



# United States Department of the Interior

BUREAU OF OCEAN ENERGY MANAGEMENT  
WASHINGTON, DC 20240-0001

Mr. Rob Keiser  
Ocean Wind LLC  
c/o Orsted North America, Inc.  
399 Boylston Street, 12<sup>th</sup> Floor  
Boston, Massachusetts 02116

Dear Mr. Keiser:

This letter is to inform you that the Bureau of Ocean Energy Management (BOEM) has approved the Construction and Operations Plan (COP) which Ocean Wind LLC submitted on August 15, 2019, and updated on June 2, 2023, for the Ocean Wind 1 Offshore Wind Farm Project (Project) on commercial lease OCS-A 0498, offshore New Jersey. Pursuant to 30 C.F.R. § 585.628(f)(1), BOEM's approval is subject to the enclosed Conditions of COP Approval.

In conjunction with this COP approval, and pursuant to both 30 C.F.R. § 585.200(b) and Section 6 of lease OCS-A 0498, BOEM hereby grants the project easement Ocean Wind LLC requested on June 30, 2023. Enclosed are updated copies of Addenda A and D, which describe and depict the project easement for commercial lease OCS-A 0498.

To maintain compliance with the approved COP, Ocean Wind LLC must submit annual reports certifying compliance with the enclosed conditions of approval, pursuant to 30 C.F.R. § 285.633(a). These reports are due annually starting on December 31, 2023.

The first year's rent payment of \$31,535 for the project easement is due within 45 days of your receipt of this letter. For the next year and for each subsequent year, annual rent for both the lease area and the project easement area is due on each lease anniversary. Accordingly, the next annual rent payment is due on March 1, 2024.

This letter constitutes a final BOEM decision that may be appealed pursuant to 30 C.F.R. § 585.118.

If you have any questions regarding this matter, please contact Seth Theuerkauf at (703) 787-1099 or [Seth.Theuerkauf@boem.gov](mailto:Seth.Theuerkauf@boem.gov).

Sincerely,

**KAREN  
BAKER**

Digitally signed by  
KAREN BAKER  
Date: 2023.09.21  
13:11:59 -04'00'

Karen J. Baker  
Chief,  
Office of Renewable Energy Programs

Enclosures

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF OCEAN ENERGY MANAGEMENT

Conditions of Construction and Operations Plan Approval  
Lease Number OCS-A 0498  
September 21, 2023

The Bureau of Ocean Energy Management's (BOEM) approval of Ocean Wind LLC's (Lessee or OW1) conduct of activities under the Construction and Operations Plan (COP) for the Ocean Wind 1 Offshore Wind Project (Project) is subject to the conditions set forth in this document. The Department of the Interior (DOI) reserves the right to amend these conditions or impose additional conditions authorized by law or regulation on any future approvals of COP revisions.

The Lessee must maintain a full copy of these terms and conditions on every Project-related vessel and is responsible for the implementation of, or the failure to implement, each of these terms and conditions by the Lessee's contractors, consultants, operators, or designees.

**Section:**

1. [GENERAL PROVISIONS](#)
2. [TECHNICAL CONDITIONS](#)
3. [NAVIGATIONAL AND AVIATION SAFETY CONDITIONS](#)
4. [NATIONAL SECURITY CONDITIONS](#)
5. [CONDITIONS RELATED TO PROTECTED SPECIES AND HABITAT](#)
6. [CONDITIONS RELATED TO COMMERCIAL FISHERIES, FOR-HIRE RECREATIONAL FISHING, AND ENVIRONMENTAL JUSTICE](#)
7. [CONDITIONS RELATED TO CULTURAL RESOURCES](#)
8. [CONDITION RELATED TO AIR QUALITY](#)

**Attachments:**

1. [LIST OF ACRONYMS](#)

## 1. GENERAL PROVISIONS

1.1 Adherence to the Approved Construction and Operations Plan (COP), Statutes, Regulations, Permits, and Authorizations (Planning) (Construction) (Operations) (Decommissioning).<sup>1</sup> The Lessee must conduct all activities as proposed in its approved COP for the Ocean Wind 1 project (Project)<sup>2</sup>, as stated in these Terms and Conditions and any final plans concurred with by the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE). Additionally, the Lessee must comply with all applicable requirements (including mitigation measures) in commercial lease OCS-A 0498 (Lease), statutes, regulations, consultations, and permits and authorizations issued by federal, state, and local agencies for the Project. The Department of the Interior (DOI) BOEM and/or BSEE, as applicable, may issue a notice of noncompliance, pursuant to 30 C.F.R. § 585.106(b) and 30 C.F.R. § 285.400(b), if it is determined that the Lessee failed to comply with any provision of its approved COP, the Lease, the Outer Continental Shelf Lands Act (OCSLA), or OCSLA's implementing regulations. BOEM and/or BSEE may also take additional actions pursuant to 30 C.F.R. § 585.106 and 30 C.F.R. § 285.400, where appropriate.

1.1.1 As depicted in the COP, the Lessee may construct and install on the Outer Continental Shelf (OCS) up to 98 wind turbine generators (WTGs), up to 3 offshore substations (OSSs), inter-array cables linking the individual WTGs to the OSS, and substation interconnector cables linking the OSSs and up to three offshore export cables (installed within two export cable route corridors) that contain up to approximately 67 statute miles of cable easement on the OCS in support of this Project.

1.2 Record of Decision (Planning) (Construction) (Operations) (Decommissioning). All mitigation measures selected in the Record of Decision (ROD) for this Project are incorporated herein by reference and are considered Terms and Conditions of this COP. To the extent there is any inconsistency between the language used in the ROD and that found in the Terms and Conditions herein, the language in the latter will prevail.

1.3 Effectiveness (Construction) (Operations). This COP approval and these associated Terms and Conditions become effective on the date BOEM notifies the Lessee that its COP has been approved, and remain effective until

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<sup>1</sup> Parenthetical indicators of Planning Construction Operations and/or Decommissioning at the start of a condition denote the primary development phase(s) to which the condition is relevant. The identification of the primary development phase(s) does not limit BOEM and BSEE's enforcement of these conditions to the identified phase(s). BOEM is not approving decommissioning at this time. The Lessee must submit a decommissioning application per 30 C.F.R. § 285.905—relevant conditions will be promulgated through review of the decommissioning application.

<sup>2</sup> Ocean Wind LLC. 2023. Construction and Operations Plan, Ocean Wind Offshore Wind Farm. Volumes I–III.

the termination of the Lease, which, unless renewed, has an operations term of 25 years from the date of COP approval.

- 1.4 Consistency with Other Agreements and Authorizations (Planning) (Construction) (Operations) (Decommissioning). In the event that these Terms and Conditions are, or become, inconsistent with the Terms and Conditions of the Project's Biological Opinion (BiOp) issued by the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) on April 3, 2023<sup>3</sup>; BiOp issued by U.S. Fish and Wildlife Service (USFWS) on May 12, 2023;<sup>3</sup> Incidental Take Authorizations (ITA) for the Project under the Marine Mammal Protection Act (MMPA); the Section 106 Memorandum of Agreement (MOA) executed on June 30, 2023, or amendments thereto; the language in the NMFS BiOp, USFWS BiOp, ITAs, Section 106 MOA or amendments thereto, will prevail. Activities authorized by COP approval will be subject to any terms and conditions and reasonable and prudent measures resulting from a BOEM-reinitiated consultation for the Project's NMFS BiOp or USFWS BiOp, and any stipulations resulting from amendments to the Section 106 MOA.
- 1.5 Variance Requests (Planning) (Construction) (Operations) (Decommissioning). The Lessee may submit a written request from the Lessee to BOEM and/or BSEE, requesting a variance from particular requirements of these Terms and Conditions. The request must explain why compliance with a particular requirement is not technically and economically practical or feasible and any alternative actions the Lessee proposes to take. To the extent not otherwise prohibited by law and after careful consideration of all relevant facts and applicable legal requirements, BOEM and/or BSEE may grant a request for variance if they determine that the variance: (1) would not result in a significant change in the Project impacts described in the Final Environmental Impact Statement (FEIS) and ROD for the Project, (2) would not alter conditions that resulted from consultations performed by BOEM and BSEE under federal law in connection with this COP approval in a manner that would otherwise require BOEM to perform additional consultations (e.g., Endangered Species Act (ESA), Coastal Zone Management Act (CZMA), National Historic Preservation Act (NHPA), Magnuson-Stevens Fishery Conservation and Management Act (MSA)); and (3) would not alter BOEM's determination that the activities associated with the project would be conducted in accordance with section 8(p)(4) of OCSLA. After making a determination regarding a request for variance, BOEM and/or BSEE will notify the Lessee in writing whether those agencies will allow the proposed variance from the identified requirements set forth in this COP approval. Approved requests for variance will be made publicly

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<sup>3</sup> This is inclusive of the avoidance, minimization, and mitigation measures described in the proposed action and included in the BiOp's Incidental Take Statement.

available. This procedure applies to the extent not superseded by different provisions for specific requirements.

- 1.6 48-Hour Notification Prior to Construction Activities (Construction) (Operations) (Decommissioning). The Lessee must submit a 48-hour notification to BSEE through TIMSWeb prior to the start of each of the following construction activities occurring on the OCS: seabed preparation activities such as boulder relocation and pre-lay grapnel runs, export cable installation, inter-array cable installation, WTG and OSS foundation installation, WTG tower and nacelle installation, OSS topside installation, and cable and scour protection installation.
- 1.7 Inspections (Construction) (Operations) (Decommissioning) The Lessee must plan for and have the capacity to receive federal personnel who arrive for inspections and assessments to be conducted under 30 C.F.R 285.820-285.825. As provided for in Terms and Conditions Item 12 of NMFS' BiOp, the Lessee must consent to on-site observations and inspections by federal agency personnel, including NOAA personnel during activities described in the NMFS BiOp, for the purpose of evaluating the effectiveness and implementation of measures designed to minimize or monitor incidental take.
- 1.8 Project Website (Planning) (Construction) (Operations) (Decommissioning). The Lessee must develop and maintain a Project website that provides a means for the public to communicate about the Project (e.g., to register comments or ask questions) through either a direct link to a comment form or email, or by providing the contact information (phone and/or email address), of a representative of the Lessee who can respond to these communications.
  - 1.8.1 The Lessee must post construction notices and other publicly relevant information to the Project website on a monthly basis. The Project website will allow users to subscribe (or unsubscribe) to an electronic mailing list for Project update notifications.
  - 1.8.2 The Lessee must post the following information to the Project website within 5 business days of availability.
    - 1.8.2.1 Locations where target burial depths were not achieved/locations of cable protection measures.
    - 1.8.2.2 Project-specific information in the most current Local Notices to Mariners (LNM).
    - 1.8.2.3 The Communication Plan (COP Volume II, Table 1.1-2, GEN-14). The Communication Plan must be submitted to BOEM ([renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov)) and BSEE via TIMSWeb for a 30-day review prior to being finalized.

1.8.2.4 The Project Mitigation Plan identified in section 1.9. The Project Mitigation Plan must be submitted to BOEM ([renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov)) and BSEE via TIMSWeb for a 30-day review prior to being finalized.

1.8.3 Geographic information system (GIS) location data must be downloadable and packaged in an ESRI compatible format, preferably an ESRI shapefile. Files must utilize a NAD83 UTM Zone 18 or a geographic coordinate system in NAD83. A text file with table field descriptions that contains measurement units, where applicable, must be included.

1.9 Project Mitigation Plan (Planning) (Construction) (Operations) (Decommissioning). The Lessee must develop a Project Mitigation Plan that is informed by public engagement, consultation with the appropriate state, federal, and regional, non-government organizations (i.e., the Regional Wildlife Science Collaborative for Offshore Wind and the Responsible Offshore Science Alliance). The Project Mitigation Plan will be a comprehensive compilation of all mitigation measures or commitments required by the Terms and Conditions of COP approval, as well as other federal and state authorizations and consultations (e.g., ESA, CZMA) required for the construction and operation of the Project. The Project Mitigation Plan must summarize the expected Project impacts; describe and provide technical details for each mitigation measure (including the type of Project impact to which it relates and the consultation, authorization, or conditions under which it is required); identify policies and standards to be used and complied with; and be responsive to impacts detected in Project monitoring and other monitoring and research studies and initiatives, including the Lessee's Fisheries Monitoring Plan, the Lessee's Benthic Monitoring Plan, and the New Jersey Research and Monitoring Initiative for Offshore Wind.

## **2. TECHNICAL CONDITIONS**

2.1 Munitions and Explosives of Concern/Unexploded Ordnance Investigation (Planning). The Lessee must investigate the areas of potential disturbance, as described in the COP, for the presence of Munitions and Explosives of Concern (MEC)/Unexploded Ordnance (UXO) and evaluate the risk consistent with the *As Low as Reasonably Practical* (ALARP) risk mitigation principle. The ALARP risk mitigation principle requires: (1) a desktop study (DTS); (2) an investigation survey to determine the presence of objects and report of findings; (3) an identification survey to determine the nature of the identified objects and report of findings; (4) a MEC/UXO mitigation (avoidance, in situ disposal, or relocation); and (5) a certification that

MEC/UXO risks from installation and operation of the facility have been reduced to ALARP levels.

- 2.2 MEC/UXO Identification Survey Report (Planning). The Lessee must submit an Identification Survey Report to BOEM and BSEE for each agencies' review and concurrence prior to the installation of facilities in the area of potential disturbance. The report must include the following:
  - 2.2.1 A detailed discussion of methodologies.
  - 2.2.2 A summary and detailed description of the findings and information on all mitigations necessary for MEC/UXO risks to reach ALARP levels, such as: detailed information on MEC/UXO relocation activities, micrositing of facilities, changes to installation or operational activities, and cable re-routings.
  - 2.2.3 A separate list of findings that identify conditions different from those anticipated and discussed in the DTS.
  - 2.2.4 A statement attesting that the installation methods and MEC/UXO mitigation strategies discussed in the Fabrication and Installation Report (FIR), DTS, and/or Investigation Survey Report are consistent with the results of the Identification Survey Report, accepted engineering practices, and applicable best management practices. Alternatively, the Lessee may submit a detailed discussion of alternative installation methods and/or MEC/UXO mitigation strategies that the Lessee has determined to be appropriate given the results of the Identification Survey, accepted engineering practices, and applicable best management practices.
- 2.3 MEC/UXO Survey Results Implementation (Construction). The Lessee must implement the mitigation methods identified in the approved COP, DTS, and the subsequent survey report(s) following the resolution of all comments provided by BOEM and BSEE. As part of the FIR and prior to commencing installation activities, the Lessee must make available for review to the approved Certified Verification Agent (CVA), BOEM, and BSEE the complete and final versions of information on implementation and installation activities associated with the ALARP mitigation process, including the: (1) DTS; (2) investigation surveys to determine the presence of objects; (3) identification surveys to determine the nature of the identified objects; (4) and MEC/UXO relocation and/or construction re-routing.
- 2.4 MEC/UXO ALARP Certification (Planning). The Lessee must provide to BOEM, BSEE, and the approved CVA, a certification confirming that MEC/UXO risks related to the installation and operation of the facility have been reduced to ALARP levels. The certification must be made available with

the submission of the Facility Design Report (FDR) or FIR, whichever is submitted earlier.

2.5 MEC/UXO Discovery Notification (Construction) (Operations) (Decommissioning). In the event of a confirmed MEC/UXO, the Lessee must coordinate with the USCG to ensure the MEC/UXO discovery is published in the next version of the LNM for the specified area and provide BOEM and BSEE a copy of the LNM once it is available. The Lessee must also provide the following information to BOEM ([BOEM\\_MEC\\_Reporting@boem.gov](mailto:BOEM_MEC_Reporting@boem.gov)), BSEE, and relevant agency representatives within 24 hours of discovery for seabed clearance activities, construction, and operations:

- 2.5.1 Narrative describing activities that resulted in the identification of confirmed MEC/UXO;
- 2.5.2 Activity at the time of discovery (survey, seabed clearance, cable installation, etc.);
- 2.5.3 Location (Latitude (DDD°MM.MMM'), Longitude (DDD°MM.MMM)), Lease Area, and block;
- 2.5.4 Water depth (meters);
- 2.5.5 MEC/UXO type, dimensions, and weight; and
- 2.5.6 MEC/UXO vertical position (description of exposure or estimated depth of burial).

2.6 Safety Management System (Planning) (Construction) (Operations) (Decommissioning). Pursuant to 30 C.F.R. § 285.810, a Lessee, designated operator, contractor, or subcontractor constructing, operating, or decommissioning renewable energy facilities on the OCS must have a Safety Management System (SMS). The Lessee must provide a description of the SMS that will guide all activities described in the approved COP (hereafter the "Lease Area's Primary SMS"). BSEE will review the Lease Area's Primary SMS and compare it to the regulations and requirements below (Sections 2.6.1 through 2.6.4) and verify that the submissions are acceptable.

- 2.6.1 The Lease Area's Primary SMS must identify and assess risks to health, safety, and the environment associated with the offshore wind facilities and operations and must include an overview of the methods that will be used and maintained to control the identified risks.
- 2.6.2 The Lease Area's Primary SMS is expected to evolve as activities progress from site characterization through construction, operations, and eventually to decommissioning, typically by acknowledging the new risks that will be faced by the workforce

and by incorporating work practices and operating procedures specific to managing those risks. Pursuant to 30 C.F.R. § 285.811, the Lease Area's Primary SMS must be functional when the Lessee begins activities described in the approved COP. A description of any changes to the Lease Area's Primary SMS to address new or increased risk must be provided to BSEE before each phase of the Project commences (i.e., construction, operation and maintenance, decommissioning). In addition, the Lessee must demonstrate to BSEE's satisfaction the functionality of the Lease Area's Primary SMS by providing evidence of such functionality no later than 30 days<sup>4</sup> prior to beginning the relevant activities, as described in the COP. The Lessee can demonstrate the Lease Area's Primary SMS functionality through various means. The following list provides illustrative examples of demonstrations of functionality.

- 2.6.2.1 If the Lessee wants to use a similar SMS that is functioning elsewhere as the Lease Area's Primary SMS, the Lessee may demonstrate the proper functioning of the similar SMS by sharing certifications of that SMS from a recognized accreditation organization (e.g., International Organization for Standardization (ISO)/International Electric Code (IEC) 450001, American National Standards Institute Z10, American Petroleum Institute Recommended Practices (API RP) 75 4<sup>th</sup> or later edition), or by sharing reports of third-party or internal audits of the SMS. The Lessee must also share an explanation of how the Lessee has adapted the similar, audited SMS to become the Lease Area's Primary SMS.
- 2.6.2.2 If the Lessee does not have a similar SMS that is functioning elsewhere, demonstration of functionality may include the following:
  - A desktop exercise in which the Lessee evaluates how the Lease Area's Primary SMS functions in response to different scenarios, including an evaluation of the strengths and weaknesses of Lessee's preparedness to control various risks.
  - A description of the personnel who have been trained on the Lease Area's Primary SMS, an overview of the training content, and a description of controls the Lessee has established to ensure trained personnel's understanding of and adherence to the Lease Area's Primary SMS.
  - A detailed description of how the Lessee intends to monitor whether the implementation of the Lease Area's Primary SMS is

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<sup>4</sup> Unless otherwise specified in the terms and conditions, the term "days" means "calendar days."

achieving the desired goals, and an overview of how the SMS will be adjusted as necessary to control identified risks.

- A description of how the Lessee intends to manage the interface with contractors, subcontractors, and other critical stakeholders.

2.6.3 The Lessee must conduct periodic Lease Area Primary SMS audits and provide BSEE with a report summarizing the results of the most recent audit at least once every 3 years, and upon BSEE's request. The report must include any corrective actions implemented or being implemented as a result of that audit, and an updated description of the Lease Area's Primary SMS highlighting changes that were made since the last such submission to BSEE. Following BSEE's review of the report, the Lessee must engage with and respond to BSEE until any questions or concerns BSEE may have are resolved and BSEE is satisfied that the Lease Area Primary SMS is effective and functional.

2.6.4 In addition to maintaining an acceptable Lease Area Primary SMS, the Lessee, designated operator, contractor, and subcontractor constructing, operating, or decommissioning renewable energy facilities on the OCS is required to follow the policies and procedures of the specific SMS applicable to their activities and to take corrective action whenever there is a failure to follow the specific SMS or the specific SMS failed to ensure safety.

2.7 Emergency Response Procedure. Prior to construction of the Project, the Lessee must submit an Emergency Response Procedure to address non-routine events for review and concurrence by BSEE. The Lessee must submit any revisions of the procedure once every 3 years or upon BSEE's request, consistent with Section 2.7.3. The Emergency Response Procedure must address the following:

2.7.1 Standard Operating Procedures. The Lessee must describe the procedures and systems that will be used at Project facilities in the case of emergencies, accidents, or non-routine conditions, regardless of whether they are man-made or natural. The Lessee must include, as a part of non-routine conditions, descriptions of high-consequence and low probability events, including methods for: (1) establishing and testing WTG rotor shutdown, braking, and locking; (2) lighting control; (3) notifying the USCG of mariners in distress or potential/ actual search and rescue incidents; (4) notifying BSEE and the USCG of any events or incidents that may impact maritime safety or security; and (5) providing the USCG with environmental data, imagery,

communications, and other information pertinent to search and rescue or marine pollution response.

2.7.2 Communications. The Lessee must describe the capabilities to be maintained by the control center to communicate with the USCG.

2.7.3 Monitoring. The control center must maintain the capability to monitor (e.g., using cameras) the Lessee's installation and operations in real time, including at night and in periods of poor visibility.

2.8 Oil Spill Response Plan (Planning). Pursuant to 30 C.F.R. § 585.627(c), the Lessee must submit an Oil Spill Response Plan (OSRP) to the BSEE Oil Spill Preparedness Division (OSPD) at [BSEEOSPD\\_ATL\\_OSRLPs@bsee.gov](mailto:BSEEOSPD_ATL_OSRLPs@bsee.gov) for review and approval prior to the installation of any component that may handle or store oil on the OCS. The OSRP may be lease specific, or it may be a regional OSRP covering multiple leases. Facilities and leases covered in the Regional OSRP must have the same owner or operator and must be located in the Atlantic OCS Region. For a regional OSRP, subject to BSEE OSPD approval, the Lessee may group leases into sub-regions for the purposes of determining worst-case discharge (WCD) scenarios, conducting stochastic trajectory analyses, and identifying response resources. The Lessee's OSRP must be consistent with the National Contingency Plan and appropriate Area Contingency Plan(s), as defined in 30 C.F.R. § 254.6. To continue operating, the Lessee must operate consistent with the OSRP approved by BSEE. The Lessee's OSRP, including any regional OSRP, must contain the following information:

2.8.1 Bookmarks. Include appropriately labeled bookmarks that are linked to their corresponding sections of the OSRP.

2.8.2 Table of Contents. Provide a table of contents.

2.8.3 Record of Change. Provide a table identifying the changes made to the current version of the OSRP and, as applicable, a record of changes made to previously submitted versions of the OSRP.

2.8.4 Facility and Oil Information. "Facility," as defined in 30 C.F.R. § 585.113, means an installation that is permanently or temporarily attached to the seabed of the OCS. An OSS and WTG, as examples, each meet this definition of facility. "Oil," as defined in 33 U.S.C. 1321(a), means oils of any kind or in any form, including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Dielectric fluids, as an example, meets this definition of oil. The OSRP must:

- 2.8.4.1 List the latitude and longitude, water depth, and distance to the nearest shoreline for each facility that may handle and/or store oil.
- 2.8.4.2 List the oil(s) by product/brand name and corresponding volume(s) on each type of facility covered under the Lessee's OSRP.
- 2.8.4.3 Include a map depicting the location of each facility that may handle and/or store oil within the boundaries of the covered lease area(s) and their proximity to the nearest shoreline. The map must also feature a compass rose, scale, and legend.
- 2.8.5 Safety Data Sheets. The OSRP must include a safety data sheet for every type of oil present on any facility in quantities equal to or greater than 100 gallons.
- 2.8.6 Worst-Case Discharge Scenario. The OSRP must describe the WCD scenario for the facility containing the highest cumulative volume of oil(s). For a regional OSRP covering multiple sub-regions, a WCD scenario must be described for each sub-region.
  - 2.8.6.1 If multiple candidate WCD facilities contain the same cumulative volume of oil(s), the WCD facility is the one closest to shore.
  - 2.8.6.2 In addition to the facility information required by Condition 2.8.4., the WCD facility must be identified on the facility map. Identify the subset of oil spill response equipment from the inventory listed in the OSRP that you will use to contain and recover the WCD volume. Provide timeframes for response resources to deploy to the WCD facility. Timeframes should include times for equipment procurement, loadout, travel, and deployment.
- 2.8.7 Response Organization. The OSRP must identify a trained Qualified Individual (QI), and at least one alternate, with full authority to implement removal actions and ensure immediate notification of appropriate federal officials and response personnel. The OSRP must provide their 24-hour contact information, including phone numbers and email addresses. In the OSRP covering the OSSs, the Lessee must also designate trained members of the Lessee's Incident Management Team (IMT) and provide their 24-hour contact information, including phone numbers and email addresses. For the IMT, at least one alternate must be identified for the Incident Commander (IC), Planning Section Chief (PSC), Operations Section Chief (OSC), Logistics

Section Chief (LSC), and Finance Section Chief (FSC). If a contract has been established with an IMT, evidence of such a contract must be provided in the Lessee's OSRP.

2.8.7.1 "Qualified Individual" (QI) means an English-speaking representative of the Lessee who is located in the United States, available on a 24-hour basis, and given full authority to obligate funds, carry out removal actions, and communicate with the appropriate federal officials and the persons providing personnel and equipment in removal operations.

2.8.7.2 "Incident Management Team" (IMT) means the group of personnel identified within the Lessee's organizational structure who manage the overall response to an incident consistent with the Lessee's OSRP. The IMT consists of the Incident Commander, Command and General Staff, and other personnel assigned to key Incident Command System positions designated in the Lessee's OSRP.

2.8.8 Notification Procedures. The OSRP must describe the procedures for spill notification. Notification procedures must include the 24-hour contact information for:

2.8.8.1 The QI and an alternate, including phone numbers and email addresses.

2.8.8.2 IMT members, including phone numbers and email addresses.

2.8.8.3 Federal, state, and local regulatory agencies that must be notified when a spill occurs, including, but not limited to, the National Response Center.

2.8.8.4 The Oil Spill Removal Organization(s) (OSRO) and Spill Response Operating Team(s) (SROT) that are available to respond.

2.8.8.5 Other response organizations and subject matter experts that the Lessee will rely on for the Lessee's response.

2.8.9 Spill Mitigation Procedures. The OSRP must describe the different discharge scenarios that could occur from the Lessee's facilities and the mitigation procedures by which the offshore facility operator and any listed/contracted OSROs would follow when responding to such discharges. The mitigation procedures must address responding to both smaller spills (with slow, low-volume leakage) and larger spills, to include the largest WCD scenario covered under the Lessee's OSRP. To achieve

compliance with this section, the OSRP must include the following:

- 2.8.9.1 Procedures for the early detection of a spill (i.e., monitoring procedures for detecting dielectric fluid and other oil-based substances handled or stored on the facility when spilled to the ocean).
- 2.8.9.2 General procedures for ensuring the source of a discharge are controlled as soon as possible after a spill occurs.
- 2.8.9.3 Procedures to remove oil and oiled debris from offshore and shallow waters and along shorelines.
- 2.8.9.4 Procedures to store, transfer, and dispose of recovered oil and oil-contaminated materials and to ensure that all disposal is consistent with federal, state, and local requirements.
- 2.8.10 Trajectory Analysis. The OSRP must include a stochastic trajectory analysis for the WCD facility. For a regional OSRP covering multiple WCD scenarios, a stochastic trajectory analysis must be included for each WCD facility. The stochastic trajectory analysis must:
  - 2.8.10.1 Be based on the WCD volume.
  - 2.8.10.2 Be conducted for the longest period that the discharged oil would reasonably be expected to persist on the water's surface, or 14 days, whichever is shorter.
  - 2.8.10.3 Identify the probabilities for oiling on the water's surface and on shorelines, and minimum travel times for the transport of the oil over the duration of the model simulation. Oiling probabilities and minimum travel times must be calculated for exposure threshold concentrations reaching 10 grams per square meter. Stochastic analysis must incorporate a minimum of 100 different trajectory simulations using random start dates selected over a multi-year period.
- 2.8.11 Resources at Risk. The OSRP must include a concise list of the sensitive resources located near the Lessee's offshore facility that could be impacted by a spill. In lieu of listing sensitive resources, the Lessee may identify the areas that could be oiled by a spill from the Lessee's facility and provide hyperlinks to corresponding Environmentally Sensitive Index Maps and Geographic Response Strategies/Plans for those areas from the appropriate Area Contingency Plan(s).

- 2.8.12 OSRO(s) and SROT(s). The “Oil Spill Removal Organization” (OSRO) is an entity contracted by the Lessee to provide spill response equipment and/or manpower in the event of an oil spill. The “Spill Response Operating Team” (SROT) is the trained persons who deploy and operate oil spill response equipment in the event of a spill, threat of a spill, or an exercise. The OSRP must include a list (with contact information) of OSROs and SROTs who are under contract and/or membership agreement to respond to the WCD of oil from the Lessee’s offshore facilities. Evidence of such contracts and/or membership agreements must be provided in the OSRP.
- 2.8.13 Training. The OSRP must include a description of the training necessary to ensure that the QI, IMT, OSRO(s), and SROT(s) are sufficiently trained to perform their respective duties. The Lessee must ensure that the IMT, OSRO(s), and SROT(s) receive annual training. The Lessee’s OSRP must provide the most recent dates of applicable training(s) completed by the QI, IMT, OSRO(s), and SROT(s). Training records must be maintained and retained for 3 years and must be provided to BSEE upon request.
- 2.8.14 Response Plan Exercise. The OSRP must include a triennial exercise plan for review and concurrence by BSEE to ensure that the Lessee is able to respond quickly and effectively whenever oil is discharged from the Lessee’s facilities. Compliance with the National Preparedness for Response Exercise Program (NPREP) guidelines will satisfy the exercise requirements of this section. If the Lessee chooses to follow an alternative exercise program, the OSRP must provide a description of that program. For a regional OSRP covering multiple sub-regions, the IMT exercise scenarios must be rotated between each sub-region within the triennial exercise period.
- 2.8.14.1 The Lessee must conduct an annual scenario-based notification exercise, an annual scenario-based IMT tabletop exercise, and, during the triennial exercise period, at least one functional exercise.
- 2.8.14.2 The Lessee must conduct an annual oil spill response equipment deployment exercise.
- 2.8.14.3 The lessee must notify BSEE OSPD at least 30 days in advance of any exercise they intend to conduct for compliance with this condition.
- 2.8.14.4 BSEE OSPD will advise on the options available to the Lessee for satisfaction of these requirements and may require changes

in the type, frequency, or location of the required exercises, exercise objectives, equipment to be deployed and operated, or deployment procedures or strategies.

- 2.8.14.5 BSEE may evaluate the results of the exercises and advise the Lessee of any needed changes in response equipment, procedures, tactics, or strategies.
- 2.8.14.6 BSEE may periodically initiate unannounced exercises to test the Lessee's spill preparedness and response capabilities.
- 2.8.14.7 Exercise records must be maintained and retained for at least 3 years following the exercise and must be provided to BSEE upon request.
- 2.8.15 Oil Spill Response Equipment. The OSRP must include a list, or a hyperlink to a list, of the oil spill response equipment that is available to the Lessee through a contract and/or membership agreement with the OSRO(s). The OSRP must also include a map that shows the oil spill response equipment storage depot(s) and planned/potential staging area(s) for the oil spill response equipment that would be deployed by the facility operators or the OSRO(s) in the event of a discharge.
  - 2.8.15.1 The Lessee must ensure that the contracted response equipment is maintained in proper operating condition.
  - 2.8.15.2 The Lessee must ensure that all maintenance, modification, and repair records are kept for a minimum of 3 years.
  - 2.8.15.3 The Lessee must provide oil spill response equipment maintenance, modification, and repair records to BSEE OSPD upon request.
  - 2.8.15.4 The Lessee or the OSRO must provide BSEE OSPD with physical access to the oil spill response equipment storage depots and perform functional testing of the equipment upon request.
  - 2.8.15.5 BSEE OSPD may require maintenance, modifications, or repairs to oil spill response equipment or require the Lessee to remove equipment from being listed in the OSRP if the equipment does not operate as intended.
- 2.8.16 OSRP Review and Update. The Lessee must review and update the entire OSRP at least once every 3 years and as needed, starting from the date the OSRP was initially approved. The Lessee must send a written notification to BSEE OSPD upon completion of

this review and submit any updates for concurrence. BSEE OSPD may require changes to the Lessee's OSRP at any time if it is determined to be outdated or to contain significant inadequacies as discovered through a review of the Lessee's OSRP, information obtained during exercises or actual spill responses, or other relevant information obtained by BSEE OSPD.

