affect* listed species that use the seafloor habitat.

Water Quality

The new utility cable would be installed using a combination of trenching and HDD from the shore to below the water line, creating minor ground disturbance where the cable comes out of the substrate and enters the ocean, causing a temporary increase in suspended sediment in the action area and increasing turbidity through the displacement of substrate. Any sediment plume would likely be composed of sand, with little silt, from the ocean floor at the point of egress for the cable. These activities could produce total suspended solids (TSS) concentrations of approximately 5-235 mg/L above baseline levels, based on construction actions in similar areas (pile driving and jet plow technology) (GARFO, 2023d). The small resulting sediment plume is expected to settle out of the water column within a few hours. The TSS levels expected are below those shown to have adverse effects on fish and benthic communities, would not likely affect sturgeon behavior or movement, and when added to baseline conditions would be too small to be meaningfully measured or detected. Therefore, potential increases in TSS would be insignificant.

HDD usually involves the use of a drilling slurry, which is normally bentonite and water. While bentonite is nontoxic, if released into waterbodies, a process normally referred to as inadvertent returns, it has the potential to adversely impact fish, fish eggs, aquatic plants, and benthic invertebrates. The Proposed Action would have an Inadvertent Return Plan to minimize any impacts on water quality. Any discharges

associated with authorized activities would meet all applicable water quality standards pursuant to the Clean Water Act and its implementing regulations, the Section 404(b)(a) guidelines, which are in place to prevent acute or chronic toxic impacts to aquatic life. As there would be no measurable or detectable permanent change in water quality from the baseline levels, the impacts of HDD on water quality are anticipated to have insignificant impacts to listed species. The zone of passage is not likely to be impacted.

The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables via a CLB. The new cable would be 3.9 inches in diameter and weigh 8.8 pounds per linear foot in saltwater (approximately 14 pounds per foot in air). Due to the heavy weight of the cable anchoring to the seafloor is not necessary. Any potential lateral movement of the cable that could cause increased turbidity would be greatly limited due to the rugged and rocky seafloor landscape and changes in bathymetry. The CLB portion of the cable installation would likely cause a temporary increase in turbidity as the cable contacts the seafloor, but any disturbed sediment is expected to settle once the cable is in place. The CLB portion of the Proposed Action is anticipated to require a duration of four to seven days. Given the minimal and temporary increase in turbidity above baseline levels of the CLB portion of the cable installation, there would be no measurable or detectable increase in turbidity, and effects to listed species are insignificant.

No other water quality parameters (lowered dissolved oxygen, changes in temperature, addition of pollutants, etc.) are expected to be impacted by the Proposed Action, and all impacts are anticipated to be within the immediate area of the Proposed Action. The probability of active sea turtles, sturgeon, and whales being impacted by any temporary shifts in water quality is extremely unlikely because of the short time of the disturbance and the large water body in which the Proposed Action would take place. Therefore, the effects to water quality associated with the Proposed Action are discountable when added to baseline conditions and therefore *not likely to adversely affect* species or water quality conditions.

Prey Quantity/Quality

The proposed action is unlikely to result in reductions in the quality or quantity of prey currently available. Actions from HDD and cable laying may increase turbidity and temporary disturbance of benthic habitat. Some species of benthic invertebrates that sturgeon feed on have limited mobility and could be temporarily buried during cable-laying or HDD operations. However, any increase in TSS levels expected (see "Water Quality") would be so minor that any effect of sediment plumes caused by the Proposed Action would be undetectable and temporary and not likely to impact foraging behaviors or prey quality or quantity, as these impacts are only to a small portion of available foraging habitat. The benthic community is expected to recover quickly from any displacement.

Neither ESA-listed whale habitat nor their prey would be affected by the action, as whales and their prey forage and live in the water column, as do leatherback sea turtles that feed on jellyfish in open waters. As there are no sea grass areas in the planned cable route, green sea turtle prey is unlikely to be impacted. Some of the prey species targeted by sea turtles and sturgeon, including crabs, are mobile and most likely will not be impacted. Therefore, the impacts of the proposed action are *not likely to adversely affect* the prey quantity or quality of ESA-listed species.

Vessels

A source of anthropogenic mortality and injury for whales, sturgeon, and sea turtles is boat hull or propeller strikes. DHS S&T would heed all regulations and guidelines regarding safe operation of vessels around marine mammals and other protected species. Furthermore, water vessels are anticipated to move slowly

(6 knots) during cable laying, thus reducing the risk of propeller strikes. Vessel traffic added to baseline conditions as a result of the Proposed Action is *not likely to adversely affect* ESA-listed species. The Proposed Action would not permanently alter vessel traffic in the action area, therefore there is no increased long-term risk of vessel strike. We have also considered the likelihood that an increase in vessel traffic related to the Proposed Action would generally increase the risk of interactions between listed species and vessels in the action area, in addition to baseline conditions. Vessels would only be those laying cable between Orient Point and Plum Island. The use of a CLB and support craft would cause a small, localized, temporary increase in vessel traffic lasting a duration of four to seven days. The area of Plum Gut, where the Proposed Action would occur, is commonly trafficked by recreational boaters and the Plum Island and Cross Sound Ferries. Vessel traffic associated with the Proposed action would be negligible in context of baseline vessel traffic in the area. As such, any increased risk of a vessel strike caused by the project would be too small to be meaningfully measured or detected. As a result, the effect of the Proposed Action on the increased risk of a vessel strike in the action area is insignificant, and any impacts are *not likely to adversely affect* listed species. Possible noise impacts caused by vessels are addressed in the "Sound" section.

Conclusions

Based on the analysis that all effects of the Proposed Action would be insignificant and/or extremely unlikely, we have determined that Plum Island Animal Disease Center Undersea Cable Installation ***may affect, but is not likely to adversely affect*** (NLAA) any of the NMFS Listed Species that have the potential to be present in the area. There would be no effect on designated critical habitat, as none is present in the action area. We certify that we have used the best scientific and commercial data available to complete this analysis. We request your concurrence with this determination. For additional information, please contact Benjamin Obenland at benjamin.obenland@aecom.com. Email responses are preferred, although letter responses may be submitted to *Benjamin Obenland, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876.*

