

**STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE**

CHANGE NOTICE

February 6, 2025

TO: JASON ZEHR
CHIEF, ENVIRONMENTAL CERTIFICATION AND COMPLIANCE
OFFICE OF RENEWABLE ENERGY SITING AND ELECTRIC TRANSMISSION

FROM: Daniel Connor, Utility Analyst 2 (Environmental)
ENVIRONMENTAL CERTIFICATION AND COMPLIANCE
OFFICE OF RENEWABLE ENERGY SITING AND ELECTRIC TRANSMISSION

SUBJECT: CASE 20-T-0617 - Application of Sunrise Wind LLC for a Certificate of Environmental Compatibility and Public Need for the Construction of Up to 6.2 Miles (320 kilovolt [kV]) of Direct Current (DC) Submarine Export Cable from the New York State Territorial Waters Boundary to the Smith Point County Park on Fire Island in the Town of Brookhaven in Suffolk County and Up to 17.5 Miles (320 kV) of Onshore Transmission Cable from the Landfall at Fire Island to a New Onshore Converter Station in the Town of Brookhaven and Up to 1 Mile (138 kV) of Alternating Current (AC) Onshore Interconnection Cable Connecting to the Existing Holbrook Substation in the Town of Brookhaven in Suffolk County.

RECOMMENDATION: Approval of EM&CP Change Notice 2025-P2_011 As Requested.

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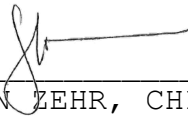
In accordance with Certificate Condition 41 of the Order Adopting Terms of a Joint Proposal and granting Sunrise Wind LLC (Sunrise Wind or Certificate Holder) a Certificate of Environmental Compatibility and Public Need in the above referenced proceeding, Sunrise Wind has notified Department of Public Service Staff (DPS staff) of a proposed minor change. This minor change pertains to the Project's Phase 2 Environmental Management and Construction Plan (EM&CP), which was approved by the Commission on December 18, 2023.

Change Notice 2025-P2_011 - According to the Certificate Holder's request, as reviewed by DPS staff, this Phase 2 EM&CP minor change request seeks modifications to the method of water quality

monitoring for boulder relocation activities described in the approved Suspended Sediment and Water Quality Monitoring Plan (Appendix SS of the EM&CP). The proposed water quality monitoring will include visual observation of turbidity throughout boulder relocation activities by a qualified visual monitor. If visual observations of turbidity that cause a substantial visible contrast to natural conditions occur, DPS staff, NYSDEC staff, and the Aquatic Environmental Monitor shall be immediately notified, and work shall be ceased and then restarted at modified levels to eliminate visual observations of turbidity and bring activities into compliance with the narrative water quality standard in 6 NYCRR § 703.2.

DPS staff, in consultation with NYSDEC, concludes this minor change will not result in a net increase of adverse environmental impacts, nor is it directly related to any contested issues decided by the Administrative Law Judges or the Commission during the proceeding. No new land rights will need to be acquired, and all work will be performed within the current property easements. It is hereby recommended that this change be approved, and the Certificate Holder be notified.

REVIEWED & APPROVED:



JASON ZEHR, CHIEF
ENVIRONMENTAL CERTIFICATION AND COMPLIANCE
OFFICE OF RENEWABLE ENERGY SITING AND ELECTRIC
TRANSMISSION

cc: R. Forest Rung (RForest.Rung@stantec.com)
Dan Connor, DPS (daniel.connor@dps.ny.gov)
20-T-0617 Case File
DPS Central File

Sunrise Wind LLC (Case 20-T-0617)

Environmental Management & Construction Plan Notice of Change Form

<u>Notice Number:</u> 2025-P2_011	<u>Change Location:</u> SRW NYS Corridor	<u>Drawing Number(s):</u> Appendix SS – Suspended Sediment and Water Quality Monitoring Plan
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Description of Requested Change:

The Certificate Holder is proposing to change the method of water quality monitoring for boulder relocation activities currently described in the approved Suspended Sediment and Water Quality Monitoring Plan (Appendix SS of the EM&CP). The proposed water quality monitoring will include visual observation of turbidity throughout boulder relocation activities by a qualified visual monitor. If during water quality monitoring, visual observations of turbidity that cause a substantial visible contrast to natural conditions occur, NYSDPS Staff, NYSDEC Staff, and the Aquatic Environmental Monitor shall be immediately notified and work shall be ceased and then restarted at modified levels to eliminate visual observations of turbidity and bring activities into compliance with the narrative water quality standard in 6 NYCRR § 703.2.

Rationale for Change:

The Certificate Holder has currently identified 6 boulders along the SRWEC-NYS corridor which require relocation. The relocation and survey activities are anticipated to be completed within less than one day (approximately 6 hours). This is a very controlled scope and will result in only minor disturbance of sediment. Water depths where the boulders are located are 50 to 56 ft (15 to 17 m), and the area is composed of Sand and Muddy Sand habitats and Coarse Sediment – Mobile habitats. Due to the very limited spatial and temporal extent of this scope and the very low likelihood of suspended sediment persisting at a distance of 1,500 ft down current (i.e., the limit identified in Certificate Condition 187), visual monitoring will achieve compliance with the narrative water standard in 6 NYCRR § 703.2: “No increase that will cause a substantial visible contrast to natural conditions.”

List of Attachments (e.g., field sketches, revised drawings, etc.):

- Attachment A: Amended EM&CP Appendix SS - Suspended Sediment and Water Quality Monitoring Plan

Does the proposed change result in a substantial increase in adverse environmental impact, or is the change directly related to contested issues decided by the Administrative Law Judge or the Commission during the proceeding?

☐ Yes (Change to be sent to the Commission for approval)	☒ No (Change to be sent to Director of Facility Certification & Compliance of the Environmental Certification and Compliance ("EC&C") Section or their designee for approval)
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Signatures:

Initiated/Prepared by:

 Date: 1/24/2025

Approved by Certificate Holder:

 Date: 1/27/2025

Approved by EC&C Director or DPS Staff:

_____ Date: _____



SUSPENDED SEDIMENT AND WATER QUALITY MONITORING PLAN

Case 20-T-0617

Sunrise Wind New York Cable Project
Town of Brookhaven

December 2022

Revised January 2025

Prepared for:
Sunrise Wind LLC
437 Madison Avenue, Suite 1903
New York, NY 10022

Prepared by:



SUSPENDED SEDIMENT AND WATER QUALITY MONITORING PLAN

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Abbreviations

AC	alternating current
ADCP	acoustic Doppler current profiler
Certificate	Certificate of Environmental Compatibility and Public Need
DC	direct current
NYSDPS	New York State Department of Public Service
EM&CP	Environmental Management and Construction Plan
ft	feet
GPS	Global Positioning System
HDD	horizontal directional drilling
kV	kilovolt
km	kilometers
<u>LARS</u>	<u>Launch and Recovery System</u>
LIPA	Long Island Power Authority
m	meters
MHWL	Mean High Water Line
mg/L	milligrams per liter
mi	miles
mm	millimeters
nm	nautical miles
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSERDA	New York State Energy Research and Development Authority
OCS	Outer Continental Shelf
OnCS–DC	Onshore Converter Station
OREC	Offshore Wind Renewable Energy Certificate

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PLGR	pre-lay grapnel run
PSL	Public Service Law
ROW	right-of-way
SRWEC	Sunrise Wind Export Cable
SRWEC–NYS	Sunrise Wind Export Cable – New York State portion
SRWF	Sunrise Wind Farm
SS&WQ Monitoring Plan	Suspended Sediment and Water Quality Monitoring Plan
TJB	transition joint bay
TSS	total suspended solids
USACE	United State Army Corps of Engineers

1.0 INTRODUCTION

Sunrise Wind LLC (Sunrise Wind or the Applicant), a 50/50 joint venture between Orsted North America Inc. (Orsted NA) and Eversource Investment LLC (Eversource), proposes to construct, operate, and maintain the Sunrise Wind New York Cable Project (the Project). Sunrise Wind executed a 25-year Offshore Wind Renewable Energy Certificate (OREC) contract related to the Sunrise Wind Farm (SRWF) and the Project with the New York State Energy Research and Development Authority (NYSERDA) in October 2019. The Project will deliver power from the SRWF, located in federal waters on the Outer Continental Shelf (OCS), to the existing electrical grid in New York State (NYS). The Project includes offshore and onshore components within NYS that are subject to Public Service Law (PSL) Article VII review and will interconnect at the existing Holbrook Substation, which is owned and operated by the Long Island Power Authority (LIPA).