2.8.17 OSRP Maintenance. The Lessee must submit a revised OSRP to BSEE OSPD within 15 days if any of the following conditions occur:

2.8.17.1 The Lessee experiences any change that would significantly reduce their oil spill response capability.

2.8.17.2 The calculated WCD volume has significantly increased.

2.8.17.3 The Lessee removes a contracted IMT, OSRO, or SROT from the Lessee's plan.

2.8.17.4 There has been a significant change to the applicable area contingency plan(s).

2.9 Cable Routings (Planning). The Lessee must submit the final Cable Burial Risk Assessment (CBRA) package and engineered cable routings for all cable routes on the OCS to BSEE for review and concurrence no later than the submittal of the relevant FDR. The final CBRA package must include a summary of final information on (1) natural and man-made hazards; (2) sediment mobility, including high and low seabed levels, from both mobile and stable seabed, expected over the Project lifetime; (3) feasibility and effort level information required to meet burial targets; (4) profile drawings of the cable routings illustrating cable burial target depths, and (5) minimum burial depths from seabed to address threats to the cable including, but not limited to, anchoring risk, military activity, third-party cable crossings, and fishing gear interaction. Detailed supporting data and analysis may be incorporated by reference or attachments, including relevant geospatial data. The Lessee must resolve any BSEE comments on the CBRA to BSEE's satisfaction before BSEE completes its review of the associated FDR under 30 C.F.R. 285.700.

2.9.1 Morphological Seabed Assessment Study. The Lessee must submit a Morphological Seabed Assessment Study to BSEE for review no later than the submittal of the export, interconnector, or inter-array cables FDR. This study must include an assessment of seabed elevation changes for the Lease Area and export cable routes and include predictions for the operation term of the lease. The Lessee must resolve any BSEE-identified comments and

concerns with the study to BSEE's satisfaction before BSEE completes its review of the associated FDR under C.F.R. 285.700.

2.10 Cable Burial (Planning) (Construction) (Operations). The export, interconnector, and inter-array cables are expected to be installed using jetting, vertical injection, control flow excavation, trenching, and plowing as described in Section 6.1.2.6 and 6.1.2.8 of the approved COP. For the purpose of the approved COP, BOEM has determined the proper burial depth to be a minimum of 4 feet (1.2 meters) below seabed along federal sections of the export, interconnector, and inter-array cables. This depth is consistent with the approved COP and the cable burial performance assessment provided in Appendix Z-2 Cable Burial Feasibility Assessment. Unless otherwise authorized by BSEE, the Lessee must comply with cable burial conditions described in the COP by demonstrating proper burial depth of the installed submarine cables along at least 90 percent of the total export cable length on the OCS and at least 90 percent of the inter-array cable routing, excluding cable crossings and approaches to foundations. The Lessee must demonstrate proper burial depth by providing cable monitoring reports (Section 2.13) and final, as-built information (Section 2.20).

2.11 Cable Protection Measures (Planning) (Construction) (Operations). The export, interconnector and inter-array cables are expected to be installed using jetting, vertical injection, control flow excavation, trenching, and plowing as described in Section 6.1.2.6 and 6.1.2.8 of the approved COP. In areas where final cable burial depth is less than 0.6 meters below seabed, excluding cable crossings and approaches to foundations, the Lessee must install secondary protection such as concrete mattresses, fronded mattresses, rock bags or rock placement and must adhere to the scour and cable protection measures in Section 5.6.5.

2.11.1 The use of cable protection measures must not exceed 10 percent of the total export cable length on the OCS or 10 percent along the interconnector and inter-array cable routing, excluding cable crossings and approaches to foundations. The Lessee must employ cable protection measures when proper burial depth, as defined in Section 2.10, is not achieved. The Lessee must include design information and drawings as part of the relevant cable FDR and installation information as a part of the relevant FIR or must submit, and obtain concurrence from BSEE, a standalone design and installation report, containing design information and drawings and installation information respectively, prior to installing cable protection. The Lessee must provide BSEE with detailed drawings/information of the actual burial depths and locations where protective measures were used no later than when the final as-built cable drawings are submitted. Notice of locations where target burial depths were not achieved and where cable protection measures were used, including accessible graphic/geo-

referenced repository for this information, must be made available on the Project website (Section 1.8, Project Website).

2.11.2 If the Lessee cannot comply with the requirements in Section 2.11.1, the Lessee must request a waiver under Section 1.5. As a component of its request, the Lessee must provide BSEE information explaining the proposed alternatives, including a justification of the equivalent level of protection, CVA verification of the proposed alternative, and must resolve any BSEE comments.

2.12 Crossing Agreements (Planning). The Lessee must provide final cable crossing agreements for each active, in-service submarine cable or other types of in use infrastructure, such as pipelines, to BOEM at least 60 days before seabed preparation activities, including boulder clearance. The Lessee must make the agreements and crossing designs available to the CVA for review, unless otherwise determined by BOEM.

2.12.1 If the Lessee concludes that it will be unable to reach a cable crossing agreement, the Lessee must inform BOEM as soon as possible, and no later than 60-days before seabed preparation activities, including boulder clearance. A cable crossing agreement may not be required if BOEM has determined—at its sole discretion and based on its review of the record of relevant communications from the Lessee to owners or operators of active, in-service submarine cables or other types of in use infrastructure—that the Lessee made reasonable efforts to enter an agreement and was unable to do so. Information to support a claim of reasonable efforts may include call logs, emails, letters or other methods of communication.

2.13 Post-Installation Cable Monitoring (Construction) (Operations). The Lessee must conduct an inspection of inter-array, interconnector, and export cables to determine cable location, burial depths, the state of the cable, and site conditions within: 6 months, 1 year, and 2 years of commissioning, and every 3 years thereafter (e.g., years 5, 8, 11, 14, 17, 20, and 24 after commissioning). These surveys must also be conducted within 180 days of a storm event (as defined in the Post-Storm Monitoring Plan, described in Section 2.17). The Lessee must provide BSEE and BOEM with a cable monitoring report within 90 days following each inspection. Inspections of the inter-array and export cables must include high resolution geophysical (HRG) methods, involving, for example, multibeam bathymetric survey equipment; and identify seabed features, natural and man-made hazards, and site conditions along federal sections of the cable routing.

2.13.1 If BSEE determines that conditions along the cable corridor warrant adjusting the frequency of inspections (e.g., due to

changes in cable burial or seabed conditions that may impact cable stability or other users of the seabed), then BSEE may require the Lessee to submit a revised inspection schedule for review and concurrence.

2.13.2 If BSEE determines that burial conditions have deteriorated or changed significantly and remedial actions are warranted, BSEE will notify the Lessee that the Lessee must submit the following via TIMS Web within 90 days of being notified: a seabed stability analysis, a remedial action plan, and a schedule for completing remedial actions. All remedial actions must be consistent with the approved COP. BSEE will review the plan and schedule and provide any comments within 60 days of receiving the plan. The Lessee must resolve all comments to BSEE's satisfaction.

2.13.3 If the Lessee determines that burial conditions have deteriorated or changed significantly and remedial actions are warranted, the Lessee must submit the following to BSEE via TIMS Web within 90 days of making the determination: the data used to make the determination, a seabed stability analysis, a plan for remedial actions, and a schedule for the proposed work. All remedial actions must be consistent with those described in the approved COP. BSEE will review the plan and schedule and provide comments within 60 days, if applicable. The Lessee must resolve all comments to BSEE's satisfaction.

2.14 WTG and OSS Foundation Depths (Planning). In a letter dated March 3, 2022, BOEM granted a departure from 30 C.F.R. § 585.626(a)(4) and (6), permitting the Lessee to provide the final geotechnical investigation at the proposed foundation locations in the FDR. The FDR must include geotechnical investigations at all approved foundation locations along with associated geotechnical design parameters and recommendations consistent with 30 C.F.R. § 585.626(a)(4) and (6). The geotechnical investigations at each OSS must include, at a minimum, one deep boring located within the footprint of each OSS.

2.15 Structural Integrity Monitoring (Construction) (Operations). The Lessee must conduct annual above-water inspections to ensure structural integrity is maintained. The inspections should detect or verify indications of obvious overloading, deteriorating coating systems, condition of cathodic protection system(s), excessive corrosion, and bent, missing, or damaged members of the structure in the splash zone and above the water line. The Lessee must provide a summary of the findings in the Annual Self-Inspection Report

pursuant to 285.824(b). See Section 2.17 for post-storm structural integrity monitoring.

2.16 Foundation Scour Protection Monitoring (Construction) (Operations) (Decommissioning). The Lessee must minimize the footprint of scour protection measures at the WTG foundations and must inspect scour protection performance. The Lessee must submit an Inspection Plan to BSEE at least 60 days prior to initiating inspection activities described in the Inspection Plan. BSEE will review the Inspection Plan and provide comments, if any, on the plan within 60 days of its submittal. The Lessee must resolve all comments on the Inspection Plan to BSEE's satisfaction and receive BSEE's concurrence prior to initiating the inspection program. If BSEE does not send comments within 60 days, the Lessee may presume concurrence.

2.16.1 The Lessee must carry out an initial foundation scour inspection within 6 months of completing installation of each foundation location, thereafter at intervals not greater than 5 years, and within 180 days after a storm event (as defined in the Post-Storm Monitoring Plan, described in Section 2.17).

2.16.2 The Lessee must provide BSEE with a foundation scour monitoring report within 90 days of completing each foundation scour inspection. If multiple foundation locations are inspected within a single survey effort, the foundation scour monitoring reports for those locations may be combined into a single foundation scour monitoring report to be provided within 90 days of completing the last foundation scour inspection. The schedule of reporting must be included in the Inspection Plan and concurred to by BSEE.

2.16.3 If scour protection losses develop within 10 percent of the maximum loss allowance, edge scour develops within 10 percent of the maximum allowance, or if spud depressions from installation affect scour protection stability, the Lessee must submit a plan for additional monitoring and/or mitigation to BSEE for review and concurrence.

2.17 Post-Storm Event Monitoring Plan (Construction) (Operations) (Decommissioning). The Lessee must provide a plan for post-storm event condition monitoring of the facility infrastructure, foundation scour protection, and cables to BSEE for review and concurrence prior to commencing installation activities. Plans may be submitted separately for the cables (including cable protection), WTGs, and OSSs. The plan must describe how the Lessee will measure and monitor environmental conditions and duration of storm events, specify the condition thresholds (and their associated technical justification), above which post-storm event monitoring

or mitigation is necessary; describe potential monitoring, mitigation, and damage identification methods; and state when the Lessee must notify BSEE of post-storm related activities. At a minimum, post-storm event inspections should be conducted following a storm event where conditions exceed one-half the design return period. For example, a WTG platform designed for 50-year wind speeds should be inspected after a storm event with 25-year wind speeds. BSEE reserves the right to require post-storm mitigations to address conditions that could result in safety risks and/or impacts to the environment.

2.18 High Frequency Radar Interference Analysis and Mitigation (Planning (Construction) (Operations)). The Project has the potential to interfere with oceanographic high-frequency (HF) radar systems in the U.S. Integrated Ocean Observing System (IOOS®), which is managed by the IOOS Office within NOAA pursuant to the Integrated Coastal and Ocean Observation System Act of 2009 (Pub. L. No. 111-11), as amended by the Coordinated Ocean Observation and Research Act of 2020 (Pub. L. No. 116-271, Title I), codified at 33 U.S.C. §§ 3601–3610 (referred to herein as “IOOS HF-radar”). IOOS HF-radar measures the sea state, including ocean surface current velocity and waves in near real time. These data have many vital uses (“mission objectives”), including tracking and predicting the movement of spills of hazardous materials or other pollutants, monitoring water quality, and predicting sea state for safe marine navigation. The USCG also integrates IOOS HF-radar data into its Search and Rescue systems. The Project is within the measurement range of eight IOOS HF radar systems listed in the table below:

<b>Table 2.18-1</b>	
<b>Radar Name</b>	<b>Radar Operator</b>
Seaside Park SeaSonde Oceanographic HF-radar	Rutgers University
Brant Beach SeaSonde Oceanographic HF-radar	Rutgers University
Strathmere SeaSonde Oceanographic HF-radar	Rutgers University
North Wildwood SeaSonde Oceanographic HF-radar	Rutgers University
Hempstead SeaSonde Oceanographic HF-radar	Rutgers University
Loveladies SeaSonde Oceanographic HF-radar	Rutgers University
Brigantine SeaSonde Oceanographic HF-radar	Rutgers University
Wildwood SeaSonde Oceanographic HF-radar	Rutgers University

- 2.18.1 Mitigation Requirement. Due to the potential interference with IOOS HF-radar and the risk to public health, safety, and the environment, the Lessee must mitigate unacceptable interference with IOOS HF-radar from the Project. Interference must be mitigated before rotor blades are installed within the Project, and interference mitigation must continue throughout operations and decommissioning until the point of decommissioning where all rotor blades are removed. Interference is considered unacceptable if, as determined by BOEM in consultation with NOAA's IOOS Office, IOOS HF-radar performance falls or may fall outside any of the specific radar systems' operational parameters or fails or may fail to meet IOOS's mission objectives.
- 2.18.2 Mitigation Review. The Lessee must submit to BOEM documentation demonstrating how it will mitigate unacceptable interference with IOOS HF-radar systems. The Lessee must submit this documentation to BOEM at least 120 days prior to the installation of the first rotor blades. If, after consultation with the NOAA IOOS Office, BOEM deems the mitigation acceptable, the Lessee must conduct activities in accordance with the proposed mitigations.
- 2.18.3 Mitigation Agreement. The Lessee is encouraged to enter into an agreement with the NOAA IOOS Office to implement mitigation measures, and any such Mitigation Agreement may satisfy the requirement to mitigate unacceptable interference with IOOS HF-radar. The point-of-contact for development of a Mitigation Agreement with the NOAA IOOS Office is the Surface Currents Program Manager, whose contact information is available at <https://ioos.noaa.gov/about/meet-the-ioos-program-office/> and upon request from BOEM. If the parties reach a mitigation agreement, the Lessee must submit it to BOEM. A Mitigation Agreement may serve the purpose of implementing Section 2.18.2. If there is any discrepancy between Section 2.18.2 and the terms of a Mitigation Agreement, the terms of the Mitigation Agreement will prevail.
- 2.18.4 Mitigation Data Requirements. Mitigation required under Section 2.18.2 must address the following:
- 2.18.4.1 Before rotor blades are installed within the Project, and continuing throughout the life of the Project until the point of decommissioning when all rotor blades are removed, Lessee must make publicly available via NOAA IOOS near real-time accurate numerical telemetry of surface current velocity, wave height, wave period, wave direction, and other oceanographic

data measured at Project locations selected by the Lessee in coordination with the NOAA IOOS Office.

2.18.4.2 If requested by the NOAA IOOS Office, the Lessee must share with IOOS accurate numerical time-series data of blade rotation rates, nacelle bearing angles, and other information about the operational state of each WTG in the Lease Area to aid interference mitigation.

2.18.5 Additional Notification and Mitigation.

2.18.5.1 If at any time the NOAA IOOS Office or a HF-radar operator informs the Lessee that the Project will cause unacceptable interference to a HF-radar system, the Lessee must notify BOEM of the determination and propose new or modified mitigation pursuant to Section 2.18.5.2 as soon as possible and no later than 30 days from the date on which the determination was communicated.

2.18.5.2 If a mitigation measure other than that identified in Section 2.18.2 is proposed, then the Lessee must submit information on the proposed mitigation measure to BOEM for its review and concurrence. If, after consultation with the NOAA IOOS Office, BOEM deems the mitigation acceptable, the Lessee must conduct activities in accordance with the proposed mitigations.

2.19 Critical Safety Systems (Planning) (Construction). Lessee must provide to BSEE qualified third-party verification of (1) the identification of, (2) proper installation, and (3) commissioning of all critical safety systems and equipment designed to prevent or ameliorate major accidents that could result in harm to health, safety, or the environment (hereinafter “critical safety systems”). The documentation provided to BSEE must demonstrate that the qualified third-party verified that the critical safety systems were identified based on a standardized risk assessment methodology, installed and commissioned in conformity with the Original Equipment Manufacturer’s (OEM’s) standards and the Project’s functional requirements, and are functioning properly, as required by the surveillance reporting requirements in 2.19.4.

2.19.1 Qualified Third-Party. A qualified third-party must be either a technical classification society, a licensed professional engineering firm, or a registered professional engineer capable of providing the necessary certifications, verifications, and reports. The qualified third-party must not have been involved in the design of the Project.

2.19.2 Identification of Critical Safety Systems and Equipment Risk Assessment. The Lessee must conduct a risk assessment to identify the critical safety systems and equipment within its facility, including the WTG, tower, and each OSS. The Lessee must submit the risk assessment to BSEE and the qualified third-party for review no later than submission of the FDR. The Lessee must arrange with the qualified third-party and provide the information necessary for a qualified third-party to make a recommendation to BSEE on the acceptability of the risk assessment and its associated conclusions. The Lessee must address BSEE's comments to BSEE's satisfaction before BSEE completes its review of the associated FDR under 30 C.F.R. § 285.700.

2.19.3 Installation and Commissioning Surveillance Requirements. The Lessee must ensure the proper installation and commissioning of the critical safety systems and equipment. The Lessee must arrange for a qualified third-party to evaluate whether the installation and commissioning of the critical safety systems and equipment are in conformance with the OEM requirements and the Project's functional requirements. BSEE and the Lessee may agree to perform additional tests during commissioning surveillance activities.

The aforementioned third-party evaluation must include: 1) an examination of the commissioning records of the critical safety systems and equipment for every WTG and OSS, 2) witnessing of the commissioning of the critical safety systems and equipment of 5 percent of the WTG, including at least one WTG in the first array string, and of each OSS. The Lessee must arrange for a qualified third-party, at a minimum, to verify that:

2.19.3.1 The installation procedures and/or commissioning instructions supplied by the manufacturer and identified in the Project's functional requirements are adequate.

2.19.3.2 The Lessee is following the instructions supplied by the manufacturer and identified in the Project's functional requirements during commissioning.

2.19.3.3 The systems and equipment function as designed.

2.19.3.4 The final commissioning records are complete.

2.19.4 Surveillance Reporting. The Lessee must submit surveillance records (for example, the final results and acceptance of the commissioning test by the qualified third-party) or a Conformity Statement and supporting documentation (prepared consistent

with International Electrotechnical Commission System for Certification to Standards relating to Equipment for use in Renewable Energy applications [IECRE OD-502)]) for the critical safety systems identified in Section 2.20.2. Once the commissioning of the critical safety systems and equipment has been completed for the first WTG, Lessee must, at bi-weekly intervals, submit the surveillance records or Conformity Statement and supporting summary documentation for WTGs which have been verified by a qualified third-party within the previous two weeks. If BSEE has not responded to the surveillance records or Conformity Statement and supporting documentation submitted by the qualified third-party within five business days, then the Lessee may presume concurrence and keep operating. If the surveillance records or Conformity Statement and supporting documentation are not submitted within two weeks of third-party verification of the commissioning, the WTG is not allowed to continue operating.

2.20 Engineering Drawings (Construction) (Operations) (Decommissioning). The Lessee must compile, retain, and make available to BSEE the drawings and documents specified in Table 2.20-1.

<b>Table 2.20-1</b>			
<b>Drawing Type</b>	<b>Time Frame to Make Available “Issued for Construction” Drawings</b>	<b>Time Frame to Make Available Post-Fabrication Drawings</b>	<b>Deadline to Submit Final, As-Built Drawings</b>
Complete set of structural drawing(s), including major structural components and evacuation routes <sup>5</sup>	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	N/A	Submit no later than March 31st of each calendar year for all structures installed the prior year and then submitted annually until project completion.
Front, side, and plan view drawings <sup>6</sup>	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	N/A	N/A
Location plat for all Project facilities <sup>7</sup>	With FDR submittal. Drawings must be reviewed and stamped by a registered professional land surveyor.	N/A	Submit no later than March 31st of each calendar year for all facilities installed the prior year and then updated annually until project completion. Drawings must be reviewed and stamped by a registered professional land surveyor.

<sup>5</sup> As required by 30 C.F.R. § 285.701(a)(4). This is applicable to the WTGs and OSSs.

<sup>6</sup> As required by 30 C.F.R. § 285.701(a)(3). This is applicable to the WTGs and OSSs.

<sup>7</sup> As required by 30 C.F.R. § 285.701(a)(2). This is applicable for all installed assets on the OCS, including scour protection, cables, WTGs, OSSs.

<b>Table 2.20-1</b>			
<b>Drawing Type</b>	<b>Time Frame to Make Available “Issued for Construction” Drawings</b>	<b>Time Frame to Make Available Post-Fabrication Drawings</b>	<b>Deadline to Submit Final, As-Built Drawings</b>
Complete set of cable drawing(s)	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	Prior to completion of Final FIR review, as contemplated in 30 C.F.R. § 285.700(b) <sup>8</sup>	Submit quarterly for all facilities installed in the previous quarter.
Proposed Anchoring Plat as required by Section 5.6.2 and 7.2	120 days before anchoring activities.	N/A	N/A
As-placed Anchor Plats for all anchoring activities	N/A	N/A	Submit 90 days after completion of an activity or construction of a major facility component.
Piping and instrumentation diagram(s)	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	N/A	Submit quarterly for all facilities installed in the previous quarter.
Safety diagram(s) <sup>9</sup>	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	N/A	Submit quarterly for all facilities installed in the previous quarter.
Electrical drawings, i.e. - Electrical one-line drawing(s) and Protective Relay Coordination Study/Diagram	With FDR- submittal. Drawings must be reviewed and stamped by a registered professional engineer.	N/A	Submit quarterly for all facilities installed in the previous quarter.
Cause and Effect Chart	With FDR submittal.	N/A	N/A
Schematics of fire and gas-detection system(s)	With FDR submittal. Drawings must be reviewed and stamped by a registered professional engineer.	N/A	Submit quarterly for all facilities installed in the previous quarter.
Area classification diagrams	With FDR Submittal.	N/A	Submit quarterly for all facilities installed in the previous quarter.

2.20.1 Engineering drawings, as outlined in Table 2.20-1, and the associated engineering report(s) must be reviewed and stamped by a licensed professional engineer or a professional land surveyor. For modified systems, only the modifications are required to be reviewed and stamped by a licensed professional engineer(s) or a

<sup>8</sup> As-installed location must be submitted with the final FIR.

<sup>9</sup> Safety diagrams should depict the location of critical safety systems and equipment designed to prevent or ameliorate major accidents that could result in harm to health, safety, or the environment. This should include, but not be limited to, escape routes, station bill, fire/gas detectors, firefighting equipment, etc.

professional land surveyor. The professional engineer or land surveyor must be licensed in a state or Territory of the United States and have sufficient expertise and experience to perform the duties.

2.20.2 The Lessee must certify in an accompanying letter that the as-built design documents have been reviewed for compliance with applicable FDR/FIR, do not make material changes from the stamped issued for construction drawings, and accurately represent the as-installed facility. The drawings must be clearly marked “as-built.”

2.20.3 The Lessee must ensure that the engineer of record submits a stamped report showing that the as-built design documents have been reviewed and do not make material changes from the issued for construction (IFC) drawings and accurately represent the as-installed facility. The Lessee must also ensure that the engineer of record documents any differences between the IFC drawings and the as-built drawings in the stamped report and submits the report with the as-built drawings.

2.20.4 As-Placed Anchor Plats. The Lessee must provide as-placed anchor plats to BOEM and BSEE within 90 days of completion of an activity (including during operations) or construction of a major facility component (e.g., buoys; export cable installation; WTG or OSS installation and inter array cable installation) or decommissioning to demonstrate that seabed-disturbing activities complied with avoidance requirements for seabed features and hazards, archaeological resources, and/or anomalies. As-placed plats must show the “as-placed” location of all anchors and any associated anchor chains and/or wire ropes and relevant locations of interest or avoidance on the seabed for all seabed disturbing activities. The plats must be at a scale of 1 inch = 1,000 feet (300 meters) with Differential Global Positioning System (GPS) accuracy.

2.21 Construction Status. On at least a monthly basis, the Lessee must provide BSEE, BOEM, and USCG with a construction status update and any changes

to the construction schedule or process described in the plan required by Section 3.2.1 (Installation Schedule).

2.22 Maintenance Schedule. On a quarterly basis, the Lessee must provide BSEE with its maintenance schedule for any planned WTG or OSS maintenance.

### **3. NAVIGATIONAL AND AVIATION SAFETY CONDITIONS**

3.1 Design Conditions (Planning) (Construction) (Operations).

3.1.1 Marking. The Lessee must mark each WTG and OSS with private aids to navigation. No sooner than 365 days and no less than 60 days before installation, the Lessee must file an application (form CG-2554), either in paper form or electronically, with the Commander of the Fifth Coast Guard District to establish Private Aids to Navigation (PATON), as provided in 33 C.F.R. Part 66. USCG approval of the application must be obtained before the Lessee begins installation of the facilities. The PATON must be included with the lighting, marking, and signaling plan and design specifications for maritime navigation lighting. The Lessee must:

3.1.1.1 Provide a lighting, marking, and signaling plan for review and concurrence by BOEM, BSEE, and USCG at least 120 days before installation. The plan must conform to applicable federal law and regulations, and guidelines, e.g., International Association of Marine Aids to Navigation and Lighthouse Authorities Recommendation G1162, The Marking of Man-Made Offshore Structures; USCG's LNM (D5 LNM: 14/23) or recent version on Ocean-Structure PATON Marking Guidance; and BOEM's Guidelines for Lighting and Marking of Structures Supporting Renewable Energy Development (April 28, 2021).

3.1.1.2 Mark each individual WTG and OSS with clearly visible, unique, alpha-numeric identification characters, as agreed to by BOEM, BSEE, and USCG. The Lessee must additionally display this label on each WTG nacelle, visible from above. The Lessee must also display this label on OSS helicopter landing platforms, visible from above, as described in Section 3.1.1.1.

3.1.1.3 Light each WTG and OSS in a manner that is visible by mariners in a 360-degree arc around the WTG and OSS.

3.1.1.4 For each WTG, the Lessee must install red obstruction lighting that is consistent with the Federal Aviation Administration (FAA) Advisory Circular (AC) 70/7460-IM.

- 3.1.1.5 Provide signage that is visible to mariners in a 360-degree arc around the structures to inform vessels of the vertical blade-tip clearance, as determined at Highest Astronomical Tide.
- 3.1.1.6 Submit as-built cable route, OSS, and WTG locations to USCG and NOAA, consistent with Section 2.20, to facilitate government-produced and commercially available nautical charts.
- 3.1.1.7 Provide mariner information, such as location and PATON details, on the Lessee's website within 90 days of installing any WTG and OSS component.
- 3.1.1.8 Submit summary documentation of mariner information to BSEE via TIMSWeb within 90 days of the completion of commissioning activities showing the Lessee's compliance with Sections 3.1.1.1 through 3.1.1.7.
- 3.1.1.9 Immediately report discrepancies in the status of all PATONs to the local USCG Sector Command Center (a timeline of when discrepancies can be resolved must be sent to USCG within 14 days).
- 3.1.2 Blade/Nacelle Control. The Lessee must equip all WTG rotors (blade assemblies) with control mechanisms constantly operable from the Lessee's control center.
  - 3.1.2.1 Control mechanisms must enable the Lessee to immediately initiate the shutdown of any WTGs upon emergency order of the Department of Defense (DoD) or USCG. The Lessee must initiate braking and shut down of each WTG after the shutdown order. The Lessee may resume operations only upon notification from the entity (DoD or USCG) that initiated the shutdown.
  - 3.1.2.2 The Lessee must include a shutdown procedure in its Emergency Response Procedure and test the shutdown capability (functioning) of at least one WTG within the field at least annually. The Lessee must submit the results of testing with the Project's annual inspection results to BSEE.
  - 3.1.2.3 The Lessee must work with USCG to establish the proper blade configuration during WTG shutdown for USCG air assets conducting search and rescue operations.
  - 3.1.2.4 The Lessee must notify USCG and BSEE in advance of trainings and exercises to test and refine notification and

shutdown procedures and allow USCG and BSEE to participate in these trainings and exercises.

3.1.3 Structure Micrositing. The Lessee must not adjust approved structure locations in a way that narrows any linear rows and columns oriented both northwest-southeast and northeast-southwest to less than 0.6 nautical miles, nor to a layout which eliminates two distinct lines of orientation in a grid pattern. The Lessee must submit the final as-built structure locations as part of the as-built documentation outlined in Section 2.20.

### 3.2 Installation Conditions (Planning) (Construction).

3.2.1 Installation Schedule. Not less than 60 days prior to commencing offshore construction activities, but as early as possible, the Lessee must provide BSEE and USCG with a plan that describes the schedule and process for seabed preparation, export, substation interconnector and inter-array cable installation, and installing the WTGs and OSSs, including all planned mitigations to be implemented to minimize any adverse impacts to navigation while installation is ongoing. No WTG or OSS installation work may begin at the Project site (i.e., on or under the water) without prior review by BOEM, BSEE, and USCG of the plan required under this provision. The Lessee must submit any significant revisions or updates to the plan at least 60 days before commencing the activities described in that update or revision. Appropriate LNM submissions must accompany the plan and its revisions.

3.2.2 Design Modifications. Any changes or modification in the design of the Lease Area that may impact navigation safety (including, but not limited to a change in number, size, or location of WTGs, or change in construction materials or construction method) requires written approval by BSEE.

3.2.3 Cable Burial. A detailed submarine cable system burial plan must be submitted to USCG and BSEE for BSEE review no later than the relevant FDR/FIR submittal. No later than 60 days after post-cable installation of all cable lines (export, interconnector, and array), the Lessee must submit to BSEE, BOEM, and USCG a copy of the final submarine cable system route positioning list that depicts the precise location and burial depths of the entire cable system.

3.3 Reporting Conditions (Planning) (Construction) (Operations) (Decommissioning).

3.3.1 Complaints. On a monthly basis, the Lessee must (1) provide BSEE with a description of any complaints received (written or oral) by boaters, fishermen, commercial vessel operators, or other mariners regarding impacts to navigation safety allegedly caused by construction or operations vessels, crew transfer vessels, barges, or other equipment; and (2) describe remedial action(s) taken in response to complaints received, if any. BSEE reserves the right to require additional remedial action, consistent with 30 C.F.R. § 285. The monthly report must be submitted via TIMSWeb.

3.3.2 Correspondence. On a monthly basis, the Lessee must provide BSEE, BOEM, and USCG with copies of any correspondence received from other federal, state, or local agencies regarding navigation safety issues. Monthly reports must be submitted to BSEE via TIMSWeb and to BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov).

3.4 Meeting Attendance (Planning) (Construction) (Operations). As requested by BSEE, BOEM, and USCG, the Lessee must attend meetings (i.e., Harbor Safety Committee, Area Committee) to provide briefings on the status of construction and operations, and on any problems or issues encountered with respect to navigation safety.

#### 4. NATIONAL SECURITY CONDITIONS

4.1 Hold and Save Harmless – United States Government. (Planning) (Construction) (Operation). Whether compensation for such damage or injury might otherwise be due under a theory of strict or absolute liability or any other theory, the Lessee assumes all risks of damage or injury to any person or property, which occur in, on, or above the OCS, in connection with any activities being performed by the Lessee in, on, or above the OCS, if the injury or damage to any person or property occurs by reason of the activities of any agency of the United States Government, its contractors, or subcontractors, or any of its officers, agents or employees, being conducted as a part of, or in connection with, the programs or activities of the individual military command headquarters (hereinafter “the appropriate command headquarters”) listed below:

United States Fleet Forces (USFF) N46  
1562 Mitscher Ave, Suite 250  
Norfolk, VA 23551  
(757) 836-6206

The Lessee assumes this risk, whether or not such injury or damage is caused in whole or in part by any act or omission, regardless of negligence or fault, of the United States, its contractors or subcontractors, or any of its officers, agents, or employees. The Lessee further agrees to indemnify and save harmless the United States against all claims for loss, damage, or injury in connection with the programs or activities of the command headquarters, whether the same is caused in whole or in part by the negligence or fault of the United States, its contractors, or subcontractors, or any of its officers, agents, or employees and whether such claims might be sustained under a theory of strict or absolute liability or otherwise.

- 4.2 Distributed Fiber-Optic Sensing Technology. (Planning) (Construction) (Operation). To mitigate potential impacts on the Department of the Navy's (DON's) operations, the Lessee must coordinate with the DoD/DON on any proposal to use distributed fiber-optic sensing technology as part of the Project or associated transmission cables. The DON point-of-contact for coordination is Matthew Senska: [matthew.senska@navy.mil](mailto:matthew.senska@navy.mil); 571-970-8400.
- 4.3 Electromagnetic Emissions. (Planning) (Construction) (Operation). Before entering any designated defense operating area, warning area, or water test area for the purpose of carrying out any survey activities under the approved COP, the Lessee must enter into an agreement with the commander of the appropriate command headquarters to coordinate the electromagnetic emissions associated with such survey activities. The Lessee must ensure that all electromagnetic emissions associated with such survey activities are controlled as directed by the commander of the appropriate command headquarters. The Lessee must provide BOEM with a copy of the agreement within 15 days of entering into it.

## **5. PROTECTED SPECIES<sup>10</sup> AND HABITAT CONDITIONS**

- 5.1 General Environmental Conditions (Planning) (Construction) (Operations) (Decommissioning).
  - 5.1.1 Aircraft Detection Lighting System (Construction) (Operations). The Lessee must use a FAA-approved vendor for the Aircraft Detection Lighting System (ADLS), which will activate the FAA hazard lighting only when an aircraft is in the vicinity of the wind facility to reduce visual impacts at night. The Lessee must confirm the use of, and submit to BOEM (via [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov)) and BSEE (via TIMSWeb), the information about an FAA-approved vendor for ADLS on WTGs and the OSS at the time the relevant FIR is submitted.

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<sup>10</sup> As used herein, the term "protected species" means species of fish, wildlife, or plant that have been determined to be endangered or threatened under Section 4 of the Endangered Species Act (ESA). ESA-listed species are provided in 50 C.F.R. 17.11-12. The term also includes marine mammals protected under the Marine Mammal Protection Act (MMPA).