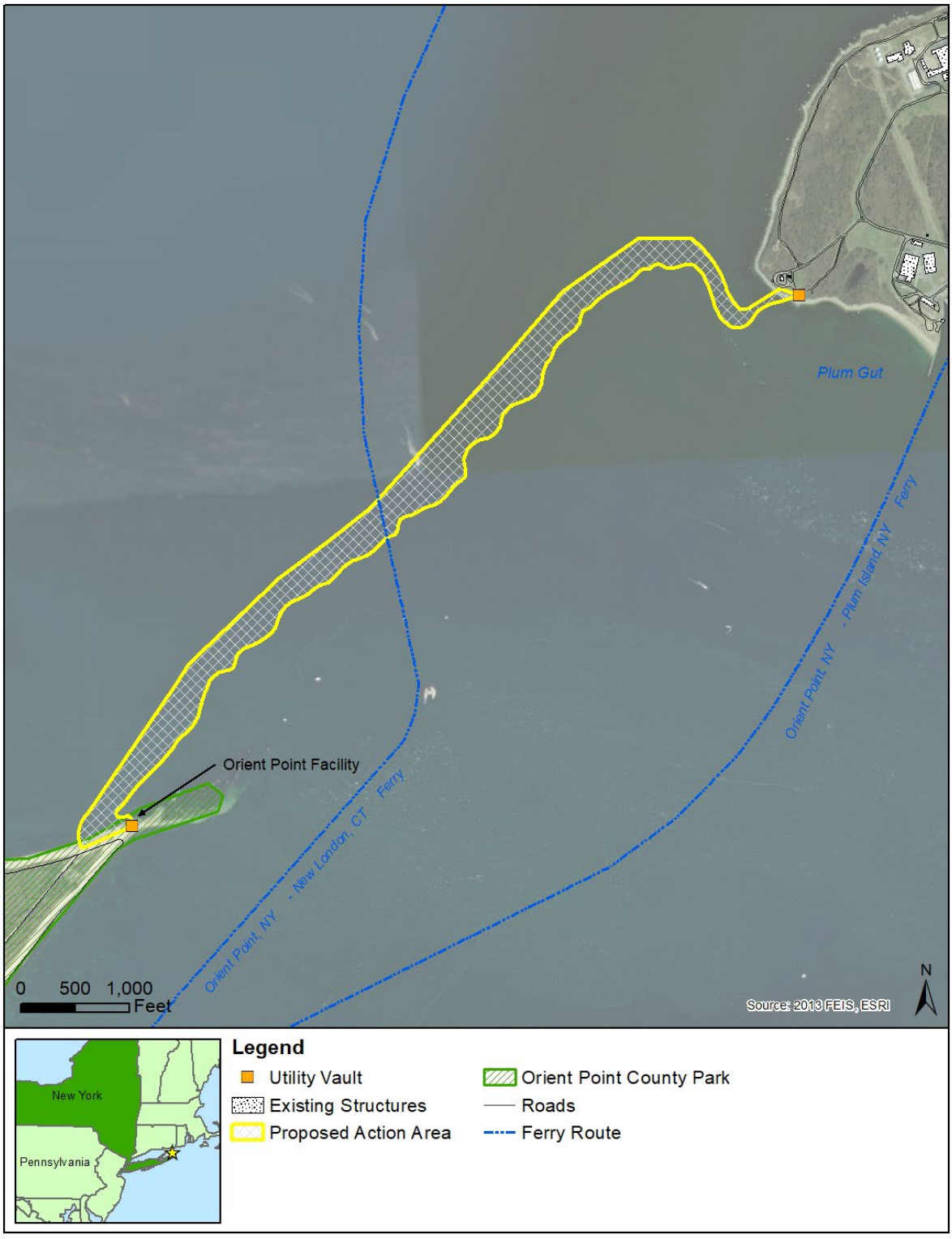
Respectfully,

John M. Searing, PE, PMP
Deputy Center Director
PICS Program Director
Plum Island Animal Disease Center
Office of National Laboratories
Science and Technology Directorate

Attachments:

1a. Proposed Action Location
1b. Proposed Undersea Cable Route
2. NOAA Fisheries Section 7 Consultation Mapper Result
3. References

Attachment 1a: Proposed Action Location



Attachment 1b: Proposed Undersea Cable Route

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 6,037.86 acres

Sep 14 2023 10:06:05 Eastern Daylight Time

Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	2	9,731.12	N/A
Shortnose Sturgeon	0	0	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	4	19,462.41	N/A
Atlantic Large Whales	5	24,326.45	N/A
In or Near Critical Habitat	0	0	N/A

Atlantic Sturgeon

#	Feature ID	Species	Lifestage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	ANS_LIS_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	Long Island Sound	01/01	12/31	N/A	N/A	4,865.56
2	ANS_LIS_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	Long Island Sound	01/01	12/31	N/A	N/A	4,865.56

Sea Turtles

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	GRN_STS_AJV_MAF	Green sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	4,865.60
2	KMP_STS_AJV_MAF	Kemp's ridley sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	4,865.60
3	LTR_STS_AJV_MAF	Leatherback sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	4,865.60
4	LOG_STS_AJV_MAF	Loggerhead sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	4,865.60

Atlantic Large Whales

#	Feature ID	Species	Lifestage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	RIT_WRS_AJV_MIG	North Atlantic right whale	Adults and juveniles	Migrating	Mid-Atlantic (Cape Cod, MA to VA)	1/1	12/31	*No Data*	*No Data*	4,865.29
2	FIN_WFS_AJV_MIG	Fin whale	Adults and juveniles	Migrating	Mid-Atlantic (Cape Cod, MA to VA)	1/1	12/31	*No Data*	*No Data*	4,865.29
3	FIN_WFS_AJV_WIN	Fin whale	Adults and juveniles	Overwintering	Mid-Atlantic (Cape Cod, MA to VA)	11/1	1/31	*No Data*	*No Data*	4,865.29
4	FIN_WFS_AJV_FOR	Fin whale	Adults and juveniles	Foraging	Mid-Atlantic (Cape Cod, MA to VA)	1/1	12/31	*No Data*	*No Data*	4,865.29
5	FIN_WFS_ADU_CLV	Fin whale	Adult	Calving	Mid-Atlantic (Cape Cod, MA to VA)	10/1	1/31			4,865.29

Attachment 3: References

GARFO. (2022). *ESA S7 Mapper, Version 2.1*. Retrieved from NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO) Protected Resources Division: https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=a85c0313b68b44e0927b51928271422a

GARFO. (2023a). *Section 7: Consultation Technical Guidance in the Greater Atlantic Region.* Retrieved from NOAA Fisheries: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultation-technical-guidance-greater-atlantic

GARFO. (2023b). *Section 7: Species/Critical Habitat Information & Maps in the Greater Atlantic Region*. Retrieved from NOAA Fisheries GARFO: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-species-critical-habitat-information-maps-greater

GARFO. (2023c). *Section 7 Effects Analysis: Acoustics in the Greater Atlantic Region*. Retrieved from NOAA Fisheries GARFO: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effects-analysis-acoustics-greater-atlantic-region

GARFO. (2023d). *Section 7 Effects Analysis: Turbidity in the Greater Atlantic Region.* Retrieved from NOAA Fisheries GARFO: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effects-analysis-turbidity-greater-atlantic-region

NMFS. (2018). *2018 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts.* U.S. Dept. of Commerce. NOAA. NOAA Technical Memorandum NMFS-OPR-59, 167 p.