Specifically, power from the SRWF will be delivered to the existing mainland electric grid via distinct Project segments: the submarine segment of the export cable (SRWEC), which will be located in both federal and NYS waters (the NYS portion of the cable referred to as the SRWEC–NYS); the terrestrial underground segment of the transmission cable (Onshore Transmission Cable); the new Onshore Converter Station (OnCS–DC); and the underground segment of the interconnection cable (Onshore Interconnection Cable) to the existing Holbrook Substation. The Onshore Transmission Cable, the OnCS–DC, Onshore Interconnection Cable and the existing Holbrook Substation (collectively, the Onshore Facilities) are all located in the Town of Brookhaven, Suffolk County, New York.

The Project's components are generally defined into two categories:

- SRWEC–NYS
 - One direct current (DC) submarine export cable bundle (320 kilovolt [kV]) up to 5.2 miles (mi) (8.4 kilometers [km]) in length in NYS waters and up to 1,152 feet (ft) (351 meters [m]) in length located onshore (i.e., above the Mean High Water Line [MHWL], as defined by the United States [US] Army Corps of Engineers [USACE] [33 Code of Federal Regulations (CFR) 329]) and underground, up to the transition joint bay (TJB).
- Onshore Facilities
 - One DC underground transmission circuit (320 kV) (referred to as the Onshore Transmission Cable) up to 17.5 mi (28.2 km) in length within existing roadway right-of-way (ROW), TJB and concrete splice joint and associated components;
 - One OnCS–DC that will transform the Project voltage to 138 kV alternating current (AC);
 - Two AC underground circuits (138 kV) (referred to as the Onshore Interconnection Cable) up to 1.1 mi (186 km) in length, which will connect the new OnCS–DC to the existing Holbrook Substation;
 - Fiber optic cables co-located with both the Onshore Transmission Cable and Onshore Interconnection Cable;
 - Laydown yards and temporary equipment; and
 - Expansion of the Holbrook Substation to accept the Onshore Interconnection Cable (the Holbrook Substation Expansion).

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INSPIRE Environmental has prepared this Suspended Sediment and Water Quality Monitoring Plan (hereinafter referred to as the Monitoring Plan) to specify water quality monitoring activities to be conducted during specific construction activities within the SRWEC–NYS corridor. Monitoring will be conducted for the duration of activities that require monitoring as described in Section 2.1, *Project Activities Requiring Water Quality Monitoring*.

This Plan has been developed in accordance with the Certificate of Environmental Compatibility and Public Need (Certificate) as well as Appendix I of the Certificate, “Scope of Study: Suspended Sediment and Water Quality Monitoring Plan.” This Monitoring Plan is designed to fulfill the requirements of Certificate of Environmental Compatibility and Public Need (Certificate) Conditions 182–189 and 193 which state that the Environmental Management and Construction Plan (EM&CP) must address and/or include:

- 182 *The Certificate Holder shall incorporate within the Post-Phase 1 EM&CP and implement a Suspended Sediment and Water Quality Monitoring Plan pertaining to offshore and onshore activities. The Certificate Holder must submit a Suspended Sediment and Water Quality Monitoring Plan for review and comment by DPS Staff, NYSDEC, and NYSDOS forty-five (45) days prior to the filing of the EM&CP. The Suspended Sediment and Water Quality Monitoring Plan must be prepared in accordance with Appendix I of the Joint Proposal.*
- a. Water quality monitoring shall be conducted within the Project Corridor as described in Appendix B during seabed preparations, jet trenching pre-construction and construction activities, excavation of the HDD exit, pre-lay grapnel run, cable installation, backfill of the HDD exit, and maintenance and decommissioning activities that involve disturbance of sediments (together, “Monitored Construction Activities”).*
 - b. Maintenance and decommissioning activities that result in only minor disturbance of sediments, including: (i) anchor sweep; (ii) anchoring; (iii) placement of jack-up barge; (iv) hand jetting; or (vi) other activities as determined by DPS Staff, in consultation with NYSDEC, shall not require water quality monitoring.*
- 183 *The Suspended Sediment and Water Quality Monitoring Plan must:*
- a. Specify sample location, depth of samples, frequency of sampling, and sampling during various tidal cycles;*
 - b. Describe procedures for background (upcurrent) and compliance (downcurrent) monitoring;*
 - c. Include daily sampling during each tidal cycle;*
 - d. Use an Acoustic Doppler Current Profiler to locate the plume;*
 - e. Require whole water samples in the vertical water column (from at least 3 depths) along a transect within the plume;*
 - f. Include an up-current transect outside the influence of Monitored Construction Activities;*

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- g. Require water quality monitoring, which shall include laboratory TSS and OBS turbidity analyses, to be conducted daily throughout the duration of Monitored Construction Activities. Prior to commencing maintenance and decommissioning activities, the Certificate Holder shall submit for NYSDEC review a water quality monitoring plan for activities that may require such monitoring;*
 - h. Identify a procedure whereby, if sampling results indicate consistent compliance with the TSS standards, the Certificate Holder can submit a request in writing to DPS Staff and NYSDEC to reduce the sampling frequency;*
 - i. Specify that real-time data must be collected using Acoustic Doppler Current Profiler and Optical Backscatter Sensor instrumentation and by collecting water samples at various depths for laboratory analysis of: TSS according to the methods and method detection limits identified in the Water Quality Monitoring Plan;*
 - j. Specify that, if activities occur concurrently in multiple locations, each activity that may cause resuspension of bottom sediments must be monitored separately.*
- 184 *All water quality analyses required by this Certificate must be conducted by a laboratory certified by the NYSDOH ELA*
- 185 *Certificate Holder shall use commercially reasonable efforts to request the most expedited turnaround time available for laboratory samples for locations along the SRWEC-NYS. Analytical results must be sent to DPS Staff and NYSDEC as soon as received from the laboratory, but no longer than forty-eight (48) hours of receipt. Exceedances must be highlighted.*
- 186 *A pre-activity water quality calibration will be conducted to ensure that TSS may be accurately estimated in real-time during water quality monitoring activities. The pre-activity water quality calibration will be described in detail in the suspended solids and water quality monitoring plan.*
- 187 *The following limit must be achieved for TSS at a distance of 1,500 feet down current (based on tide direction) of sediment disturbing activities:*
- a. Guidance Value: TSS 100 mg/L above ambient for all offshore construction activities.*
 - b. If during water quality monitoring, the real-time TSS concentrations established by the calibration curve exceed the TSS limits established in this Certificate, DPS Staff, NYSDEC Staff, and the Aquatic Environmental Monitor shall be immediately notified and work shall be ceased immediately and then restarted at modified levels that will reduce TSS levels and bring them into compliance with Condition 192 (a) (b) in accordance with iterative changes outlined in Condition 192 (c) (ii) and (iii). The Certificate Holder will continue to iteratively implement operational controls and measure the resulting TSS. The Certificate Holder will notify the Aquatic Monitor throughout the process about any such operational adjustments.*
 - i. During implementation of corrective actions, DPS Staff and NYSDEC may specify additional monitoring until compliance with Water Quality Standards is*

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demonstrated. Samples shall be collected until resumption of routine monitoring is authorized by DPS Staff in consultation with NYSDEC.