- 5.1.2 Marine Debris<sup>11</sup> Awareness and Elimination (Planning) (Construction) (Operations) (Decommissioning).
- 5.1.2.1 The Lessee must submit required documents related to marine debris awareness training, reporting, and recovery (e.g., annual training compliance, incident reporting, 24-hour notices, recovery plans, recovery notifications, monthly reporting, annual survey and reporting, and decommissioning and site clearance) described in Section 5.1.2.2 through Section 5.1.2.10 to BSEE via TIMSWeb with a notification email sent to [marinedebris@bsee.gov](mailto:marinedebris@bsee.gov).
- 5.1.2.2 Marine Debris Awareness Training and Certification. The Lessee must ensure that all vessel operators, employees, and contractors engaged in offshore activities pursuant to the approved COP complete marine debris awareness training initially (i.e., prior to engaging in offshore activities pursuant to the approved COP) and annually. Operators must implement a marine debris awareness training and certification process that ensures that their employees and contractors are adequately trained. The training and certification process must include the following elements: (1) training through viewing of either a marine debris video or training slide pack posted on the BSEE website or by contacting BSEE, and an explanation from management personnel that emphasizes their commitment to the requirements; and (2) documented certification that all personnel listed above have completed their initial and annual training. This certification made available for inspection by BSEE upon request.
- 5.1.2.3 Training Compliance Report. By January 31 of each year, the Lessee must submit to BSEE an annual report that describes its marine debris awareness training process and certifies that the training process has been followed for the preceding calendar year.
- 5.1.2.4 Marking. Any materials, equipment, tools, containers, and other items that are used in OCS activities and that are of a shape or configuration that are likely to snag or damage fishing devices or be lost or discarded overboard, must be clearly marked with the vessel or facility identification number, and properly secured to prevent loss overboard. All markings must clearly identify the owner and must be able to resist the effects of the environmental conditions to which they may be exposed.

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<sup>11</sup> Throughout this document, “marine debris” is defined as any object or fragment of wood, metal, glass, rubber, plastic, cloth, paper, or any other man-made item or material that is lost or discarded in the marine environment.

- 5.1.2.5 Recovery. Discarding trash or debris in the marine environment is prohibited. Debris that is accidentally released by the Lessee in the marine environment while performing any activities associated with the Project must be recovered within 24 hours when the marine debris is likely to (1) cause undue harm or damage to natural resources (e.g., entanglement or ingestion by protected species); or (2) interfere with OCS uses (e.g., snagging or damaging fishing equipment, or presenting a hazard to navigation). If the marine debris is located within the boundaries of an archaeological resource/avoidance area, or a sensitive ecological/benthic resource area, the Lessee must contact BSEE for concurrence before conducting any recovery efforts. The Lessee must take steps to prevent similar releases of marine debris and must submit a description of these preventative actions to BSEE within 30 days from the date on which the release of marine debris occurred.
- 5.1.2.6 Notification. The Lessee must notify BSEE within 24 hours of any releases of marine debris and indicate whether released marine debris was immediately recovered. If the marine debris was not recovered, the Lessee must provide their rationale for not recovering the marine debris (e.g., marine debris is located within the boundaries of a sensitive area, recovery was not possible because conditions are unsafe, or recovery was not practicable and warranted because the released marine debris is not likely to result items (1) or (2) listed in Section 5.1.2.5).
- 5.1.2.7 Remedial Recovery. After reviewing the notification and rationale, BSEE may order the Lessee to recover the marine debris if BSEE finds that the reasons provided by the Lessee in the notification are insufficient and the marine debris would cause undue harm or damage to natural resources or interfere with OCS uses.
- 5.1.2.7.1. Recovery Plan. If BSEE requires the Lessee to recover the marine debris, the Lessee must submit the Recovery Plan to BSEE within 10 days after receiving BSEE's request. Unless BSEE objects within 48 hours after the Recovery Plan has an accepted or in review status by BSEE in TIMSWeb, the Lessee may proceed with the activities described in the Recovery Plan. The Lessee must request and obtain a time extension if recovery activities cannot be completed within 30 days from the date on which marine debris was released
- 5.1.2.7.2. Recovery Completion Notification. Within 30 days after the marine debris is recovered, the Lessee must provide

notification to BSEE that recovery was completed and, if applicable, describe any substantial variance from the activities described in the Recovery Plan that were required during the recovery efforts.

5.1.2.8 Monthly Reporting. The Lessee must submit to BSEE a monthly report, no later than the fifth day of the month, of all marine debris lost or discarded during the preceding month, including, if applicable, information related to 48-Hour Reporting and Recovery Plan information that occurred and include the referenced TIMSWeb Submittal ID (SID). The Lessee is not required to submit a report for those months in which no debris was lost or discarded. The monthly report must include the following:

- a. Project identification and contact information for the Lessee and for any operators or contractors involved;
- b. The date and time of the incident;
- c. The lease number, OCS area and block, and coordinates of the object's location (latitude and longitude in decimal degrees);
- d. A detailed description of the dropped object, including dimensions (approximate length, width, height, and weight), composition (e.g., plastic, aluminum, steel, wood, or paper), and buoyancy (floats or sinks);
- e. Pictures, data imagery, data streams, and/or a schematic/illustration of the object, if available;
- f. An indication of whether the lost or discarded item could be detected as a magnetic anomaly of greater than 50 nanotesla, a seabed target of greater than 1.6 feet (0.5 meters), or a sub-bottom anomaly of greater than 1.6 feet (0.5 meters) when operating a magnetometer or gradiometer, side scan sonar, or sub-bottom profiler consistent with DOI's most recent, applicable guidance;
- g. An explanation of how the object was lost; and
- h. A description of immediate recovery efforts and results, including photos.

5.1.2.9 Annual Surveying and Reporting. Periodic Underwater Surveys, Reporting of Monofilament and Other Fishing Gear Around WTG Foundations (Operations). The Lessee must monitor indirect impacts associated with charter and recreational fishing gear lost from expected increases in fishing around WTG foundations by surveying at least 10 of the WTGs located closest to shore in the Lease Area annually. Survey design and effort (i.e., the number of WTGs and frequency of

reporting) may be modified; any modification must be reviewed and concurred with by BOEM and BSEE. The Lessee may conduct surveys by remotely operated vehicles, divers, or other means to determine the frequency and locations of marine debris. The Lessee must report the results of the surveys to BOEM (at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov) and BSEE in an annual report, submitted by January 31, for the preceding calendar year. Annual reports must be submitted in Word and Adobe PDF format. Photographic and videographic materials (TIFF or Motion JPEG 2000) must be provided in TIMSWeb with the submittal of the annual report. Photographic and videographic files can also be submitted to [marinedebris@bsee.gov](mailto:marinedebris@bsee.gov) if unable to upload in TIMSWeb.

5.1.2.9.1. Annual reports must include a summary of survey reports that include results, including: the survey date; contact information of the operator; the location and pile identification number; photographic and/or video documentation of the survey and debris encountered; any animals sighted; and the disposition of any located debris (i.e., removed or left in place). Annual reports must also include claim data attributable to the Project from Ørsted's corporate gear loss compensation policy and procedures. Required data and reports may be archived, analyzed, published, and disseminated by BOEM and BSEE.

5.1.2.10 Site Clearance and Decommissioning. The Lessee must include and address information on unrecovered marine debris in the description of the site clearance activities provided in the decommissioning application required under 30 C.F.R. § 585.906 and 285.906.

## 5.2 ESA-Listed Plant Conditions.

5.2.1 The Lessee must submit all required documents related to the ESA-listed plant conditions in Section 5.2.2 through 5.2.4 to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov); and USFWS at [Wendy\\_Walsh@fws.gov](mailto:Wendy_Walsh@fws.gov). The Lessee must confirm the relevant point of contact before submitting the report and must also confirm the agencies' receipt of the report.

5.2.2 American Chaffseed (Planning). The Lessee must retain a USFWS qualified surveyor to conduct a survey of all suitable American chaffseed habitats between June 1 and August 15 that will be subject to temporary disturbance or permanent modification as a result of Project activities, both during

construction and from post-construction operations and maintenance (O&M) activities, including areas crossed by horizontal directional drilling (HDD). Survey areas must not be mowed for at least one month prior to the survey, and the survey must cover all areas of suitable habitat, not just transects. The Lessee must submit the survey area(s), timing, methods, and qualifications of the surveyor(s) for BOEM, U.S. Army Corps of Engineers (USACE), and USFWS approval before starting the survey. A survey report, including maps and associated spatial files in an ESRI ArcGIS/ArcPro compatible format, must be provided to BOEM, USACE, and USFWS for review no later than 30 days after the survey has been completed. BOEM, USACE, and USFWS will complete their reviews and identify any deficiencies that require a report revision by the Lessee within 30 days of receipt of the survey report. If any American chaffseed is found during the survey, the surveyor must document the distribution and abundance of plants and submit both the full survey report and a completed Natural Heritage Rare Plant Species Reporting Form to BOEM, USACE, USFWS, and the New Jersey Natural Heritage Program. If American chaffseed is present in or adjacent to Project activities, the Lessee must coordinate with USFWS to develop appropriate conservation measures that the Lessee is required to implement to avoid adverse effects to this species.

- 5.2.3 Swamp Pink (Planning). If the Lessee elects to construct an Oyster Creek onshore cable route option other than the Holtec property route, the Lessee must adhere to all applicable laws and obtain all necessary permits. The Lessee must retain a USFWS qualified surveyor to conduct a survey between late fall and early spring and consistent with USFWS swamp pink survey guidelines of all suitable habitats (i.e., forested wetlands) that will be subject to temporary disturbance or permanent modification as a result of Project activities, both during construction and from post-construction O&M activities, including areas crossed by HDD. The survey area must also include all forested wetlands within 300 feet of upland disturbance. The Lessee must submit the survey area(s), timing, methods, and qualifications of the surveyor(s) for BOEM, USACE, and USFWS approval prior to the start of the survey. A survey report, including maps and associated spatial files in an ESRI ArcMap/ArcPro compatible format, must be provided to BOEM, USACE, and USFWS for review no later than 30 days after the survey has been completed. BOEM, USACE, and USFWS will complete their reviews and identify any deficiencies that require a report revision by the Lessee within 30 days of receipt of the survey report. If any swamp pink is found during the survey, the surveyor must

document the distribution and abundance of plants and submit both the full survey report and a completed Natural Heritage Rare Plant Species Reporting Form ([https://www.nj.gov/dep/parksandforests/natural/docs/NHRPSR\\_Form.pdf](https://www.nj.gov/dep/parksandforests/natural/docs/NHRPSR_Form.pdf)) to BOEM, USACE, USFWS and the New Jersey Natural Heritage Program. If swamp pink is present in or adjacent to Project activities, the Lessee must coordinate with USFWS to develop appropriate conservation measures that the Lessee is required to implement to avoid adverse effects to this species.

- 5.2.4 Knieskern's Beaked-Rush (Planning). If the Lessee elects to construct an Oyster Creek onshore cable route option other than the Holtec property route, the Lessee must adhere to all applicable laws and obtain all necessary permits. The Lessee must retain a USFWS qualified surveyor to conduct a survey between July and September and consistent with USFWS Knieskern's beaked-rush survey guidelines of all suitable habitats that will be subject to temporary disturbance or permanent modification as a result of Project activities, both during construction and from post-construction O&M activities, including areas crossed by HDD. USFWS requires that survey areas not be mowed for at least one month before the survey. The Lessee must submit the survey area(s), timing, methods, and qualifications of the surveyor(s) for BOEM, USACE, and USFWS approval before starting the survey. A survey report, including maps and associated spatial files in an ESRI ArcGIS/ArcPro compatible format, must be provided to BOEM, USACE and USFWS for review no later than 30 days after the survey has been completed. BOEM, USACE and USFWS will complete their reviews and identify any deficiencies that require a report revision by the Lessee within 30 days of receipt of the survey report. If any Knieskern's beaked-rush is found during the survey, the surveyor must document the distribution and abundance of plants and submit both the full survey report and a completed Natural Heritage Rare Plant Species Reporting Form to BOEM, USACE, USFWS, and the New Jersey Natural Heritage Program. If Knieskern's beaked-rush is present in or adjacent to Project activities, the Lessee must coordinate with USFWS to develop appropriate conservation measures that the Lessee is required to implement to avoid adverse effects to this species.

### 5.3 Avian and Bat Protection Conditions.

- 5.3.1 The Lessee must submit all required documents related to avian and bat protection conditions in Sections 5.3.2 through Section 5.3.10 to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov); BSEE at [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov) for a notification email and

TIMSWeb; USFWS at [wendy\\_walsh@fws.gov](mailto:wendy_walsh@fws.gov); and the New Jersey Department of Environmental Protection (NJDEP) at [njfishandwildlife@dep.nj.gov](mailto:njfishandwildlife@dep.nj.gov). The Lessee must confirm the relevant point of contact before submitting the report and must also confirm that the agencies have received the report.

- 5.3.2 Bird-Deterrent Devices and Plan (Construction) (Operations). To minimize attracting birds to operating WTGs, the Lessee must install bird perching-deterrent device(s) on each WTG and OSS. The Lessee must submit a plan to deter perching on offshore infrastructure by roseate terns and other marine birds for BOEM, BSEE, and USFWS approval. The Bird Perching Deterrent Plan must include the type(s) and locations of bird perching-deterrent devices and a monitoring plan for the life of the Project, allow for modifications and updates as new information and technology becomes available, and track the efficacy of the deterrents. The plan must be based on best available science regarding the effectiveness of perching-deterrent devices on minimizing collision risk. The location of bird perching-deterrent devices must be proposed by the Lessee based on best management practices applicable to the appropriate operation and safe installation of the devices. The Lessee must submit the Bird Perching Deterrent Plan with the FIR. The Bird Perching Deterrent Plan must be approved before the Lessee may commence installation of any WTGs or OSSs. The Lessee must also provide the location and type of bird-deterrent devices as part of the as-built submittals to BSEE.
- 5.3.3 Navigation Lighting Upward Illumination Minimization (Planning) (Construction) (Operations). Conditional on USCG approval, the top of each USCG-required marine navigation light must be shielded to minimize upward illumination to minimize the potential of attracting migratory birds. The Lessee must provide BOEM, BSEE, and USFWS with a copy of the application to USCG to establish PATON (Section 3.1.1).
- 5.3.4 Avian and Bat Monitoring Program (Construction) (Operations). The Lessee must develop and implement an Avian and Bat Post-Construction Monitoring Plan based on COP Appendix III, Appendix AB Avian and Bat Post-Construction Monitoring Framework, in coordination with USFWS, NJDEP, and other relevant regulatory agencies. Prior to or concurrent with offshore construction activities, including seabed preparation activities, the Lessee must submit an Avian and Bat Post-Construction Monitoring Plan for BOEM and BSEE review. BSEE, BOEM, and USFWS will review the Avian and Bat Post-Construction Monitoring Plan and provide any comments on the plan to the

Lessee within 60 days of its submittal. The Lessee must resolve all comments on the Avian and Bat Post-Construction Monitoring Plan to BOEM, BSEE, and USFWS's satisfaction before implementing the plan and before commissioning the first WTG. The Lessee may conclude that BOEM and BSEE have concurred in the Avian and Bat Post-Construction Monitoring Plan if BOEM and BSEE provide no comments on the plan within 60 days of its submittal date.

- 5.3.4.1 Monitoring. The Lessee must conduct monitoring, as outlined in the COP Appendix III, Appendix AB Avian and Bat Post-Construction Monitoring Framework (March 24, 2023), which will include the use of radio-tags to monitor movement of ESA-listed birds in the vicinity of the Project. The plan will include an initial monitoring phase involving deployment of Motus Wildlife Tracking System (Motus) radio tags on listed birds in conjunction with installation and operation of Motus receiving stations in the Lease Area following offshore Motus recommendations. The initial phase may also include deployment of satellite-based tracking technologies (e.g., GPS or Argos tags).
- 5.3.4.2 Annual Monitoring Reports. The Lessee must submit to BOEM, USFWS, and BSEE a comprehensive report after each full year of monitoring (pre- and post-construction) within 12 months of completion of the last avian survey. The report must include all data, analyses, and summaries regarding ESA-listed and non-ESA-listed birds and bats.
- 5.3.4.3 Post-Construction Quarterly Progress Reports. During the first full year that the Project is operational, the Lessee must submit quarterly progress reports during the implementation of the Avian and Bat Post-Construction Monitoring Plan to BOEM, BSEE, and USFWS by the 15th day of the first month following the end of each quarter. The Lessee must include a summary of all work performed, an explanation of overall progress, and any technical problems encountered in the progress reports.
- 5.3.4.4 Monitoring Plan Revisions. Within 30 days of submitting the annual monitoring report, the Lessee must meet with BOEM, BSEE, and USFWS to discuss the monitoring results, the potential need for revisions to the Avian and Bat Monitoring Plan, including technical refinements or additional monitoring, and the potential need for any additional efforts to reduce impacts. If, following that meeting, BOEM, BSEE, and USFWS jointly determine that revisions to the Avian and Bat

Post-Construction Monitoring Plan are necessary, the Lessee will be required to modify the Avian and Bat Post-Construction Monitoring Plan. If the reported monitoring results deviate substantially from the impact analysis included in the FEIS,<sup>12</sup> the Lessee must transmit to BOEM, BSEE, and USFWS recommendations for new mitigation measures and/or monitoring methods.

- 5.3.4.5 Operational Reporting (Operations). Upon commissioning of the first WTG, the Lessee must submit to BOEM and BSEE an annual report, due by January 31, summarizing monthly operational data from the preceding year calculated from 10-minute Supervisory Control and Data Acquisition (SCADA) data for all WTGs together in tabular format, including the proportion of time the WTGs were spinning each month, the average rotor speed (monthly revolutions per minute) of spinning WTGs plus 1 standard deviation, and the average pitch angle of blades (degrees relative to rotor plane) plus 1 standard deviation. Any operational data considered by the Lessee to be privileged or confidential must be clearly marked as confidential business information and will be handled by BOEM and BSEE in a manner consistent with 30 C.F.R. § 585.114.
- 5.3.4.6 Raw Data. The Lessee must store the raw data from all avian and bat surveys and monitoring activities according to accepted archiving practices. Such data must be accessible to BOEM, BSEE, and USFWS upon request for the duration of the Lease. The Lessee must work with BOEM to ensure the data are publicly available. All avian tracking data (i.e., from radio and satellite transmitters) will be stored, managed, and made available to BOEM and USFWS following the protocols and procedures outlined in the agency document entitled Guidance for Coordination of Data from Avian Tracking Studies, or its successor.
- 5.3.5 Annual Bird/Bat Mortality Reporting (Construction) (Operations) (Decommissioning). The Lessee must submit an annual report covering each calendar year, due by January 31, documenting any dead or injured birds or bats found on vessels and structures during construction, operations, and decommissioning in the preceding year. The report must be submitted to BOEM, BSEE, and USFWS. The report must contain the following information: the name of species, date found, location, a picture to confirm species identity (if possible), and any other relevant information.

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<sup>12</sup><https://www.boem.gov/renewable-energy/state-activities/ocean-wind-1-final-environmental-impact-statement-feis-commercial>

Carcasses with federal or research bands must be reported to the United States Geological Survey Bird Band Laboratory.<sup>13</sup>

- 5.3.6 Immediate Reporting (Construction) (Operations) (Decommissioning). Any occurrence of dead or injured ESA birds or bats must be reported to BOEM, BSEE, and USFWS<sup>14</sup> as soon as practicable (taking into account crew and vessel safety), ideally within 24 hours and no more than 3 days after the sighting. If practicable, the Lessee must carefully collect the dead specimen and preserve the material in the best possible state, contingent on the acquisition of any necessary wildlife permits and compliance with the Lessee's health and safety standards (see Monitoring Requirements in USFWS BiOp).
- 5.3.7 Collision Minimization (Planning) (Construction) (Operations). Within 5 years of the start of WTG operation and every 5 years thereafter for the operational life of the Project, the Lessee must provide BOEM with a review of best available scientific and commercial data on technologies and methods that have been implemented or are being studied to reduce or minimize bird collisions at WTGs. The review must be worldwide and include both offshore and onshore WTGs. BOEM's Collision Minimization Report, prepared consistent with Term and Condition 2 of the USFWS BiOp, will be provided to the Lessee, USFWS, NJDEP and the New Jersey Board of Public Utilities (NJBPU) for a 60-day review period. Within 60 days of BOEM's issuance of the final Collision Minimization Report, the Lessee must participate in a meeting with BOEM, BSEE, and USFWS. Meeting participants will discuss the Collision Minimization Report and seek consensus on: (1) whether implementation of any technologies/methods is reasonable and prudent,<sup>15</sup> (2) a timeframe in which any required collision minimization measure(s) must be implemented, and (3) requirements to monitor, maintain, or adapt the minimization measure(s) over time. USFWS will make the final determination of whether any minimization measures are reasonable and prudent (i.e., necessary or appropriate to minimize the amount or extent of incidental take), after considering input from BOEM, the Lessee, the NJDEP, and the NJBPU.

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<sup>13</sup> <https://www.usgs.gov/centers/eesc/science/bird-banding-laboratory>

<sup>14</sup> Report must be submitted to: Senior Resident Agent, U.S. Fish and Wildlife Service, Division of Law Enforcement, Sea Land Building, 2<sup>nd</sup> Floor, 1210 Corbin Street, Elizabeth, New Jersey, 07201, 973-645-5910 consistent with the FWS BiOp. The Lessee must confirm the relevant point of contact before submitting the report and must also confirm that the agencies have received the report.

<sup>15</sup> The terms reasonable and prudent are defined by ESA (i.e., necessary or appropriate to minimize the amount or extent of incidental take).

5.3.7.1 The Lessee must submit an annual report covering each calendar year, due by January 31, documenting the implementation of any minimization measure(s) during the preceding year. The report must be submitted to BOEM, BSEE, and USFWS.

5.3.8 Compensatory Mitigation for Piping Plover, Red Knot, and Roseate Tern (Planning) (Construction) (Operations). At least 180 days prior to the start of commissioning of the first WTG, the Lessee must distribute a Compensatory Mitigation Plan to BOEM, BSEE, and the USFWS for review and comment. BOEM, BSEE, and USFWS will review the Compensatory Mitigation Plan and provide any comments on the plan to the Lessee within 60 days of its submittal. The Lessee must resolve all comments on the Compensatory Mitigation Plan to BOEM's and BSEE's satisfaction before implementing the plan and before commissioning of the first WTG. The Compensatory Mitigation Plan must provide compensatory mitigation actions to offset take of Piping Plover, Red Knot, and Roseate Tern by the fifth year of WTG operation. The Compensatory Mitigation Plan must include: a) detailed description of the mitigation actions; b) the specific location for each mitigation action; c) a timeline for completion of the mitigation measures; d) itemized costs for implementing the mitigation actions; e) details of the mitigation mechanisms (e.g., mitigation agreement, applicant-proposed mitigation); and f) monitoring to ensure the effectiveness of the mitigation actions in offsetting take.

5.3.9 Eastern Black Rail and Saltmarsh Sparrow Assessment (Planning). If the Lessee elects to construct an Oyster Creek onshore cable route option other than the Holtec property route, the Lessee must notify BOEM, USFWS, and NJDEP. The Lessee must retain a species expert to conduct a desktop and field assessment for the purposes of mapping suitable eastern black rail and saltmarsh sparrow habitat within the limits of disturbance. The Lessee must provide the assessment, mapping, and associated spatial files in an ESRI ArcMap/ArcPro compatible format, and qualifications of the expert, to BOEM and USFWS for review no later than 30 days after the assessment has been completed. BOEM and USFWS will complete their reviews and identify any deficiencies that require a report revision by the Lessee within 30 days of receipt of the assessment. If areas of suitable eastern black rail and/or saltmarsh sparrow habitat will be impacted by Project activities, the Lessee must coordinate with USFWS to develop appropriate conservation measures that the Lessee must implement to avoid adverse effects to these species. Conservation measures must include seasonal restriction of construction

activities and other Project-related intrusions into areas of suitable habitat from April 1 through September 30 (April 1 through September 30 for eastern black rail and May 1 to September 30 for saltmarsh sparrow) to minimize the risk of directly disturbing or injuring adults, eggs, or chicks during sensitive periods of the breeding season.

5.3.10 Bat Surveys (Planning). If the Lessee elects to construct an Oyster Creek onshore cable route option other than the Holtec route, the Lessee must notify BOEM, USFWS, and NJDEP. After this notification to BOEM, USFWS, and NJDEP, the Lessee must retain the services of a USFWS Recognized and Qualified Bat Surveyor to conduct acoustic surveys along the proposed route. The Lessee must provide a survey report, including maps and associated spatial files in an ESRI ArcGIS/ArcPro compatible format, to BOEM and USFWS for a 30-day review no later than 30 days after the survey has been completed. The Lessee must resolve any deficiencies that require a report revision to BOEM and USFWS's satisfaction prior to commencing onshore construction activities.

5.4 Benthic Habitat and Fisheries Monitoring Conditions (Planning) (Construction) (Operations).

5.4.1 The Lessee must submit all required documents related to benthic habitat and fisheries monitoring conditions in Section 5.4.2 through Section 5.4.4 (e.g., benthic and fisheries monitoring plans) to BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov) and to BSEE with status updates of those reports in the Annual Certification<sup>16</sup> for reporting in TIMSWeb.

5.4.2 Benthic Monitoring Plan. The Lessee must conduct benthic monitoring according to the *Ocean Wind Offshore Wind Farm Benthic Monitoring Plan* (BMP) to assess benthic habitats in the Project area pre-, during, and post- construction. The Lessee must review all NMFS Greater Atlantic Fisheries Office (GARFO) comments on the BMP that BOEM provides to the Lessee and revise the BMP, as appropriate. The Lessee must resolve all comments on the BMP to BOEM's and BSEE's satisfaction prior to implementation of the revised BMP.

5.4.2.1 The Lessee must submit to BOEM and BSEE a survey report within 90 days of the completion of each year of sampling. The

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<sup>16</sup> 30 C.F.R. § 285.633(a) requires certification of compliance annually with certain terms and conditions of your COP, hereinafter referred to as "Annual Certification."

Lessee must share data consistent with its data sharing plan and upon BOEM's or BSEE's request.

- 5.4.3 Benthic Supplemental MBES Monitoring Plan (Planning) (Construction) (Operations). If any of the WTGs A09, B09, C09, D09, or D10 will be constructed, the Lessee must submit and implement the Lessee's Supplemental Multibeam Echosounder (MBES) Monitoring Plan, which is a component of the Project's Benthic Monitoring Plan designed to detect physical changes – such as depth, hardness, rugosity, slope, and other morphometrics – to the sand ridge and trough benthic habitat through the regular collection of acoustic data. The Supplemental MBES Monitoring Plan must include the following components:
- 5.4.3.1 MBES surveys within region of the Lease Area where sand ridges exist and along a gradient from the Lease Area using a Before-After-Gradient study design.
  - 5.4.3.2 Post-construction MBES surveys must occur at  $T_{0.5}$  (6 months),  $T_1$ ,  $T_2$ , and  $T_5$ . Post-construction timing is defined as: time zero ( $t_0$ ) is the day of commissioning;  $t_1$  is one year after commissioning, etc. If the Project is constructed such that there are multiple  $t_0$ s, each  $t_0$  must be factored into the survey design.
  - 5.4.3.3 After the Year 5 ( $T_5$ ) post-construction survey, MBES surveys will be conducted every 3 years thereafter for the life of the project, as well as within 180 days of a major storm event. If Project phasing results in multiple  $t_0$ s, this condition will apply to each  $t_0$ .
  - 5.4.3.4 At least 120 days before construction of WTGs A09, B09, C09, D09, or D10, the Lessee must submit the Plan to BOEM and BSEE for a 60-day review. BOEM and BSEE will submit the Plan to NMFS GARFO for a concurrent review. The Lessee must resolve all comments on the Supplemental MBES Survey Plan to BOEM's and BSEE's satisfaction prior to implementation of the Plan.
  - 5.4.3.5 Within 90 days after the  $T_{0.5}$  survey and any major storm event survey, and within 90 days of the completion of each year of sampling ( $T_1$ ,  $T_2$ ,  $T_5$ , and every three years thereafter), the Lessee must submit a report on its findings to BOEM and BSEE. BOEM and BSEE will coordinate submission of the report to NMFS GARFO. If Project phasing results in multiple  $t_0$ s, this condition will apply to each  $t_0$ . The Lessee must share data consistent with its data sharing plan and upon BOEM's or BSEE's request.

- 5.4.4 Fisheries Monitoring Plan (Planning) (Construction) (Operations). The Lessee must conduct fisheries monitoring according to the *Ocean Wind Offshore Wind Farm Fisheries Monitoring Plan* (FMP) to assess fisheries status in the Project area pre-, during, and post- construction. The Lessee must review all NMFS GARFO comments on the FMP and revise the FMP, as appropriate. The Lessee must resolve all comments on the FMP to BOEM's and BSEE's satisfaction prior to implementation of the revised FMP. The Lessee must submit an annual report to BOEM and BSEE within 90 days of the completion of each year of sampling. The Lessee must share data consistent with its data sharing plan and upon BOEM's or BSEE's request.
- 5.5 Protected Species Monitoring Plan Conditions (Planning) (Construction) (Operations) (Decommissioning).
- 5.5.1 The Lessee must submit all required documents related to protected species conditions in Section 5.5.2 through Section 5.5.11 (e.g., passive acoustic monitoring, pile driving monitoring and plans, UXO/MEC detonation and monitoring, Sound Field Verification (SFV), cofferdam installation and monitoring, and vessel strike) to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov); BSEE via TIMSWeb with a notification email sent to BSEE at [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov); NMFS GARFO at [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov); and USACE at [napregulatory@usace.army.mil](mailto:napregulatory@usace.army.mil).
- 5.5.2 Passive Acoustic Monitoring (PAM) During Construction (Planning) (Construction). The Lessee must conduct PAM to supplement visual monitoring of marine mammals for all monopile and pin pile installations, as well as before, during, and after all UXO/MEC detonations.
- 5.5.3 UXO/MEC PAM Plan. The Lessee must prepare a UXO/MEC PAM Plan that describes all proposed equipment, deployment locations, detection review methodology, and other procedures and protocols related to the use of PAM to supplement visual monitoring during UXO/MEC detonation. The Lessee must submit this plan to NMFS GARFO, BOEM, and BSEE for review and BOEM's concurrence at least 180 days before the planned start of UXO/MEC activities requiring PAM. The UXO/MEC PAM Plan must incorporate the list of requirements as described in Section 5.5.4.
- 5.5.4 Pile Driving PAM Plan. The Lessee must submit a Pile Driving PAM Plan to BOEM, BSEE, and NMFS GARFO at least 180 days before impact pile driving is planned. BOEM, BSEE, and

NMFS will review the PAM plan and provide comments to the Lessee within 45 days of receipt of the plan. The Lessee must resolve all comments on the plan to BOEM's and BSEE's satisfaction before starting any pile driving. NMFS GARFO may comment to BOEM, BSEE, and the Lessee about whether the plan is consistent with the requirements outlined in the BiOp and its Incidental Take Statement (ITS). If BOEM determines that the plan is inconsistent with those requirements, the Lessee must resubmit a modified plan that addresses the identified issues at least 15 days before the start of the associated activity; at that time, BOEM, BSEE, and NMFS will discuss a timeline for review and approval of the modified plan. The Plan must include a description of all proposed PAM equipment, address how the proposed passive acoustic monitoring will follow standardized measurement, processing methods, reporting metrics, and metadata standards for offshore wind (Van Parijs et al., 2021). The plan must describe all proposed PAM equipment, procedures, and protocols including information to support that it will be able to detect vocalizing North Atlantic right whales (NARW) within the clearance and shutdown zones, and an evaluation of consistency with the NMFS BiOp. The plan must also incorporate the following requirements: If a NARW is detected via real-time PAM, data must be submitted by the Lessee to NMFS at [nmfs.pacmdata@noaa.gov](mailto:nmfs.pacmdata@noaa.gov) using the NMFS Passive Acoustic Reporting System Metadata and Detection data spreadsheets (<https://www.fisheries.noaa.gov/resource/document/passive-acoustic-reporting-system-templates>) as soon as feasible, but no longer than 24 hours after the detection. The Lessee must submit the completed data templates to NMFS at [nmfs.pacmdata@noaa.gov](mailto:nmfs.pacmdata@noaa.gov). The Lessee must also submit the full acoustic species Detection data, Metadata, and GPS data records, from real-time data, within 90 days via the ISO standard metadata forms available on the NMFS Passive Acoustic Reporting System website (<https://www.fisheries.noaa.gov/resource/document/passive-acoustic-reporting-system-templates>). The Lessee must submit the completed data templates to NMFS at [nmfs.pacmdata@noaa.gov](mailto:nmfs.pacmdata@noaa.gov). The Lessee must also send the full acoustic recordings from real-time systems to NOAA's National Centers for Environmental Information (NCEI) for archiving within 90 days after pile-driving has ended and instruments have been pulled from the water.