NMFS. (2023, January). *National Marine Fisheries Service: Summary of Endangered Species Act Acoustic Thresholds (Marine Mammals, Fishes, and Sea Turtles).* Retrieved from https://www.fisheries.noaa.gov/s3/2023-02/ESA%20all%20species%20threshold%20summary_508_OPR1.pdf

NOAA Fisheries. (2021). *Vessel Strike Avoidance Measures.* Retrieved from NOAA Fisheries Southeast Regional Office: https://media.fisheries.noaa.gov/2021-06/Vessel_Strike_Avoidance_Measures.pdf

NOAA Fisheries. (2022a). *Harbor Seal*. Retrieved from NOAA Fisheries Species Directory: https://www.fisheries.noaa.gov/species/harbor-seal

NOAA Fisheries. (2022b). *Gray Seal*. Retrieved from NOAA Fisheries Species Directory: https://www.fisheries.noaa.gov/species/gray-seal

NYNHP. (2016). *Plum Island Biodiversity Inventory.* Retrieved September 19, 2023, from https://www.nynhp.org/documents/140/plum_island_inventory.pdf

NYNHP. (2022). *Survey of Plum Island's Subtidal Marine Habitats.* Retrieved September 22, 2023, from https://www.nynhp.org/documents/177/Plum_Island_Marine_Subtidal_Habitats_March_2022.pdf

U.S. Fish and Wildlife. (2023). *The Horizontal Directional Drilling Process*. Retrieved August 30, 2023, from https://www.fws.gov/sites/default/files/documents/NiSourceHCPfinalAppndxJ_HDD.pdf

Science and Technology

December 6, 2023

NOAA Fisheries
Greater Atlantic Regional Fisheries Office
Protected Resources Division
55 Great Republic Dr
Gloucester, MA 01930

Attn: Jennifer Anderson, Assistant Regional Administrator, Protected Resources Division

SUBJECT: Project Review Request, Endangered Species Act Section 7, Plum Island Animal Disease Center Undersea Cable Installation, Plum Island, New York

Dear Ms. Anderson:

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) is proposing to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, New York (NY) and Plum Island, NY. This letter is to request concurrence from your office regarding our effect determinations for the referenced project under Section 7 of the Endangered Species Act (ESA). We have made the determination that the proposed activity *may affect but is not likely to adversely affect* species listed as threatened or endangered by National Marine Fisheries Service (NMFS) under the ESA within the Action Area. Our supporting analysis is provided below following "Section 7: Consultation Technical Guidance in the Greater Atlantic Region" (GARFO, 2023a).

DHS S&T previously initiated consultation with your office on October 19, 2023, and received comments on October 23, 2023. As a result of your response, DHS is resubmitting this consultation to address and include recommendations provided by NMFS. Additionally, since consultation was initiated, project methodologies have been revised and are no longer anticipated to include horizontal directional drilling (HDD); rather, the cable would be trenched from the cable vault to several hundred feet offshore. This letter also includes a revised description of the Proposed Action and accounts for potential impacts based on the new methodology.

Proposed Project

The Proposed Action is to conduct activities relating to the abandonment in place of an existing undersea utility cable and the installation of a new undersea utility cable between Orient Point, NY, and the Plum Island Animal Disease Center (PIADC) on Plum Island, NY (Proposed Action).

Plum Island Animal Disease Center (PIADC) has served as the nation's premier defense against accidental or intentional introduction of foreign animal diseases since 1954. PIADC is located on Plum Island, an 840-acre island located approximately 1.5 miles off the northeast tip of Orient Point, on Long Island's North Fork in Suffolk County, NY (**Attachment 1a**). DHS

S&T operates PIADC in cooperation with the United States Department of Agriculture (USDA). DHS S&T also owns and operates the supporting Orient Point facility at Orient Point, NY. The Orient Point facility consists of two parcels: a 9.5-acre harbor facility, which is comprised of various buildings, warehouses, and ferry docking facilities; and a 0.5-acre parcel of land within Orient Point County Park that houses the utility transfer station, which supports the underground cabling and utilities on Plum Island.

DHS S&T is preparing an Environmental Assessment (EA) to evaluate the potential environmental impacts resulting from the Proposed Action. Plum Island currently receives electrical and fiber optic communications capabilities through two existing undersea cables connecting Orient Point and Plum Island, referred to as the M1 and M2 cables. Each cable supports 13.2 kilovolts service, measures up to approximately 11,000 feet long, with approximately 10,000 feet submerged underwater, and together provide for the island's normal electrical requirements. DHS S&T conducted an inspection of the undersea cables' conditions in March 2022. The inspection determined that the oldest of the two cables, M1, which has exceeded the end of its 25-year lifespan, is degrading to such an extent that it is at risk of failing. Without implementation of the Proposed Action, the existing cables would remain in danger of failing, which would significantly constrain PIADC's operational capabilities, including ongoing and planned closure activities, should one of the cables fail in the near-term.

Final design for the proposed cable installation is currently underway. The new cable would support 13.2 kilovolt service, identical to the existing cables, and would be connected within each cable vault and entrenched along the beach (up to approximately 500 feet at Orient Point and 200 feet at Plum Island), through the existing shoreline riprap, and into the water (laid on the seafloor). Existing soil, sand, and riprap would be temporarily excavated and stored on the shoreline adjacent to the trench line as the trench is constructed. Following cable installation, the excavated soil and sand would be used to backfill the trench and the riprap would be replaced above the trench.

The new cable is expected to be trenched to a depth similar to the existing cables (approximately 30 inches) using a small excavator (e.g., Bobcat). In-water trenching is also anticipated and could occur up to several hundred feet along the seafloor before the bottom lay portion of the cable installation begins. DHS S&T anticipates using low impact in-water trenching methods, such as jetting or ploughing to minimize adverse impacts to nearshore areas to the extent practicable; however, traditional trenching methods utilizing a barge and excavator/hydraulic dredge may be required.

Approximately 100 feet of Cast Iron Cable Protectors (CICP) would also be installed around the cable at each landing point during trenching. A portion of the total CICP length would be installed around the length of cable that is entrenched within the surf zone, with the remainder of the CICP length continuing along the length of cable that would be bottom laid along the surface of the seafloor.

Approximately 0.5 acre on Plum Island and approximately 0.5 acre at Orient Point would be used to stage equipment at each respective cable terminus location. No land disturbance is planned at these areas except for the trenches between the cable vaults and the shoreline. Trenching work would be anticipated to take four to six weeks to complete at each site.

From where the cable exits the trench, along the seafloor of Plum Gut, a cable-laying barge (CLB), assisted by tugboats and other support craft, would lay the remaining cable along

the seafloor. The use of a CLB and support craft would cause a small, localized (Plum Gut), temporary increase in vessel traffic for up to seven days. During installation of the cable, the CLB would likely move slowly (<6 knots or 3 m/s) on its path and not interfere with regular ferry trips. Home port locations for the CLB and support vessels are not known at this time.

The new cable would be approximately 3.5 inches in diameter and weigh approximately 6.2 pounds per linear foot in saltwater (approximately 10.3 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. Any potential lateral movement of the cable would be greatly limited due to the rugged and rocky seafloor landscape and changes in depth.

Prior to installing the cable, DHS S&T's contractor would perform marine route pre-lay and onshore surveys and would create a hydrographic map showing bottom contours, exact locations of the existing power cables, and other obstructions within the proposed cable corridor. The pre-lay and onshore surveys are not anticipated to include sediment sampling, but may include the use of sonar within an approximately 300-foot-wide corridor. Additionally, DHS S&T's contractor would provide advance notice to utility providers regarding any potential outages or potential service disruptions related to the Proposed Action. The contractor would also obtain all applicable permits, permissions, and authorizations prior to starting installation activities, including but not limited to notifying the United States Coast Guard, New York State Police, and the Suffolk County Parks Department. No harbors or waterways would be closed under the Proposed Action; however, recreational boating, fishing, and diving may be restricted in areas where Proposed Action activities are occurring. The Proposed Action is anticipated to occur either in 2024 or 2025, between the months of September and March. No work would occur between April 1 and September 1. Work would require approximately one year to complete, including completion of pre-installation surveys, installation and laying of the cable, cable inspection and testing, and preparation of as-built surveys. The bottom laying portion of the in-water work for the Proposed Action is anticipated to only last up to seven days. Areas temporarily disturbed during trenching and installation would revegetate passively over time.