- ii. For purposes of iterative changes to the use of a CFE or hand jetting tools, the following changes may be employed: changing the rate of advancement of the CFE or hand jet tool, modifying or varying hydraulic jetting pressures, and/or implementing other reasonable operational controls that may reduce suspension of in-situ sediments in a manner that would not materially delay the progress of work to complete the installation procedure.*
- iii. For purposes of iterative changes to the use of a barge mounted excavator, the following changes may be employed: changing the rate of advancement of the excavator, modifying the depth of the excavator bucket in the water column, implementing other reasonable operational controls that may reduce suspension of in-situ sediments in a manner that would not materially delay the progress of work to complete the installation procedure, and/or operating the bucket so as to control the rate of the descent and to maximize the depth of penetration without overfilling the bucket, and/or to control bucket retrieval rates.*

188. *If any jet trenching technology is used to lay the cable, trials must be conducted within representative sections or areas proximate to the proposed underwater cable route in NYS waters prior to cable installation to ensure compliance with Total Suspended Solids ("TSS") threshold limits as defined in Condition 187 (a). The trial will include approximately 1,000 feet of jet trenching operations within an area to be specified in the Jet Trencher Trial Plan that will be submitted as part of the Post-Phase 1 EM&CP. The following conditions apply to jet trencher trials:*

- a. Pre-monitoring water quality calibration will be conducted prior to the jet trencher trials and will enable real-time estimation of TSS concentrations during the trials.*
- b. A combination of acoustic ("ADCP") and calibrated optical backscatter ("OBS") measurements will be used to estimate TSS concentrations on selected transects. TSS and OBS turbidity water samples will be collected one thousand five hundred (1,500) feet up-current (for baseline) and one thousand five hundred (1,500) feet down-current of the jet plow, at three-interval depths (near surface, mid-depth, and near bottom) and analyzed by a NYSDOH Environmental Laboratory Approval Program ("ELAP") certified laboratory. Water quality monitoring requirements during jet trencher trials will be described in detail in the suspended solids and water quality monitoring plan;*
- c. The Certificate Holder must coordinate with DPS Staff and NYSDEC to share real-time TSS measurement estimates collected during the jet trencher installation trials to evaluate whether the operating conditions result in TSS concentrations that exceed the TSS threshold limit;*
- d. If the jet trencher trials demonstrate that the operating conditions result in TSS concentrations that exceed the TSS threshold limit established herein, the Certificate Holder notify DPS Staff and NYSDEC and implement feasible modifications to the jet trencher operating conditions to*

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- further reduce in-situ sediment re-suspension associated with the jet trencher installation procedure; and*
- e. *Jet trencher operations may proceed after Jet Trencher Trial results are reviewed in real-time and accepted by DPS Staff and NYSDEC. Review of this information by DPS and NYSDEC staffs shall not unreasonably delay the commencement of installation of the underwater cable system.*
189. *The following conditions apply if jet trenching technology is used to install the SRWEC–NYS:*
- a. *The Certificate Holder must operate the jet trencher in accordance with the operating conditions determined through jet trencher trials to maintain the suspension of in-situ sediments within the Total Suspended Solid (TSS) limits;*
- b. *If, during jet trencher installation of the cable, TSS concentrations exceed the TSS limits established in this Certificate, the Certificate Holder shall follow the process established in Conditions 188 and 189 (c).*
- c. *For purposes of iterative changes to the use of the jet trencher, the following changes may be employed: changing the rate of advancement of the jet trencher, modifying or varying hydraulic jetting pressures, and/or implementing other reasonable operational controls that may reduce suspension of in-situ sediments in a manner that would not materially delay the progress of work to complete the jet trencher installation procedure.*
193. *Visual observations of turbidity will be identified in the Post-Phase 1 EM&CP caused by underwater cable and HDD exit pit installation/backfill activities, pre-lay grapnel run operations, maintenance, and decommissioning activities must be conducted to ensure compliance with the narrative water quality standard in 6 NYCRR § 703.2: “No increase that will cause a substantial visible contrast to natural conditions.”*
194. *If an HDD exit pit is utilized, within four months of Commercial Operation, the Certificate Holder must submit a report summarizing the results of the construction of the offshore HDD exit, water quality monitoring, and excavated material management operations. The report shall include:*
- a. *location and extent of excavation;*
- b. *total amount of material excavated;*
- c. *ultimate placement location of excavated material;*
- d. *water quality monitoring results and corrective actions (when needed) taken; and*
- e. *documentation of follow-up testing/observations.*
195. *Within four months of completion of the excavation of the offshore HDD exit, the Certificate Holder must file with the Secretary an analysis comparing the actual water quality monitoring results obtained during installation with any model predictions previously provided in support of the Project.*

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The objective of this Monitoring Plan is to describe monitoring to be conducted during specific Project construction, maintenance, and decommissioning activities to ensure compliance with state and federal water quality standards. Section 2, *Monitoring of Project Activities*, provides a description of Project activities requiring monitoring and the expected sequence of project construction activities. Section 3, *Water Quality Monitoring Program*, provides a description of the Monitoring Plan, including protocols, types of measurements, and monitoring locations. Section 4, *HDD Exit Pit Monitoring*, Section 5, *Jet Trencher Trial Monitoring*, and Section 6, *Cable Installation and other Monitored Construction Activities* provide descriptions of water quality monitoring that will be conducted specifically for each of those activities. Section 7, *Reporting*, provides a description of reporting requirements associated with the water quality monitoring program.

An Aquatic Environmental Monitor, as described in the Certificate Conditions, will be present for the duration of in-water work that requires suspended sediment and water quality monitoring as described herein.

2.0 MONITORING OF PROJECT ACTIVITIES

Suspended sediment and water quality sampling and monitoring (hereinafter referred to as water quality monitoring) will be conducted to ensure compliance with state and federal water quality standards during Project activities in the monitoring area. Water quality compliance and monitoring requirements are described in Section 3, *Water Quality Monitoring Program*. Project activities requiring monitoring are described below. The monitoring area is defined as the SRWEC–NYS corridor from the MHWL to the 3 nautical mile (nm) (5.5 km) NYS waters boundary (“study area”) (Figure 1). The study area is approximately 3 nm (5.5 km) long and approximately 1,878 feet (ft) (572 meters [m]) wide.

2.1 PROJECT ACTIVITIES REQUIRING WATER QUALITY MONITORING

As described in Appendix I of the Certificate, water quality monitoring will be conducted in the Project Corridor during seabed preparations, jet trenching pre-construction and construction activities, excavation of the horizontal directional drilling (HDD) exit, pre-lay grapnel run (PLGR), cable installation, backfill of the HDD exit, and maintenance and decommissioning activities that involve disturbance of sediments (together, monitored construction activities). Maintenance and decommissioning activities that result in only minor disturbance of sediments, including: (i) anchor sweep; (ii) anchoring; (iii) placement of jack-up barge; (iv) hand jetting; or (vi) other activities, as determined by the New York State Department of Public Service (NYSDPS) Staff in consultation with the New York State Department of Environmental Conservation (NYSDEC), shall not require water quality monitoring.

HDD and cable installation activities will be conducted at different times. The planned sequence of monitored construction activities is that the HDD exit will be constructed prior to cable installation. A list of specific Project activities requiring water quality monitoring is provided below.

HDD Exit:

- Seabed preparations
- Excavation of the HDD exit

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- Backfill of the HDD exit

Cable Installation:

- Seabed preparations
- Jet trencher trials
- PLGR
- Jet trenching pre-construction and construction activities
- Cable installation

A brief description of each type of Project activity requiring water quality monitoring is provided in Section 7 of the Environmental Management and Construction Plan (EM&CP). Additional information is also provided in Appendices to the EM&CP, including Appendix PP of the EM&CP for Jet Trencher Trial Plan, Appendix RR of the EM&CP for the SRWEC-NYS Installation Plan, as well as Appendix NN of the EM&CP for HDD Work Plan, and Appendix QQ of the EM&CP for Dredging Activities Work Plan.

The water quality monitoring program described below will be conducted during monitored construction activities. In addition, prior to commencing maintenance and decommissioning activities, a water quality monitoring plan will be submitted for review by NYSDEC and NYSDPS Staff.

3.0 WATER QUALITY MONITORING PROGRAM

The water quality monitoring measurements and protocols described below will be applied to conduct pre-activity water quality calibration and monitored construction activities. Water quality monitoring will be conducted to determine whether the total suspended solids (TSS) concentration limits are in compliance during monitored construction activities in SRWEC–NYS waters (Figure 1). TSS limit is not to exceed 100 milligrams/liter above the background TSS concentration at a distance of 1,500 ft (457 m) down-current from monitored construction activities. Monitoring for compliance with the TSS limit will require knowledge of the prevailing ambient current direction and tidal heights. Ambient currents in the study area change direction over time and will be measured in real time using a current meter prior to each round of water quality monitoring.

Two water quality monitoring transects, one up-current to measure background conditions and the other down-current to measure construction-related conditions, will be established within the study area. Figure 2 provides an example of the monitoring configuration. The two transects will be perpendicular to the current direction and tangential to a circle of radius 1,500 ft (457 m) with the monitored construction activity at the center. Compliance with the TSS limitation will be monitored in real time by collecting measurements along the up-current and down-current transects, as described below.

Project activities are dynamic and will utilize real-time monitoring to determine compliance with the TSS limitation. TSS concentrations are the result of laboratory analyses of water samples that typically require at least two days to process. Since real-time estimates of TSS concentration are required, real-time in-situ turbidity measurements will be collected prior to and throughout the monitoring program. Prior to

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commencement of monitored construction activities, a water quality calibration will be conducted whereby real-time turbidity measurements will be calibrated to TSS concentration measurements through a process of collecting paired TSS and turbidity measurements and conducting correlation analyses, as described in Section 3.2 below. As a result, throughout monitored construction activities, the monitoring team will be able to collect real-time turbidity measurements and immediately estimate the associated TSS concentrations. This process will enable the monitoring team to conduct and report real-time assessments of compliance with the TSS limitation during monitored activities.