- 5.5.5 Long-term Passive Acoustic Monitoring (Construction) (Operations). The Lessee must conduct long-term monitoring of ambient noise, baleen whale, and marine fish vocalizations in the Lease Area before, during, and following construction. The

Lessee must conduct continuous<sup>17</sup> recording at least 30 days before conducting pile driving, during foundation pile driving, initial operation,<sup>18</sup> and for at least 3 but no more than 10 full calendar years of operation to monitor for potential impacts. The Lessee must meet with BOEM and BSEE at least 60 days prior to conclusion of the third full calendar year of operation monitoring (and at least 60 days prior to the conclusion of each subsequent year until monitoring is concluded) to discuss: 1) monitoring conducted to-date, 2) the need for continued monitoring, and 3) if monitoring is continued, whether adjustments to the monitoring are warranted. Following this meeting, BOEM will make a determination as to continued monitoring requirements and inform the Lessee of any changes to monitoring requirements. The Lessee must independently deploy at least three devices within the Lease Area to maximize spatial coverage of the Lease Area based on 10-kilometer spacing between deployment locations or as otherwise agreed between BOEM and the Lessee. The device(s) must be configured to identify the specific locations of vocalizing NARW within the Lease Area. The Lessee must coordinate the locations of the buoys with the Regional Wildlife Science Collaborative prior to the plan being submitted to BOEM and BSEE. The Lessee may move devices to new locations during the recording period, if existing PAM devices will be present in the Lease Area providing continuous recording. The archival recorders must have a minimum capability of continuously detecting and storing acoustic data on vessel noise, pile-driving, WTG operation, baleen whale vocalizations, and marine fish vocalizations in the Lease Area.

- 5.5.5.1 Long-term Passive Acoustic Monitoring Plan. No later than 180 days before buoy deployment, the Lessee must submit to BOEM and BSEE the long-term PAM plan, which must describe all proposed equipment, deployment locations, detection review methodology, and other procedures and protocols related to the required use of PAM for monitoring. The PAM plan must detail mooring best practices, data management, storage, measurement, and data processing best practices that are required by BOEM for long-term PAM monitoring. Refer to Regional Wildlife Science Collaborative for Offshore Wind Data Management & Storage Best Practices

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<sup>17</sup> Continuous recording in this measure recognizes that PAM devices can be damaged or lost from weather and other ocean uses, mechanical failures, and general maintenance. The Lessee must make every effort to maintain the PAM system as near continuous as possible. If temporal gaps in recording are expected, the lessee must ensure that additional recorders can be deployed to fill gaps.

<sup>18</sup> For the purposes of this condition, operation initiates with the commissioning of the first WTG.

for Long-term and Archival PAM Data.<sup>19</sup> The Lessee should detail other best practices consistent with COP approval in the plan. The long-term PAM Plan must include the proposed equipment, sample rate (the sampling rate (minimum 10 kHz) of the recorders should prioritize baleen whale detections but must also have a minimum capability to record noise from vessels, pile-driving, and WTG operation in the Lease Area), mooring design, deployment locations, methods for baleen whale and marine fish detections, and metrics for ambient noise analysis. The Lessee must submit the long-term PAM plan to BOEM and BSEE for review and concurrence. BOEM and BSEE will review the long-term PAM Plan and provide comments, if any, on the plan to the Lessee within 45 days, but no later than 90 days of its submittal. The Lessee's plan must satisfy all outstanding comments to BOEM's and BSEE's satisfaction. The Lessee will receive written concurrence from BOEM and BSEE upon acceptance of the final long-term PAM plan. If BOEM and BSEE do not provide comments on the long-term PAM Plan within 90 days of its submittal, the Lessee may conclusively presume BOEM and BSEE's concurrence with the long-term PAM Plan. The Lessee must provide long-term PAM monitoring results to BOEM and BSEE within 180 days of buoy collection and again within 180 days of the annual anniversaries of each the PAM device deployments. The Lessee must send all raw data to NCEI for archiving no later than 6 months following the date of each recorder recovery.

5.5.5.2 Option to Make Economic Contributions to BOEM's Environmental Studies Program.<sup>20</sup> As an alternative to conducting long-term PAM in the Lease Area, the Lessee may opt to meet the monitoring requirement described in Section 5.5.5 each year monitoring remains required through an annual economic contribution to BOEM's Environmental Studies Program in support of its Partnership for an Offshore Wind Energy Regional Observation Network (POWERON) initiative, the terms of which will be specified in a separate agreement between BOEM and the Lessee.<sup>21</sup> At the Lessee's request, BOEM's Environmental Studies Program will estimate the amount of the economic contribution to be included in the separate agreement based on a share of the expected costs of the

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<sup>19</sup> <https://rwsc.org/wp-content/uploads/2022/12/RWSC-PAM-Data-Management-Storage-Best-Practices.pdf>

<sup>20</sup> If the Lessee opts to meet the long-term PAM in the Lease Area by making annual economic contributions to BOEM's Environmental Studies Program (Section 5.5.5.2) and executes an agreement with BOEM, the Lessee is not required to develop a Long-Term Passive Acoustic Monitoring Plan (Section 5.5.5.1). BOEM will deem the execution and implementation of such an agreement to meet the long-term PAM requirements set forth in Section 5.5.5.

<sup>21</sup> The Lessee may elect the Option to Make Economic Contributions to BOEM's Environmental Studies Program (5.5.5.2) initially or during any subsequent calendar year of monitoring, subject to agreement with BOEM and BSEE.

POWERON program. Under this option, the Lessee will be expected to cooperate with the POWERON team to facilitate deployment and retrieval of instruments within the Lease Area. If necessary, the Lessee may request temporary withholding of the public release of acoustic data that has been collected within its Lease Area.

5.5.6 Marine Mammal and Sea Turtle Monitoring Plan for Pile Driving and UXO Detonation (Planning) (Construction). The Lessee must submit a Marine Mammal and Sea Turtle Monitoring Plan for Pile Driving and UXO Detonation to BOEM, BSEE, and NMFS GARFO at least 90 days before impact or vibratory pile driving or UXO detonation is planned. BOEM, BSEE, and NMFS GARFO will review the plan and provide comments within 45 days of receipt of the plan. NMFS GARFO's comments to BOEM, BSEE, and the Lessee will include a determination as to whether the plan is consistent with the requirements outlined in the BiOp and its ITS. If the plan is determined to be inconsistent with these requirements, the Lessee must resubmit a modified plan that addresses the identified issues at least 15 days before the start of the associated activity; at that time, BOEM, BSEE, and NMFS GARFO will discuss a timeline for review and approval of the modified plan. The Lessee must resolve all comments on the plan to BOEM's and BSEE's satisfaction before starting any pile driving or carrying out any UXO detonation. The plan must include a description of all monitoring equipment and Protected Species Observer (PSO) protocols (including number and location of PSOs) for all pile driving and UXO detonations. The plan must detail all plans and procedures for sound attenuation as well as for monitoring ESA-listed whales and sea turtles during all impact and vibratory pile driving and UXO detonation. The plan must also describe how the Lessee will determine the number of whales exposed to noise above the Level B harassment threshold during pile driving with the vibratory hammer to install cofferdams.

5.5.7 Cofferdam Installation and Removal Monitoring Plan (Planning) (Construction). The Lessee must submit the Cofferdam Installation and Removal and Monitoring Plan to BOEM, BSEE, USACE, and NMFS GARFO at least 90 days before vibratory pile driving is planned to begin. NMFS GARFO's comments to BOEM, BSEE, and the Lessee will include a determination as to whether the plan is consistent with the requirements outlined in the BiOp and its ITS. If the plan is determined to be inconsistent with these requirements, the Lessee must resubmit a modified plan that addresses the identified issues at least 15 days before the start of the associated activity; at that time, BOEM, BSEE, and NMFS will discuss a timeline for review and approval of the

modified plan. The Lessee must resolve all comments on the plan to BOEM's and BSEE's satisfaction prior to the start of any pile driving or the start of any cofferdam installation or removal with a vibratory hammer. This plan must include a description of how BOEM, BSEE, and the Lessee will determine the number of whales exposed to noise above the Level B harassment threshold during pile installation and removal with the vibratory hammer. This plan may be stand-alone or a component of the Pile Driving and Marine Mammal and Sea Turtle Monitoring Plan.

5.5.8 Alternative Monitoring Plan/Nighttime Pile Driving Monitoring Plan (Planning) (Construction). The Lessee must submit the Alternative Monitoring/Nighttime Pile Driving Monitoring Plan to BOEM, BSEE, and NMFS GARFO at least 90 days before impact pile driving is planned to begin unless specified differently under the MMPA Letter of Agreement. BOEM, BSEE, and NMFS will review the Alternative Monitoring/Nighttime Pile Driving Monitoring Plan and provide comments within 45 days of receipt of the plan. NMFS GARFO's comments to BOEM, BSEE, and the Lessee will include a determination as to whether the plan is consistent with the requirements outlined in the BiOp and its ITS. If the plan is determined to be inconsistent with these requirements, the Lessee must resubmit a modified plan that addresses the identified issues at least 15 days before the start of the associated activity; at that time, BOEM, BSEE, and NMFS will discuss a timeline for review and approval of the modified plan. The Lessee must resolve all comments on the plan to BOEM's and BSEE's satisfaction prior to the start of pile driving. This plan must contain a thorough description of how the Lessee plans to monitor pile driving activities at night, including proof of the efficacy of the Lessee's night vision devices (e.g., mounted thermal/IR camera systems, hand-held or wearable night vision devices, infrared (IR) spotlights) in detecting ESA listed marine mammals and sea turtles over the full extent of the required clearance and shutdown zones, including demonstration that the full extent of the minimum visibility zones (1,650 meters May-November, 2,500 meters December) can be effectively and reliably monitored for marine mammals. The Plan must identify the efficacy of the technology at detecting marine mammals and sea turtles in the clearance and shutdowns under all conditions anticipated during construction, including varying weather conditions, sea states, and various uses of artificial lighting. If the plan does not include a full description of the proposed technology, monitoring methodology, and data demonstrating that marine mammals and sea turtles can reliably and effectively be detected within the clearance and shutdown zones for monopiles and pin piles before and during impact pile driving, nighttime pile

driving by the Lessee (unless a pile was initiated 1.5 hours prior to civil sunset) must not occur.

- 5.5.9 Alternative Monitoring Plan/Daytime Reduced Visibility Pile Driving Monitoring Plan (Planning) (Construction). The Lessee must submit the Alternative Monitoring Plan/Daytime Reduced Visibility Pile Driving Monitoring Plan to BOEM, BSEE, and NMFS GARFO at least 90 days before impact pile driving is planned to begin. BOEM, BSEE, and NMFS will review the Alternative Monitoring Plan/Daytime Reduced Visibility Pile Driving Monitoring Plan and provide comments within 45 days of receipt of the plan. The Lessee must resolve all comments on the plan to BOEM's and BSEE's satisfaction prior to the start of pile driving. The plan must address monitoring during daytime when lighting or weather (e.g., fog, rain, sea state) conditions prevent visual monitoring of the full extent of the clearance and shutdown zones. For the purposes of this condition, daytime is defined as one hour after civil sunrise to 1.5 hours before civil sunset. The Alternative Monitoring Plan must demonstrate (through empirical evidence) the capability of the proposed monitoring methodology to detect marine mammals and sea turtles within the full extent of the established clearance and shutdown zones (i.e., species can be detected at the same distances and with similar confidence) with the same effectiveness as daytime visual monitoring (i.e., same detection probability). The Lessee must use only those devices and methods that have been demonstrated as being capable of detecting marine mammals and sea turtles to the maximum extent of the clearance and shutdown zones.
- 5.5.10 SFV Plan (Planning) (Construction). The Lessee must submit the SFV Plan to BOEM, BSEE, and NMFS GARFO at least 180 days before impact pile driving or UXO detonation is planned to begin. BOEM, BSEE, and NMFS GARFO will review the plan and will provide comments within 45 days of receipt of the plan. NMFS GARFO's comments to BOEM, BSEE, and the Lessee will include a determination as to whether the plan is consistent with the requirements outlined in the BiOp and its ITS. If the plan is determined to be inconsistent with these requirements, the Lessee must resubmit a modified plan that addresses the identified issues at least 15 days before the start of the associated activity; at that time, BOEM, BSEE, and NMFS will discuss a timeline for review of the modified plan. The Lessee must resolve all comments on the plan to BOEM's and BSEE's satisfaction prior to the start of pile driving or UXO detonation activities. The plan must describe how the Lessee will ensure that the first three monopile and pin pile installation sites and each UXO/MEC detonation site selected for SFV are representative of the rest of the monopile and pin pile

installation and UXO/MEC sites. In the case that these sites are not determined to be representative of all other monopile and pin pile installation sites and UXO/MEC detonation locations, the Lessee must include information on how additional sites will be selected for SFV. The plan must also include methodology for collecting, analyzing, and preparing SFV data for submission to NMFS GARFO. The Lessee's plan must describe how the effectiveness of the sound attenuation methodology will be evaluated based on the results. The Lessee must also provide, as soon as they are available, but no later than 48 hours after each installation, the initial results of the SFV measurements to BOEM, BSEE, and NMFS GARFO in an interim report after each monopile for the first 3 piles and pin pile installation for the first full jacket foundation (16 pin piles). If any interim SFV report submitted for any of the first 3 monopiles indicates the sound fields exceed the modeled distances to any protected species injury or behavioral harassment/disturbance thresholds (as modeled assuming 10 decibel attenuation), the Lessee must carry out SFV for the next 3 monopiles and provide a SFV report to BOEM, BSEE, and NMFS GARFO within 48 hours after each foundation is installed. If the interim SFV report submitted for the first full jacket foundation indicates the sound fields exceed the modeled distances to any protected species injury or behavioral harassment/disturbance thresholds (as modeled assuming 10 decibel attenuation), the Lessee must carry out SFV for the next full jacket foundation (i.e., all 16 pin piles) and provide a SFV report to BOEM, BSEE, and NMFS GARFO within 48 hours after the foundation is installed.

5.5.10.1 After the first 6 monopiles and/or the first two full jacket foundations, BOEM, BSEE, or NMFS GARFO may require the Lessee to carry out additional SFV and provide additional interim SFV reports to BOEM, BSEE, and NMFS GARFO if the measured sound fields continue to exceed the modeled results. These requirements are in addition to the requirement for the Lessee to implement additional sound attenuation measures and/or adjustments to clearance and shutdown zones if sound fields exceed the modeled distances to any protected species injury or behavioral harassment/disturbance thresholds (as modeled assuming 10 decibel attenuation).

5.5.10.2 Additional Noise Attenuation Measures. If any of the SFV measurements from any pile indicate that the distance to any isopleth of concern is larger than those modeled assuming 10 decibel attenuation (see NMFS BiOp Tables 7.1.7-7.1.10 (whales); 7.1.32 and 7.1.33 (sea turtles); and, 7.1.39 and 7.1.40 (Atlantic sturgeon)), the Lessee must identify and implement

additional measures that are expected to reduce sound levels to the modeled distances before the next pile is installed.

Additional attenuation measures that could reduce sound levels to the modeled distances include, but are not limited to: adding noise attenuation devices, adjusting hammer operations, and adjusting the noise mitigation system (NMS). Additionally, the Lessee must also provide an explanation to BOEM, BSEE, NMFS GARFO and NMFS Office of Protected Resources (OPR) as to why the additional measures to be implemented for the next pile will reduce sound levels to the modeled distances. The Lessee must implement those additional measures before installing subsequent piles (e.g., if threshold distances are exceeded on pile 1, then additional measures must be deployed before installing pile 2).

- 5.5.10.3 If after implementation of the additional noise attenuation measures, any subsequent SFV measurements are still larger than those modeled assuming 10 decibel attenuation, then the Lessee must either implement additional noise attenuation measures (e.g., additional bubble curtain or modify the pile driving operations) in a way that is expected to reduce noise and the distance to thresholds of concern to no greater than the modeled distances (assuming 10 decibel attenuation). Additionally, the Lessee must provide an explanation to BOEM, BSEE, NMFS GARFO, and NMFS OPR as to why the additional measures to be implemented for the next pile will reduce sound levels to the modeled distances. The Lessee must implement those additional noise attenuation measures before installing subsequent piles (e.g., if threshold distances are still exceeded on pile 2, the additional measures must be deployed for pile 3).
- 5.5.10.4 If, following the installation of the pile with the additional measures required above, the SFV results indicate that any isopleths of concern are still larger than those modeled assuming 10 decibel attenuation, then before any additional piles can be installed, the Lessee must determine, in coordination with NMFS GARFO/OPR, BOEM, BSEE, and USACE, what additional measures can be implemented. The Lessee must either implement those measures, or, if no additional measures are identified, then pile installation must continue with implementation of the measures required above and any expanded clearance and shutdown zone sizes (and any required additional PSOs). Additionally, the Lessee must continue SFV for the next two piles (for a total of three) and submit the interim reports within 48 hours as required above.

5.5.10.5 If the SFV results from all three of those piles described above are within the distances to isopleths of concern modeled assuming 10 decibel attenuation, then the Lessee, upon confirmation from BOEM and BSEE, can revert to the original clearance and shutdown zones or continue with the approved expanded clearance and shutdown zones (and any required additional PSOs). The Lessee must continue to implement the measures required above (Section 5.5.10.2) during the installation of all future piles.

5.5.11 Vessel Strike Avoidance Plan (Planning) (Construction) (Operations) (Decommissioning). The Lessee must submit the Vessel Strike Avoidance Plan to BOEM, BSEE, and NMFS GARFO at least 90 days prior to commencement of vessel use, with the exception of vessels deployed for the fisheries surveys. BOEM, BSEE, and NMFS GARFO will review the plan and provide comments within 45 days of receipt of the plan. NMFS GARFO's comments to BOEM, BSEE, and the Lessee will include a determination as to whether the plan is consistent with the requirements outlined in the BiOp and its ITS. If the plan is determined to be inconsistent with these requirements, the Lessee must resubmit a modified plan that addresses the identified issues at least 15 days before the start of the associated activity; at that time, BOEM, BSEE and NMFS will discuss a timeline for review and approval of the modified plan. The plan must provide details on the separation distances, vessel strike avoidance protocols, and vessel-based observer protocols on transiting vessels. If the Lessee plans to implement the Alternative Plan for vessel strike avoidance (i.e., implement PAM in the Atlantic City to Lease Area transit lane to allow vessel transit above 10 knots from May 1 – October 31), the plan must describe how PAM, in combination with visual observations, will be conducted to ensure the transit corridor is clear of NARWs. Consistent with the requirements of the proposed MMPA ITA, unless and until the Plan is approved by NMFS OPR and NMFS GARFO, all vessels transiting between the O&M facility and the Lease Area, year-round, must comply with the 10-knot speed restriction.

5.6 Pre-Seabed Disturbance Conditions (Planning) (Construction) (Operations) (Decommissioning).

5.6.1 The Lessee must submit all required documents related to pre-seabed disturbance conditions in Section 5.6.2 through Section 5.6.6 (e.g., anchoring plan, as-placed anchor plats, micrositing plan, scour and cable protection, and post seabed disturbance) to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), BSEE via TIMSWeb, and NMFS GARFO at [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov).

5.6.2 Anchoring Plan. The Lessee must prepare and implement an Anchoring Plan for all areas where anchoring or buoy placement occurs during construction and operations/maintenance, and decommissioning within 1,640 feet (500 meters) of habitats, resources, and submerged infrastructure that are sensitive, including complex habitat;<sup>22</sup> sand ridge and trough habitat at WTGs A06, A07, A09, B07, B09, C09, D09, and D10; boulders  $\geq$  0.5 meters; ancient, submerged landform features; known and potential shipwrecks; potentially significant debris fields; potential hazards; and any related facility installation activities (such as cable, WTG, and OSS installation). The Lessee must provide to all construction and support vessels the locations where anchoring or buoy placement must be avoided to the extent technically and/or economically feasible, including complex habitat; sand ridge and trough habitat at WTGs A06, A07, A09, B07, B09, C09, D09, and D10; boulders  $\geq$  0.5 meters; ancient submerged landform features; and known and potential shipwrecks potentially significant debris fields; potential hazards; and any related facility installation activities (such as cable, WTG, and OSS installation). If anchoring is necessary at these locations, then all vessels deploying anchors must extend the anchor lines to the extent practicable to minimize the number of times the anchors must be raised and lowered to reduce the amount of habitat disturbance, unless the anchor chain sweep area includes complex habitat that may be impacted by the chain sweep. On all vessels deploying anchors, the Lessee must use mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seabed, unless the Lessee demonstrates, and BOEM and BSEE accept, that (1) the use of mid-line anchor buoys to reduce the amount of anchor chain or line that touches the seabed is not technically feasible; or (2) a different alternative is as safe and provides the same or greater environmental protection. Any instances where the Lessee believes there is technical infeasibility must be supported by a technical feasibility analysis, as appropriate, for review and concurrence by BOEM and BSEE.

5.6.2.1 The Lessee must provide the Anchoring Plan to BOEM and BSEE to coordinate with NMFS GARFO for a 60-day review at least 120 days before anchoring activities and construction begins for export and inter-array cables. The Lessee must resolve all comments on the Anchoring Plan to BOEM's and BSEE's satisfaction before conducting any OCS seabed-disturbing activities that require anchoring.

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<sup>22</sup> Complex habitat for this Project is defined by Project-specific benthic habitat delineations with modifiers to identify habitat that is less resilient to disturbance (hardbottom substrate, hardbottom substrate with epifauna or macroalgae, and vegetated habitats).

- 5.6.2.2 For operations and decommissioning, the Lessee must provide proposed anchoring plats to BOEM and BSEE for review and concurrence before anchoring activities occur. The proposed anchoring plats must include avoidances identified in Section 5.6.2 above and as-placed anchor plats must be submitted per Section 2.20.4.
- 5.6.3 WTG Removal (Construction) (Decommissioning). To the extent it is technically and/or economically feasible and practicable for the Lessee to construct fewer than 98 WTGs, the Lessee must prioritize removal of WTG positions A09, B09, C09, D09 and D10 from the Project layout. The Lessee may choose the order in which the listed WTGs are removed. Following these five, the Lessee should prioritize WTG positions A06, A07, and B07, again choosing the order. Any instances where the Lessee believes there is technical and/or economic infeasibility must be supported by a technical and/or economic feasibility analysis, as appropriate, for review and concurrence by BOEM and BSEE.
- 5.6.4 Micrositing Plan (Planning) (Construction). The Lessee must prepare and implement a Micrositing Plan that describes how WTGs A06, A07, A09, B05, B06, B07, B08, B09, C09, D02, D09, D10, E07, F01, F07, G03, G09, and J03 and inter-array and export cable routes will be microsited to avoid or minimize impacts to high relief sand ridge and trough complex areas, complex habitat<sup>22</sup> and boulders  $\geq 0.5$  meters, as technically and/or economically feasible or practicable. The Lessee must not microsite structure locations in a way that narrows any WTG corridors to less than the distance required by Section 3.1.3. The Micrositing Plan must include a figure for each microsited WTG or cable segment, including benthic habitat delineations showing complex habitat<sup>22</sup> and locations of boulders  $\geq 0.5$  meters. For WTGs and cables that cannot be microsited to avoid impacts to high relief sand ridge and trough complex areas, complex habitat, or boulders  $\geq 0.5$  meters, impact minimization measures must be provided, as technically and/or economically feasible. Any instances where the Lessee believes there is technical and/or economic infeasibility must be supported by a technical and/or economic feasibility analysis, as appropriate, for review and concurrence by BOEM and BSEE. The Micrositing Plan must be submitted to BOEM and BSEE to coordinate with NMFS GARFO and NJDEP for a 60-day review, 120 days prior to site preparation activities for cables and WTGs. The Lessee must resolve all comments on the Micrositing Plan to BOEM's and BSEE's satisfaction prior to implementation of the plan.

- 5.6.4.1 The Lessee must identify all potential and previously identified MEC/ UXO in the Micrositing Plan and any practicable mitigation measures for MEC/UXO.
- 5.6.4.2 Boulder Relocation (Construction). As a component of the Micrositing Plan, the Lessee must consider the spatial extent of boulder relocation in the micrositing of WTGs and OSS foundations and inter-array and export cables, and must, to the extent technically and/or economically feasible or practicable for this Project, relocate boulders as close as practicable to areas immediately adjacent to existing similar habitat. The Lessee must clearly depict all boulder relocation activities in the Micrositing Plan.
- 5.6.4.2.1. The Lessee must identify where boulders will be removed and where they will be placed. The Lessee must also identify boulders that cannot be relocated with documentation of technical and/or economic feasibility concerns. The plan must include the following: (1) detailed methodology for each type of boulder relocation activity; (2) identification of areas of active (within last 5 years) bottom trawl fishing, areas where boulders >2 meters in diameter are anticipated to occur, and areas where boulders are expected to be relocated for project purposes; (3) methods to minimize the quantity of seabed or obstructions from relocated boulders in areas of active bottom trawl fishing, as identified in item (1) above, as technically and/or economically feasible; (4) identification of locations of boulders that will be moved and approximately where they will be placed, method(s) for moving boulders, and measures to minimize impacts as technically and/or economically feasible; and (5) an outreach/communication plan to relay information in a timely manner to mariners and other interested parties regarding the boulder relocation plan. Any instances where the Lessee believes there is technical and/or economic infeasibility must be supported by a technical and/or economic feasibility analysis, as appropriate, for review and concurrence by BOEM and BSEE.
- 5.6.5 Scour and Cable Protection Plan (Construction). The Lessee must prepare and implement a Scour and Cable Protection Plan (Plan) that includes descriptions and specifications for all scour and cable protection materials used in complex habitat<sup>22</sup> and sand ridge and trough habitat at WTGs A06, A07, A09, B07, B09, C09, D09, and D10. The Lessee must avoid the use of engineered stone or concrete mattresses in complex habitat and the sand ridge and

trough complex area at the listed WTGs, as technically and/or economically feasible or practicable. The Lessee must ensure that all materials used for scour and cable protection measures consist of natural or engineered stone that does not inhibit epibenthic growth and provides three-dimensional complexity in height and in interstitial spaces, as technically and/or economically feasible or practicable. Cable protection measures should have tapered or sloped edges to reduce hangs for mobile fishing gear. The Lessee must submit the Plan to BOEM and BSEE to coordinate with NMFS GARFO for a 60-day review at least 120 days before placement of scour and cable protection. Any instances where the Lessee believes there is technical and/or economic infeasibility must be supported by a technical and/or economic feasibility analysis, as appropriate, for review and concurrence by BOEM and BSEE. The Lessee must resolve all comments on the Plan to BOEM's and BSEE's satisfaction before placement of the scour and cable protection materials.

- 5.6.6 WTG Impact Zones. The Lessee must reduce the temporary impact zones for WTGs B05, B06, D02, and F01 from 250 meters to 200 meters to reduce potential impacts to New Jersey Prime Fishing Grounds.

## 5.7 Post-Seabed Disturbance Conditions

- 5.7.1 Berm Survey and Report (Construction) (Operations). Where plows, jets, grapnel runs, or other similar methods are used, post-construction surveys capable of detecting bathymetry changes of 0.5 feet or less should be completed to determine the height and width of any created berms. The Lessee must capture bathymetry changes greater than 3 feet during the Year 1 multi-beam echosounder (MBES) bathymetry survey along the cable routes. If there are bathymetric changes in berm height greater than 3 feet above grade, the Lessee must develop and implement a Berm Remediation Plan to restore created berms to match adjacent natural bathymetric contours (isobaths), as technically and/or economically feasible. Any instances where the Lessee believes there is technical and/or economic infeasibility must be supported by a technical and/or economic feasibility analysis, as appropriate, for review and concurrence by BOEM and BSEE. The Lessee must submit the Berm Remediation Plan to BOEM and BSEE to coordinate with NMFS for a 60-day review within 90 days of completion of the Year 1 MBES bathymetry survey. BOEM and BSEE will also review the plan to determine if the scope of activities (e.g., methods, disturbance area, vessel trips, emissions) is within the already completed National Environmental Policy Act analysis and ESA and essential fish habitat (EFH)

consultations and, if not, will complete additional environmental review and consultations. The Lessee must resolve all comments on the Berm Remediation Plan to BOEM's and BSEE's satisfaction prior to initiating restoration activities.

5.7.2 If avoidance of and minimization to Prime Fishing Areas identified on NOAA and NJDEP's publicly available GIS layer depicting previously identified Prime Fishing Areas (see <https://gisdata-njdep.opendata.arcgis.com/>) is not feasible, then Lessee must provide the NJDEP's Division of Land Resource Protection with information that clearly shows any permanent changes to the bathymetry, including but not limited to flattening sand waves, filling, and relocation of boulders, post-construction. The information must include the location and extent of modification of the pre-existing bathymetry (figures and GIS shapefiles with locations and dimensions of these features within the Project area should be provided), which structures were installed within these areas, and the avoidance and minimization measures which were implemented to reduce the area permanently modified. The Lessee must submit confirmation from NJDEP that the requirements under Section 5.7.2 have been met in the Lessee's Annual Certification.

#### 5.8 Endangered and Threatened Species Conditions for Fishery Monitoring (Planning) (Construction) (Operations)

##### 5.8.1 General Conditions for All Fisheries Monitoring Surveys

5.8.2 The Lessee must submit all required documents related to endangered and threatened species conditions for fishery monitoring in Section 5.8.3 through Section 5.8.10 (e.g., marine debris, visual and PSOs, take, and annual reporting) to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), BSEE via TIMSWeb with a notification email sent to [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov) or [marinedebris@bsee.gov](mailto:marinedebris@bsee.gov) (if related to marine debris/lost gear), and NMFS GARFO Protected Resources Division at [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov).

5.8.3 The Lessee must ensure that any lost survey gear is reported and recovered according to the Marine Debris Elimination and Reporting conditions. All lost gear must also be reported to NMFS GARFO and BSEE within 24 hours of the documented time when gear is discovered to be missing or lost. This report must include information on any markings on the gear and any efforts undertaken or planned to recover the gear.

- 5.8.3.1 All vessels must comply with the vessel speed plan as outlined below in Section 5.10.4 for vessel speed restrictions.
- 5.8.3.2 Marine mammal monitoring must occur prior to, during, and after haul-back of fisheries gear. If a marine mammal is determined to be at risk of interaction with the deployed gear, all gear must be immediately removed.
- 5.8.3.3 If marine mammals are sighted in the area within 15 minutes before deploying gear and are considered to be at risk of interaction with the research gear, then the sampling station must be either moved or canceled, or the activity must be suspended, until there are no sightings of any marine mammal for 15 minutes within 1 nautical mile (1,852 meters) of sampling location.
- 5.8.3.4 The Lessee must ensure all vessels deploying fixed gear (e.g., chevron traps) have adequate disentanglement equipment (i.e., knife and boathook) onboard. Any disentanglement must occur consistent with the Northeast Atlantic Coast Sea Turtle Disentanglement Network Guidelines and the procedures described in “Careful Release Protocols for Sea Turtle Release with Minimal Injury.”

#### 5.8.4 Conditions for Trawl Surveys.

- 5.8.4.1 The Lessee must ensure all vessels have at least one survey team member onboard the trawl surveys who has completed Northeast Fisheries Observer Program observer training (or another training in protected species identification and safe handling, inclusive of taking genetic samples from Atlantic sturgeon) within the last 5 years. Reference materials for identification, disentanglement, safe handling, and genetic sampling procedures must be available on board each survey vessel. This requirement applies to any trips where gear is set or hauled. Documentation of training must be provided to BOEM and BSEE within 48 hours upon request. If the Lessee will deploy non- Northeast Fisheries Observer Program trained observers, the Lessee must submit a plan to BOEM, BSEE, and NMFS GARFO describing the training that will be provided to the survey observers. The Lessee must submit the PSO Training Plan for Trawl Surveys as soon as possible after issuance of the Project’s BiOp but no later than 7 days prior to the start of trawl surveys. BOEM, BSEE, and NMFS will provide comments on the plan, and the Lessee must resolve all comments to BOEM’s and BSEE’s satisfaction before beginning any trawl survey.

- 5.8.4.2 The captain and/or a member of the scientific crew must conduct marine mammal monitoring before, during, and after haul back.
- 5.8.4.3 The Lessee must commence trawl operations as soon as possible once the vessel arrives on station; the target tow time must be limited to 20 minutes.
- 5.8.4.4 The Lessee must initiate marine mammal watches (visual observation) within 1 nautical mile (1,852 meters) of the site 15 minutes prior to sampling.
- 5.8.4.5 If a marine mammal is sighted within 1 nautical mile (1,852 meters) of the planned sampling station in the 15 minutes before gear deployment, the Lessee must delay setting the trawl until marine mammals have not been sighted for 15 minutes, or the Lessee may move the vessel away from the marine mammal to a different section of the sampling area. If, after moving on, marine mammals are still visible from the vessel, the Lessee may decide to move again or to skip the sampling station.
- 5.8.4.6 The Lessee must maintain visual monitoring effort during the entire period of time that trawl gear is in the water (i.e., throughout gear deployment, fishing, and retrieval). If marine mammals are sighted before the gear is fully removed from the water, (i.e., prior to haul back) the vessel must slow its speed and steer away from the sighted animal in order to minimize potential interactions.
- 5.8.4.7 The Lessee must open the codend of the net close to the deck/sorting area to avoid damage to animals that may be caught in gear.
- 5.8.4.8 The Lessee must empty gear as close as possible to the deck/sorting area and as quickly as possible after retrieval.
- 5.8.4.9 The Lessee must fully clean and repair trawl nets (if damaged) before setting again.
- 5.8.4.10 In the case of a marine mammal interaction, the Lessee must contact the Marine Mammal Stranding Network immediately.
- 5.8.5 Conditions for Structured Habitat Surveys (Chevron traps and Baited Remote Underwater Video (BRUVs)).
  - 5.8.5.1 The Lessee must deploy chevron traps and BRUVs on a limited soak duration (90 minutes or less) and must keep the vessel on location with the gear while it is sampling.