Description of the Action Area

The Action Area is defined as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action" (50 CFR § 402.02). The Action Area includes the stretch of land between the existing cable vault at the Orient Point facility and the coastline of Orient Point (41° 9'34.74"N, -72°14'7.40"W), the seafloor corridor of Plum Gut where the cable is to be laid (41°10'7.76"N, -72°13'25.85"W), and the land from the coastline of Plum Island to the Island's cable vault (41°10'23.82"N, -72°12'39.29"W) (**Attachment 1b**). The Action Area also includes the extent of any turbidity caused by the project, and all routes traveled by the project vessels.

The offshore habitats within the Action Area are unique due to the combination of deep-water habitats and shoals, which create a productive environment that supports a variety of marine life, including valuable sport fishes. Plum Gut has a large range of water depths, though most of the Action Area is 30-50 ft deep. Salinity in Long Island Sound – the larger body of water around Plum Gut – ranges from 23-33 parts per thousand. Temperatures in Long Island Sound range from 37 degrees Fahrenheit (°F) in the winter to 69°F in the summer.

A survey of Plum Island's subtidal marine habitats was conducted in 2022 by the New York Natural Heritage Program (NYNHP) and InnerSpace Scientific Diving for Save the Sound

(NYNHP, 2022). The report investigated subtidal nearshore areas in the vicinity of Plum Island. Investigations off the southwest coast of the island, in the vicinity of the Proposed Action area, found seafloor substrate in this area to be mostly small (<10 centimeter [cm]) to medium sized rocks (>10 cm, <1 meter [m]). Prominent vegetation in this area includes eelgrass in shallower habitats and brown and red algae in deeper habitats (NYNHP, 2022). The eelgrass habitat is submerged aquatic vegetation (SAV) habitat for summer flounder.

NMFS Listed Species in the Action Area

NMFS Listed Species that may occur in the Action Area are identified and discussed in **Table 1**. No designated critical habitat is present in the Action Area.

Table 1: NMFS Listed Species in the Action Area

Name	Federal Status/ Federal Register citation/ Species Recovery Plan	Life Stage(s)	Action	Seasonality/ Duration	Habitat/Reason in Action Area
Mammals					
Fin whale *Balaenoptera physalus*	Endangered 35 FR 18319 (NMFS, 2010)	Adults and juveniles	Migrating	Year round	Inhabits deep offshore waters in oceans around the world, commonly found north of 30º North latitude. Migratory pathway generally moves from northern latitudes for foraging, where there are high concentration areas of food, to southern latitudes for calving grounds. Could pass through, though Action Area is shallower than this species prefers.
		Adults and juveniles	Overwintering	Winter	Evidence of wintering in mid-shelf areas east of New Jersey. Not likely to occur in Action Area.
		Adults and juveniles	Foraging	Year round	Year round in the mid-shelf area off the east end of Long Island. The Action Area is not close to the shelf.
		Adult	Calving	Oct – Jan	Possible offshore calving area. Not likely to occur in Action Area as it is too close to shore.
North Atlantic right whale *Eubalaena glacialis*	Endangered 73 FR 12024 (NMFS, 2005)	Adults and juveniles	Migrating	Year round	Highly migratory whale that commonly inhabits the coastal waters of eastern North America and the Gulf of Mexico. This whale spends much of its time at or near the water surface. Migratory pathway to/from northern latitude foraging and southern calving grounds. May briefly utilize deeper portions of Plum Gut adjacent to the Action Area as stopover habitat during migration.
Reptiles					
All Sea Turtle Species	See below for each species	See below for each species	See below for each species	See below for each species	In general, juveniles and adults migrate north in the spring as water temperatures warm, arriving in mid-Atlantic waters in May. As the waters cool in the fall, most sea turtles leave the area by the end of November.
Green sea turtle *Chelonia mydas*	Threatened [a] 81 FR 20057 (NMFS & USFWS, 1991)	Adults and juveniles	Migrating & Foraging	May – Nov	Inhabits shallow waters inside reefs, bays, and inlets unless migrating. Commonly observed in lagoons and shoals with marine grass and algae. Hatchlings seek refuge and food in sargassum habitat. May be in shallower parts of Action Area where there is more abundance of food.

Name	Federal Status/ Federal Register citation/ Species Recovery Plan	Life Stage(s)	Action	Seasonality/ Duration	Habitat/Reason in Action Area
Kemp's ridley sea turtle *Lepidochelys kempii*	Endangered 35 FR 18319 (NMFS, USFWS, & SEMARNAT, 2011)	Adults and juveniles	Migrating & Foraging	May – Nov	Inhabits nearshore muddy or sandy bottom waters less than 120 feet deep. Moves to deeper offshore waters as water temperature drops. May be in shallower parts of Action Area where there is more abundance of food.
Leatherback sea turtle *Dermochelys coriacea*	Endangered 35 FR 8491 (NMFS & USFWS, 1992)	Adults and juveniles	Migrating & Foraging	May – Nov	Inhabits the tropical and temperate open oceans worldwide but typically feeds just offshore. Active in waters below 40º F. Likely to be further offshore than the Action Area.
Loggerhead sea turtle *Caretta caretta*	Threatened [b] 76 FR 58868 (NMFS & USFWS, 2008)	Adults and juveniles	Migrating & Foraging	May – Nov	Inhabits a wide range of habitats, from hundreds of miles out to sea, to inshore areas like bays, lagoons, marshes, creeks, ship channels, and mouths of large rivers. Commonly uses coral reefs and rocky areas for feeding. May be in Action Area, passing through on migration.
Fish					
Atlantic sturgeon [c] *Acipenser oxyrinchus oxyrinchus*	Threatened [d]/ Endangered [e] 77 FR 5880 and 77 FR 5914 No Plan Listed	Subadult	Migrating & Foraging	Year round/ late spring – fall	Opportunistically forage in Long Island Sound year-round; 85% of Atlantic sturgeon caught in Long Island Sound are over mud/transitional bottoms of 88-122 feet deep in the central basin, likely outside of /deeper than the Action Area. The Action Area consists of rocky glacial moraine deposits. Spawning and early life stages are not expected to be present since the Action Area is not a natal river and contains saline waters.
		Adult	Migrating & Foraging	Year round/ late spring – fall	

Sources: (GARFO, 2022) (GARFO, 2023b)
a North Atlantic Distinct Population Segments
b Northwest Atlantic Distinct Population Segment
c Sturgeon from any DPS could possibly be present in the Action Area
d Gulf of Maine DPS
e New York Bight DPS, Chesapeake Bay DPS, Carolina DPS, South Atlantic DPS
*No designated critical habitat is present in the Action Area.

Effects Determination

Following Section 7 Consultation Technical Guidance, this section describes stressors from the Proposed Action and the possible effects of the Proposed Action on listed species in the Action Area under NOAA jurisdiction. This section is organized by stressor and their possible impacts on each listed species (**Table 1**) determined to be in the area using the NOAA Fisheries Greater Atlantic Region ESA Section 7 Mapper (GARFO, 2022). For each stressor we considered three elements: (1) the existing baseline conditions; (2) the action and what it adds to existing baseline conditions; and (3) new baseline conditions (the existing baseline conditions and the action combined). Effects determinations are summarized in **Table 2**.