The specific types of water quality and current measurements and monitoring protocols required to support the water quality monitoring program are described below.

3.1 WATER QUALITY AND CURRENT MEASUREMENTS

The water quality monitoring program will include the following types of measurements collected at up-current and down-current locations:

- Water samples for laboratory analysis of TSS concentrations (SM 2540D) and turbidity (SM 2130B) (APHA 2012)
- In-situ measurement of turbidity
- In-situ boat-based acoustic Doppler current profiler (ADCP) measurement of acoustic backscatter intensity
- In-situ ADCP (same as above) measurement of ambient current direction and magnitude
- Positional (x, y) measurement using a differential Global Positioning System (GPS)

The boat-based ADCP will transmit acoustic signals and process acoustic signal returns from throughout the water column. Through this process the ADCP will collect water velocity and acoustic backscatter data in real time throughout the water column. The vessel will then travel along the monitoring transects and the ADCP will collect acoustic data along the transect. As a result, the ADCP will collect two-dimensional data from the seafloor to the water surface and along the entire transect. These data are viewed in real time using on-board ADCP software.

The monitoring team will review the real-time display of ADCP acoustic backscatter measurements as the vessel travels along the transect. The location of maximum acoustic backscatter intensity will be identified, and paired grab water samples will be collected for laboratory analysis of TSS and turbidity and in-situ measurements of turbidity will be collected from the maximum backscatter location. This sampling protocol will be followed during each sampling event and is described in detail below. In addition, the monitoring team will make and record visual observations of turbidity during each monitoring day.

3.2 PRE-ACTIVITY WATER QUALITY CALIBRATION

A site-specific turbidity-to-TSS calibration will be established prior to the commencement of monitored construction activities. The calibration will feature a correlation analysis of paired turbidity and TSS measurements collected through a wide range of TSS concentration values to create a robust calibration curve. The pre-activity water quality calibration will be conducted in a laboratory and will ensure that real-time turbidity measurements can be converted to TSS concentrations during monitored construction activities. A strong turbidity-to-TSS calibration is important because TSS is the regulatory metric and needs to be assessed in real-time during monitored construction activities.

Ambient sediment samples previously collected from along the cable route will be used for the calibration. A set of ambient sediment samples were reviewed and the sediment with potential to generate the highest TSS in the water column was selected for use in the calibration, as described in Section 5.1. Ambient sediment will be mixed with ambient seawater to create a minimum of 30 separate water samples with TSS concentrations ranging from approximately 1.0 milligram per liter (mg/L) to 200 mg/L. For each sample, sediment and seawater will be completely mixed in pre-measured amounts to create a range of TSS measurements (e.g., 1.0 mg per liter of seawater, 5 mg/L, 10 mg/L, 15 mg/L, 20 mg/L, and so on). For each sample, in-situ turbidity will be measured and a grab water sample will be collected and sent to the Certified laboratory for TSS analysis. The result will be a large set of paired turbidity and TSS concentration measurements representing the full relevant range of TSS concentrations using site-specific sediment and seawater.

A water quality calibration report will be submitted to the NYSDEC and NYSDPS Staff for review and then submitted to NYSDPS Staff for approval more than 15 days prior to commencement of Project activities requiring monitoring. The calibration report will include a description of the ambient sediment, ambient seawater, the sample mixing protocol, and the data analysis protocols applied. The report will present paired turbidity and TSS measurements, the regression analysis, and the resulting turbidity-to-TSS calibration curve. The calibration curve will contain TSS concentration measurements from throughout the approximately 1 to 200 mg/L range necessary to support compliance evaluation. NYSDEC and NYSDPS review of the water quality calibration report within 15 days is requested to avoid construction delays. Once approved, the report will establish the turbidity-to-TSS calibration that will be applied in real-time to determine water quality compliance.

3.3 WATER QUALITY MONITORING PROTOCOLS

Monitored in-water construction activities will be conducted using 24-hour operations. During each day of the water quality monitoring program, the monitoring team will conduct at least one round of water quality monitoring during each tidal stage (high water slack, ebb, low water slack, and flood) over a 12-hour period when monitored construction activities are ongoing. Monitored construction activities will be conducted sequentially such that only one activity requiring water quality monitoring is ongoing at a time. If activities requiring monitoring are conducted concurrently at multiple locations, then each activity will be monitored separately.

Each round of water quality monitoring will feature the following activities:

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A. Monitoring Location Specification

1. Measurement of the direction of ambient currents. The ADCP will be deployed to measure the direction and magnitude of ambient currents. These measurements will be used to determine the up-current and down-current sampling locations.
2. The monitoring team will strive to conduct monitoring at 1,500 ft (457 m) from project activities. If monitoring at 1,500 ft (457 m) from project activities is deemed to be unsafe, then monitoring will be moved farther away to ensure safe monitoring vessel operations with project activities. Decisions regarding exceedance of the maximum allowable monitoring distance due to safety concerns would be made in coordination with the environmental monitor, in consultation with NYSDEC and NYSDPS Staff.
3. The location of two transects, one up-current and one down-current, will be specified using on-board hydrographic mapping software. The two transects will be perpendicular to the direction of current and tangential to a circle of radius 1,500 ft (457 m) with the construction activity at the center (Figure 2). As construction activity moves along the cable corridor, the location of monitoring will shift accordingly.

B. Up-current Monitoring

1. The monitoring vessel will travel along the up-current (background) transect collecting ADCP backscatter intensity measurements in real time throughout the water column (horizontally and vertically) along the transect. The monitoring vessel will travel approximately 1,000 ft (305 m) along the linear transect. The ADCP backscatter intensity measurements will be displayed in real time on a boat-based computer using the ADCP software.
2. The monitoring team will identify the location of maximum ADCP backscatter intensity along the up-current transect and will save a GPS position (i.e., a waypoint) for that location. Upon completion of the transect, the monitoring vessel will immediately double-back to the maximum backscatter waypoint.
3. At the maximum backscatter waypoint, water samples will be collected at near-surface, mid-depth, and near-bottom depths (three water samples total) for laboratory analysis of TSS and turbidity. The turbidity sensor will be concurrently lowered throughout the water column to collect turbidity measurements. This sampling method will result in a set of paired turbidity and TSS concentration measurements.
4. Once up-current sampling is complete, the vessel will transit to the down-current sampling transect.

C. Down-current Monitoring

1. The monitoring vessel will travel along the down-current transect collecting ADCP backscatter intensity measurements in real time throughout the water column (horizontally and vertically) along the transect. The monitoring vessel will travel approximately 2,000 ft (610 m) along the linear transect. The length of the down-current transect will be adjusted based on presence or

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absence of elevated ADCP backscatter intensity observed. The ADCP backscatter intensity measurements will be displayed in real time on a boat-based computer using the ADCP software.

2. The monitoring team will identify the location with maximum backscatter intensity along the down-current transect and will save a waypoint at that location. Upon completion of the transect, the monitoring vessel will immediately double-back to the maximum backscatter waypoint.
3. At the maximum backscatter waypoint, water samples will be collected at near-surface, mid-depth, and near-bottom depths (three water samples total) for laboratory analysis of TSS. The turbidity sensor will be concurrently lowered throughout the water column to collect turbidity measurements. This sampling method will result in a set of paired turbidity and TSS concentration measurements.

D. Post-monitoring

1. The monitoring team will conduct a quality assurance review of in-situ data, water samples for laboratory analysis, and GPS positional data to ensure that measurement data are accurately labeled, georeferenced, and reliably stored.
2. The monitoring team will ship the water samples to a NYS Department of Health Environmental Laboratory Approval Program certified laboratory for analysis of TSS concentration at the end of each monitoring day.
3. Reasonable efforts will be made to request and obtain the most expedited turnaround time available for TSS samples analyzed in the laboratory. Analytical results will be sent to NYSDEC and NYSDPS Staff as soon as possible upon receipt from the laboratory and no longer than 48 hours from receipt.
4. At the end of each monitoring day, a water quality monitoring briefing will be conducted with the Aquatic Environmental Monitor and in-situ measurements will be provided. If during water quality monitoring, exceedances of the TSS limit are observed, NYSDPS Staff, NYSDEC Staff, and the Aquatic Environmental Monitor shall be immediately notified and work shall be ceased and then restarted at modified levels that will reduce TSS levels and bring them into compliance with Certificate Condition 187 (a). The Certificate Holder will continue to iteratively implement operational controls and measure the resulting TSS. The Certificate Holder will notify the Aquatic Environmental Monitor throughout the process regarding operational adjustments. During implementation of corrective actions, NYSDPS Staff and NYSDEC may specify additional monitoring until compliance with Water Quality Standards is demonstrated. Specific iterative operational controls implemented are specified by type of construction activity in Sections 4, 5, and 6 below.