- 5.8.5.2 The Lessee must use buoy/end lines with a breaking strength of <1,700 pounds (lbs). All buoy line must use weak links that are chosen from the list of NMFS approved gear. This may be accomplished by using whole buoy line that has a breaking strength of 1,700 lbs; or buoy line with weak inserts that result in line having an overall breaking strength of 1,700 lbs.
- 5.8.5.3 The Lessee must label all buoys as research gear and must write the scientific permit number on the buoy. All markings on the buoys and buoy lines must be compliant with the regulations, and all buoy markings must comply with any specific marking instructions received by staff at NMFS GARFO.
- 5.8.5.4 The Lessee must report any lines that go missing to the NMFS GARFO as soon as possible.
- 5.8.5.5 The Lessee must not deploy either the chevron traps or the BRUVs if marine mammals are sighted near the proposed sampling station. The Lessee must not deploy gear if marine mammals are observed within the area. If a marine mammal is deemed to be at risk of interaction, the Lessee must immediately remove all gear.
- 5.8.6 The Lessee must ensure that any sea turtles or Atlantic sturgeon caught and/or retrieved in any fisheries survey gear are identified to species or species group and reported to BOEM, BSEE, and NMFS GARFO. Each ESA-listed species caught and/or retrieved must then be properly documented using appropriate equipment and the NMFS data collection form.<sup>23</sup> Biological data, samples, and tagging must occur as outlined below:
- a. The Lessee must follow the Sturgeon and Sea Turtle Take Standard Operating Procedures.<sup>24</sup>
  - b. The Lessee must equip survey vessels with a passive integrated transponder (PIT) tag reader onboard capable of reading 134.2 kHz and 125 kHz encrypted tags (e.g., Biomark GPR Plus Handheld PIT Tag Reader), and this reader must be used to scan any captured sea turtles and sturgeon for tags. Any recorded tags must be recorded on the take reporting form<sup>27</sup> and reported to BOEM, BSEE, and NMFS GARFO.
  - c. The Lessee must take genetic samples from all captured Atlantic sturgeon (alive or dead) to allow for identification of the distinct population segment (DPS) of origin of captured individuals and the tracking of the amount of

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<sup>23</sup> <https://media.fisheries.noaa.gov/2021-07/Take%20Report%20Form%2007162021.pdf?null>

<sup>24</sup> [https://media.fisheries.noaa.gov/dam-migration/sturgeon\\_&\\_sea\\_turtle\\_take\\_sops\\_external.pdf](https://media.fisheries.noaa.gov/dam-migration/sturgeon_&_sea_turtle_take_sops_external.pdf)

incidental take. This sample collection must be done consistent with the Procedures for Obtaining Sturgeon Fin Clips.<sup>25</sup>

- d. The Lessee must send fin clips to a BOEM approved laboratory capable of performing genetic analysis and assignment to DPS of origin. The Lessee must submit the results of genetic analysis, including assigned DPS of origin, to BOEM, BSEE, and NMFS GARFO within 6 months of the sample collection.
- e. The Lessee must hold and submit subsamples of all fin clips and accompanying metadata form to the Atlantic Coast Sturgeon Tissue Research Repository on a quarterly basis using the Sturgeon Genetic Sample Submission Form.<sup>26</sup>

5.8.7 The Lessee must ensure all captured sea turtles and Atlantic sturgeon are documented with required measurements, photographs, body condition, and descriptions of any marks or injuries. This information must be entered as part of the record for each capture. The Lessee must fill out an NMFS Take Report Form<sup>27</sup> for each individual sturgeon and sea turtle and submitted to BOEM, BSEE, and NMFS GARFO.

5.8.8 The Lessee must ensure any live, uninjured animals are returned to the water as quickly as possible after completing the required handling and documentation. Live and responsive sea turtles or Atlantic sturgeon caught and retrieved in gear used in any fisheries survey should be released according to established protocols and whenever at-sea conditions are safe for those releasing the animal(s). Any unresponsive sea turtles or Atlantic sturgeon caught and retrieved in gear used in fisheries surveys must be handled and resuscitated whenever at-sea conditions are safe for those handling and resuscitating the animal(s). Specifically:

5.8.8.1 To the extent allowed by sea conditions, the Lessee must give priority to the handling and resuscitation of any sea turtles or sturgeon that are captured in the gear being used. Handling times for these species should be minimized (i.e., kept to 15 minutes or less) to limit the amount of stress placed on the animals.

5.8.8.2 All survey vessels must have copies of the sea turtle handling and resuscitation requirements found at 50 C.F.R.

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<sup>25</sup> [https://media.fisheries.noaa.gov/dam-migration/sturgeon\\_genetics\\_sampling\\_revised\\_june\\_2019.pdf](https://media.fisheries.noaa.gov/dam-migration/sturgeon_genetics_sampling_revised_june_2019.pdf)

<sup>26</sup> <https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-take-reporting-programmatics-greater-atlantic>

<sup>27</sup> <https://media.fisheries.noaa.gov/2021-07/Take%20Report%20Form%2007162021.pdf?null>

§ 223.206(d)(1) prior to the commencement of any on-water activity.<sup>28</sup> These handling and resuscitation procedures (the latter, when necessary) must be executed any time a sea turtle is incidentally captured and brought onboard a survey vessel.

- 5.8.8.3 For sea turtles that appear injured, sick, distressed, or dead (including stranded or entangled individuals), survey staff must immediately contact the Greater Atlantic Region Marine Animal Hotline at 866-755-6622 for further instructions and guidance on handling, retention, and/or disposal of the animal. If unable to contact the hotline (e.g., due to distance from shore or lack of ability to communicate via phone), the USCG should be contacted via very high frequency (VHF) marine radio on Channel 16. If required, hard-shelled sea turtles (i.e., non-leatherbacks) may be held on board for up to 24 hours, provided that conditions during holding are authorized by the NMFS Greater Atlantic Regional Fisheries Office, Protected Resources Division and safe handling practices are followed. If the hotline or an available veterinarian cannot be contacted and the injured animal cannot be taken to a rehabilitation center, activities that could further stress the animal must be stopped. When sea-to-shore contact with the hotline or an available veterinarian is not possible, the animal must be allowed to recover and be responsive before safely releasing it to the sea.
- 5.8.8.4 The Lessee must make attempts to resuscitate any Atlantic sturgeon that are unresponsive or comatose by providing a running source of water over the gills as described in the Sturgeon Resuscitation Guidelines.<sup>29</sup>
- 5.8.8.5 NMFS may authorize that dead sea turtles or Atlantic sturgeon be retained on board the survey vessel, provided that appropriate cold storage facilities are available on the survey vessel. Sea turtle and sturgeon carcasses should be held in cold storage (frozen is preferred, although refrigerated is permitted if a freezer is not available) until retention or disposal procedures are authorized by the NMFS Greater Atlantic Regional Fisheries Office, Protected Resources Division for transfer to an appropriately permitted partner or facility on shore.
- 5.8.9 The Lessee must provide notification via email to BOEM, BSEE, and NMFS GARFO within 24 hours of any interaction with a sea turtle or sturgeon and include the NMFS take reporting form.<sup>27</sup> The report must include at a minimum, the following: (1) survey

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<sup>28</sup> [https://media.fisheries.noaa.gov/dam-migration/sea\\_turtle\\_handling\\_and\\_resuscitation\\_measures.pdf](https://media.fisheries.noaa.gov/dam-migration/sea_turtle_handling_and_resuscitation_measures.pdf)

<sup>29</sup> <https://media.fisheries.noaa.gov/dam-migration-miss/Resuscitation-Cards-120513.pdf>

name and applicable information (e.g., vessel name, station number); (2) GPS coordinates describing the location of the interaction (in decimal degrees); (3) gear type involved (e.g., bottom trawl, gillnet, longline); (4) soak time, gear configuration and any other pertinent gear information; (5) time and date of the interaction; (6) identification of the animal to the species level (if possible); and (7) a photograph or video of the animal (multiple photographs are suggested, including at least one photograph of the head scutes). If reporting within 24 hours is not possible (e.g., due to distance from shore or lack of ability to communicate via phone, fax, or email), the Lessee must submit reports as soon as possible and must submit late reports with an explanation for the delay.

5.8.10 The Lessee must submit an annual report within 90 days of the completion of each survey season to BOEM, BSEE, and NMFS GARFO. The report must include all information on any observations of and interactions with ESA-listed species and contain information on all survey activities that took place during the season, including location of gear set, duration of soak/trawl, and total effort. The report on survey activities must be comprehensive of all activities, regardless of whether ESA-listed species were observed.

5.9 Protected Species Training and Coordination (Construction) (Operations) (Decommissioning). Before beginning any in-water activities involving vessel use, pile driving, UXO/MEC detonation, and HRG surveys, and when new personnel join the work, the Lessee must conduct briefings for construction supervisors and crews, PSO and PAM teams, vessel operators, and all staff prior to the start of all pile driving, UXO/MEC detonation, and HRG survey activity, and when new personnel join the work, in order to explain responsibilities, communication procedures, and protected species mitigation, monitoring, and reporting requirements.

5.9.1 The Lessee must submit all required documents and reports related to protected species training and coordination conditions in Sections 5.9.2. and 5.9.3 to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), BSEE via TIMSWeb with a notification email sent to [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov), and NMFS GARFO Protected Resources Division at [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov).

5.9.2 Vessel Crew and Protected Species Observer (PSO) Training Requirements. (Construction) (Operations) (Decommissioning). The Lessee must provide Project-specific training to all vessel crew members, PSOs, and Trained Lookouts on the identification of sea turtles and marine mammals, vessel strike avoidance and

reporting protocols, how and when to communicate with the vessel captain, the authority of the PSOs, and the associated regulations for avoiding vessel collisions with protected species prior to the start of in-water construction or detonation activities. The Lessee must make reference materials for identifying sea turtles and marine mammals available aboard all Project vessels. Copies of the Marine Mammal and Sea Turtle Monitoring Plans and Vessel Strike Avoidance Plan must be available aboard all Project vessels. Confirmation of the training and understanding of the requirements must be documented on a training course log sheet, and the Lessee must provide the log sheets to BOEM and BSEE upon request. The Lessee must communicate to all crew members its expectation for them to report sightings of sea turtles and marine mammals to the designated vessel contacts. The Lessee must communicate the process for reporting sea turtles and marine mammals (including live, entangled, and dead individuals) to the designated vessel contact and all crew members. The Lessee must post the reporting instructions, including communication channels, in highly visible locations aboard all Project vessels.

5.9.3 PSO Requirements (Construction) (Operations) (Decommissioning). The Lessee must use independent, dedicated, qualified PSOs provided by a third-party. PSOs must have no Project-related tasks other than to observe, collect and report data, and communicate with and instruct relevant vessel crew regarding the presence of protected species and mitigation requirements (including brief alerts regarding maritime hazards). PSOs or any PAM operators serving as PSOs must have completed a commercial PSO training program for the Atlantic with an overall examination score of 80 percent or greater.<sup>30</sup> The Lessee must provide training certificates for individual PSOs to BOEM or BSEE upon request. PSOs and PAM operators must be approved by NMFS before the start of a survey. The Lessee must submit PSO and PAM resumes for NMFS's review and approval at least 60 days prior to commencement of in-water construction activities requiring PSOs/PAM operators. Application requirements to become a NMFS-approved PSO for construction activities can be found on the NOAA website<sup>31</sup> or for geological and geophysical surveys by sending an inquiry to [nmfs.psoreview@noaa.gov](mailto:nmfs.psoreview@noaa.gov).

5.9.3.1 PSOs and PAM operators must be on watch for no more than a maximum of 4 consecutive hours, followed by a break of at least 2 hours between watches.

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<sup>30</sup> <https://repository.library.noaa.gov/view/noaa/15851>

<sup>31</sup> [www.fisheries.noaa.gov/new-england-mid-atlantic/careers-and-opportunities/protected-species-observers](http://www.fisheries.noaa.gov/new-england-mid-atlantic/careers-and-opportunities/protected-species-observers)

5.10 Vessel Strike Avoidance Conditions (Planning) (Construction) (Operations) (Decommissioning).

5.10.1 The Lessee must submit all required documents related to vessel strike avoidance conditions in Section 5.10.2 through Section 5.10.5 to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), BSEE via TIMSWeb with a notification email sent to [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov), and NMFS GARFO Protected Resources Division at [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov).

5.10.2 PSO Requirements (Construction) (Operations) (Decommissioning). The Lessee must ensure that vessel operators and crew members maintain a vigilant watch for marine mammals and sea turtles, and reduce vessel speed, alter the vessel's course, or stop the vessel as necessary to avoid striking marine mammals or sea turtles.

5.10.2.1 All vessels must have a visual observer on board who is responsible for monitoring the vessel strike avoidance zone for marine mammals and sea turtles. Visual observers may be PSO or crew members, but crew members responsible for these duties must be provided sufficient training by the Lessee to distinguish marine mammals and sea turtles from other phenomena and must be able to identify a marine mammal as a NARW, other whale (defined in this context as sperm whales or baleen whales other than NARWs), or other marine mammal, as well as identify sea turtles. Crew members serving as visual observers must not have duties other than observing for marine mammals while the vessel is operating over 10 knots.

5.10.3 Vessel Communication of Threatened and Endangered Species Sightings (Planning) (Construction) (Operations) (Decommissioning). The Lessee must ensure that whenever multiple Project vessels are operating, any detections of ESA-listed species (marine mammals and sea turtles) are communicated in near real time to these personnel on the other Project vessels: PSO, vessel captains, or both.

5.10.3.1 Year-round, all vessel operators must monitor, the project's Situational Awareness System, WhaleAlert, USCG VHF Channel 16, and the Right Whale Sighting Advisory System (RWSAS) for the presence of NARWs once every 4-hour shift during project-related activities. The PSO and PAM operator monitoring teams for all activities must also monitor these systems no less than every 12 hours. If a vessel operator is alerted to a NARW detection within the Project area, they must immediately convey this information to the PSO and PAM

teams. For any UXO/MEC detonation, these systems must be monitored for 24 hours prior to blasting.

5.10.3.2 Any observations of any large whale by any of the Lessee's staff or contractor, including vessel crew, must be communicated immediately to PSOs and all vessel captains to increase situational awareness.

5.10.4 Vessel Speed Requirements (Construction) (Operations) (Decommissioning). All vessels must comply with existing NMFS vessel speed regulations, as applicable, for NARWs and the vessel speed restrictions in the NMFS BiOp (see Table 3.3.1) and the MMPA ITA decision. Within 30 days after issuance of the MMPA ITA decision, the Lessee must submit a summary of all vessel speed requirements applicable to Project activities for review and approval by BOEM and BSEE. BOEM and BSEE will review the summary, and provide comments, if any, to the Lessee within 60 days of their submittal to BOEM and BSEE. The Lessee must resolve all comments to BOEM's and BSEE's satisfaction.

5.10.5 Vessel Strike Avoidance of Sea Turtles (Construction) (Operations) (Decommissioning).

5.10.5.1 For all vessels operating north of the Virginia/North Carolina border between June 1 and November 30, the Lessee must have a trained lookout posted on all vessel transits during all phases of the project to observe for sea turtles. The trained lookout must communicate any sightings, in real time, to the captain so that the requirements below can be implemented.

5.10.5.2 For all vessels operating south of the Virginia/North Carolina border year-round, the Lessee must have a trained lookout posted on all vessel transits during all phases of the project to observe for sea turtles. The trained lookout must communicate any sightings, in real time, to the captain so that the requirements below can be implemented. This requirement is in place year-round for any vessels transiting south of Virginia, as sea turtles are present year-round in those waters.

5.10.5.3 The trained lookout must monitor <https://seaturtlesightings.org/> prior to each trip and report any observations of sea turtles in the vicinity of the planned transit to all vessel operators/captains and lookouts on duty that day.

5.10.5.4 The trained lookout must maintain a vigilant watch and monitor a Vessel Strike Avoidance Zone (500 meters) at all times to maintain minimum separation distances from ESA-listed

species. Alternative monitoring technology (e.g., night vision, thermal cameras, etc.) must be available to ensure effective watch at night and in any other low visibility conditions. If the trained lookout is a vessel crew member, monitoring must be their designated role and primary responsibility while the vessel is transiting. Any designated crew lookouts must receive training on protected species identification, vessel strike minimization procedures, how and when to communicate with the vessel captain, and reporting requirements.

- 5.10.5.5 If a sea turtle is sighted within 100 meters or less of the operating vessel's forward path, the vessel operator must slow down to 4 knots (unless unsafe to do so) and then proceed away from the turtle at a speed of 4 knots or less until there is a separation distance of at least 100 meters at which time the vessel may resume normal operations. If a sea turtle is sighted within 50 meters of the forward path of the operating vessel, the vessel operator must shift to neutral when safe to do so and then proceed away from the turtle at a speed of 4 knots. The vessel may resume normal operations once it has passed the turtle.
- 5.10.5.6 Vessel captains/operators must avoid transiting through areas of visible jellyfish aggregations or floating sargassum lines or mats. In the event that operational safety prevents avoidance of such areas, vessels must slow to 4 knots while transiting through such areas.
- 5.10.5.7 All vessel crew members must be briefed in the identification of sea turtles and in regulations and best practices for avoiding vessel collisions. Reference materials must be available aboard all project vessels for identification of sea turtles. The requirement and process for reporting of sea turtles (including live, entangled, and dead individuals) must be clearly communicated and posted in highly visible locations aboard all project vessels, so that there is a clear requirement for reporting to the designated vessel contact (such as the lookout or the vessel captain), as well as a communication channel and process for crew members to do so.
- 5.10.5.8 The only exception to the requirements regarding vessel speed and avoiding jellyfish, sargassum, and/or sea turtles is when the safety of the vessel or crew during an emergency necessitates deviation from these requirements. If any such incidents occur, they must be reported to BSEE and NMFS GARFO within 24 hours.

5.10.5.9 If a vessel is carrying a PSO or trained lookout for the purposes of maintaining watch for NARWs, an additional lookout is not required and this PSO or trained lookout must also maintain watch for sea turtles.

5.10.5.10 Vessel transits to and from the Wind Farm Area that require PSOs must maintain a speed commensurate with weather conditions and effectively detecting sea turtles prior to reaching the 100-meter separation distance mentioned above, at which point the vessel must reduce speed and avoid sea turtles.

5.11 WTG and OSS Foundation Installation Conditions (Construction)

(Operations). Monopiles must be no larger than 11 meters in diameter, representing the larger end of the tapered 8/11 meter monopile design. If jacket foundations are used for OSSs, pin piles must be no larger than 2.44 meters in diameter. For all monopiles and pin piles, the minimum amount of hammer energy necessary to effectively and safely install and maintain the integrity of the piles must be used. Hammer energies must not exceed 4,000 kilojoules.

5.11.1 The Lessee must submit all required documents related to WTG and OSS foundation installation conditions in Section 5.11.2 through Section 5.11.5 to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), BSEE via TIMSWeb with a notification email sent to [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov), and NMFS GARFO Protected Resources Division at [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov).

5.11.2 Seasonal and Daily Restrictions (Construction) No foundation impact pile driving activities are allowed to occur January 1 through April 30. No more than two foundation monopiles are allowed to be installed per day. The Lessee must not conduct pile driving operations at any time when lighting or weather conditions (e.g., darkness, rain, fog, sea state) prevent visual monitoring of the full extent of the clearance and shutdown zones. The lead PSO must determine when sufficient light exists to allow effective visual monitoring in all cardinal directions. If light is insufficient, the lead PSO must call for a delay until the visual clearance zone is visible in all directions or must implement the Alternative Monitoring Plan/Daytime Reduced Visibility Pile Driving Monitoring Plan. Under the terms of the NMFS BiOp, the Lessee is not allowed to conduct night-time (i.e., 1.5 hours before civil sunset to 1 hour after civil sunrise) pile driving, unless the Lessee has received concurrence from BOEM, BSEE, and NMFS on the Alternative Monitoring Plan/Nighttime Pile Driving Monitoring Plan (See Section 5.5.8 for more detail regarding requirements of

the Alternative Monitoring Plan/Nighttime Pile Driving Monitoring Plan).

- 5.11.3 Noise Abatement Systems (Construction). The Lessee must employ noise abatement systems, also known as NMS, during all impact pile driving (monopiles and pin piles) consistent with the Protected Species Mitigation and Monitoring Plan (COP Volume III, Appendix AA) to reduce the sound pressure levels that are transmitted through the water in an effort to reduce ranges to acoustic thresholds and minimize any acoustic impacts resulting from pile driving. The Lessee must employ a double big bubble curtain or a combination of two or more NMS during these activities, that are capable of achieving, at a minimum, 10 decibels of sound attenuation from modeled data during all impact pile driving of foundation piles. NMS that result in greater noise dampening must be included to avoid and minimize impacts to habitats and species in artificial reef sites, to the greatest extent technically feasible. The Lessee must also adjust operational protocols to minimize noise levels.
- 5.11.3.1 The bubble curtain(s) must distribute air bubbles using an airflow rate of at least  $0.5 \text{ m}^3/(\text{min}*\text{m})$ . The bubble curtain(s) must surround 100 percent of the piling perimeter throughout the full depth of the water column. In the unforeseen event of a single compressor malfunction, the offshore personnel operating the bubble curtain(s) must make appropriate adjustments to the air supply and operating pressure such that the maximum possible sound attenuation performance of the bubble curtain(s) is achieved.
- 5.11.3.2 The lowest bubble ring must be in contact with the seabed for the full circumference of the ring, and the weights attached to the bottom ring must ensure 100 percent seabed contact.
- 5.11.3.3 No parts of the ring or other objects may prevent full seabed contact.
- 5.11.3.4 The Lessee must use qualified and experienced staff to train personnel in the proper balancing of airflow to the ring. The Lessee must ensure that construction contractors submit an inspection/performance report for approval by the Lessee within 72 hours following the performance test; that report must also be submitted to NMFS GARFO, NMFS OPR, BOEM, and BSEE at that time. Corrections to the bubble ring(s) to meet the performance standards must occur prior to impact pile driving of monopiles. If the Lessee uses a noise mitigation device in

addition to the big bubble curtain, the Lessee must maintain similar quality control measures as described here.

5.11.3.5 The Lessee must submit video and/or photographs of the bubble curtain(s) operating during all pile driving with the weekly pile driving reports specified in condition 5.14.4. The video and/or photographs must show that the bubble curtain(s) is providing 360-degree coverage around each monopile. All videos and photographs submitted must include a description identifying the pile being driven.

5.11.4 Use of PSOs and PAM Operators (Construction). The Lessee must use PSOs and PAM operators before, during, and after all foundation installation activities. At minimum, four visual PSOs must be actively observing for marine mammals and sea turtles before, during, and after pile driving. At least two visual PSOs must be stationed on the pile driving vessel and at least two visual PSOs must be stationed on a secondary, PSO-dedicated vessel. The dedicated PSO vessel must be located at the outer edge of the 2-kilometer (in the summer; 2.5-kilometer in the winter) large whale clearance zone (unless modified by NMFS based on SFV). At least one active PSO on each platform must have a minimum of 90 days at-sea experience working in those roles in offshore environments with no more than 18 months elapsed since the conclusion of the at-sea experience. These PSOs must maintain watch at all times when impact pile driving of monopiles and/or pin piles is underway. Concurrently, at least one PAM operator must actively monitor for vocalizing marine mammals before, during and after pile driving. Furthermore, all crew and personnel working on the Project are required to maintain situational awareness of marine mammal presence (discussed further above) and are required to report any sightings to the PSOs.

5.11.4.1 The Lessee must ensure that PSO coverage is sufficient to reliably detect whales and sea turtles at the surface in the identified clearance and shutdown zones (Section 5.11.5) to execute any pile driving delays or shutdown requirements. If, at any point prior to or during construction, the PSO coverage is determined not to be sufficient to reliably detect ESA-listed whales and sea turtles within the clearance and shutdown zones, additional PSOs and/or platforms must be deployed. Determinations prior to construction must be based on review of the Marine Mammal and Sea Turtle Monitoring Plan - Pile Driving and UXO Detonations (Section 5.5.6). Determinations during construction must be based on review of the weekly pile driving reports and other information, as appropriate.

5.11.4.2 The Lessee must ensure that, if the clearance and/or shutdown zones are expanded due to the verification of sound fields from Project activities, PSO coverage is sufficient to reliably monitor the expanded clearance and/or shutdown zones. Additional observers must be deployed on additional platforms for every 1,500 meters that a clearance or shutdown zone is expanded beyond the distances modeled prior to verification.

5.11.5 Clearance and Shutdown Zones (Construction). The Lessee must use visual PSOs and PAM operators to monitor the area around each foundation pile before, during and after pile driving. The clearance and shutdown zones are defined below.

Table 5.11.5-1		
Species	Clearance Zone (Meters)	Shutdown Zone (Meters)
<b>Minimum Visibility Zone: 1,650 meters May-November, 2,500 meters December</b>		
NARW – visual PSO	any distance	any distance
NARW – PAM	3,500 (3,800)	1,650 (2,500)
Blue, fin, sei, and sperm whale	2,000 (2,500)	1,800 (2,500)
Sea Turtles	500	500

5.11.5.1 Clearance or Shutdown Zone Adjustment After SFV. The Lessee must conduct SFV consistent with the SFV Plan. BOEM and BSEE, in cooperation with NMFS OPR and NMFS GARFO, may approve the Lessee’s request for reductions in the shutdown zones for sei, fin, or sperm whales based upon SFV of a minimum of 3 piles; however, the shutdown zone for sei whales, fin whales, blue whales, and sperm whales must not be reduced to less than 1,000 meters, or 500 meters for sea turtles. No reductions in the clearance or shutdown zones for NARWs will be considered regardless of the results of SFV.

5.11.5.2 Pile Driving Clearance Zones for Marine Mammals and Sea Turtles. The Lessee must establish and implement clearance and shutdown zones (all distances to the perimeter are the radii from the center of the pile being driven) as described above for all WTG and OSS foundation installation. The Lessee must use visual PSOs and PAM operators to monitor the area around each foundation pile before, during, and after pile driving. PSOs must visually monitor clearance zones for marine mammals and

sea turtles for a minimum of 60 minutes prior to commencing pile driving. Acoustic PSOs (at least one PAM operator) must review data from at least 24 hours prior to pile driving and actively monitor hydrophones for 60 minutes prior to pile driving. Prior to initiating soft-start procedures, the entire minimum visibility zone must be visible (i.e., not obscured by dark, rain, fog, etc.) and all clearance zones must be visually confirmed to be free of marine mammals and sea turtles for 30 minutes immediately prior to starting a soft-start of pile driving. Clearance zones extending beyond this minimum visibility zone may be cleared using both visual and acoustic methods. If a marine mammal or sea turtle is observed entering or within the relevant clearance zone prior to the initiation of impact pile driving activities, pile driving must be delayed and must not begin until either the marine mammal(s) or sea turtle(s) has voluntarily left the specific clearance zones and have been visually or acoustically confirmed beyond that clearance zone, or, when specific time periods have elapsed with no further sightings or acoustic detections have occurred (i.e., 15 minutes for small odontocetes and 30 minutes for all other marine mammal species and sea turtles). The clearance zone may only be declared clear if no confirmed NARW acoustic detections (in addition to visual) have occurred during the 60-minute monitoring period. Any large whale sighting by a PSO or detected by a PAM operator that cannot be identified as a non-NARW must be treated as if it were a NARW.

- 5.11.5.3 Pile Driving Shutdown for Marine Mammals and Sea Turtles. If a marine mammal or sea turtle is observed entering or within the respective shutdown zone, as defined above, and impact pile driving has begun, the PSO must call for a temporary cessation of impact pile driving. The Lessee must immediately cease pile driving upon orders of the PSO unless shutdown is not practicable due to imminent risk of injury or loss of life to an individual, pile refusal, or pile instability. In this situation, reduced hammer energy must be implemented instead, as determined to be practicable.

The Lessee must file a report with BSEE and NMFS GARFO in the event that any ESA listed species is observed within the identified shutdown zone during active pile driving. This report must be filed within 48 hours of the incident and include the following: duration of pile driving prior to the detection of the animal, location of PSOs and any factors that impaired visibility or detection ability, time of detection of the animal, time the PSO called for shutdown, time the pile driving was stopped, and any measures implemented (e.g., reduced hammer energy) prior to shutdown. The report must also

include the time that the animal was last detected and any PSO reports on the behavior of the animal. If shutdown was determined not to be feasible, the report must include an explanation for that determination and the measures that were implemented (e.g., reduced hammer energy).

5.11.5.4 Pile Driving Restart Procedures for Marine Mammal or Sea Turtle Detections. Pile driving must not restart until either the marine mammal(s) has voluntarily left the specific clearance zones and has been visually or acoustically confirmed beyond that clearance zone, or, when specific time periods have elapsed with no further sightings or acoustic detections have occurred. The specific time periods are 15 minutes for small odontocetes and 30 minutes for all other marine mammal species and sea turtles. In cases where these criteria are not met, pile driving may restart only if necessary to maintain pile stability at which time the lowest hammer energy must be used to maintain stability. If impact pile driving has been shut down due to the presence of a NARW, pile driving may not restart until the NARW is no longer observed or 30 minutes has elapsed since the last detection. Upon re-starting pile driving, soft start protocols must be followed.

5.11.5.5 Soft Start for Pile Driving. (Construction). The Lessee must use a soft start protocol for impact pile driving of monopiles by performing 4-6 strikes per minute at 10 to 20 percent of the maximum hammer energy, for a minimum of 20 minutes. Soft start must be used at the beginning of each day's monopile installation, and at any time following a cessation of impact pile driving of 30 minutes or longer. If a marine mammal or sea turtle is detected within or about to enter the applicable clearance zones, prior to the beginning of soft-start procedures, impact pile driving must be delayed until the animal has been visually observed exiting the clearance zone or until a specific time period has elapsed with no further sightings (i.e., 15 minutes for small odontocetes and 30 minutes for all other marine mammal species and sea turtles).

5.12 HRG Survey Conditions for Marine Mammals and Sea Turtles (Planning) (Construction) (Operations) (Decommissioning).

5.12.1 The Lessee must submit all required documents related to HRG survey conditions in Section 5.12.2 through Section 5.12.8 to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), to BSEE via TIMSWeb with a notification email sent to [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov), and to NMFS GARFO Protected Resources Division at [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov).

5.12.2 Use of PSOs. The Lessee must employ qualified NMFS-approved PSOs during HRG surveys related to the Project using sound sources operating at frequencies below 180 kHz. One PSO must monitor during daylight hours and two must monitor during nighttime hours, per vessel. Between four and six PSOs must be present on every 24-hour survey vessel and two to three PSOs must be present on every 12-hour survey vessel. At least one PSO must be on active duty during HRG surveys conducted during daylight and at least two PSOs must be on activity duty during HRG surveys conducted at night. Any PSO must have the authority to call for a delay or shutdown of survey activities. PSOs must begin visually monitoring 30 minutes prior to the initiation of the specified acoustic source (i.e., ramp-up, if applicable) through 30 minutes after the use of the specified acoustic source has ceased. Any observations of marine mammals must be communicated to PSOs on all nearby survey vessels during concurrent HRG surveys. PSOs must establish and monitor the clearance and shutdown zones described below. These zones must be based on the radial distance from the acoustic source and not from the vessel.

<b>Table 5.12.2-1</b>		
<b>Species</b>	<b>Clearance Zone (Meters)</b>	<b>Shutdown Zone (Meters)</b>
NARW	500	500
Blue, fin, sei, and sperm whale	100	100
Sea Turtles	100	100

5.12.3 HRG Clearance Procedures (Construction). The Lessee must implement a 30-minute clearance period of the clearance zones immediately prior to the commencing of the survey or when there is more than a 30-minute break in survey activities and PSOs are not actively monitoring. The clearance zones must be monitored by PSOs, using the appropriate visual technology. If a marine mammal or sea turtle is observed within a clearance zone during the clearance period, ramp-up must not begin until the animal(s) has been observed voluntarily exiting its respective clearance zone or until an additional time period has elapsed with no further sighting (i.e., 15 minutes for small odontocetes and seals, and 30 minutes for all other marine mammal species and sea turtles). In any case when the clearance process has begun in conditions with good visibility, including via the use of night vision equipment (IR/thermal camera), and the Lead PSO has determined that the

clearance zones are clear of marine mammals, survey operations may commence (i.e., no delay is required) despite periods of inclement weather and/or loss of daylight.

5.12.3.1 During periods of low visibility (e.g., darkness, rain, fog, etc.), PSOs must use alternative technology (i.e., IR/thermal camera) to monitor the clearance and shutdown zones.

5.12.4 HRG Shutdown Procedures (Construction). Once the survey has commenced, the Lessee must shut down boomers, sparkers, and CHIRPs if a marine mammal or sea turtle enters a respective shutdown zone. In cases when the shutdown zones become obscured for brief periods due to inclement weather, survey operations may continue (i.e., no shutdown is required) so long as no marine mammals or sea turtles have been detected. The use of boomers, sparkers, and CHIRPS must not commence or resume until the animal(s) has been confirmed to have left the Level B harassment zone or until a full 15 minutes (for small odontocetes and seals) or 30 minutes (for all other marine mammals and sea turtles) have elapsed with no further sighting. Any large whale sighted by a PSO within 1,000 meters of the boomers, sparkers, and CHIRPs that cannot be identified as a non-NARW must be treated as if it were a NARW.