Table 2: NMFS Listed Species Effects Determinations

Name	Possible Stressors	Effects Determination
Fin whale *Balaenoptera physalus*	Vessels (strike) Noise	***Not likely to adversely affect*** Species would likely avoid temporary construction/cable laying areas. Risks associated with vessel strikes and noise are discountable.
North Atlantic right whale *Eubalaena glacialis*	Vessels (strike) Noise	***Not likely to adversely affect*** Species would likely avoid temporary construction/cable-laying areas. Risks associated with vessel strikes and noise are discountable.
Green sea turtle *Chelonia mydas*	Vessels (strike) Noise Habitat Disturbance	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas and could be temporarily displaced from suitable foraging habitat, but effects would be insignificant. Risks associated with vessel strikes and noise are discountable.
Kemp's ridley sea turtle *Lepidochelys kempi*	Vessels (strike) Noise Habitat Disturbance	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas and could be temporarily displaced from suitable foraging habitat, but effects would be insignificant. Risks associated with vessel strikes and vessel noise are discountable.
Leatherback sea turtle *Dermochelys coriacea*	Vessels (strike) Noise	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas; as species prefers deeper waters, effects would be insignificant. Risks associated with vessel strikes and noise are discountable.
Loggerhead sea turtle *Caretta caretta*	Vessels (strike) Noise Habitat Disturbance	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas and could be temporarily displaced from suitable foraging habitat, but effects would be insignificant. Risks associated with vessel strikes and vessel noise are discountable
Atlantic sturgeon *Acipenser oxyrinchus oxyrinchus*	Water Quality Habitat Disturbance	***Not likely to adversely affect*** Species would likely avoid construction/cable-laying areas and would opportunistically forage elsewhere due to possible foraging grounds disturbances, so that effects would be insignificant. Risks associated with vessel strikes and vessel noise are discountable.

Sound

Noise generating equipment associated with trenching would be mostly onshore or above water, although equipment used to trench the short distance from the shoreline along the seafloor would generate some noise underwater. Noise would be limited to the duration of cable installation (i.e., four to six weeks for trenching activities and up to seven days for cable laying) and would cease once installation is complete. There is some potential for impacts to listed species from underwater noise; however, in-water trenching would only constitute a short portion of the anticipated timeframe and would remain close to shore. Listed species would be anticipated to move through or avoid the area while in-water trenching is occurring, and trenching is not anticipated to result in significant underwater noise disturbance. Because the trenching equipment primarily would be on land or above water, and in-water trenching would result in minor disturbances, the effects of noise are not considered further.

Habitat Structure and Disturbance

The new utility cable would be installed using trenching from the shore to several hundred feet along the seafloor, creating ground disturbance close to shore both on land and in water, and then bottom laying the cable through Plum Gut. The new cable would be installed between, or immediately adjacent to, the existing M1 and M2 cables. The path taken by the existing cables has been determined to be the most suitable route due to ocean depth in the area. Impacts to the water column from the descending cable would be minor and temporary. The remaining length of cable under Plum Gut would be abandoned in place, identical to how previous cable replacement projects have been conducted in the area. This would mean that permanent disturbance to previously disturbed areas would be minimal and therefore have insignificant impacts on listed species.

Benthic habitat where the cable is to be laid is likely rocky, with rocks >10 cm and <1 m in size (NYNHP, 2022). None of the species listed are known to utilize this habitat type, thus any disturbance would be unlikely to impact those species. Any disturbed benthic organisms are expected to recolonize when the project is completed, making an insignificant impact on their habitat and populations. The habitat where the cable emerges from the substrate and enters the ocean may be disturbed and/or have indirect effects on species and habitats surrounding the area, but would likely not have large or long-term impacts as the habitat settles and returns to its previous state. Eelgrass habitat has been identified in areas near Plum Island's shoreline; however, the current planned cable route does not run through this area or other known eelgrass habitat. Eelgrass habitat areas would be avoided, meaning no aquaculture habitat would likely be disturbed, thereby not impacting SAV. Given that habitat would only be impacted temporarily from trenching near the shore and cable installation, with minimal impact to the already disturbed seafloor areas, and the small area to be affected compared to available habitat within the Action Area, the effects of habitat modification are too small to be meaningfully measured or detected and are therefore insignificant.

The Proposed Action is unlikely to result in reductions in the quality or quantity of prey currently available. Actions from trenching and cable laying may increase turbidity and temporary disturbance of benthic habitat. Some species of benthic invertebrates that sturgeon feed on have limited mobility and could be temporarily buried during cable-laying or

trenching operations. However, any increase in total suspended solids (TSS) levels expected (see "Water Quality") would be minor and any effect of sediment plumes caused by the Proposed Action would be temporary and expected to settle out of the water column rapidly. Therefore, TSS is not likely to impact foraging behaviors or prey quality or quantity, as these impacts are only to a small portion of available foraging habitat. The benthic community is expected to recover quickly from any displacement.

Neither ESA-listed whale habitat nor their prey would be affected by the action, as whales and their prey forage and live in the water column, as do leatherback sea turtles that feed on jellyfish in open waters. As there are no known sea grass areas in the planned cable route, green sea turtle prey is unlikely to be impacted. Some of the prey species targeted by sea turtles and sturgeon, including crabs, are mobile and most likely will not be impacted.

Water Quality

The new utility cable would be installed using in-water trenching from the shore to below the water line, creating ground disturbance where the cable is installed under the substrate, causing a temporary increase in suspended sediment in the Action Area, and increasing turbidity through the displacement of substrate. Any sediment plume caused by in-water trenching or cable laydown would likely be composed of sand, with little silt, from the ocean floor. These activities could produce TSS concentrations averaging 210 mg/L above baseline levels, across depths, and up to 445 mg/L based on similar construction actions (e.g., mechanical dredging) (ACOE, 2001; GARFO, 2023c). Monitoring performed by the USACE, in support of the New York/New Jersey Harbor Deepening Project, shows that mechanical dredge plumes dissipated to background levels within 600 feet of the source in the upper water column and 2,400 feet in the lower water column (ACOE, 2015).

The resulting sediment plume from both trenching and laydown is expected to settle out of the water column rapidly within a 2,400-foot radius based on previous studies (GARFO, 2023c). The TSS levels expected are below those shown to have adverse effects on fish (typically up to 1,000.0 mg/L; see summary of scientific literature in Burton (1993) and Wilber & Clarke (2001) and benthic communities (390.0 mg/L (EPA, 1986)). Sea turtles and whales breathe air, and would be able to swim away from the turbidity plume and would not be adversely affected by passing through the temporary increase in TSS. TSS is most likely to affect sturgeon, whales, and sea turtles if a plume causes a barrier to normal behaviors. However, we expect sturgeon, whales, and sea turtles to swim through the plume to avoid the area with no adverse effects. When added to baseline conditions, increase in TSS would be too small to be meaningfully measured or detected, and therefore, potential increases in TSS would be insignificant. The zone of passage is not likely to be impacted.

The new cable would be installed between or immediately adjacent to the existing M1 and M2 cables via a CLB. The new cable would be 3.5 inches in diameter and weigh 6.2 pounds per linear foot in saltwater (approximately 10.3 pounds per foot in air). Due to the heavy weight of the cable, anchoring to the seafloor is not necessary. Any potential lateral movement of the cable that could cause increased turbidity would be greatly limited due to the rugged and rocky seafloor landscape and changes in bathymetry. The CLB portion of the cable installation would likely cause a temporary increase in turbidity as the cable contacts the seafloor, but any disturbed sediment is expected to settle once the cable is in place. The CLB portion of the Proposed Action is anticipated to require a duration of up to seven days.