This water quality monitoring protocol will be followed during each Project activity requiring monitoring. For each 12-hour water quality monitoring day, a minimum of 24 TSS samples will be collected for laboratory analysis (three up-current and three down-current samples during each of four tidal sampling rounds).

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If sampling results indicate consistent compliance with the TSS limit for a specific monitored construction activity, results will be submitted to NYSDPS and NYSDEC Staff for a concurrence review. Consistent compliance may be determined by an overall assessment of the data set, by a specific number of compliance samples or another metric, depending on the monitored construction activity. If NYSDPS Staff and the NYSDEC concur, then a reduced sampling protocol will be designed and implemented for the specific monitored construction activity requested and will not automatically apply to other monitored construction activities.

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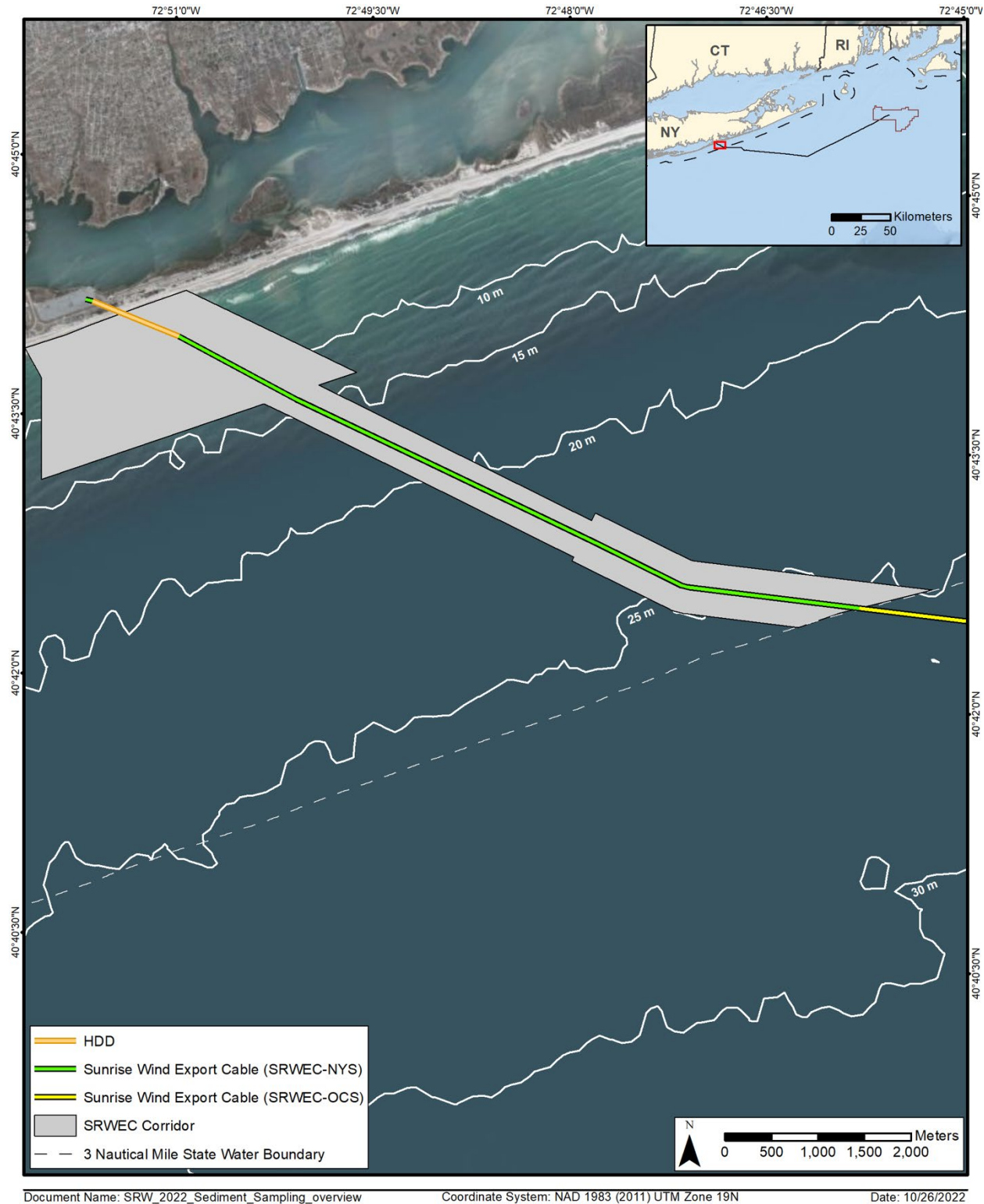


Figure 1. SRWEC-NYS Water Quality Monitoring Study Area

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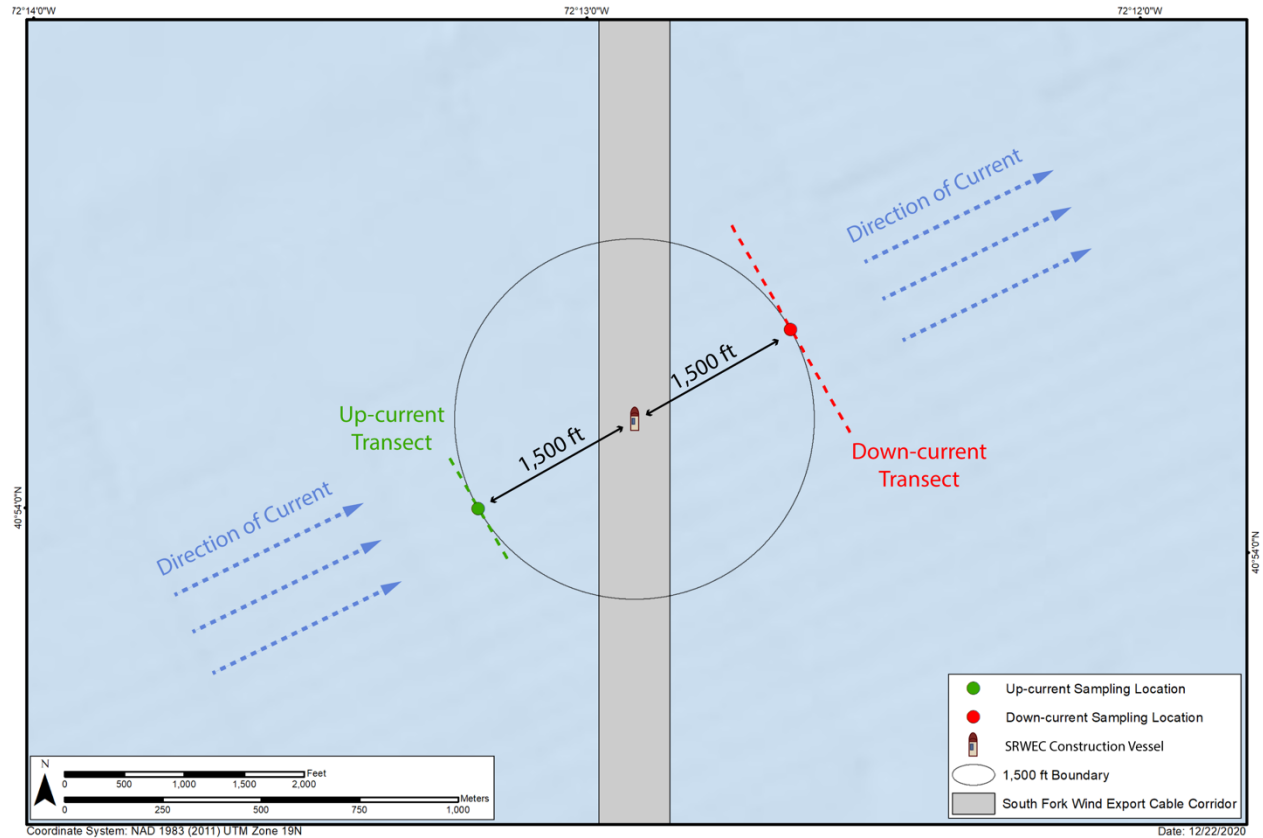


Figure 2. Example Water Quality Monitoring Configuration with Up-current and Down-current Locations

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4.0 HDD EXIT PIT MONITORING

Water quality monitoring of HDD exit pit excavation and backfill activities will be conducted in accordance with Appendix I of the Certificate, “Suspended Sediment and Water Quality Monitoring Plan Scope of Study.” Water quality monitoring will be conducted during the HDD exit pit excavation and backfill activities, as specified in Section 2.1, *Project Activities Requiring Water Quality Monitoring*. Water quality monitoring will be conducted as described in Section 3, *Water Quality Monitoring Program*. Monitoring will feature measurement of TSS, turbidity, acoustic backscatter, and currents along the up-current and down-current transects (e.g., Figure 2) throughout the HDD exit pit excavation and backfill process and will include prompt reporting of results.