Shutdown zones are defined as: a 500-meter zone for the NARW or a 100-meter zone for all other marine mammal species (with exception of specific delphinid species). The shutdown requirement is waived for small delphinids of the following genera: *Delphinus*, *Stenella*, *Lagenorhynchus*, and *Tursiops*. Specifically, if a delphinid from the specified genera is visually detected approaching the vessel (i.e., to bow-ride) or towed equipment, shutdown will not be required. Furthermore, if there is uncertainty regarding identification of a marine mammal species (i.e., whether the observed marine mammal(s) belongs to one of the delphinid genera for which shutdown is waived), the PSOs must use their best professional judgment in making the decision to call for a shutdown. Additionally, shutdown is required if a delphinid that belongs to a genus other than those specified is detected in the shutdown zone. If surveys are necessary during periods of low visibility (e.g., darkness, rain, fog, etc.), an Alternative Monitoring Plan must be submitted to BOEM and BSEE detailing the monitoring methodology that will be used during nighttime and low-visibility survey operations. The plan must be submitted at least 60 days before low visibility survey operations are planned to begin.

5.12.5 HRG Restart Procedures (Construction). If a boomer, sparker, or CHIRP is shut down for reasons other than mitigation (e.g., mechanical difficulty) for less than 30 minutes, it may be activated again without ramp-up only if: (1) PSOs have maintained constant observation and (2) no additional detections

of any marine mammal or sea turtles occurred within the respective shutdown zones. If a boomer, sparker, or CHIRP was shut down for a period longer than 30 minutes, then all clearance and ramp-up procedures must be initiated.

5.12.6 Ramp-Up Procedures (Construction). At the start or restart of the use of boomers, sparkers, and/or CHIRPs, a ramp-up procedure (i.e., gradual increase in source level output) must be followed unless the equipment operates on a binary on/off switch.

Operators must ramp up sources to half power for 5 minutes and then proceed to full power. Prior to a ramp-up procedure starting, the operator must notify a PSO of the planned start of the ramp-up. This notification time must not be less than 60 minutes prior to the planned ramp-up activities as all relevant PSOs must use the appropriate 30-minute period to monitor prior to the initiation of ramp-up. Prior to ramp-up beginning, visual clearance zones must be fully visible (e.g., not obscured by darkness, rain, fog, etc.) and the operator must receive confirmation from the PSO that the clearance zone is clear of any marine mammals and sea turtles. All ramp-ups must be scheduled to minimize the overall time spent with the source being activated. The ramp-up procedure must be used at the beginning of construction survey activities or after more than a 30-minute break in survey activities using the specified HRG equipment to provide additional protection to marine mammals and sea turtles in or near the survey area by allowing them to vacate the area prior to operation of survey equipment at full power.

5.12.6.1 The Lessee must not initiate ramp-up until the clearance process has been completed (see Clearance and Shutdown Zones sections above). Ramp-up activities must be delayed if a marine mammal(s) enters its respective shutdown zone. Ramp-up must only be reinitiated if the animal(s) has been observed exiting its respective shutdown zone or until additional time has elapsed with no further sighting (i.e., 15 minutes for small odontocetes and seals, and 30 minutes for all other marine mammal species and sea turtles).

5.12.7 The Lessee must deactivate acoustic sources during periods where no data are being collected, except as determined to be necessary for testing. Any unnecessary use of the acoustic source(s) must be avoided.

5.12.8 During daylight hours when survey equipment is not operating, the Lessee must ensure that visual PSOs conduct, as rotation schedules allow, observations for comparison of sighting rates and behavior with and without use of the specified acoustic sources.

Off-effort PSO monitoring must be reflected in the monthly PSO monitoring reports.

5.13 UXO Detonation Activity Conditions (Construction). The Lessee may detonate a maximum of 10 UXO/MECs of varying sizes. Upon encountering a UXO/MEC of concern, the Lessee may only resort to high-order removal (i.e., detonation) after all other means by which to remove the UXO/MEC have been exhausted. The Lessee must not detonate a UXO/MEC if another means of removal is practicable.

5.13.1 The Lessee must submit all required documents related to UXO/MEC activity conditions in Section 5.13.2 through Section 5.13.7 to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), BSEE via TIMSWeb with a notification email sent to [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov), and NMFS GARFO Protected Resources Division at [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov).

5.13.2 Seasonal and Daily Restrictions (Construction). UXO detonation is prohibited from January 1 to April 30 in all locations and November 1 to April 30 in the offshore areas greater than 3 nautical miles from the U.S. baseline to reduce impacts to NARW during peak migratory periods and to avoid impacts during the timeframe of potentially increased Atlantic sturgeon presence in the offshore wind area. UXO/MEC detonation must be limited to daylight hours only.

5.13.3 Noise Abatement Systems (Construction). The Lessee must use a dual noise abatement system during all UXO/MEC detonation events and operate that system in a manner that achieves maximum noise attenuation levels practicable, but at least 10 decibel attenuation.

5.13.4 Use of PAM and PSO Operators (Construction). The Lessee must monitor the clearance and shutdown zones identified below using at least six visual PSOs and one PAM operator on at least two dedicated PSO vessels or, if the largest clearance zone is greater than 5 kilometers, one dedicated PSO vessel and one aerial platform (i.e., airplane). The Lessee must perform an aerial survey of the entire clearance zone prior to detonation and immediately after detonation to monitor for marine mammals. Two PSOs must also be on the airplane during aerial surveys and must monitor for marine mammals before, during, and after UXO/MEC detonation events. All PSOs must begin monitoring 60 minutes prior to UXO detonation, during, and for 30 minutes after an activity. PAM must be conducted for at least 60 minutes prior to detonation, during, and for 30 minutes after detonation and the zone must be acoustically clear of marine mammals during this entire duration.

The PAM operator must monitor in and past the clearance zone for large whales. The Lessee may not detonate UXO/MEC(s) unless the clearance and shutdown zones are fully visible for at least 60 minutes prior to planned detonation and all marine mammal(s) are confirmed to be outside of the clearance zone for at least 30 minutes prior to detonation.

5.13.4.1 For detonation areas larger than 2 kilometers, the Lessee must use a secondary vessel to monitor. For any additional vessels determined to be necessary, two PSOs must be used and located at the appropriate vantage point on the vessel. These additional PSOs must maintain watch during the same time period as the PSOs on the primary monitoring vessel. Prior to, during, and after any detonation occurring, the Lessee must ensure that these clearance zones are fully (100 percent) monitored.

5.13.5 Clearance Zones (Construction). Prior to any detonation activities, the Lessee must clear the zones identified below using both visual and acoustic monitoring methods.

<b>Species</b>	<b>Clearance Zone (Meters)</b>
NARW, blue, fin, and sei whale	10,000
Sperm whale	2,000
Sea Turtles	500

For marine mammals, these zone sizes may be further adjusted based on the SFV, and confirmation of UXO/donor charge sizes. If a marine mammal is observed entering or within the clearance zone prior to denotation, the UXO/MEC activity must be delayed. The Lessee may continue with detonation only when the marine mammals have been confirmed to have voluntarily left the clearance zones and they have been visually confirmed to be beyond the clearance zone, or when 60 minutes have elapsed without any redetections for whales (including the NARW) or 15 minutes have elapsed without any redetections of delphinids, harbor porpoises, or seals

For sea turtles, the Lessee must establish a clearance zone extending 500 meters around any planned UXO/MEC detonation. The Lessee must maintain the clearance zone for at least 60 minutes prior to any UXO detonation. The Lessee must ensure that there is sufficient PSO coverage to reliably document sea turtle presence within the clearance zone. In the event that a PSO detects a sea turtle outside the 500 meters clearance zone, the Lessee must delay detonation until the sea turtle has not been observed for 30 minutes.

- 5.13.6 Clearance or Shutdown Zone Adjustment After SFV. During each UXO/MEC detonation, the Lessee must empirically determine source levels (peak and cumulative sound exposure level), the ranges to the isopleths corresponding to the injury and behavioral harassment/disturbance thresholds for marine mammals, sea turtles, and fish, and estimated transmission loss coefficient(s).
- 5.13.6.1 If SFV measurements on any of the detonations indicate that the ranges to the isopleths corresponding to the injury and behavioral harassment/disturbance thresholds for protected species are larger than those modeled, assuming 10-decibel attenuation, the Lessee must expand the clearance zones based on the SFV results, with approval from BOEM and BSEE of the new zone sizes, and/or apply additional noise attenuation measures (e.g., improve efficiency of bubble curtain(s), install an additional noise attenuation device) before the next detonation event.
- 5.13.7 Notification (Construction). The Lessee must provide BSEE and NMFS GARFO with notification of planned UXO/MEC detonation as soon as possible, but at least 48 hours prior to the planned detonation, unless this 48-hour notification creates delays to the detonation that result in imminent risk of human life or safety. This notification must include the coordinates of the planned detonation, the estimated charge size, and any other information available on the characteristics of the UXO/MEC. NMFS GARFO will provide alerts to NMFS sea turtle and marine mammal stranding network partners consistent with best practices. The Lessee must provide notification to NMFS GARFO via email to [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov), by phone to the NMFS GARFO Protected Resources Division (978-281-9328), and BSEE at [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov) and TIMSWeb. See Section 5.14.3.4 for requirements associated with reporting of UXO Detonations.

5.14 Reporting (Planning) (Construction) (Operations) (Decommissioning).

- 5.14.1 The Lessee must submit all required documents related to ESA and non-ESA listed marine species reporting conditions in Section 5.14.2 through Section 15.14.6 to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), to BSEE via TIMSWeb with a notification email sent to [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov), and to NMFS GARFO Protected Resources Division at [nmfs.gar.incidental-take@noaa.gov](mailto:nmfs.gar.incidental-take@noaa.gov).

5.14.2 Pre-Construction Reporting (Construction). Within 10 business days of BSEE issuing a no objection to the complete FDR/ FIR<sup>32</sup> (but at least 30 days prior to the initiation of pile driving) or the soonest time the relevant information is available, the Lessee must provide BOEM, BSEE, and NMFS GARFO with the following information: number and size of foundations to be installed to support WTG and OSSs, installation method for each of the seven planned cofferdams (i.e., gravity cell or sheet pile), the proposed construction schedule (i.e., months when pile driving is planned), and information that has become available on the ports identified for foundation fabrication and load out, WTG pre-assembly and load out, and cable staging. BOEM will review the information and, based on coordination with NMFS GARFO, notify the Lessee within 30 days of NMFS GARFO's receipt of the information identified here, of the need for ESA Section 7 consultation with NMFS to be reinitiated.

5.14.3 Situational Reporting (Construction).

5.14.3.1 Reporting of All NARW Sightings (Planning) (Construction) (Operations) (Decommissioning). If a NARW is observed at any time by PSOs or personnel on any project vessels, during any project-related activity, including during vessel transit, the Lessee must immediately report sighting information to BOEM, BSEE, NMFS (866-755-6622), the USCG via channel 16 and through the WhaleAlert app (<http://www.whalealert.org/>). The Lessee must include in its report the time, location, and number of animals sighted, animal behavior, animal closest point of approach, project activities at time of detection, vessel speed, and any mitigation measures implemented.

5.14.3.2 Reporting of ESA Listed Species within Shutdown Zone During Active Pile Driving. In the event that any ESA listed species is observed within the identified shutdown zone during active pile driving, the Lessee must file a report with BOEM, BSEE, and NMFS GARFO within 48 hours of the incident and include the following: duration of pile driving prior to the detection of the animal, location of PSOs and any factors that impaired visibility or detection ability, time of detection of the animal, time the PSO called for shutdown, time the pile driving was stopped, and any measures implemented (e.g., reduced hammer energy) prior to shutdown. The Lessee must include in its report the time that the animal was last detected and any PSO reports on the behavior of the animal. If shutdown was determined not to be feasible, the Lessee report must include an

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<sup>32</sup> Complete being defined as the submission of all final FIR or FDR asset packages.

explanation for that determination and the measures that were implemented (e.g., reduced hammer energy).

- 5.14.3.3 Detected or Impacted Protected Species Reporting (Planning) (Construction) (Operations) (Decommissioning). The Lessee must report within 48 hours all observations or collections of injured or dead whales, sea turtles, or sturgeon to BSEE and NMFS GARFO. The Lessee must ensure its reports reference the Project and include the Take Report Form.<sup>27</sup> The Lessee must ensure reports of Atlantic sturgeon take include a statement as to whether a fin clip sample for genetic sampling was taken. Fin clip samples are required in all cases with the only exception being when additional handling of the sturgeon may result in an imminent risk of injury to the fish or the PSO. Incidents falling within the exception are expected to be limited to capture and handling of sturgeon in extreme weather. Instructions for fin clips and associated metadata are available on the NMFS website under the “Sturgeon Genetics Sampling” heading.<sup>26</sup>

The Lessee must report any suspected or confirmed vessel strike of a sea turtle or sturgeon by any project vessel in any location, including observation of any injured sea turtle/sturgeon or sea turtle/sturgeon parts to BOEM, BSEE, NMFS GARFO, and NMFS New England/Mid-Atlantic Regional Stranding Hotline (866-755-6622) as soon as feasible. The Lessee must include in the report the following information: (A) Time, date, and location (latitude/longitude) of the incident; (B) Species identification (if known) or description of the animal(s) involved; (C) Vessel’s speed during and leading up to the incident; (D) Vessel’s course/heading and what operations were being conducted (if applicable); (E) Status of all sound sources in use; (F) Description of avoidance measures/requirements that were in place at the time of the strike and what additional measures were taken, if any, to avoid strike; (G) Environmental conditions (e.g., wind speed and direction, Beaufort scale, cloud cover, visibility) immediately preceding the strike; (H) Estimated size and length of animal that was struck; (I) Description of the behavior of the animal immediately preceding and following the strike; (J) Estimated fate of the animal (e.g., dead, injured but alive, injured and moving, blood or tissue observed in the water, status unknown, disappeared); and (K) To the extent practicable, photographs or video footage of the animal(s).

In the event that an injured or dead marine mammal or sea turtle is sighted, the Lessee must report the incident to BOEM, BSEE, NMFS GARFO, NMFS New England/Mid-Atlantic Regional Stranding Hotline (866-755-6622), as soon as feasible, but no later than 24 hours from the sighting. The Lessee must include in the report the following

information: (A) Time, date, and location (latitude/longitude) of the first discovery (and updated location information if known and applicable); (B) Species identification (if known) or description of the animal(s) involved; (C) Condition of the animal(s) (including carcass condition if the animal is dead); (D) Observed behaviors of the animal(s), if alive; (E) If available, photographs or video footage of the animal(s); and (F) General circumstances under which the animal was discovered. The Lessee must follow any instructions provided by staff responding to the hotline call for handling or disposing of any injured or dead animals, which may include coordination of transport to shore, particularly for injured sea turtles.

5.14.3.4 UXO Detonation Reports (Construction). The Lessee must compile and submit reports following any UXO/MEC detonation that provide details on the UXO/MEC that was detonated (e.g., charge size), location of the detonation, the start and stop of associated observation periods by the PSOs, details on the deployment of PSOs, and a record of all observations of marine mammals and sea turtles. These reports must include any observations of dead or injured fish or other marine life in the post detonation monitoring period. The Lessee must ensure that the PSO providers submit these reports directly to NMFS GARFO, BSEE, and BOEM within one week of the detonation. The reports may consist of raw data, or the raw data must be made available upon request. The Lessee must also ensure that the PSO providers submit all reports of dead or injured ESA listed species directly to NMFS GARFO, BSEE, and BOEM immediately, but no later than 24 hours following the observation.

5.14.3.5 Detected or Impacted Dead Non-ESA-Listed Fish (Planning) (Construction) (Operations) (Decommissioning). The Lessee must report any occurrence of at least 10 dead non-ESA-listed fish within established shutdown or monitoring zones to BOEM and BSEE as soon as practicable (taking into account crew and vessel safety), but no later than 24 hours after the sighting. BOEM or BSEE will notify NMFS GARFO. The Lessee must confirm the relevant point of contact prior to reporting and confirm the reporting was received.

5.14.4 Weekly Pile Driving Reports (Construction). The Lessee must compile and submit weekly reports during pile driving that document the start and stop of all pile driving daily, the start and stop of associated observation periods by the PSOs, details on the deployment of PSOs, and a record of all observations of marine mammals and sea turtles. These weekly reports must be submitted to NMFS GARFO, BOEM, and BSEE directly from the PSO

providers and may consist of raw data. Weekly reports must be submitted no later than Wednesday for the previous week (Sunday – Saturday).

5.14.4.1 Weekly monitoring reports must include: Summaries of pile driving activities and piles installed, including, start and stop times, pile locations, videos and/or photographs of bubble curtain(s) operating during pile driving (as described in 5.11.3.5), and PSO coverage; vessel operations (including port departures, number of vessels, type of vessel(s), and route); all protected species detections (including species identification, number of animals, time at initial detection, time at final detection, distance to pile at initial detection, closest point of approach to pile, animal direction of travel relative to pile; description of animal behavior, features used to identify species, and for moving vessels: speed (knots), distance and bearing to animal at initial detection, closest point of approach and bearing to animal, distance and bearing to animal at final detection, and animal direction of travel relative to vessel); vessel strike avoidance measures taken; and any equipment shutdowns or takes that may have occurred.

5.14.4.2 The Lessee must reduce any unanticipated impacts on marine mammals and sea turtles by adjusting pile driving monitoring protocols for clearance and shutdown zones, taking into account weekly monitoring results. The Lessee must obtain BOEM’s and BSEE’s concurrence for any proposed changes to the monitoring protocols before implementing those protocols.

5.14.5 Monthly Reports (Planning) (Construction) (Decommissioning). The Lessee must compile and submit monthly reports that include a summary of all project activities carried out in the previous month, including trawl surveys, vessel transits (number, type of vessel, and route inclusive of port of origin and destination), and piles installed, and all observations of ESA-listed whales, sea turtles, and sturgeon. These reports must be submitted to BOEM, BSEE, and NMFS GARFO no later than the 15th of the month for the previous month.

5.14.5.1 Reporting Instructions for PSO Pile Driving Monitoring Reports. PSOs must collect data consistent with standard reporting forms, software tools, or electronic data forms authorized by BOEM for the particular activity. PSOs must fill out report forms for each vessel with PSOs aboard. Unfilled cells must be left empty and must not contain “NA.” The reports must be submitted in Word and Excel formats (not as a pdf). Enter all dates as YYYY-MM-DD. Enter all times in 24

Hour Coordinated Universal Time (UTC) as HH:MM. Create a new entry on the Effort form each time a pile segment changes or weather conditions change, and at least once an hour as a minimum. Review and revise all forms for completeness and resolve incomplete data fields before submittal. The file name must follow this format: Lease#\_ProjectName\_PSOData\_YearMonthDayto YearMonthDay.xls. Data fields must be reported in Excel format. Data categories must include Project, Operations, Monitoring Effort, and Detection, as further specified below. All PSO data must be generated through software applications or otherwise recorded electronically by PSOs and provided to BOEM and BSEE in electronic format (csv files or similar format) and be QA/QC'd. Applications developed to record PSO data are encouraged, as long as the data fields listed below can be recorded and exported into Excel. Alternatively, BOEM has developed an Excel spreadsheet, with all the necessary data fields, that is available upon request.

Required data fields include:

Project Information:

- Project name
- Lease number
- State coastal zones
- PSO contractors
- Vessel names
- Reporting dates (YYYY-MM-DD)
- Visual monitoring equipment used (e.g., bionics, magnification, IR cameras, etc.)
- Distance finding method used
- PSO names (Last, First) and training
- Observation height above sea surface

Operations Information:

- Date (YYYY-MM-DD)
- Hammer type used (make and model)
- Greatest hammer power used for each pile
- Pile identifier and pile number for the day (e.g., pile 2 of 3 for the day)
- Pile diameters
- Pile length

- Total number of strikes used to install each pile
- Total hammer energy used to install each pile
- Pile locations (latitude and longitude)
- Number of vessel transits
- Types of vessels used
- Vessel routes used

Monitoring Effort Information:

- Date (YYYY-MM-DD)
- Noise source (ON=Hammer On; OFF=Hammer Off)
- PSO name(s) (Last, First)
- If visual, how many PSOs on watch at one time?
- Time pre-clearance visual monitoring began in UTC (HH:MM)
- Time pre-clearance monitoring ended in UTC (HH:MM)
- Time pre-clearance PAM monitoring began in UTC (HH:MM)
- Time PAM monitoring ended in UTC (HH:MM)
- Duration of pre-clearance PAM and visual monitoring
- Time power-up/ramp-up began
- Time equipment full power was reached
- Duration of power-up/ramp-up
- Time pile driving began (hammer on)
- Time pile driving activity ended (hammer off)
- Duration of activity
- Duration of visual detection
- Wind speed (knots), from direction
- Swell height (meters)
- Water depth (meters)
- Visibility (kilometers)
- Glare severity
- Latitude (decimal degrees), longitude (decimal degrees)
- Compass heading of vessel (degrees)
- Beaufort scale
- Precipitation
- Cloud coverage (%)
- Did a shutdown/power-down occur?
- Time shutdown was called for (UTC)
- Time equipment was shut down (UTC)

- Habitat or prey observations
- Marine debris sighted

Detection Information:

- Date (YYYY-MM-DD)
- Sighting ID (V01, V02, or sequential sighting number for that day; multiple sightings of the same animal or group should use the same ID)
- Date and time at first detection in UTC (YY-MM-DD HH:MM)
- Time at last detection in UTC (YY-MM-DD HH:MM)
- PSO name(s) (Last, First)
- Effort (ON=Hammer On; OFF=Hammer Off)
- If visual, how many PSOs on watch at one time?
- Start time of observations
- End time of observations
- Duration of visual observation
- Wind speed (knots), from direction
- Swell height (meters)
- Water depth (meters)
- Visibility (kilometers)
- Glare severity
- Latitude (decimal degrees), longitude (decimal degrees)
- Compass heading of vessel (degrees)
- Beaufort scale
- Precipitation
- Cloud coverage (%)
- Sightings including common name, scientific name, or family
- Certainty of identification
- Number of adults
- Number of juveniles
- Total number of animals
- Bearing to animals when first detected (ship heading+ clock face)
- Bearing to animals at closest approach (ship heading+ clock face)
- Bearing to animal at final detection (ship heading+ clock face)
- Range from vessel and pile (reticle distance in meters)

- Description (include features such as overall size; shape of head; color and pattern; size, shape, and position of dorsal fin; height, direction, and shape of blow, etc.)
- Detection narrative (note behavior, especially changes in relation to activity and distance from service vessel)
- Direction of animal travel in first approach (relative to vessel and pile)
- Behaviors observed: indicate behaviors and behavioral changes observed in sequential order (use behavioral codes)
- If any bow-riding behavior observed, record total duration during detection (UTC HH:MM)
- Initial heading of animals (degrees)
- Final heading of animals (degrees)
- Shutdown zone size during detection (meters)
- Was the animal inside the shutdown zone?
- Closest distance to vessel and pile (reticle distance in meters)
- Time at closest approach to vessel and pile (UTC HH:MM)
- Time animal entered shutdown zone (UTC HH:MM)
- Time animal left shutdown zone (UTC HH:MM)
- If observed/detected during ramp-up/power-up: first distance (reticle distance in meters), closest distance (reticle distance in meters), last distance (reticle distance in meters), behavior at final detection
- Did a shutdown/power-down occur?
- Time shutdown was called for (UTC HH:MM)
- Time equipment was shut down (UTC HH:MM)
- Detections with PAM

5.14.6 Annual Reports (Operations). Beginning in Year 2 of operations, the Lessee must compile and submit annual reports that include a summary of all Project activities carried out in the previous year, including vessel transits (number, type of vessel, and route inclusive of port origin and destination), repair and maintenance activities, survey activity, and all observations of ESA-listed species. The annual reports must be submitted to BOEM, BSEE, and NMFS GARFO. The Lessee must submit these reports by April 1 of each year (i.e., the 2026 report is due by April 1, 2027) for the previous calendar year. Upon mutual agreement of NMFS GARFO, BOEM, and BSEE, the frequency of reports can be changed.



Project to shoreside support services such as seafood processing and vessel repair services within communities near the ports in the table below.

<b>Table 6.1.2-1</b>	
<b>Port and State</b>	
Atlantic City, New Jersey	Cape May, New Jersey
New Bedford, Massachusetts	Newport News, Virginia
Sea Isle City, New Jersey	Barnegat, New Jersey
Wildwood, New Jersey	Hampton, Virginia
Ocean City, Maryland	Long Beach, New Jersey
Beaufort, North Carolina	Point Judith, Rhode Island
North Kingstown, Rhode Island	Point Pleasant, New Jersey
Wanchese, North Carolina	New London, Connecticut
Davisville, Rhode Island	Chincoteague, Virginia
Oriental, North Carolina	Montauk, New York
Shinnecock, New York	

6.1.3 Compensation Calculations. Once the values at 6.1.1 and 6.1.2 are determined, the Lessee must use Table 6.1.4-1 and Table 6.1.4-2 to calculate the total reserve fund requirements. The amounts of the reserve fund requirements should be normalized as described in Section 6.1.1.2 to current real prices from a base year. The Lessee may use the prior year’s Gross Domestic Product (GDP) Implicit Price Deflator to estimate Compensation and Mitigation Fund requirements after COP approval if the current year is unavailable.

As described in 6.1.1.1, the Lessee must ensure the reserve amount allows for 100 percent of annual revenue exposure during the projected construction years and, pending BSEE approval of decommissioning plan, decommissioning years. The Lessee must use the GDP Implicit Price Deflator to adjust the annual average commercial fisheries landings values and for-hire fishing revenue stated in Table 3.9-11 and Table 3.9-16, respectively, of the Ocean Wind 1 FEIS.

**Table 6.1.4-1. Calculation Subcomponents for Construction and Decommissioning**

Project Status	Base Annual Average Fishing Revenue Exposed to the Wind Farm Area <sup>1</sup>	Shoreside Support Services Multiplier <sup>2</sup>	Exposure Ratio	Adjusted Base Annual Average Fishing Revenue Exposed to the Wind Farm Area	Reserve Requirements
Construction	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + (\$20,929.00 \times \frac{n_i}{118.895})$	M	1	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + (\$20,929.00 \times \frac{n_i}{118.895})$	$\left[ \left( \$348,386.00 \times \frac{n_i}{113.784} \right) + (\$20,929.00 \times \frac{n_i}{118.895}) \right] (1 + M)$
Decommissioning <sup>3</sup>	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + (\$20,929.00 \times \frac{n_i}{118.895})$	M	1	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + (\$20,929.00 \times \frac{n_i}{118.895})$	$\left[ \left( \$348,386.00 \times \frac{n_i}{113.784} \right) + (\$20,929.00 \times \frac{n_i}{118.895}) \right] (1 + M)$

Notes: <sup>1</sup> Inflation-adjusted revenues from FEIS Tables 3.9-11 and 3.9-16. The inflation-adjusted base equation is:

$$\left( \text{Average Annual Commercial Fishing Revenue} \times \frac{n_i}{113.784} \right) + \left( \text{Average Annual For} \right. \\ \left. - \text{Hire Fishing Revenue} \times \frac{n_i}{118.895} \right)$$

<sup>2</sup> The Lessee’s calculations of the Impacts to Shoreside Businesses Multiplier may use BOEM’s draft *Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585* or future versions, but BOEM must, in all events, review the calculations.

<sup>3</sup> Decommissioning funds may be required pending BSEE’s approval of Lessee’s decommissioning application.

If Construction is expected to last *k* years and Decommissioning *j* years, the Lessee must calculate the reserve requirements as follows:

$$k \left( \left[ \left( \$348,386.00 \times \frac{n_i}{113.784} \right) + (\$20,929.00 \times \frac{n_i}{118.895}) \right] (1 + M) \right) + \\ j \left( \left[ \left( \$348,386.00 \times \frac{n_i}{113.784} \right) + (\$20,929.00 \times \frac{n_i}{118.895}) \right] (1 + M) \right).$$

Project Status	Base Annual Average Fishing Revenue Exposed to the Wind Farm Area <sup>1</sup>	Shoreside Support Services Multiplier <sup>2</sup>	Exposure Ratio	Adjusted Base Annual Average Fishing Revenue Exposed to the Wind Farm Area	Reserve Requirements
Operating Year 1	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + \left( \$20,929.00 \times \frac{n_i}{118.895} \right)$	M	1	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + \left( \$20,929.00 \times \frac{n_i}{118.895} \right)$	$\left[ \left( \$348,386.00 \times \frac{n_i}{113.784} \right) + \left( \$20,929.00 \times \frac{n_i}{118.895} \right) \right] (1 + M)$
Operating Year 2	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + \left( \$20,929.00 \times \frac{n_i}{118.895} \right)$	M	0.8	$\left( \$278,708.00 \times \frac{n_i}{113.784} \right) + \left( \$16,743.20 \times \frac{n_i}{118.895} \right)$	$\left[ \left( \$278,708.00 \times \frac{n_i}{113.784} \right) + \left( \$16,743.20 \times \frac{n_i}{118.895} \right) \right] (1 + M)$
Operating Year 3	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + \left( \$20,929.00 \times \frac{n_i}{118.895} \right)$	M	0.7	$\left( \$243,870.20 \times \frac{n_i}{113.784} \right) + \left( \$14,650.30 \times \frac{n_i}{118.895} \right)$	$\left[ \left( \$243,870.20 \times \frac{n_i}{113.784} \right) + \left( \$14,650.30 \times \frac{n_i}{118.895} \right) \right] (1 + M)$
Operating Year 4	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + \left( \$20,929.00 \times \frac{n_i}{118.895} \right)$	M	0.6	$\left( \$209,031.60 \times \frac{n_i}{113.784} \right) + \left( \$12,557.40 \times \frac{n_i}{118.895} \right)$	$\left[ \left( \$209,031.60 \times \frac{n_i}{113.784} \right) + \left( \$12,557.40 \times \frac{n_i}{118.895} \right) \right] (1 + M)$
Operating Year 5	$\left( \$348,386.00 \times \frac{n_i}{113.784} \right) + \left( \$20,929.00 \times \frac{n_i}{118.895} \right)$	M	0.5	$\left( \$174,193.00 \times \frac{n_i}{113.784} \right) + \left( \$10,464.50 \times \frac{n_i}{118.895} \right)$	$\left[ \left( \$174,193.00 \times \frac{n_i}{113.784} \right) + \left( \$10,464.50 \times \frac{n_i}{118.895} \right) \right] (1 + M)$
Operating Total <sup>3</sup>				$\left( \$1,254,189.60 \times \frac{n_i}{113.784} \right) + \left( \$75,344.40 \times \frac{n_i}{118.895} \right)$	$\left[ \left( \$1,254,189.60 \times \frac{n_i}{113.784} \right) + \left( \$75,344.40 \times \frac{n_i}{118.895} \right) \right] (1 + M)$

Notes: <sup>1</sup> Inflation-adjusted revenues from FEIS Tables 3.9-11 and 3.9-16. The inflation-adjusted base equation is:

$$\left( \text{Average Annual Commercial Fishing Revenue} \times \frac{n_i}{113.784} \right) + \left( \text{Average Annual For Hire Fishing Revenue} \times \frac{n_i}{118.895} \right)$$

<sup>2</sup> The Lessee's calculations of the Impacts to Shoreside Businesses Multiplier may use BOEM's draft *Guidelines for Mitigating Impacts to Commercial and Recreational Fisheries on the Outer Continental Shelf Pursuant to 30 CFR Part 585* or future versions, but BOEM must, in all events, review the calculations.

<sup>3</sup> Rolling forward unclaimed funds from prior years may lower this total value.

Before rolling forward any unclaimed funds e, the total fund reserve requirements for Construction, Decommissioning, and Operating Years 1-5 (as shown in Table 6.1.4-2 above), become:

$$k \left( \left[ \left( \$348,386.00 \times \frac{n_i}{113.784} \right) + \left( \$20,929.00 \times \frac{n_i}{118.895} \right) \right] (1 + M) \right) +$$

$$j \left( \left[ \left( \$348,386.00 \times \frac{n_i}{113.784} \right) + \left( \$20,929.00 \times \frac{n_i}{118.895} \right) \right] (1 + M) \right) +$$

$$\left[ \left( \$1,254,189.60 \times \frac{n_i}{113.784} \right) + \left( \$75,344.40 \times \frac{n_i}{118.895} \right) \right] (1 + M).$$

- 6.1.4 Reporting. The Lessee must submit to BOEM and BSEE an annual report demonstrating implementation of the Direct Compensation Program. The report must include the Fund charter, including the governance structure, audit and public reporting procedures; documentation regarding the funding account, including the dollar amount, establishment date, financial institution, and owner of the account; and standards for paying compensatory mitigation for impacts to fishers and related shoreside businesses resulting from all phases of the project development on the Lease Area (pre-construction, construction, operation, and decommissioning).
- 6.1.5 Notification. The Lessee must establish the compensation/mitigation funds in accordance with the consistency certification concurrence issued for the Project under the CZMA. Specifically, the Lessee must enter into a Memorandum of Understanding with the State of New Jersey to provide appropriate compensation measures for fisheries resources and fishing industry uses impacted by the authorized project. The Lessee must request that the administrator of the direct compensation program notify BOEM that the direct compensation program has been established and is processing claims. Notification can be accomplished by the Administrator transmitting to BOEM an annual financial statement of the direct compensation program. The Administrator must submit the required notification by January 31 of each year, beginning on the second anniversary of the Project's Commercial Operations Date as defined by Addendum "B" of the Lease. The notification must be signed by the Administrator.
- 6.2 Fisheries Gear Loss Compensation (Planning) (Construction) (Operations). The Lessee must maintain throughout the life of the Project, a fisheries gear loss claims procedure to implement the financial compensation policy proposed by the Lessee in Volume III, Appendix AE of the COP, Fisheries Mitigation Efforts. The fisheries gear loss and damage claims procedure must

be available to all fishermen impacted by Project activities or infrastructure, regardless of homeport.