Given the minimal and temporary increase in turbidity above baseline levels of the CLB portion of the cable installation, there would be no measurable or detectable increase in turbidity, and effects to listed species are insignificant.

No other water quality parameters (lowered dissolved oxygen, changes in temperature, addition of pollutants, etc.) are expected to be impacted by the Proposed Action, and all impacts are anticipated to be within the immediate area of the Proposed Action. The probability of active sea turtles, sturgeon, and whales being impacted by any temporary shifts in water quality is extremely unlikely because of the short time of the disturbance and the large water body in which the Proposed Action would take place. Therefore, the effects to water quality associated with the Proposed Action are insignificant when added to baseline conditions.

Vessels

A source of anthropogenic mortality and injury for whales, sturgeon, and sea turtles is boat hull or propeller strikes. DHS S&T would heed all regulations and guidelines regarding safe operation of vessels around marine mammals and other protected species. Furthermore, water vessels are anticipated to move slowly (6 knots) during cable laying, thus reducing the risk of propeller strikes. Vessel traffic added to baseline conditions as a result of the Proposed Action is *not likely to adversely affect* ESA-listed species. The Proposed Action would not permanently alter vessel traffic in the Action Area, therefore there is no increased long-term risk of vessel strike. We have also considered the likelihood that an increase in vessel traffic related to the Proposed Action would generally increase the risk of interactions between listed species and vessels in the Action Area, in addition to baseline conditions. Vessels would only be those laying cable between Orient Point and Plum Island. The use of a CLB and support craft would cause a small, localized, temporary increase in vessel traffic lasting a duration of up to seven days. The area of Plum Gut, where the Proposed Action would occur, is commonly trafficked by recreational boaters and the Plum Island and Cross Sound Ferries. Vessel traffic associated with the Proposed action would be negligible in context of baseline vessel traffic in the area. As such, any increased risk of a vessel strike caused by the project would be too small to be meaningfully measured or detected. As a result, the effect of the Proposed Action on the increased risk of a vessel strike in the Action Area is insignificant.

Conclusions

Based on the analysis that all effects of the Proposed Action would be insignificant and/or extremely unlikely, we have determined that Plum Island Animal Disease Center Undersea Cable Installation ***may affect, but is not likely to adversely affect*** (NLAA) any of the NMFS Listed Species that have the potential to be present in the area. We certify that we have used the best scientific and commercial data available to complete this analysis. We request your concurrence with this determination. For additional information, please contact Natalie Kisak at natalie.kisak@aecom.com. Email responses are preferred, although letter responses may be submitted to *Natalie Kisak, 12420 Milestone Center Drive, Suite 150, Germantown, Maryland 20876.*

Respectfully,

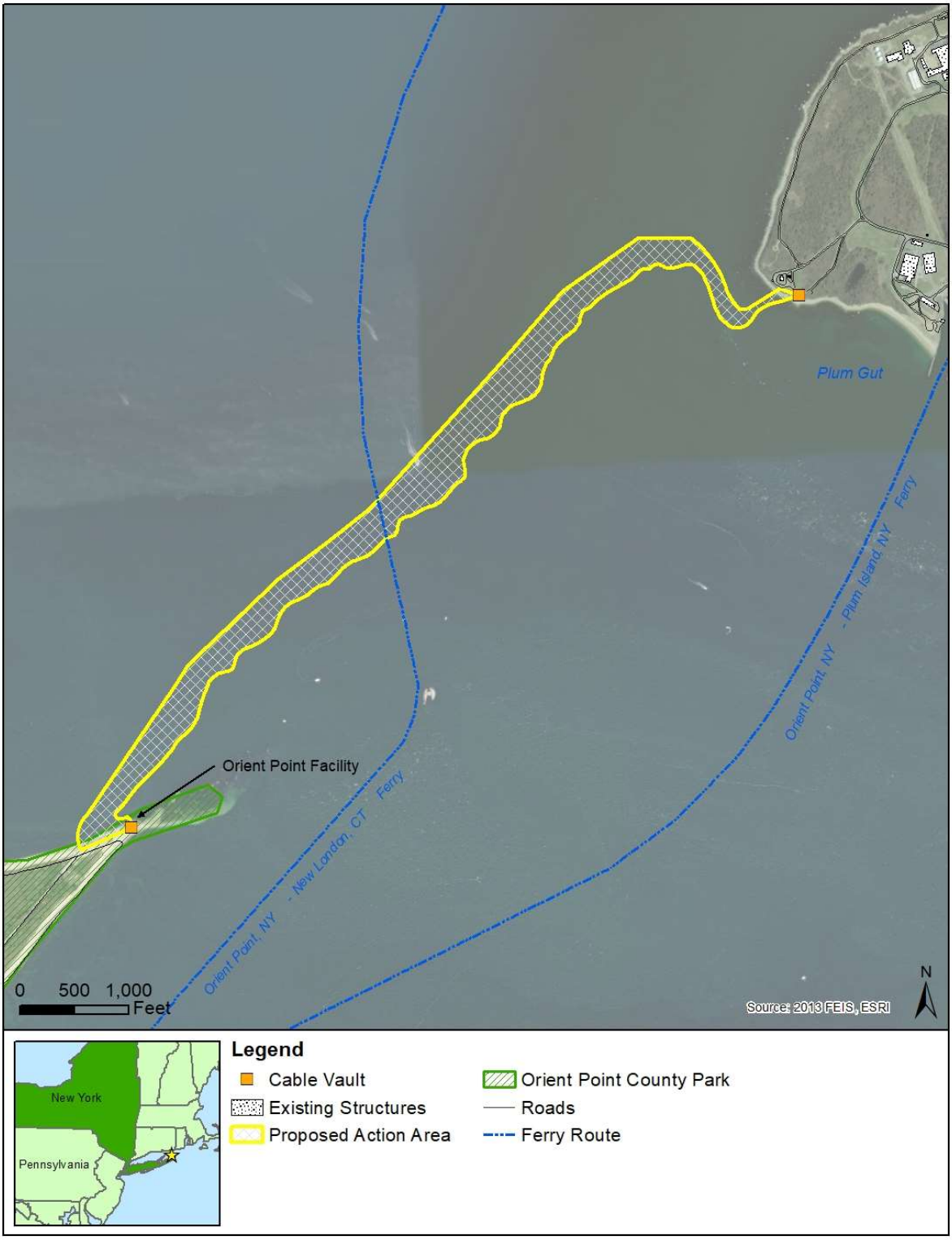
JOHN M SEARING

Digitally signed by JOHN M SEARING
Date: 2023.12.06 19:12:32 -05'00'

John M. Searing, PE, PMP
Deputy Center Director
PICS Program Director
Plum Island Animal Disease Center
Office of National Laboratories
Science and Technology Directorate

Attachments:
1a. Proposed Action Location
1b. Proposed Undersea Cable Route
2. NOAA Fisheries Section 7 Consultation Mapper Result
3. References