If, during water quality monitoring, exceedances of the TSS limit are observed, NYSDPS Staff, NYSDEC Staff, and the Aquatic Environmental Monitor shall be immediately notified and work shall be ceased and then restarted at modified levels that will reduce TSS levels and bring them into compliance with Certificate Condition 187 (a). The Certificate Holder will continue to iteratively implement operational controls and measure the resulting TSS. For the purposes of iterative changes to the use of a barge mounted excavator, the following changes may be employed: changing the rate of advancement of the excavator, modifying the depth of the excavator bucket in the water column, implementing other reasonable operational controls that may reduce suspension of in-situ sediments in a manner that would not materially delay the progress of work to complete the installation procedure, and/or operating the bucket so as to control the rate of descent to maximize the depth of penetration without overfilling the bucket and/or to control bucket retrieval rates. The Certificate Holder will notify the Aquatic Environmental Monitor throughout the process regarding operational adjustments. During implementation of corrective actions, NYSDPS Staff and NYSDEC may specify additional monitoring until compliance with Water Quality Standards is demonstrated.

5.0 JET TRENCHER TRIAL MONITORING

As described in Appendix I of the Certificate, “Suspended Sediment and Water Quality Monitoring Plan Scope of Study,” pre-installation trials of the jet trencher equipment will be conducted to simulate cable burial and refine operating configurations. Jet trencher trials will simulate cable burial to target burial depth. Jet trenching trials will include an approximately 1,000-ft (305-m) long trial area. Jet trencher trials will also include evaluation of operational modifications such as changing the rate of advancement of the jet trencher; modifying or varying hydraulic jetting pressures; or implementing other reasonable operational controls to ensure compliance with suspension of in-situ sediments. Water quality monitoring is not intended to require that cable burial methods be modified in a manner that would inhibit the cable installer from burying the cable to target burial depth.

The water quality monitoring team will coordinate closely with the construction team throughout jet trencher trial operations. This coordination will ensure that the water quality monitoring team is aware of the nature and extent of ongoing operations (e.g., specific operational conditions and modifications) in real time and can compare operational conditions with resulting water quality measurements.

Water quality monitoring during the jet trencher trials will serve several objectives which will provide:

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- Testing of construction equipment operational settings to minimize resuspension of sediments while achieving target burial depth;
- An opportunity to refine suspended sediment monitoring procedures including the data collection, communication, and safety protocols between the monitoring and cable burial vessel; and
- Paired in-situ turbidity and TSS concentration data to validate and supplement the turbidity-to-TSS calibration.

Water quality monitoring will be conducted for the duration of the jet trencher trials. Turbidity and TSS (via the turbidity-to-TSS calibration) will be assessed in real-time to evaluate jet trencher performance and determine water quality compliance throughout the jet trencher trials. Paired in-situ turbidity measurements and TSS sampling for laboratory analysis will be collected and analyzed. The results will be used to supplement and validate the turbidity-to-TSS calibration established by the pre-activity calibration.

5.1 JET TRENCHER TRIAL LOCATION

The jet trencher trials will be conducted along a representative section or area proximate to the SRWEC–NYS. The trials will include 1,000 ft (305 m) of jet trencher operations within sediment types identified to have the potential to result in the highest TSS concentrations and turbidity (i.e., areas observed to have higher percentages of finer grain sizes such as fine sands and silts). Available sediment data along the SRWEC–NYS were reviewed to support identification of the representative location with the potential to result in the highest TSS concentrations during SRWEC–NYS construction activities. A discussion of seafloor sediments along the cable route is provided below followed by identification of the jet trencher trial location.

Six representative sediment core samples collected in 2020 along the SRWEC–NYS were evaluated for particle size distribution and associated potential to result in high TSS concentrations in the water column (Figure 3; Gardline 2020). Sediments were found to consist primarily of medium sand with some fine and some coarse sand. The sediment cores were evaluated and the location with the sediment core containing the finest sediment grain sizes was selected as the jet trencher trial location.

Sediment cores SRW01-ECR-V002 through V007 were observed to have remarkably similar particle size distributions with median (50%) sizes ranging from 0.15 millimeters (mm) (at V007) to 0.5 mm (at V002). Sediment particle sizes were observed to decrease slightly with distance offshore (i.e., slightly more coarse sediment near shore and slightly finer sediment further offshore). Mobilization of sediment near core location V007 would be expected to result in slightly higher TSS concentrations and turbidity, relative to other sediment locations along the SRWEC–NYS route. Sediment at location V006 was observed to be very similar to sediment at location V007 and will serve as an alternative location.

Overall, the material observed in the six sediment cores was very similar and consisted primarily of medium sand. Sediment at location V-007 was slightly finer and may be slightly more likely to result in higher TSS concentrations and turbidity when mobilized. As a result, the area near location V-007 was selected as the location for the jet trencher trials. The jet trencher trial location will include a 1,000-ft (305-m) section adjacent to the SRWEC–NYS route near location V-007. A representative example of the jet trencher trial

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location is provided in Figure 4. The jet trencher trial will be conducted parallel and adjacent to the actual cable route due to operational constraints (i.e., specific areas cannot be trenched twice).

5.2 WATER QUALITY MONITORING

Water quality monitoring of the jet trencher trials will be conducted in accordance with Appendix I of the Certificate, “Suspended Sediment and Water Quality Monitoring Plan Scope of Study.” Water quality monitoring will be conducted throughout the jet trencher trials. Water quality monitoring will be conducted during jet trencher trial evaluation of operational modifications such as changing the rate of advancement of the jet trencher; modifying or varying hydraulic jetting pressures; and/or implementing other reasonable operational controls. Water quality monitoring will be conducted as described in Section 3, *Water Quality Monitoring Program*. Monitoring will feature measurement of TSS, turbidity, ADCP backscatter, and currents along the up-current and down-current transects (e.g., Figure 2) throughout the jet trencher trials and will include prompt reporting of results.