6.3 Federal Survey Mitigation Program (Planning) (Construction) (Operations) (Decommissioning). There are 14 NMFS scientific surveys that overlap with wind energy development in the northeast region. Eight of these surveys overlap with the Project. Consistent with NMFS and BOEM survey mitigation strategy actions 1.3.1, 1.3.2, 2.1.1, and 2.1.2 in the *NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region*,<sup>34</sup> within 120 days of COP approval, the Lessee must submit to BOEM a survey mitigation agreement between NMFS and the Lessee. The survey mitigation agreement must describe how the Lessee will mitigate the Project impacts on the eight NMFS surveys. The Lessee must conduct activities in accordance with such agreement. If the Lessee and NMFS fail to reach a survey mitigation agreement, then the Lessee must submit a survey mitigation plan to BOEM and NMFS that is consistent with the mitigation activities, actions, and procedures described in Sections 6.3.1 and 6.3.2 below, within 180 days of COP approval. BOEM will review the survey mitigation plan in consultation with NMFS Northeast Fisheries Science Center (NEFSC), and the Lessee must resolve comments to BOEM's satisfaction and must conduct activities in accordance with the plan.

6.3.1 As soon as reasonably practicable, but no later than 30 days after the issuance of the Project's COP approval, the Lessee must initiate coordination with NMFS NEFSC to develop the survey mitigation agreement described above. Mitigation activities specified under the agreement must be designed to mitigate the Project impacts on the following NMFS NEFSC surveys: (a) Spring Bottom Trawl survey; (b) Autumn Multi-species Bottom Trawl survey; (c) Ecosystem Monitoring survey; (d) NARW aerial survey; (e) Aerial marine mammal and sea turtle survey; (f) Shipboard marine mammal and sea turtle survey; (g) Atlantic surfclam and ocean quahog survey; and (h) Atlantic Sea scallop survey. At a minimum, the survey mitigation agreement must describe actions and the means to address impacts on the affected surveys due to the preclusion of sampling platforms and impacts on statistical designs. NMFS has determined that the project area is a discrete stratum for surveys that use a random stratified design. This agreement may also consider other anticipated Project impacts on NMFS surveys, such as changes in habitat and increased operational costs due to loss of sampling efficiencies.

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<sup>34</sup> Hare, J.A., Blythe, B.J., Ford, K.H., Godfrey-McKee, S., Hooker, B.R., Jensen, B.M., Lipsky, A., Nachman, C., Pfeiffer, L., Rasser, M. and Renshaw, K., 2022. NOAA Fisheries and BOEM Federal Survey Mitigation Implementation Strategy - Northeast US Region. NOAA Technical Memorandum 292. Woods Hole, MA. 33 pp.

6.3.2 The survey mitigation agreement must identify activities that will result in the generation of data equivalent to data generated by NMFS' affected surveys for the duration of the Project. The survey mitigation agreement must describe the implementation procedures by which the Lessee will work with NEFSC to generate, share, and manage the data required by NEFSC for each of the surveys impacted by the Project, as mutually agreed upon between the Lessee and NMFS/NEFSC. The survey mitigation agreement must also describe the Lessee's participation in the NMFS NEFSC Northeast Survey Mitigation Program to support activities that address regional-level impacts for the surveys listed above.

6.4 Environmental Data Sharing with Federally Recognized Tribal Nations (Planning) (Construction) (Operations) (Decommissioning). No later than 90 days after COP approval, the Lessee must request the BSEE Tribal Liaison Officer and the Eastern Seaboard Tribal Liaison at [tribalengagement@bsee.gov](mailto:tribalengagement@bsee.gov) to coordinate with federally recognized Tribal Nations on the following: (1) to solicit the federally recognized Tribal Nation's interest in participating as active monitors on board vessels provided by the Lessee during construction and/or maintenance activities,<sup>35</sup> and in postmortem examinations of mortality events as a result of these activities; and (2) provide open access to the following reports generated as a result of the FMP; reports of NARW sightings; injured or dead protected species reporting (sea turtles, NARW, sturgeon); NARW PAM monitoring; PSO reports (e.g., pile-driving reports); pile driving schedules and changes to them. If a federally recognized Tribal Nation expresses interest in participating as an active monitor, the Lessee must provide the federally recognized Tribal Nation information regarding training(s), certification(s), and safety measures, required for participation. At a minimum, the Lessee must offer access to the following federally recognized Tribal Nations: Delaware Nation; Delaware Tribe of Indians; The Shinnecock Indian Nation; Mashantucket (Western) Pequot Tribal Nation; Stockbridge-Munsee Community Band of Mohican Indians; and Wampanoag Tribe of Gay Head (Aquinnah). The Lessee must provide, in a manner suitable to the tribal nation, access to nonproprietary, non-confidential business information listed in this paragraph to any federally recognized Tribal Nation no later than 30 days after the information becomes available.

## **7. CULTURAL RESOURCES CONDITIONS**

7.1 Reporting (Planning) (Construction) (Operations) (Decommissioning). The Lessee must submit all required documents related to cultural resource conditions in Section 7.2 through Section 7.11 to: BOEM at

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<sup>35</sup> The Lessee must identify in their request the anticipated construction and/or maintenance activities for which federally recognized tribal nation participation as an active monitor is feasible.

[renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), and to BSEE via TIMSWeb with a notification email sent to [env-compliance-arc@bsee.gov](mailto:env-compliance-arc@bsee.gov).

- 7.2 Avoidance of Known and Potential Shipwrecks, Debris Fields, and Ancient Submerged Landform Features (ASLFs) (Planning) (Construction) (Operations) (Decommissioning). The Lessee must avoid known and potential shipwrecks, potentially significant debris fields, and ancient submerged landform features as described below. The Lessee must identify avoidance requirements on proposed anchoring plats, as-placed plats, and drawings associated with seabed disturbances (e.g., relevant FDR/FIR documents for export cables, inter-array cables, WTG, etc.). If the Lessee determines that avoidance is not possible, the Lessee must notify BOEM and BSEE prior to disturbing the seabed in the excluded area. In such instances, BOEM will notify the Lessee of any additional requirements, which may include additional measures to resolve adverse effects. If any vessel conducting work on behalf of the Lessee disturbs the seabed within the avoidance areas noted below, the Lessee must submit an incident report to BOEM and BSEE within 24 hours.
- 7.2.1 Avoidance of Known Shipwrecks. The Lessee must avoid known shipwrecks (Targets 1, 9, 12-14, 17 and 18 as identified in the Marine Archaeological Resources Assessment (COP Volume III, Appendix F-1)) by a distance of no less than 50 meters from the known extent of the resource for placement of Project structures and when conducting seabed-disturbing activities.
- 7.2.2 Avoidance of Potential Shipwrecks. The Lessee must avoid potential shipwrecks (Targets 2-8, 10, 11, 15, 16, 19 as identified in the Marine Archaeological Resources Assessment (COP Volume III, Appendix F-1)) and potentially significant debris fields previously identified during marine archaeological surveys by a distance of no less than 50 meters from the known extent of the resource, unless the buffer precludes the installation of facilities at their engineered locations, but in no event is the buffer allowed to be less than 50 meters from the known extent of the resource.
- 7.2.3 Avoidance of Ancient Submerged Landform Features. The Lessee must avoid three ASLFs (Targets 20, 27, and 32 as identified in the Marine Archaeological Resources Assessment (COP Volume III, Appendix F-1)). No additional avoidance buffer is required for these ASLFs, because avoidance of the ASLFs is based on the defined spatial extent of each ASLF, which has been determined based on the maximum observed presence of the seismic reflector and unique buffer area designed to account for minimal positioning errors or lack of resolution.

- 7.3 Apply Paint Color No Lighter than RAL (Reichs-Ausschuß für Lieferbedingungen und Gütesicherung) 9010 Pure White and No Darker than RAL 7035 Light Grey to the WTGs (Planning) (Construction) (Operations). The Lessee must color the WTGs an off white/grey color (no lighter than RAL 9010 Pure White and no darker than RAL 7035 Light Grey) prior to installation. The Lessee must confirm the planned paint color as part of the FDR and confirm the WTG was painted consistent with this condition as part of the final WTG FIR.
- 7.4 Implementation of Mitigation Measures to Resolve Adverse Effects to 13 Ancient Submerged Landform Features (Planning) (Construction). The Lessee must mitigate adverse effects to 13 ASLFs (Targets 21–26, 28–31, and 33–35 as identified in the Marine Archaeological Resources Assessment (COP Volume III, Appendix F-1)) that remain in the Area of Potential Effects (APE) and that cannot be avoided. The Lessee must execute all aspects of this condition, consistent with the Section 106 MOA (Stipulation III.A.1 and Attachment 3 *Historic Property Treatment Plan for the Ocean Wind 1 Farm Ancient Submerged Landform Features, Federal Waters on the Outer Continental Shelf*). Reporting associated with Section 106 MOA compliance must be included in the Annual Certification.
- 7.5 Implement Mitigation Measures to Resolve Visual Adverse Effects to 18 Historic Properties (Planning) (Construction). The Lessee must mitigate visual adverse effects to 18 historic properties (Brigantine Hotel, Brigantine City, Atlantic County; Absecon Lighthouse, Atlantic City, Atlantic County; Atlantic City Boardwalk, Atlantic City, Atlantic County; Atlantic City Convention Hall, Atlantic City, Atlantic County; Ritz-Carlton Hotel, Atlantic City, Atlantic County; Haddon Hall/Resorts Casino Hotel, Atlantic City, Atlantic County; Riviera Apartments, Atlantic City, Atlantic County; Vassar Square Condominiums, Ventnor City, Atlantic County; House at 114 South Harvard Avenue, Ventnor City, Atlantic County; Lucy the Margate Elephant, Margate City, Atlantic County; Great Egg Coast Guard Station, Longport Borough, Atlantic County; Ocean City Boardwalk, Ocean City, Cape May County; Ocean City Music Pier, Ocean City, Cape May County; Hereford Lighthouse, North Wildwood, Cape May County; North Wildwood Life Saving Station, North Wildwood, Cape May County; U.S. Lifesaving Station #35, Stone Harbor Borough, Cape May County; Flanders Hotel, Ocean City, Cape May County; and Little Egg Harbor U.S. Life Saving Station #23 (U.S. Coast Guard Station #119), Little Egg Harbor Township, Ocean County). The Lessee must execute all aspects of this condition of COP approval consistent with the Section 106 MOA (Stipulation III.B.1 and Attachment 4 *Historic Properties Treatment Plan for the Ocean Wind 1 Offshore Wind Farm Project Historic Properties Subject to Adverse Effects Cape May and Atlantic*

*Counties, New Jersey*; and Stipulation III.C). Reporting associated with Section 106 MOA compliance must be included in the Annual Certification.

- 7.6 Annual Monitoring and Reporting on the Section 106 MOA (Planning) (Construction) (Operations) (Decommissioning). By January 31 of each year the Lessee must submit for BOEM’s review a summary report detailing work undertaken pursuant to the Section 106 MOA during the preceding year. The Lessee must address any BOEM comments and after BOEM’s review and agreement, the Lessee must share the summary report with all participating consulting parties identified in Attachment 2 of the Section 106 MOA. The report must include a description of how the stipulations relating to avoidance and minimization measures (Section 106 MOA Stipulations I and II) were implemented; any scheduling changes proposed; any problems encountered; and any disputes and objections received in BOEM’s efforts to carry out the terms of the Section 106 MOA. The Lessee can satisfy this reporting requirement by providing the relevant portions of the Annual Certification required under 30 C.F.R. § 285.633.
- 7.7 Implementation of Post-Review Discovery Plans (Planning) (Construction) (Operations) (Decommissioning). If properties are discovered that may be historically significant or unanticipated effects on historic properties found, the Lessee must implement the post-review discovery plans found in Section 106 MOA Attachment 6 (Post-Review Discovery Plan for Submerged Cultural Resources for the Ocean Wind 1 Offshore Wind Farm for Lease OCS-A 0498 Construction and Operations Plan) and Attachment 7 (Post-Review Discovery Plan for Terrestrial Cultural Resources for the Ocean Wind 1 Offshore Wind Farm for Lease OCS-A 0498 Construction and Operations Plan).
- 7.8 All Post-Review Discoveries (Construction) (Operations) (Decommissioning). In the event of a post-review discovery of a property or unanticipated effects to a historic property prior to or during construction, operation, maintenance, or decommissioning of the Project, the Lessee must implement the following actions:
  - 7.8.1 Immediately halt seabed-disturbing activities within the area of discovery.
  - 7.8.2 As soon as practicable and no later than 72 hours after the discovery, notify BOEM (at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov)) and BSEE (at [env-compliance-arch@bsee.gov](mailto:env-compliance-arch@bsee.gov) and via TIMSWeb) with a written report, describing the discovery in detail, including a narrative description of the manner of discovery (e.g., date, time, heading, weather, information from logs); a narrative description of the potential resource, including measurements; images of the potential resource that may have been captured; portions of raw and processed datasets relevant to the discovery area; and any

other information considered by the Lessee to be relevant to understanding of the potential resource. Provide the notification to BOEM and BSEE within 72 hours of its discovery. BOEM and BSEE may request additional information and/or request revisions to the report.

7.8.3 Keep the location of the discovery confidential and take no action that may adversely affect the archaeological resource until BOEM has made an evaluation and instructs the Lessee on how to proceed.

7.8.4 Conduct any additional investigations and submit documentation as directed by BOEM to determine if the resource is eligible for listing in the National Register of Historic Places (NRHP) (30 C.F.R. § 585.802(b)). The Lessee must satisfy this requirement only if (1) the site has been impacted by the Lessee's Project activities; and/or (2) impacts to the site or to the APE cannot be avoided. If investigations indicate that the resource is potentially eligible for listing in the NRHP, BOEM will instruct the Lessee on avoidance, minimization or mitigation of adverse effects.

7.8.5 If there is any evidence that the discovery is from a federally recognized tribal nation or appears to be a preserved burial site, the Lessee must contact the federally recognized tribal nation as identified in the notification lists included in the post-review discovery plan within 72 hours of the discovery with details of what is known about the discovery, and consult with the federally recognized tribal nation pursuant to the post review discovery plan.

7.8.6 If BOEM incurs costs in addressing the discovery, under Section 110(g) of the National Historic Preservation Act, BOEM may charge the Lessee reasonable costs for carrying out preservation responsibilities under OCSLA (30 C.F.R. § 585.802(c-d)).

7.9 Emergency Situations (Construction) (Operations) (Decommissioning). In the event of an emergency or disaster that is declared by the President or the Governor of New Jersey, which represents an imminent threat to public health or safety, or creates a hazardous condition due to impacts from the Project's infrastructure damaged during the emergency and affecting historic properties in the APEs, BOEM with the assistance of the Lessee will notify the consulting federally recognized tribal nation, New Jersey State Historic Preservation Officer, and the Advisory Council on Historic Preservation of the condition which has initiated the situation and the measures taken to respond to the emergency or hazardous condition consistent with the Section 106 MOA. BOEM will make this notification as soon as reasonably possible, but no later than 48 hours from when it becomes aware of the emergency or

disaster. Should the consulting federally recognized tribal nation, New Jersey State Historic Preservation Officer, or the Advisory Council on Historic Preservation desire to provide technical assistance to BOEM, they will submit comments within seven days from notification if the nature of the emergency or hazardous condition allows for such coordination.

- 7.10 No Impact Without Approval (Planning) (Construction) (Operations) (Decommissioning). The Lessee may not knowingly impact a potential archaeological resource without BOEM and BSEE's prior concurrence. If a possible impact to a potential archaeological resource occurs, the Lessee must immediately halt operations; report the incident within 24 hours to BOEM and BSEE; and provide a written report to within 72 hours to BOEM and BSEE.
- 7.11 PAM Placement Review (Construction) (Operations) (Decommissioning). The Lessee may only place PAM systems in locations where an analysis of the results of geophysical surveys has been completed. This analysis must include a determination by a Qualified Marine Archaeologist as to whether any potential archaeological resources are present in the area. This activity may have been performed already as part of the Lessee's submission of archaeological resources reports in support of its approved COP. Except as allowed by BOEM under Stipulation 4.3.6 of Addendum C of the Lease and Section 7.10 above, the PAM placement activities must avoid potential archaeological resources by a minimum of 328 feet (100 meters), and the avoidance distance must be calculated from the maximum discernible extent of the archaeological resource. If PAM placement activities impact potential historic properties, the Lessee must take the actions described in Section 7.8, All Post-Review Discoveries. As-placed PAM system plats must be submitted to BSEE via TIMSWeb within 90 days. This certification is not required if the PAM placement activities did impact potential historic properties identified in the archaeological surveys without the BOEM's prior authorization. In that case, the Lessee and the Qualified Marine Archaeologist who prepared the report must instead provide to BOEM a statement documenting the extent of these impacts. This statement must be made to BOEM, consistent with Stipulation 4.3.7 of Addendum C of the Lease and Section 7.8, above. BOEM may require additional mitigation measures as appropriate based on a review of the results and supporting information.

## **8. AIR QUALITY CONDITIONS**

- 8.1 Reporting (Construction) (Operations) (Decommissioning). The Lessee must submit all required documents related to air quality conditions in Section 8.2 and Section 8.3 to: BOEM at [renewable\\_reporting@boem.gov](mailto:renewable_reporting@boem.gov), to BSEE via TIMSWeb with a notification email sent to [oswsubmittals@bsee.gov](mailto:oswsubmittals@bsee.gov), USFWS at [jaron\\_ming@fws.gov](mailto:jaron_ming@fws.gov), and the Environmental Protection Agency

(EPA) at [Chan.Suilin@epa.gov](mailto:Chan.Suilin@epa.gov). The Lessee must confirm the relevant point of contact prior to reporting and confirmation of reporting receipt.

8.2 Brigantine Wilderness Area Air Quality Related Values (AQRV) Mitigation Framework (Construction) (Operations) (Decommissioning). The Lessee must develop a framework for the mitigation of AQRV impacts at Brigantine Wilderness Area.

8.2.1 The framework must include a description of existing conditions and monitoring objectives; description of preventative and any voluntary offsetting mitigation measures; identification of the avoidance or offset value for each measure; cost estimates for each measure; schedule for USFWS implementation of each measure; the mechanism for the transfer of any funding from the Lessee to USFWS; and reporting to demonstrate completion of implementation.

8.2.2 The framework must be submitted to BOEM, BSEE, USFWS, and EPA for review at least 30 days prior to publication of the draft OCS Air Permit.

8.3 Sulfur Hexafluoride (SF<sub>6</sub>) Leak Rate Monitoring and Detection (Construction) (Operations) (Decommissioning). The Lessee must adhere to IEC and EPA guidance for SF<sub>6</sub> leak detection and monitoring requirements of one-half percent or less.

8.3.1 The Lessee must create alarms based on the pressure readings in the breakers and switches, so leaks can be detected when substantial sulfur hexafluoride leakage occurs. Upon a detectable pressure drop that is greater than 10 percent of the original pressure (accounting for ambient air conditions), the Lessee must perform maintenance to fix seals within 14 days. If an event requires removal of SF<sub>6</sub>, the affected major component(s) must be replaced with new component(s).

8.3.2 The Lessee must report any detectible pressure drop that is greater than 10 percent as soon as practicable and no later than 72 hours after the discovery, notify BOEM and BSEE and provide an estimated timeframe for maintenance or replacement.

8.3.3 The Lessee must provide a summary in the Lessee's Annual Certification of observed SF<sub>6</sub> leak rates in the past year and a summary of any leaks greater than 1 percent and the associated maintenance or repair actions taken and their timeframe from detection to completion.

8.3.4 National Ambient Air Quality Standards (NAAQS) and Prevention of Significant Deterioration (PSD) Class I and Class II

Air Quality Increments (Construction) (Operations). The Lessee is required under the Clean Air Act to obtain a permit for OCS sources and as a consequence must demonstrate that the air quality impacts from emissions of both the construction, and operation and maintenance phases must be within the NAAQS and PSD of Air Quality Increments. This demonstration must be submitted and approved by EPA prior to the issuance of the draft OCS Air Quality Permit. If any requirement in Section 8 of these conditions is inconsistent with the terms of EPA's permit, the language in EPA's permit will prevail.

**ATTACHMENT 1: LIST OF ACRONYMS**

AC	Advisory Circular
ADLS	Aircraft Detection Lighting System
ALARP	As Low as Reasonably Practical
APE	Area of Potential Effects
API RP	American Petroleum Institute Recommended Practices
AQRV	Air Quality Related Value
ASLF	Ancient Submerged Landform Feature
BiOp	Biological Opinion
BMP	Benthic Monitoring Plan
BOEM	Bureau of Ocean Energy Management
BRUV	Baited Remote Underwater Video
BSEE	Bureau of Safety and Environmental Enforcement
CBRA	Cable Burial Risk Assessment
COP	Construction and Operations Plan
CVA	Certified Verification Agent
CZMA	Coastal Zone Management Act
DoD	Department of Defense
DOI	Department of the Interior
DON	Department of the Navy
DPS	distinct population segment
DTS	Desktop Study
EFH	essential fish habitat
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FDR	Facility Design Report
FEIS	Final Environmental Impact Statement
FIR	Fabrication and Installation Report

FMP	Fisheries Monitoring Plan
FSC	Finance Section Chief
GARFO	Greater Atlantic Fisheries Office
GDP	Gross Domestic Product
GIS	Geographic information system
GPS	Global Positioning System
HDD	horizontal directional drilling
HF	high frequency
HRG	high resolution geophysical
IC	Incident Commander
IEC	International Electric Code
IFC	issued for construction
IMT	Incident Management Team
IOOS	Integrated Ocean Observing System
IR	infrared
ISO	International Organization for Standardization
ITA	Incidental Take Authorization
ITS	Incidental Take Statement
LNM	Local Notices to Mariners
LSC	Logistics Section Chief
MBES	Multibeam Echosounder
MEC	Munitions and Explosives of Concern
MMPA	Marine Mammal Protection Act
MOA	Memorandum of Agreement
Motus	Motus Wildlife Tracking System
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NAAQS	National Ambient Air Quality Standards
NARW	North Atlantic right whale
NCEI	National Centers for Environmental Information
NEFSC	Northeast Fisheries Science Center
NHPA	National Historic Preservation Act
NJBPU	New Jersey Board of Public Utilities
NJDEP	New Jersey Department of Environmental Protection
NMFS	National Marine Fisheries Service
NMS	noise mitigation system
NOAA	National Oceanic and Atmospheric Administration
NPREP	National Preparedness for Response Exercise Program
NRHP	National Register of Historic Places

OCS	Outer Continental Shelf
OCSLA	Outer Continental Shelf Lands Act
OEM	Original Equipment Manufacturer
O&M	operations and maintenance
OPR	Office of Protected Resources
OSPD	Oil Spill Preparedness Division
OSC	Operations Section Chief
OSRO	Oil Spill Removal Organization
OSRP	Oil Spill Response Plan
OSS	offshore substation
PAM	Passive Acoustic Monitoring or Passive Acoustic Monitor(s)
PATON	Private Aids to Navigation
PIT	passive integrated transponder
POWERON	Partnership for an Offshore Wind Energy Regional Observation Network
PSC	Planning Section Chief
PSD	Prevention of Significant Deterioration
PSO	Protected Species Observer
QI	Qualified Individual
RAL	Reichs-Ausschuß für Lieferbedingungen und Gütesicherung
ROD	Record of Decision
WSAS	Right Whale Sighting Advisory System
SCADA	Supervisory Control and Data Acquisition
SFV	Sound Field Verification
SMS	Safety Management System
SROT	Spill Response Operating Team
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
UTC	Coordinated Universal Time
UXO	unexploded ordnance
VHF	Very High Frequency
WCD	worst-case discharge
WTG	wind turbine generator

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF OCEAN ENERGY MANAGEMENT

**ADDENDUM “A”**  
**Revised September 21, 2023**

DESCRIPTION OF LEASED AREA AND LEASE ACTIVITIES

Lease Number OCS-A 0498

I. Lessor and Lessee Contact Information

Lessee Company Number: 15057

(a) Lessor’s Contact Information

	<b>Lease Representative</b>	<b>Operations Representative</b>
Name	Program Manager, Office of Renewable Energy Programs	Same as Lease Representative
Address	U.S. Department of the Interior Bureau of Ocean Energy Management 45600 Woodland Road, Mail Stop VAM-OREP Sterling, Virginia 20166	
Phone	(703) 787-1300	
Fax	(703) 787-1708	
Email	renewableenergy@boem.gov	

(b) Lessee’s Contact Information

	<b>Lease Representative</b>	<b>Operations Representative</b>
Name	Rob Keiser	Mikkel Maehlsen
Title	Head of Asset Management	Head of Operations
Address	Orsted North America, Inc. 399 Boylston Street, 12 <sup>th</sup> Floor Boston, Massachusetts 02116	Orsted North America, Inc. 399 Boylston Street, 12 <sup>th</sup> Floor Boston, Massachusetts 02116
Phone	(281) 229-4539	(857) 360-9682
Email	robek@orsted.com	Mikma@orsted.com

II. Description of Leased Area

The leased area is defined as the Blocks described below and the project easement described in Addendum “D.” Except for the purpose of rent calculation, any reference to “leased area” in Lease Number OCS-A 0498 should be interpreted to include the project easement.

The Blocks described below comprise approximately 75,526 acres. The leased area is subject to later adjustment in accordance with applicable regulations (e.g., by contraction or relinquishment).

## Lease OCS-A 0498

The following Blocks or portions of Blocks, lying within Official Protraction Diagram Wilmington NJ18-02, are depicted on the map below and comprise approximately 75,526 acres.

- 1) Block 6884, SE1/4 of SW1/4, SE1/4
- 2) Block 6885, SW1/4, SW1/4 of SE1/4
- 3) Block 6933, SE1/4 of NE1/4, SE1/4 of SW1/4, SE1/4
- 4) Block 6934, All of Block
- 5) Block 6935, All of Block
- 6) Block 6936, SW1/4 of NW1/4, SW1/4, SW1/4 of SE1/4
- 7) Block 6982, NE1/4 of SE1/4 of SW1/4, S1/2 of SE1/4 of SW1/4, S1/2 of SE1/4, and NE1/4 of SE1/4
- 8) Block 6983, All of Block
- 9) Block 6984, All of Block
- 10) Block 6985, All of Block
- 11) Block 6986, N1/2, SW1/4, N1/2 of SE1/4, SW1/4 of SE1/4
- 12) Block 6987, SW1/4 of NW1/4
- 13) Block 7032, NE1/4, N1/2 of SE1/4, SE1/4 of SE1/4, NE1/4 of NW1/4, E1/2 of SE1/4 of NW1/4, NW1/4 of SE1/4 of NW1/4
- 14) Block 7033, All of Block
- 15) Block 7034, All of Block
- 16) Block 7035, N1/2, SW1/4, N1/2 of SE1/4, SW1/4 of SE1/4
- 17) Block 7036, N1/2 of NW1/4, SW1/4 of NW1/4
- 18) Block 7083, NE1/4, E1/2 of NW1/4, NW1/4 of NW1/4, NE1/4 of SW1/4 of NW1/4, E1/2 of NE1/4 of SW1/4, NW1/4 of NE1/4 of SW1/4, N1/2 of SE1/4, E1/2 of SW1/4 of SE1/4, NW1/4 of SW1/4 of SE1/4, SE1/4 of SE1/4
- 19) Block 7084, N1/2, SW1/4, N1/2 of SE1/4, SW1/4 of SE1/4
- 20) Block 7085, N1/2 of NW1/4, SW1/4 of NW1/4
- 21) Block 7133, N1/2 of NE1/4 of NE1/4
- 22) Block 7134, NE1/4 of NW1/4, N1/2 of NW1/4 of NW1/4

For the purposes of these calculations, a Block equals 2,304 hectares. One hectare equals 2.471043930 acres.



U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF OCEAN ENERGY MANAGEMENT

**ADDENDUM “D”**

PROJECT EASEMENT

Lease Number OCS-A 0498

**Granted:** September 21, 2023

This section includes a description of the offshore export cable corridors and project easement for this lease and a calculation of the associated rent for the area within the project easement.

I. Project Easement Description

This project easement is subject to: all terms and conditions of Lease OCS-A 0498, executed effective March 1, 2016; the Construction and Operations Plan (COP); the terms and conditions of the COP approval issued on September 21, 2023; and any subsequent revisions, amendments, or supplements to the same.

The map in Figure 1 below depicts the two offshore export cable corridors for the project described in the COP. The two corridors are of variable width, ranging from a maximum width of 984.252 feet to a minimum width of 626.36 feet (exact width dependent upon water depth at any given location). One corridor (hereafter referred to as the Oyster Creek export cable, OYC-EC) will extend approximately 98.11 statute miles from OCS-A 0498 through both federal and state waters to the landfall location at Island Beach State Park, New Jersey. The second corridor (hereafter referred to as the BL England export cable, BLE-EC) will extend approximately 12.403 statute miles from OCS-A 0498 through both federal and state waters to the landfall location in Ocean City, New Jersey.

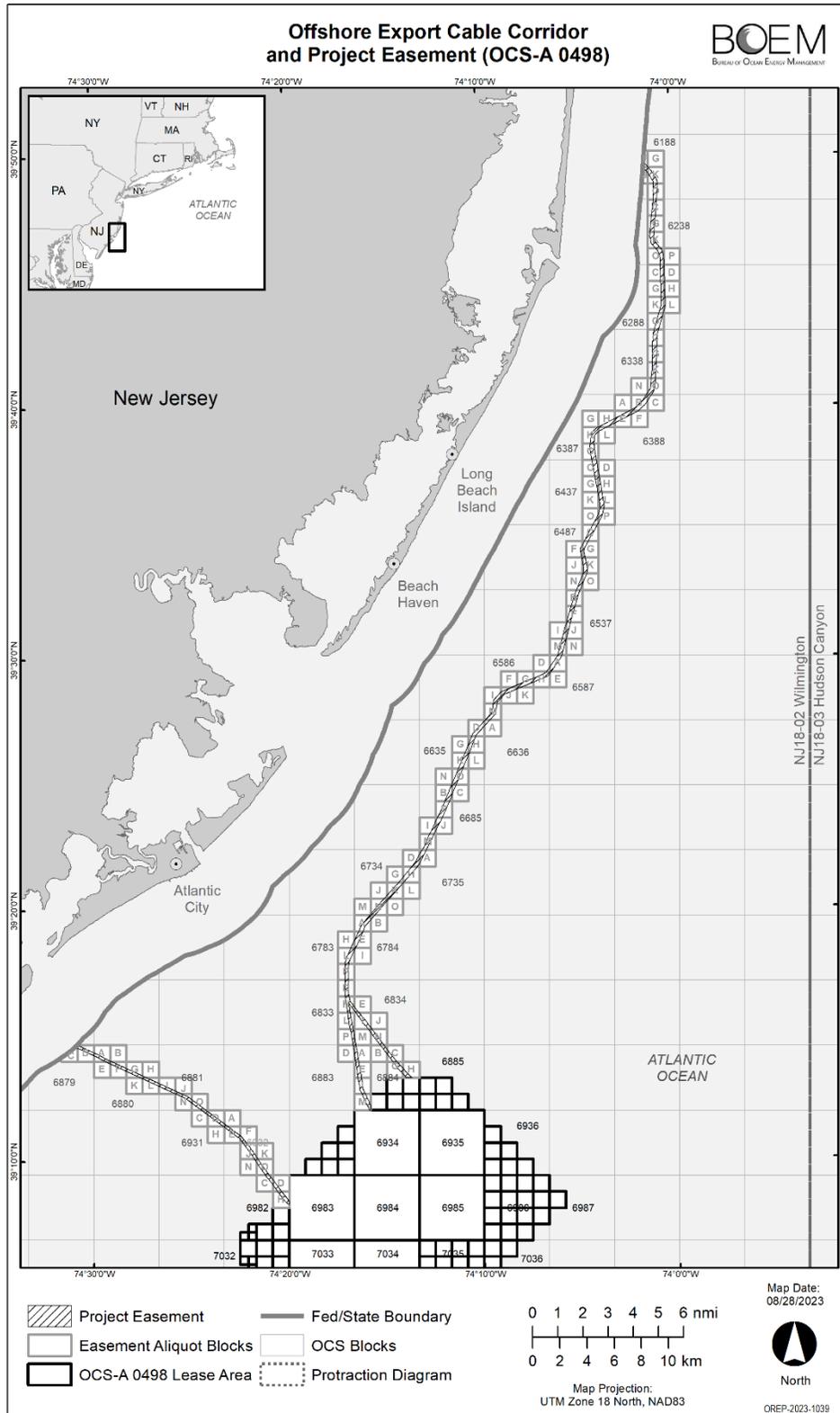
Within Figure 1, the project easement is bounded by solid lines and by BOEM aliquots (OCS sub-blocks). The project easement (inclusive of both corridors) extends approximately 67 statute miles and includes approximately 6,976 acres. The federal portion of OYC-EC extends approximately 54 statute miles and includes approximately 5,943 acres. The federal portion of BLE-EC extends approximately 13 statute miles and includes approximately 1,033 acres.

The project easements' centerline, from which the project easements extend between approximately 313.18 and 492.126 feet on either side, can be determined by interconnecting the points indicated by the centerline coordinates in Table 1 below. The centerline coordinates follow an order from south to north (described per corridor) and are provided in both geographic NAD(83) (longitude, latitude) and UTM Zone 19N, NAD(83) (eastings, northings).