Attachment 1a: Proposed Action Location



Attachment 1b: Proposed Undersea Cable Route

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 6,037.86 acres

Sep 14 2023 10:06:05 Eastern Daylight Time

Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	2	9,731.12	N/A
Shortnose Sturgeon	0	0	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	4	19,462.41	N/A
Atlantic Large Whales	5	24,326.45	N/A
In or Near Critical Habitat	0	0	N/A

Atlantic Sturgeon

#	Feature ID	Species	Lifestage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	ANS_LIS_ADU_MAF	Atlantic sturgeon	Adult	Migrating & Foraging	Long Island Sound	01/01	12/31	N/A	N/A	4,865.56
2	ANS_LIS_SUB_MAF	Atlantic sturgeon	Subadult	Migrating & Foraging	Long Island Sound	01/01	12/31	N/A	N/A	4,865.56

Sea Turtles

#	Feature ID	Species	Life Stage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	GRN_STS_AJV_MAF	Green sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	4,865.60
2	KMP_STS_AJV_MAF	Kemp's ridley sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	4,865.60
3	LTR_STS_AJV_MAF	Leatherback sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	4,865.60
4	LOG_STS_AJV_MAF	Loggerhead sea turtle	Adults and juveniles	Migrating & Foraging	Massachusetts (S of Cape Cod) through Virginia	5/1	11/30	*No Data*	*No Data*	4,865.60

Atlantic Large Whales

#	Feature ID	Species	Lifestage	Behavior	Zone	From	Until	From (2)	Until (2)	Area(acres)
1	RIT_WRS_AJV_MIG	North Atlantic right whale	Adults and juveniles	Migrating	Mid-Atlantic (Cape Cod, MA to VA)	1/1	12/31	*No Data*	*No Data*	4,865.29
2	FIN_WFS_AJV_MIG	Fin whale	Adults and juveniles	Migrating	Mid-Atlantic (Cape Cod, MA to VA)	1/1	12/31	*No Data*	*No Data*	4,865.29
3	FIN_WFS_AJV_WIN	Fin whale	Adults and juveniles	Overwintering	Mid-Atlantic (Cape Cod, MA to VA)	11/1	1/31	*No Data*	*No Data*	4,865.29
4	FIN_WFS_AJV_FOR	Fin whale	Adults and juveniles	Foraging	Mid-Atlantic (Cape Cod, MA to VA)	1/1	12/31	*No Data*	*No Data*	4,865.29
5	FIN_WFS_ADU_CLV	Fin whale	Adult	Calving	Mid-Atlantic (Cape Cod, MA to VA)	10/1	1/31			4,865.29

Attachment 3: References

ACOE. (2001). *Monitoring of Boston Harbor confined aquatic disposal cells.* ERDC/CHL TR-01-27: Compiled by L.Z. Hales, Army Corps of Engineers Coastal and Hydraulics Laboratory.

ACOE. (2015). *Dredging and dredged material management.* Washington D.C.: 568 pp: Army Corps of Engineers. Engineer Manual.

Burton, W. H. (1993). *Effects of bucket dredging on water quality in the Delaware River and the potential for effects on fisheries resources.* Columbia, Maryland: Versar, Inc.

EPA. (1986). *Quality Criteria for Water.* EPA 440/5-86-001.

GARFO. (2022). *ESA S7 Mapper, Version 2.1*. Retrieved from NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO) Protected Resources Division: https://noaa.maps.arcgis.com/apps/webappviewer/index.html?id=a85c0313b68b44e0927b51928271422a

GARFO. (2023a). *Section 7: Consultation Technical Guidance in the Greater Atlantic Region*. Retrieved from NOAA Fisheries: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultation-technical-guidance-greater-atlantic

GARFO. (2023b). *Section 7: Species/Critical Habitat Information & Maps in the Greater Atlantic Region*. Retrieved from NOAA Fisheries GARFO: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-species-critical-habitat-information-maps-greater

GARFO. (2023c). *Section 7 Effects Analysis: Turbidity in the Greater Atlantic Region*. Retrieved from NOAA Fisheries GARFO: https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-effects-analysis-turbidity-greater-atlantic-region

NMFS. (2005). *Recovery Plan for the North Atlantic Right Whale (Eubalaena glacialis).*

NMFS. (2010). *Final Recovery Plan for the Fin Whale (Balaenoptera physalus).*

NMFS, & USFWS. (1991). *Recovery Plan for U.S. Population of Atlantic Green Turtle (Chelonia mydas).*

NMFS, & USFWS. (1992). *Recovery Plan for Leatherback Turtles (Dermochelys coriacea) in the U.S. Caribbean, Atlantic, and Gulf of Mexico.*

NMFS, & USFWS. (2008). *Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (Caretta caretta).*

NMFS, USFWS, & SEMARNAT. (2011). *Bi-National Recovery Plan for the Kemp's Ridley Sea Turtle (Lepidochelys kempii).*

NYNHP. (2022). *Survey of Plum Island's Subtidal Marine Habitats.* Retrieved September 22, 2023, from https://www.nynhp.org/documents/177/Plum_Island_Marine_Subtidal_Habitats_March_2022.pdf

Wilber, D. H., & Clarke, D. G. (2001). Biological effects of suspended sediments: A review of suspended sediment impacts on fish and shellfish with relation to dredging activities in estuaries. *North American Journal of Fisheries Management*, 21(4):855-875.

Appendix F: New York State Department of Environmental Conservation Environmental Assessment Form Mapper Results

This page intentionally left blank.

EAF Mapper Summary Report

Wednesday, October 4, 2023 9:38 AM

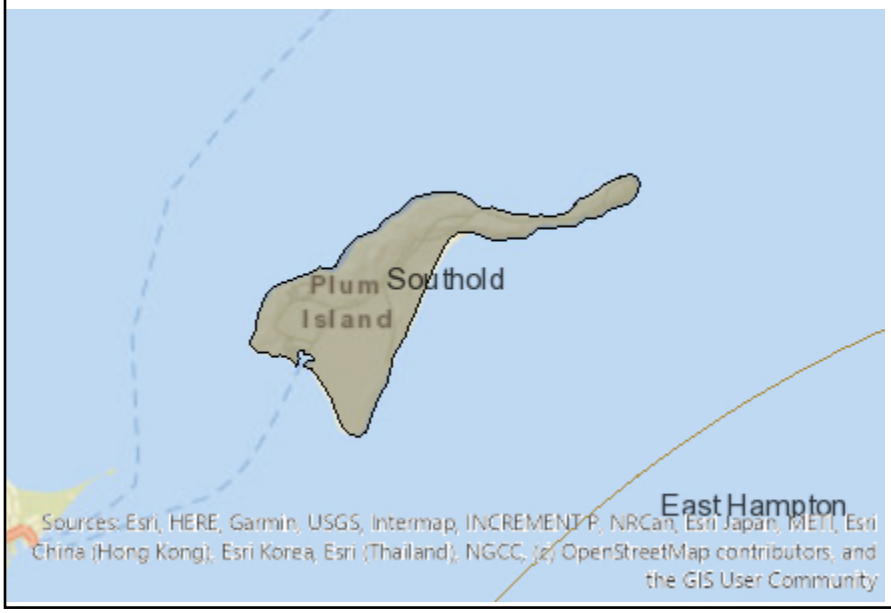
Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	Yes
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:LI North Shore Heritage Area
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Lake/Pond Name]	924-1, 924-16
E.2.h.iv [Surface Water Features - Lake/Pond Classification]	SA
E.2.h.iv [Surface Water Features - Wetlands Name]	Tidal Wetlands, Federal Waters
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	Yes