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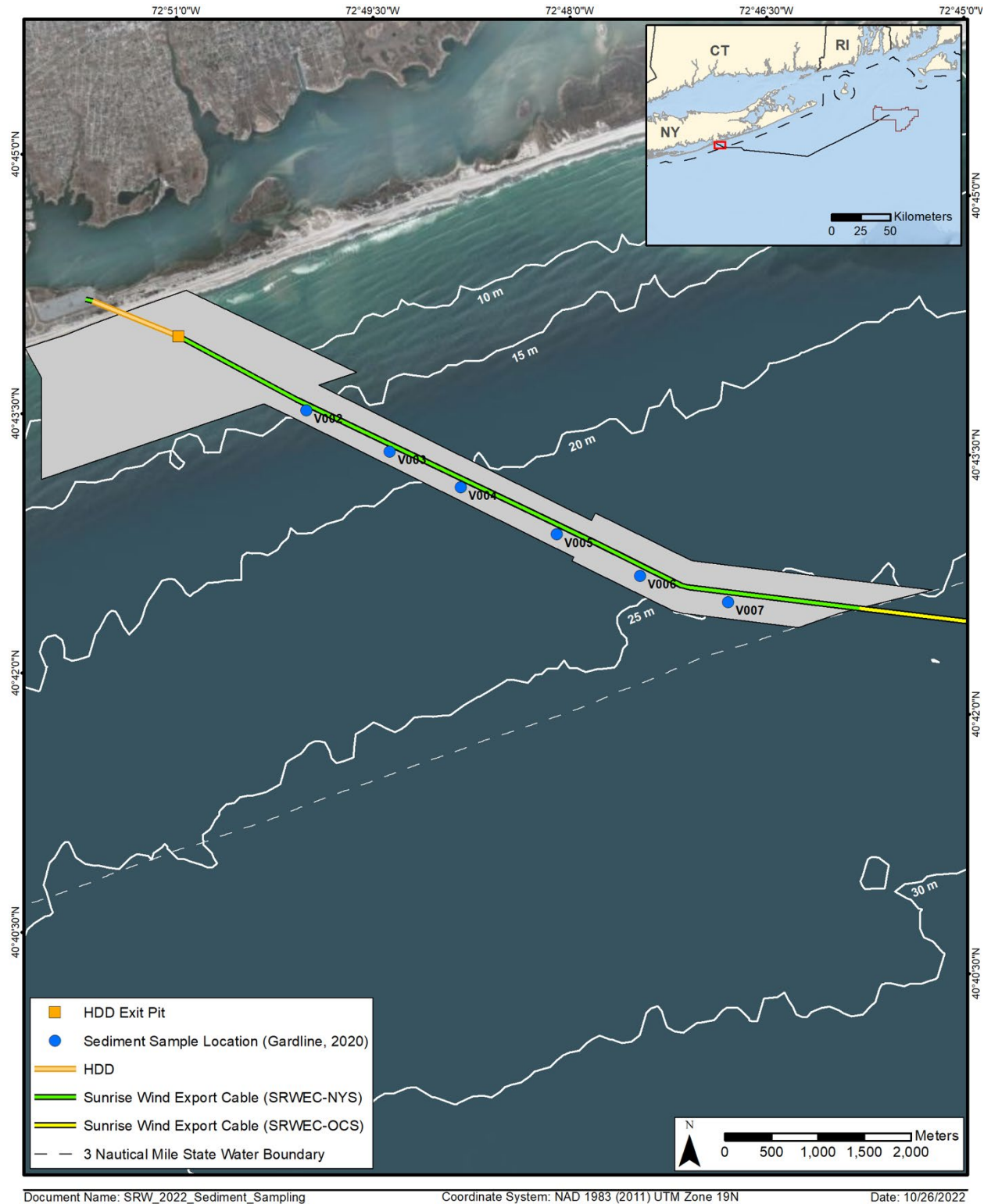


Figure 3. SRWEC-NYS Sediment Core Sampling Locations

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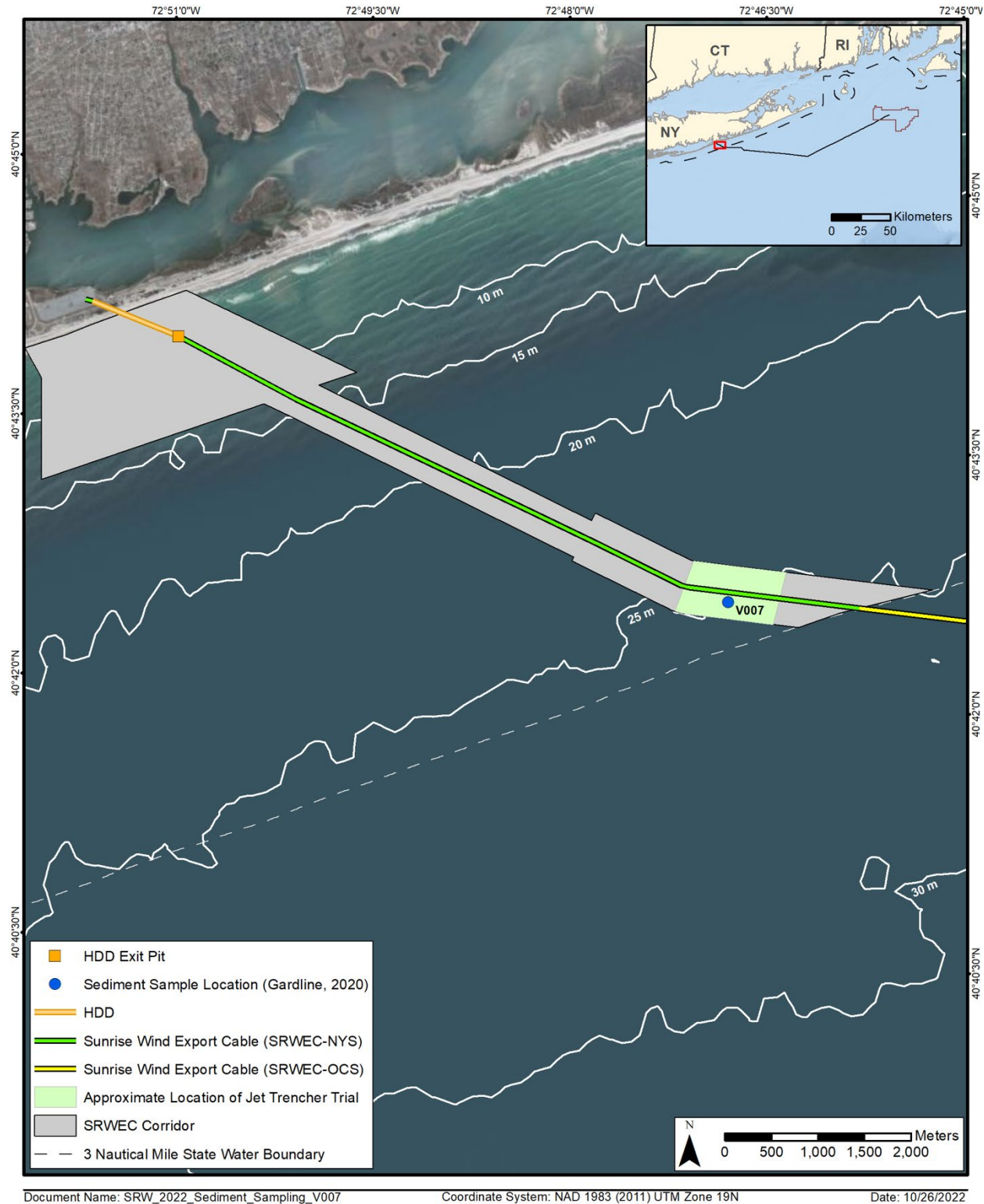


Figure 4. Approximate Jet Trencher Trial Location

5.3 WATER QUALITY DATA ANALYSIS AND MODIFICATIONS

During the Jet Trencher Trials (see the Jet Trencher Trial Plan included as Appendix PP to EM&CP 2), a set of in-situ turbidity measurements and water samples for laboratory analysis of TSS concentration will be collected concurrently (i.e., paired). The monitoring team will ship the water samples to a NYS Department of Health Environmental Laboratory Approval Program certified laboratory for analysis of TSS concentration on a daily basis. The most expedited turnaround time available for TSS samples analyzed in the laboratory will be requested.

At the end of each Jet Trencher Trial day, a brief memo will be submitted for NYSDEC and NYSDPS Staff for review. The memo will provide turbidity measurements and TSS measurements (using the pre-activity turbidity-to-TSS calibration) collected throughout the day. The memo will also provide a summary of any exceedances of the TSS limitation. In addition, once the TSS laboratory results are obtained, the jet trencher trial paired turbidity-TSS data will be applied to supplement the existing turbidity-to-TSS calibration curve. Following completion of the jet trencher trial and receipt of TSS lab results, a final memo will be submitted for NYSDEC and NYSDPS Staff for review. The final memo will include a table of paired turbidity and TSS results and a discussion of the process of supplementing the existing turbidity-to-TSS calibration using the jet trencher trial data. The final jet trencher trial monitoring memo will be informational and will likely be submitted after the cable burial process is underway.

If the jet trencher trials demonstrate that the operating conditions result in TSS concentrations that exceed the TSS limit established herein, NYSDPS Staff, NYSDEC Staff, and the Aquatic Environmental Monitor shall be immediately notified and work shall be ceased and then restarted at modified levels that will reduce TSS levels and bring them into compliance with Certificate Condition 187 (a). The Certificate Holder will continue to iteratively implement operational controls and measure the resulting TSS. The Certificate Holder will notify the Aquatic Environmental Monitor throughout the process regarding operational adjustments.

Procedures for TSS monitoring may be modified based on the findings of the jet trencher trials. Modifications may include adjustment of transect locations, number of water samples collected, methods for deploying equipment, and the procedures for correlating water samples with real-time instrument monitoring. Modification to the monitoring Plan must be coordinated with NYSDEC and NYSDPS Staff and then submitted for NYSDPS Staff for approval.