E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Sole Source Aquifer Names:Nassau-Suffolk SSA
E.2.n. [Natural Communities]	Yes
E.2.n.i [Natural Communities - Name]	Maritime Beach, Marine Intertidal Gravel/Sand Beach, Marine Eelgrass Meadow, Marine Rocky Intertidal
E.2.n.i [Natural Communities - Acres]	75.63, 170.02, 110.46, 14.39
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Piping Plover
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	Yes
E.3.d [Critical Environmental Area - Name]	Peconic Bay and Environs, Orient Point
E.3.d.ii [Critical Environmental Area - Reason]	Protect public health, water, vegetation, & scenic beauty, Benefit to human health & protect drinking water
E.3.d.iii [Critical Environmental Area – Date and Agency]	Agency:Suffolk County, Date:7-12-88, Date:2-10-88
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

EAF Mapper Summary Report

Wednesday, October 4, 2023 9:27 AM



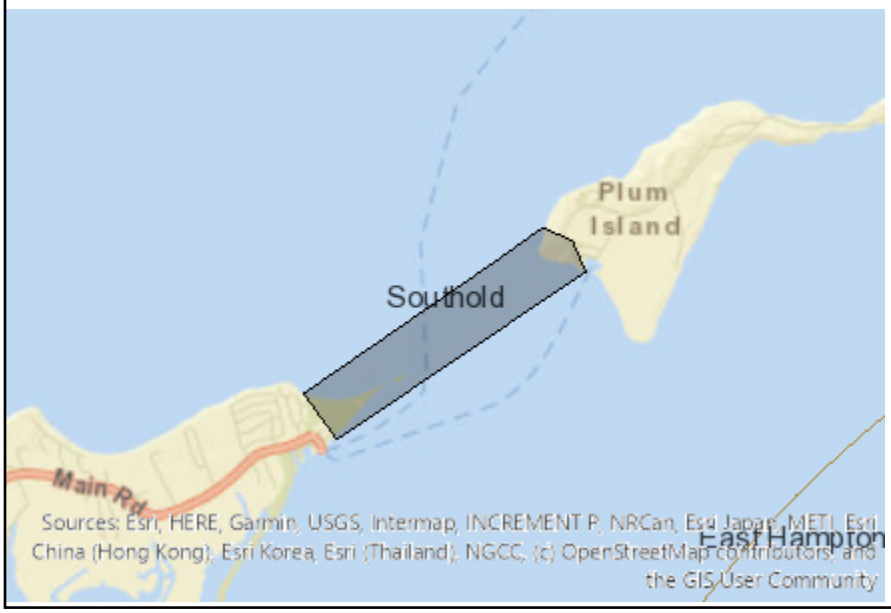
Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	Yes
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:LI North Shore Heritage Area
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Lake/Pond Name]	924-1, 924-16, 924-180
E.2.h.iv [Surface Water Features - Lake/Pond Classification]	SA
E.2.h.iv [Surface Water Features - Wetlands Name]	Tidal Wetlands, Federal Waters, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):2.9, NYS Wetland (in acres):11.2, NYS Wetland (in acres):11.6, NYS Wetland (in acres):76.3, NYS Wetland (in acres):1.4, NYS Wetland (in acres):1.0

E.2.h.iv [Surface Water Features - DEC Wetlands Number]	PL-5, PL-4, PL-1, PL-2, PL-6, PL-7, PL-8
E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	No
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Sole Source Aquifer Names:Nassau-Suffolk SSA
E.2.n. [Natural Communities]	Yes
E.2.n.i [Natural Communities - Name]	Marine Eelgrass Meadow, Maritime Dunes, Marine Intertidal Gravel/Sand Beach, Maritime Beach, Marine Rocky Intertidal, Maritime Bluff
E.2.n.i [Natural Communities - Acres]	9.5, 63.0, 28.47, 32.84, 39.25, 11.8
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Northern Harrier, Many-spiked Flat Sedge, Oakes' Evening Primrose, Annual Saltmarsh Aster, Marsh Straw Sedge, Reflexed Flat Sedge, Velvet Rosette Grass, Cut-leaved Water Milfoil, Single-glumed Spike Rush, Great Plains Flat Sedge, Dwarf Umbrella Sedge, Piping Plover, Wild Pink, Grass-leaved Ladies' Tresses, Scotch Lovage, Coastal Fireweed
E.2.p. [Rare Plants or Animals]	Yes
E.2.p. [Rare Plants or Animals - Name]	Seabeach Knotweed
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	Yes
E.3.d [Critical Environmental Area - Name]	Peconic Bay and Environs
E.3.d.ii [Critical Environmental Area - Reason]	Protect public health, water, vegetation, & scenic beauty
E.3.d.iii [Critical Environmental Area – Date and Agency]	Agency:Suffolk County, Date:7-12-88
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Eligible property:Buildings 101, 102 and 103, Eligible property:Building 103, Plum Island Light Station, Fort Terry Historic District
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

EAF Mapper Summary Report

Friday, September 29, 2023 9:11 AM



Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	Yes
B.i.ii [Local Waterfront Revitalization Area]	Yes
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	NYS Heritage Areas:LI North Shore Heritage Area
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.1.h.iii [Within 2,000' of DEC Remediation Site]	No
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Lake/Pond Name]	924-1, 924-16
E.2.h.iv [Surface Water Features - Lake/Pond Classification]	SA
E.2.h.iv [Surface Water Features - Wetlands Name]	Tidal Wetlands, Federal Waters, NYS Wetland
E.2.h.iv [Surface Water Features - Wetlands Size]	NYS Wetland (in acres):2.9
E.2.h.iv [Surface Water Features - DEC Wetlands Number]	PL-5

E.2.h.v [Impaired Water Bodies]	No
E.2.i. [Floodway]	Digital mapping data are not available or are incomplete. Refer to EAF Workbook.
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Sole Source Aquifer Names:Nassau-Suffolk SSA
E.2.n. [Natural Communities]	Yes
E.2.n.i [Natural Communities - Name]	Maritime Beach, Marine Intertidal Gravel/Sand Beach, Marine Eelgrass Meadow, Marine Rocky Intertidal, Maritime Dunes
E.2.n.i [Natural Communities - Acres]	75.63, 170.02, 110.46, 14.39, 9.5, 63.0, 28.47, 32.84, 39.25
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Piping Plover, Northern Harrier, Marsh Straw Sedge, Cut-leaved Water Milfoil, Great Plains Flat Sedge, Wild Pink, Scotch Lovage, Coastal Fireweed
E.2.p. [Rare Plants or Animals]	No
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	Yes
E.3.d [Critical Environmental Area - Name]	Peconic Bay and Environs, Orient Point
E.3.d.ii [Critical Environmental Area - Reason]	Protect public health, water, vegetation, & scenic beauty, Benefit to human health & protect drinking water
E.3.d.iii [Critical Environmental Area – Date and Agency]	Agency:Suffolk County, Date:7-12-88, Date:2-10-88
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Orient Point Light Station, Plum Island Light Station, Fort Terry Historic District
E.3.f. [Archeological Sites]	No
E.3.i. [Designated River Corridor]	No