6.0 CABLE INSTALLATION AND OTHER MONITORED CONSTRUCTION ACTIVITIES

Water quality monitoring of cable burial and related monitored construction activities will be conducted in accordance with Appendix I of the Certificate, "Suspended Sediment and Water Quality Monitoring Plan Scope of Study." Water quality monitoring will be conducted during cable burial, PLGR, and other construction-related activities, as specified in Section 2.1, *Project Activities Requiring Water Quality Monitoring*. Water quality monitoring during cable burial and related monitored construction activities will be conducted as described in Section 3, *Water Quality Monitoring Program*. Monitoring will feature measurement of TSS, turbidity, ADCP backscatter and currents along the up-current and down-current

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transects (e.g., Figure 2) throughout the cable burial and related monitored construction activities and will include prompt reporting of results. Water quality monitoring during the Project's limited boulder relocation will be conducted as described in Section 6.1, *Boulder Relocation Monitoring*.

During water quality monitoring, the monitoring team will use the turbidity-to-TSS calibration to estimate TSS concentrations based on real-time turbidity measurements and determine compliance with the TSS limit during subsequent monitoring. For each 12-hour water quality monitoring day, a minimum of 24 TSS samples will be collected for laboratory analysis (three up-current and three down-current samples during each of four tidal sampling rounds). In addition, as the monitoring program progresses, new paired TSS-turbidity data will be evaluated and the calibration will be refined, as needed, to ensure accurate, real-time estimation of TSS concentrations throughout the monitoring program.

If during water quality monitoring, exceedances of the TSS limit are observed, NYSDPS Staff, NYSDEC Staff, and the Aquatic Environmental Monitor shall be immediately notified and work shall be ceased and then restarted at modified levels that will reduce TSS levels and bring them into compliance with Certificate Condition 187 (a). The Certificate Holder will continue to iteratively implement operational controls and measure the resulting TSS. For the purposes of iterative operational controls, the following changes may be employed: changing the rate of advancement, modifying or varying hydraulic jetting pressures, and/or implementing other reasonable operational controls that may reduce suspension of in-situ sediments in a manner that would not materially delay the progress of work to complete the installation procedure. The Certificate Holder will notify the Aquatic Environmental Monitor throughout the process regarding operational adjustments. During implementation of corrective actions, NYSDPS Staff and NYSDEC may specify additional monitoring until compliance with Water Quality Standards is demonstrated.

Water quality monitoring is not intended to require that monitored construction activity methods be modified in a manner that would inhibit the cable installer from burying the cable to the target burial depth.

6.1 **BOULDER RELOCATION MONITORING**

In light of the Project's limited boulder relocation needs and the methodology that will be employed to complete the task, this section provides a unique set of inclusive water quality monitoring requirements that must be followed during that activity. Nevertheless, as described in Certificate Condition 193, the Certificate Holder will conduct visual observations of turbidity throughout boulder relocation activities to ensure compliance with the narrative water standard in 6 NYCRR § 703.2: "No increase that will cause a substantial visible contrast to natural conditions."

As described in Section 2.3 of Appendix R of the EM&CP "SRWEC-NYS Installation Plan", boulder relocation will be performed using a remotely operated boulder grab tool. The grab is deployed from the system's self-contained Launch and Recovery System (LARS), an A-frame, or a crane and guided by a video link from a ROV. The grab is lowered to the seabed over the targeted boulder, and then the targeted boulder is "grabbed" before being relocated away from the designated location within the installation corridor. Boulders will generally be relocated outside the 20 m clearance corridor perpendicular to the cable and relocated as close to the original location as feasible. Boulders will typically be relocated as close as possible outside the installation corridor and will be within 26.2 to 49.2 ft (8 to 15 m) of the existing boulder location. Boulders may be relocated larger distances where technically necessary.

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To ensure the boulder relocation activity does not disturb sediment or water quality in a way that would violate the Certificate Conditions, the Certificate Holder will visually observe the area around the vessel during the relocation activity to ensure no visible plume is identified. An Aquatic Environmental Monitor, as described in the Certificate Conditions, will also be present onboard the boulder relocation vessel for the duration of the activity. If during water quality monitoring, visual observations of turbidity that cause a substantial visible contrast to natural conditions are made by the Certificate Holder in the water column above the boulder relocation, NYSDPS Staff, NYSDEC Staff, and the Aquatic Environmental Monitor shall be immediately notified and work shall be ceased and then restarted at modified levels to eliminate visual observations of turbidity and bring activities into compliance with the narrative water quality standard in 6 NYCRR § 703.2. The Certificate Holder will continue to iteratively implement operational controls and visually observe the resulting turbidity and work will not resume in full until the visual plume is eliminated. For the purposes of iterative operational controls, the following changes may be employed: changing the rate of grabbing, movement, and/or placement, and/or implementing other reasonable operational controls that may reduce suspension of in-situ sediments in a manner that would not materially delay the progress of work to complete the boulder relocation scope. The Certificate Holder will notify the Aquatic Environmental Monitor throughout the process regarding operational adjustments.

7.0 REPORTING

As described in Appendix I of the Certificate, reporting associated with the water quality monitoring is described below.

Pre-Activity Water Quality Calibration Report

A water quality calibration report will be submitted to NYSDEC Staff and NYSDPS Staff for review more than 15 days prior to commencement of Project activities requiring monitoring. The calibration report will include a description of the ambient sediment, ambient seawater, the sample mixing protocol, and the data analysis protocols applied. The report will present turbidity and TSS measurements, the regression analysis, and the resulting calibration curve. NYSDPS Staff will have 15 days to approve the water quality calibration report. Once approved, the report will establish the turbidity-to-TSS calibration that will be applied in real time to determine water quality compliance.

Jet Trencher Trial Monitoring Memos

At the end of each Jet Trencher Trial day, a brief memo will be submitted for NYSDEC and NYSDPS Staff for review. The memo will provide turbidity measurements and TSS measurements (using the pre-activity turbidity-to-TSS calibration) and associated operational adjustments made to achieve compliance (if applicable). In addition, once the TSS laboratory results are obtained, the jet trencher trial paired turbidity-TSS data will be applied to supplement the existing calibration curve. Following completion of the jet trencher trial and receipt of TSS lab results, a final memo will be submitted for NYSDEC Staff and NYSDPS Staff for review. The final memo will include a table of paired turbidity and TSS results and a discussion of the process of supplementing the existing calibration using the jet trencher trial data. The final jet trencher trial monitoring memo will be informational and will likely be submitted after the cable burial process is underway.

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Cable Burial Monitoring Memos

Within four months of the completion of cable burial activities, a comparative analysis will be filed with the Secretary of the NYS Public Service Commission. The analysis will compare the actual water quality monitoring results obtained during installation with any model predictions previously provided in support of the Project. This analysis will include a table and a quantitative analysis (statistical analysis, if possible) comparing the actual and predicted results.

HDD Exit Pit Monitoring Report

Within four months of completion of excavation of the HDD exit, a report summarizing the results of the excavation of the HDD exit, water quality monitoring, and excavated material management operations will be submitted to NYSDEC and NYSDPS Staff. In accordance with Condition 19 of the Project's Water Quality Certificate, the report shall include:

- Location and extent of excavation;
- Total amount of material excavated;
- Ultimate placement location of excavated material;
- Water quality monitoring results and corrective actions if required; and
- Documentation of follow-up testing/observations.

Maintenance and Decommissioning Water Quality Monitoring Plan

Prior to commencing maintenance and decommissioning activities that involve disturbance of sediments, a water quality monitoring plan for activities that may require water quality monitoring will be submitted for NYSDEC and NYSDPS Staff for review.

Final Monitoring Report

Within one year of completion of the Monitored Construction Activities, a final report will be prepared that will include a description of procedures followed during the monitoring program, field data results, analytical testing data results, and accompanying quality assurance/quality control data. The final report will include the correlations between turbidity data and corresponding TSS results from water samples. The report will also include a comparison of TSS results to permit-required thresholds and a comparison of water quality results to relevant water quality standards. The final report summarizing the results of the suspended sediment/water quality monitoring program will be filed with the Secretary of the NYS Public Service Commission.

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8.0 REFERENCES

American Public Health Association (APHA). 2012. American Public Health Association, American Water Works Association, and Water Environment Federation. Standard Methods for the Examination of Water and Wastewater. 22nd Edition, 2012. Washington, DC.

Gardline. 2020. Geotechnical Report for Orsted. Geotechnical Investigations for IAC and ECR 2020 (Lot 10&11). Volume II: Measured and Derived Geotechnical Parameters and Final Results. Survey Date: April – August 2020. Project Number: 11472. Final Report.