## II. Rent

The Lessee must begin submitting rent payments for any project easement associated with this lease commencing on the date when BOEM approves the COP. Annual rent for a project easement 200 feet wide, centered on the transmission cable, is \$70.00 per statute mile. For any additional acreage required, the Lessee must also pay the greater of \$5.00 per acre per year or \$450.00 per year. The first annual rent payment for the project easement in the amount of \$31,535 is due within 45 days of the Lessee's receipt of the COP approval letter. The rent for the next year and for each subsequent year is due on or before each lease anniversary.

To calculate the required rent payment for the project easement, BOEM first multiplied 67 statute miles (the approximate combined length of the project easements, rounded to the nearest whole mile) by \$70, totaling \$4,690 for a project easement 200 feet wide. Then, BOEM determined the additional acreage within the variable width project easements beyond the 200-foot area at the center of the easement. Next, BOEM multiplied 5,369 acres (the additional area of the project easement, rounded to the nearest whole acre) by \$5, totaling \$26,845. Therefore, the total project easement rent payment due is \$31,535 (\$4,690 + \$26,845).



**Figure 1: Offshore Export Cable Corridor and Project Easement (OCS-A 0498).** Note that the northern corridor within the project easement corresponds to the Oyster Creek export cable

(OYC-EC) with east and west forks into lease area OCS-A 0498. The southern corridor within the project easement corresponds to the BL England export cable (BLE-EC).

**Table 1: Project Easement Centerline Coordinates**

- **Point Numbers 1 – 164** follow the southern corridor within the project easement from the lease area (OCS-A 0498) to the federal/state boundary.
- **Point Numbers 165 – 335** follow the west fork of the northern corridor within the project easement from the lease area (OCS-A 0498) to the intersection of the east fork.
- **Point Numbers 336 – 419** follow the east fork of the northern corridor within the project easement from the lease area (OCS-A 0498) to the intersection of the west fork.
- **Point Numbers 420 – 2091** follow the remainder of the northern corridor within the project easement to the federal/state boundary.

Point Number	X Easting	Y Northing	Longitude	Latitude
1	557479.0239	4332466.6332	-74.334902	39.139489
2	557440.5078	4332504.3554	-74.335344	39.139832
3	557440.5078	4332504.3554	-74.335344	39.139832
4	557267.5054	4332718.4302	-74.337328	39.141772
5	557094.9110	4332932.0001	-74.339307	39.143708
6	557075.3630	4332948.2341	-74.339532	39.143855
7	557063.5913	4332970.7554	-74.339666	39.144059
8	557005.0572	4333043.1862	-74.340337	39.144716
9	556946.2511	4333115.9534	-74.341012	39.145375
10	556945.7092	4333116.6340	-74.341018	39.145381
11	556943.8301	4333119.0295	-74.341039	39.145403
12	556941.1456	4333122.4517	-74.341070	39.145434
13	556940.0917	4333123.8360	-74.341082	39.145447
14	556937.5075	4333127.3347	-74.341112	39.145478
15	556935.6986	4333129.7836	-74.341133	39.145500
16	556935.1868	4333130.4871	-74.341139	39.145507
17	556641.7487	4333540.0535	-74.344500	39.149216
18	556348.3099	4333949.6210	-74.347861	39.152926
19	556347.7964	4333950.3267	-74.347867	39.152932
20	556345.9818	4333952.7832	-74.347888	39.152954
21	556343.3893	4333956.2927	-74.347918	39.152986
22	556342.7302	4333957.1681	-74.347925	39.152994
23	556342.3320	4333957.6813	-74.347930	39.152999
24	556339.6386	4333961.1139	-74.347961	39.153030
25	556338.0226	4333963.1733	-74.347979	39.153049
26	556336.9253	4333964.5305	-74.347992	39.153061

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
27	556334.1332	4333967.8834	-74.348024	39.153091
28	556332.1787	4333970.2303	-74.348046	39.153113
29	556331.6155	4333970.8967	-74.348053	39.153119
30	556223.9517	4334096.4211	-74.349288	39.154257
31	556116.2877	4334221.9456	-74.350524	39.155395
32	556115.7242	4334222.6123	-74.350530	39.155401
33	556113.7699	4334224.9591	-74.350553	39.155422
34	556110.9778	4334228.3119	-74.350585	39.155452
35	556109.8805	4334229.6692	-74.350598	39.155465
36	556108.2646	4334231.7286	-74.350616	39.155483
37	556105.5712	4334235.1612	-74.350647	39.155514
38	556105.1732	4334235.6740	-74.350651	39.155519
39	556104.5139	4334236.5497	-74.350659	39.155527
40	556101.9214	4334240.0592	-74.350689	39.155559
41	556100.1067	4334242.5159	-74.350710	39.155581
42	556099.5935	4334243.2213	-74.350715	39.155587
43	556031.8402	4334337.7880	-74.351492	39.156444
44	555964.3409	4334432.0001	-74.352265	39.157297
45	555946.3443	4334448.5339	-74.352472	39.157447
46	555936.4764	4334470.8921	-74.352584	39.157649
47	555730.2907	4334758.6758	-74.354947	39.160256
48	555523.8220	4335046.8546	-74.357313	39.162865
49	555523.2625	4335047.6502	-74.357319	39.162873
50	555520.2479	4335052.0190	-74.357354	39.162912
51	555517.7860	4335055.5868	-74.357382	39.162945
52	555517.2402	4335056.3931	-74.357388	39.162952
53	555155.3692	4335601.2075	-74.361532	39.167884
54	554793.5180	4336145.9921	-74.365677	39.172816
55	554793.0129	4336146.7392	-74.365683	39.172822
56	554790.7359	4336150.0483	-74.365709	39.172852
57	554787.9477	4336154.1003	-74.365741	39.172889
58	554787.4305	4336154.8389	-74.365747	39.172896
59	554700.5591	4336276.7571	-74.366742	39.174000
60	554613.1534	4336399.4251	-74.367744	39.175111
61	554612.6016	4336400.1857	-74.367751	39.175117
62	554609.5565	4336404.3084	-74.367786	39.175155
63	554607.0697	4336407.6752	-74.367814	39.175185
64	554606.5050	4336408.4262	-74.367820	39.175192
65	554367.7315	4336720.3997	-74.370560	39.178018
66	554129.2435	4337032.0001	-74.373296	39.180841

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
67	554101.4766	4337068.2794	-74.373614	39.181169
68	554073.7043	4337104.5658	-74.373933	39.181498
69	554045.6846	4337141.1754	-74.374254	39.181830
70	554045.6470	4337141.2244	-74.374255	39.181830
71	554045.1860	4337141.8160	-74.374260	39.181835
72	554042.7260	4337144.9243	-74.374288	39.181864
73	554039.4716	4337149.0363	-74.374326	39.181901
74	554038.3630	4337150.3878	-74.374338	39.181913
75	554034.9669	4337154.3835	-74.374377	39.181949
76	554032.7029	4337157.0471	-74.374403	39.181973
77	554031.5477	4337158.3591	-74.374417	39.181985
78	554029.1921	4337160.9420	-74.374444	39.182009
79	554025.6584	4337164.8165	-74.374484	39.182044
80	554024.4581	4337166.0873	-74.374498	39.182055
81	554020.7911	4337169.8360	-74.374540	39.182089
82	554018.3466	4337172.3349	-74.374568	39.182112
83	554017.9593	4337172.7264	-74.374573	39.182116
84	554017.1026	4337173.5629	-74.374583	39.182123
85	554014.5722	4337175.9749	-74.374612	39.182145
86	554010.7764	4337179.5931	-74.374655	39.182178
87	554009.4902	4337180.7769	-74.374670	39.182189
88	554005.5703	4337184.2602	-74.374715	39.182220
89	554002.9571	4337186.5822	-74.374745	39.182241
90	554002.7120	4337186.7986	-74.374748	39.182243
91	554001.6304	4337187.7203	-74.374761	39.182252
92	553998.9377	4337189.9496	-74.374792	39.182272
93	553994.8984	4337193.2938	-74.374838	39.182302
94	553993.5327	4337194.3848	-74.374854	39.182312
95	553989.3789	4337197.5858	-74.374902	39.182341
96	553986.2637	4337199.9864	-74.374937	39.182363
97	553986.1818	4337200.0493	-74.374938	39.182364
98	553985.5668	4337200.5138	-74.374945	39.182368
99	552011.2399	4338667.6756	-74.397691	39.195708
100	550037.6130	4340134.3172	-74.420436	39.209040
101	550036.9099	4340134.8302	-74.420444	39.209044
102	550033.7268	4340137.1108	-74.420481	39.209065
103	550029.4823	4340140.1517	-74.420530	39.209093
104	550028.0501	4340141.1405	-74.420546	39.209102
105	550025.1518	4340143.0679	-74.420580	39.209119
106	550020.8041	4340145.9593	-74.420630	39.209145

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
107	550019.3383	4340146.8977	-74.420647	39.209154
108	550014.8926	4340149.6360	-74.420698	39.209179
109	550011.9290	4340151.4613	-74.420732	39.209195
110	550010.4314	4340152.3481	-74.420750	39.209204
111	550007.4061	4340154.0693	-74.420785	39.209219
112	550002.8678	4340156.6512	-74.420837	39.209243
113	550001.3403	4340157.4853	-74.420855	39.209250
114	549998.2569	4340159.1001	-74.420890	39.209265
115	549993.6314	4340161.5225	-74.420944	39.209287
116	549992.5491	4340162.0727	-74.420956	39.209292
117	549992.0758	4340162.3030	-74.420962	39.209294
118	549987.3689	4340164.5629	-74.421016	39.209315
119	549983.8388	4340166.2578	-74.421057	39.209330
120	549983.0511	4340166.6276	-74.421066	39.209334
121	547109.8642	4341485.0910	-74.454251	39.221375
122	544236.8989	4342803.4526	-74.487446	39.233405
123	544236.5520	4342803.6134	-74.487450	39.233406
124	544069.5678	4342881.7915	-74.489379	39.234119
125	543902.0328	4342960.2275	-74.491315	39.234835
126	543901.2804	4342960.5874	-74.491324	39.234838
127	543897.9083	4342962.2353	-74.491363	39.234853
128	543893.4120	4342964.4325	-74.491415	39.234873
129	543891.9256	4342965.1898	-74.491432	39.234880
130	543887.5051	4342967.5358	-74.491483	39.234901
131	543884.5584	4342969.0997	-74.491517	39.234915
132	543883.0981	4342969.9062	-74.491534	39.234923
133	543878.7583	4342972.3984	-74.491584	39.234946
134	543875.5036	4342974.2674	-74.491622	39.234963
135	543875.4030	4342974.3254	-74.491623	39.234963
136	543874.7838	4342974.6888	-74.491630	39.234966
137	543738.1322	4343056.2234	-74.493208	39.235708
138	543601.4533	4343137.7743	-74.494787	39.236450
139	543600.8340	4343138.1377	-74.494794	39.236453
140	543600.6780	4343138.2274	-74.494795	39.236454
141	543597.1722	4343140.2347	-74.494836	39.236472
142	543592.4974	4343142.9113	-74.494890	39.236496
143	543590.9234	4343143.7754	-74.494908	39.236504
144	543587.7451	4343145.4466	-74.494945	39.236519
145	543582.9773	4343147.9536	-74.495000	39.236542
146	543581.8217	4343148.5422	-74.495013	39.236548

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
147	543581.3732	4343148.7606	-74.495018	39.236550
148	543576.5184	4343151.0948	-74.495075	39.236571
149	543572.8775	4343152.8454	-74.495117	39.236587
150	543572.0650	4343153.2271	-74.495126	39.236590
151	542826.6156	4343495.3029	-74.503742	39.239710
152	542080.3303	4343837.7623	-74.512368	39.242832
153	542079.4706	4343838.1470	-74.512378	39.242836
154	542075.5863	4343839.8417	-74.512422	39.242851
155	542070.4070	4343842.1013	-74.512482	39.242872
156	542069.5474	4343842.4668	-74.512492	39.242875
157	542068.6667	4343842.8219	-74.512502	39.242878
158	542063.4058	4343844.8848	-74.512563	39.242897
159	542059.8989	4343846.2600	-74.512604	39.242910
160	542058.1327	4343846.9145	-74.512624	39.242916
161	542052.7979	4343848.7778	-74.512686	39.242933
162	542049.2417	4343850.0199	-74.512727	39.242944
163	541945.2746	4343874.9239	-74.513930	39.243173
164	541867.8395	4343899.7616	-74.514826	39.243401
165	563599.8689	4339288.3527	-74.263441	39.200530
166	563589.7291	4339310.0362	-74.263556	39.200726
167	563579.4582	4339332.0001	-74.263673	39.200925
168	563565.2447	4339350.5916	-74.263836	39.201093
169	563560.0813	4339373.4370	-74.263894	39.201299
170	563532.6956	4339432.0002	-74.264205	39.201829
171	563505.3100	4339490.5633	-74.264517	39.202359
172	563500.1465	4339513.4086	-74.264575	39.202565
173	563485.9330	4339532.0001	-74.264737	39.202733
174	563449.3231	4339610.2891	-74.265154	39.203442
175	563412.6849	4339688.6386	-74.265571	39.204150
176	563398.0030	4339708.2316	-74.265739	39.204328
177	563392.4079	4339732.0001	-74.265802	39.204542
178	563275.5014	4339982.0001	-74.267132	39.206803
179	563158.5949	4340232.0001	-74.268463	39.209065
180	563152.9999	4340255.7686	-74.268525	39.209279
181	563138.3181	4340275.3615	-74.268694	39.209457
182	563065.0698	4340432.0001	-74.269527	39.210873
183	562991.8215	4340588.6387	-74.270361	39.212290
184	562977.1397	4340608.2316	-74.270529	39.212468
185	562971.5446	4340632.0001	-74.270592	39.212682
186	562966.2021	4340643.4249	-74.270653	39.212786

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
187	562960.6047	4340655.3946	-74.270716	39.212894
188	562960.1061	4340656.4894	-74.270722	39.212904
189	562958.3995	4340660.3382	-74.270742	39.212939
190	562955.9613	4340665.8369	-74.270769	39.212988
191	562955.3782	4340667.1970	-74.270776	39.213001
192	562955.0303	4340668.0555	-74.270780	39.213008
193	562953.7010	4340671.4102	-74.270795	39.213039
194	562951.4852	4340677.0023	-74.270820	39.213089
195	562950.6440	4340679.2564	-74.270830	39.213110
196	562949.4502	4340682.6617	-74.270843	39.213140
197	562947.4604	4340688.3381	-74.270866	39.213192
198	562946.7102	4340690.6241	-74.270874	39.213212
199	562944.9495	4340696.3757	-74.270894	39.213264
200	562943.8933	4340699.8262	-74.270906	39.213295
201	562943.2354	4340702.1404	-74.270913	39.213316
202	562942.3183	4340705.6304	-74.270924	39.213348
203	562940.7897	4340711.4479	-74.270941	39.213400
204	562940.2250	4340713.7867	-74.270947	39.213421
205	562939.4486	4340717.3108	-74.270956	39.213453
206	562938.1544	4340723.1849	-74.270970	39.213506
207	562937.9021	4340724.3888	-74.270973	39.213517
208	562937.6840	4340725.5445	-74.270975	39.213528
209	562936.6264	4340731.4658	-74.270987	39.213581
210	562935.8861	4340735.6103	-74.270995	39.213618
211	562935.6864	4340736.7967	-74.270997	39.213629
212	562908.3079	4340910.0883	-74.271298	39.215192
213	562881.0235	4341082.7835	-74.271598	39.216750
214	562882.0742	4341108.1732	-74.271584	39.216979
215	562873.2477	4341132.0001	-74.271684	39.217195
216	562845.6941	4341306.3995	-74.271987	39.218768
217	562818.1352	4341480.8327	-74.272290	39.220342
218	562809.1517	4341505.6531	-74.272392	39.220566
219	562810.0511	4341532.0001	-74.272379	39.220803
220	562787.0339	4341677.6867	-74.272632	39.222118
221	562763.9680	4341823.6813	-74.272885	39.223435
222	562763.8679	4341824.2969	-74.272886	39.223440
223	562763.1985	4341828.3023	-74.272894	39.223476
224	562762.5804	4341832.0001	-74.272901	39.223510
225	562753.2964	4341856.8493	-74.273006	39.223734
226	562753.9224	4341883.0686	-74.272996	39.223970

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
227	562749.7727	4341907.5449	-74.273042	39.224191
228	562745.6266	4341932.0001	-74.273088	39.224412
229	562746.3924	4341957.3959	-74.273077	39.224641
230	562737.2987	4341981.1213	-74.273180	39.224855
231	562732.9857	4342006.5613	-74.273227	39.225085
232	562728.6728	4342032.0001	-74.273275	39.225314
233	562729.6056	4342056.4110	-74.273262	39.225534
234	562720.6751	4342079.1739	-74.273363	39.225740
235	562700.5437	4342197.9161	-74.273585	39.226811
236	562680.3824	4342316.8355	-74.273808	39.227884
237	562680.3311	4342317.1430	-74.273808	39.227887
238	562680.0586	4342318.8075	-74.273811	39.227902
239	562679.8361	4342320.1668	-74.273814	39.227914
240	562679.7874	4342320.4696	-74.273814	39.227917
241	562576.1700	4342976.3106	-74.274954	39.233834
242	562472.5765	4343632.0001	-74.276093	39.239749
243	562473.9456	4343655.3747	-74.276075	39.239960
244	562465.4330	4343677.2150	-74.276172	39.240157
245	562377.7816	4344232.0001	-74.277136	39.245162
246	562290.1302	4344786.7853	-74.278101	39.250167
247	562281.6176	4344808.6256	-74.278197	39.250365
248	562282.9866	4344832.0001	-74.278179	39.250575
249	562269.4892	4344917.4313	-74.278328	39.251346
250	562255.9269	4345003.2736	-74.278477	39.252120
251	562255.7908	4345004.0948	-74.278479	39.252128
252	562255.2280	4345007.3374	-74.278485	39.252157
253	562254.4518	4345011.8102	-74.278493	39.252197
254	562254.2049	4345013.1359	-74.278496	39.252209
255	562254.1424	4345013.4457	-74.278497	39.252212
256	562253.2312	4345017.8930	-74.278507	39.252252
257	562252.6541	4345020.7094	-74.278513	39.252278
258	562252.2954	4345022.3348	-74.278517	39.252292
259	562251.2500	4345026.7525	-74.278529	39.252332
260	562250.4922	4345029.9552	-74.278538	39.252361
261	562250.2944	4345030.7636	-74.278540	39.252368
262	562192.1334	4345260.9468	-74.279193	39.254447
263	562127.9062	4345515.1379	-74.279914	39.256741
264	562130.3077	4345526.7712	-74.279885	39.256846
265	562130.7247	4345528.8212	-74.279880	39.256865
266	562130.8524	4345530.9092	-74.279878	39.256883

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
267	562130.6883	4345532.9949	-74.279880	39.256902
268	562129.9137	4345536.2734	-74.279888	39.256932
269	562129.3261	4345539.1569	-74.279895	39.256958
270	562128.7560	4345542.4771	-74.279901	39.256988
271	562120.2104	4345599.6474	-74.279995	39.257503
272	562120.1331	4345600.1143	-74.279996	39.257508
273	562099.5463	4345732.2540	-74.280222	39.258700
274	562082.8746	4345823.8987	-74.280407	39.259527
275	562082.8191	4345824.2243	-74.280408	39.259530
276	562082.4179	4345826.4876	-74.280412	39.259550
277	562081.6006	4345829.9927	-74.280421	39.259582
278	562080.5558	4345833.4368	-74.280433	39.259613
279	562079.2880	4345836.8053	-74.280447	39.259643
280	562077.8027	4345840.0836	-74.280464	39.259673
281	562076.1061	4345843.2577	-74.280484	39.259702
282	562074.3546	4345846.0742	-74.280504	39.259727
283	562066.3080	4345896.6071	-74.280592	39.260183
284	562065.5627	4345901.3913	-74.280601	39.260226
285	562065.5232	4345901.6541	-74.280601	39.260229
286	562067.1283	4345909.3745	-74.280582	39.260298
287	562067.4811	4345912.9563	-74.280577	39.260330
288	562067.5988	4345916.5534	-74.280576	39.260363
289	562067.4811	4345920.1506	-74.280577	39.260395
290	562067.1283	4345923.7324	-74.280580	39.260427
291	562066.9432	4345925.0201	-74.280582	39.260439
292	562051.3636	4346025.0201	-74.280754	39.261341
293	562028.7869	4346185.0287	-74.281001	39.262784
294	562020.3224	4346206.8786	-74.281097	39.262982
295	562020.2737	4346207.1987	-74.281097	39.262985
296	562007.4806	4346289.3133	-74.281238	39.263726
297	561992.5595	4346380.7401	-74.281403	39.264550
298	561992.1157	4346383.9674	-74.281407	39.264580
299	561991.8328	4346386.7631	-74.281410	39.264605
300	561991.6211	4346390.0137	-74.281413	39.264634
301	561987.9849	4346467.0797	-74.281448	39.265329
302	561985.2798	4346524.4113	-74.281474	39.265845
303	561985.2335	4346525.2453	-74.281474	39.265853
304	561984.9936	4346528.9971	-74.281477	39.265887
305	561984.6737	4346533.9996	-74.281480	39.265932
306	561984.5392	4346535.6651	-74.281481	39.265947

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
307	561984.2147	4346538.9909	-74.281485	39.265977
308	561983.7279	4346543.9799	-74.281490	39.266022
309	561983.5378	4346545.6399	-74.281492	39.266037
310	561983.1024	4346548.9530	-74.281497	39.266067
311	561982.4491	4346553.9229	-74.281504	39.266112
312	561982.2037	4346555.5757	-74.281506	39.266126
313	561981.3847	4346560.5211	-74.281516	39.266171
314	561980.8388	4346563.8177	-74.281522	39.266201
315	561980.5383	4346565.4614	-74.281525	39.266216
316	561979.5545	4346570.3766	-74.281536	39.266260
317	561978.8987	4346573.6532	-74.281543	39.266290
318	561978.5435	4346575.2859	-74.281547	39.266304
319	561977.3961	4346580.1655	-74.281560	39.266348
320	561976.5356	4346583.8250	-74.281570	39.266381
321	561976.3375	4346584.6368	-74.281572	39.266389
322	561960.1773	4346648.5476	-74.281753	39.266966
323	561934.6658	4346749.4409	-74.282040	39.267877
324	561932.0501	4346767.0294	-74.282068	39.268035
325	561932.0195	4346767.2461	-74.282069	39.268037
326	561931.2183	4346770.6348	-74.282078	39.268068
327	561930.5996	4346773.6674	-74.282085	39.268095
328	561930.0751	4346776.7177	-74.282090	39.268123
329	561929.6453	4346779.7828	-74.282095	39.268150
330	561917.9606	4346867.0986	-74.282222	39.268938
331	561917.5840	4346870.5602	-74.282227	39.268969
332	561917.5439	4346870.8396	-74.282227	39.268972
333	561908.2137	4346970.9886	-74.282326	39.269875
334	561898.6284	4347033.6198	-74.282431	39.270440
335	561920.0470	4347228.7911	-74.282165	39.272197
336	566454.4837	4341600.8814	-74.230157	39.221152
337	566268.9349	4341782.5648	-74.232288	39.222804
338	566082.0127	4341965.5930	-74.234435	39.224467
339	566081.4890	4341966.1112	-74.234441	39.224472
340	566081.0752	4341966.5285	-74.234446	39.224476
341	566078.4886	4341969.1588	-74.234476	39.224499
342	566074.5090	4341973.2059	-74.234522	39.224536
343	566072.6879	4341975.1293	-74.234542	39.224554
344	566068.8642	4341979.3240	-74.234586	39.224592
345	566066.3790	4341982.0503	-74.234615	39.224617
346	566065.4961	4341983.0375	-74.234625	39.224625

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
347	566000.2178	4342057.4293	-74.235374	39.225301
348	565935.3757	4342131.3239	-74.236118	39.225971
349	565900.0001	4342171.6382	-74.236524	39.226337
350	565832.5940	4342248.4549	-74.237297	39.227035
351	565764.8427	4342325.6650	-74.238074	39.227735
352	565764.1469	4342326.4469	-74.238082	39.227743
353	565762.3939	4342328.3892	-74.238103	39.227760
354	565759.5890	4342331.4971	-74.238135	39.227788
355	565758.1650	4342333.0313	-74.238151	39.227802
356	565755.2745	4342336.0597	-74.238184	39.227830
357	565753.4680	4342337.9524	-74.238205	39.227847
358	565752.7402	4342338.7044	-74.238213	39.227854
359	565726.6163	4342365.3208	-74.238513	39.228096
360	565720.9862	4342373.2332	-74.238578	39.228167
361	565675.0182	4342420.0678	-74.239106	39.228593
362	565674.2343	4342421.0757	-74.239115	39.228602
363	565664.7045	4342432.3073	-74.239224	39.228704
364	565664.2116	4342432.8048	-74.239230	39.228708
365	565660.6295	4342436.1598	-74.239271	39.228739
366	565656.8357	4342439.2733	-74.239315	39.228767
367	565643.0662	4342447.6190	-74.239473	39.228844
368	565605.4194	4342497.4379	-74.239905	39.229295
369	565602.9889	4342500.4758	-74.239932	39.229323
370	565602.7957	4342500.7260	-74.239935	39.229325
371	565586.1209	4342522.4557	-74.240126	39.229522
372	565583.2162	4342525.9951	-74.240159	39.229554
373	565566.3775	4342539.9714	-74.240353	39.229681
374	565544.1149	4342573.1191	-74.240607	39.229982
375	565521.7211	4342602.3016	-74.240864	39.230246
376	565499.3274	4342631.4839	-74.241121	39.230511
377	565480.1475	4342648.2651	-74.241341	39.230664
378	565468.9009	4342671.1343	-74.241469	39.230871
379	565434.4504	4342716.0285	-74.241864	39.231278
380	565400.0001	4342760.9225	-74.242259	39.231685
381	565381.4737	4342776.8521	-74.242472	39.231830
382	565370.8806	4342798.8697	-74.242593	39.232029
383	565166.3264	4343065.4350	-74.244937	39.234446
384	564961.7722	4343332.0001	-74.247281	39.236863
385	564951.8326	4343353.1660	-74.247394	39.237055
386	564933.9597	4343368.2441	-74.247600	39.237192

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
387	564731.5612	4343632.0001	-74.249919	39.239584
388	564529.1628	4343895.7562	-74.252239	39.241975
389	564511.2898	4343910.8343	-74.252445	39.242112
390	564501.3502	4343932.0001	-74.252558	39.242304
391	564319.3035	4344169.2347	-74.254645	39.244455
392	564137.0380	4344406.7543	-74.256734	39.246608
393	564136.6043	4344407.3271	-74.256739	39.246614
394	564134.6866	4344409.8950	-74.256761	39.246637
395	564132.3383	4344413.0394	-74.256788	39.246665
396	564131.9109	4344413.6196	-74.256793	39.246671
397	563903.6192	4344727.8076	-74.259409	39.249518
398	563675.2888	4345042.0490	-74.262025	39.252367
399	563674.7825	4345042.7346	-74.262031	39.252373
400	563672.5031	4345045.7715	-74.262057	39.252400
401	563669.7120	4345049.4902	-74.262089	39.252434
402	563669.1950	4345050.1681	-74.262095	39.252440
403	563496.9940	4345272.3399	-74.264069	39.254455
404	563325.0410	4345494.1917	-74.266041	39.256466
405	563314.3340	4345516.1675	-74.266163	39.256665
406	563295.7364	4345532.0001	-74.266377	39.256809
407	563147.8683	4345722.7780	-74.268073	39.258539
408	563000.0001	4345913.5558	-74.269769	39.260268
409	562981.4025	4345929.3884	-74.269983	39.260412
410	562970.6956	4345951.3642	-74.270105	39.260611
411	562823.1773	4346141.6907	-74.271797	39.262337
412	562675.6722	4346332.0001	-74.273489	39.264062
413	562665.6307	4346353.1174	-74.273604	39.264253
414	562647.6828	4346368.1118	-74.273810	39.264390
415	562505.0719	4346552.1067	-74.275446	39.266058
416	562183.6360	4346966.8198	-74.279134	39.269817
417	562041.0252	4347150.8147	-74.280770	39.271486
418	561980.5361	4347189.8029	-74.281467	39.271841
419	561920.0470	4347228.7911	-74.282165	39.272197
420	561920.0470	4347228.7911	-74.282165	39.272197
421	561918.9248	4347232.2734	-74.282178	39.272228
422	561917.9308	4347235.7945	-74.282189	39.272260
423	561917.0663	4347239.3495	-74.282199	39.272292
424	561916.3324	4347242.9338	-74.282207	39.272324
425	561915.6548	4347246.9937	-74.282214	39.272361
426	561867.5596	4347571.6360	-74.282742	39.275290

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
427	561827.7363	4347840.4435	-74.283179	39.277714
428	561827.6245	4347841.2425	-74.283180	39.277722
429	561826.9924	4347846.0417	-74.283187	39.277765
430	561826.8076	4347847.6446	-74.283189	39.277779
431	561826.3307	4347852.4618	-74.283194	39.277823
432	561826.1977	4347854.0698	-74.283196	39.277837
433	561825.8765	4347858.8998	-74.283199	39.277881
434	561825.7955	4347860.5114	-74.283200	39.277895
435	561825.6303	4347865.3492	-74.283201	39.277939
436	561825.6013	4347866.9625	-74.283201	39.277954
437	561825.5923	4347871.8032	-74.283201	39.277997
438	561825.5973	4347872.6100	-74.283201	39.278004
439	561825.1233	4347876.2094	-74.283206	39.278037
440	561824.8054	4347879.4206	-74.283209	39.278066
441	561824.5913	4347882.6404	-74.283212	39.278095
442	561824.4812	4347885.8654	-74.283213	39.278124
443	561824.4745	4347889.4958	-74.283212	39.278157
444	561839.5144	4348942.2870	-74.282941	39.287641
445	561853.9600	4349953.4793	-74.282681	39.296751
446	561854.1009	4349957.7257	-74.282679	39.296790
447	561854.1186	4349958.5237	-74.282678	39.296797
448	561854.2635	4349963.3094	-74.282676	39.296840
449	561854.3372	4349964.9036	-74.282675	39.296854
450	561854.6049	4349968.6707	-74.282672	39.296888
451	561854.9023	4349973.4493	-74.282668	39.296931
452	561855.0269	4349975.0404	-74.282666	39.296946
453	561855.4767	4349979.8071	-74.282661	39.296989
454	561855.8865	4349983.5614	-74.282656	39.297022
455	561855.9678	4349984.3550	-74.282655	39.297030
456	561856.5880	4349988.5584	-74.282647	39.297067
457	561863.1007	4350047.5008	-74.282566	39.297598
458	561870.6965	4350093.0137	-74.282474	39.298008
459	561870.7986	4350093.8698	-74.282473	39.298015
460	561871.4553	4350099.0012	-74.282464	39.298061
461	561871.7037	4350100.7076	-74.282461	39.298077
462	561872.5369	4350105.8132	-74.282451	39.298123
463	561872.8440	4350107.5100	-74.282448	39.298138
464	561878.9787	4350135.3689	-74.282374	39.298389
465	561879.3441	4350137.0541	-74.282370	39.298404
466	561879.4881	4350139.1413	-74.282368	39.298422

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
467	561880.6713	4350144.1773	-74.282353	39.298468
468	561880.9403	4350152.3162	-74.282350	39.298541
469	561880.3714	4350160.1629	-74.282355	39.298612
470	561880.5758	4350161.0007	-74.282353	39.298619
471	561880.4187	4350163.0867	-74.282355	39.298638
472	561880.5534	4350165.1743	-74.282353	39.298657
473	561880.9774	4350167.2229	-74.282348	39.298675
474	561881.6117	4350169.0291	-74.282340	39.298692
475	561885.4672	4350178.1068	-74.282295	39.298773
476	561886.0107	4350179.2496	-74.282288	39.298783
477	561894.9720	4350205.3996	-74.282182	39.299018
478	561895.6950	4350208.6615	-74.282173	39.299048
479	561933.4662	4350357.8262	-74.281722	39.300389
480	561934.3035	4350361.0608	-74.281712	39.300418
481	561935.2541	4350364.2638	-74.281700	39.300447
482	561936.3167	4350367.4315	-74.281688	39.300475
483	561937.4900	4350370.5598	-74.281674	39.300503
484	561938.7726	4350373.6450	-74.281659	39.300531
485	561940.3643	4350377.1230	-74.281640	39.300562
486	561940.5918	4350377.9888	-74.281637	39.300570
487	561942.0034	4350383.1716	-74.281620	39.300617
488	561942.5048	4350384.8905	-74.281614	39.300632
489	561944.1010	4350390.0194	-74.281595	39.300678
490	561944.6636	4350391.7192	-74.281589	39.300694
491	561946.4425	4350396.7877	-74.281567	39.300739
492	561947.0656	4350398.4663	-74.281560	39.300754
493	561949.0248	4350403.4678	-74.281537	39.300799
494	561949.7076	4350405.1231	-74.281529	39.300814
495	561951.8446	4350410.0512	-74.281504	39.300858
496	561952.2081	4350410.8695	-74.281499	39.300866
497	562081.3775	4350694.7109	-74.279975	39.303414
498	562296.5928	4351143.9418	-74.277438	39.307446
499	562313.0011	4351178.4408	-74.277244	39.307756
500	562313.1606	4351178.7660	-74.277242	39.307759
501	562320.7330	4351193.7434	-74.277153	39.307893
502	562320.8401	4351193.9596	-74.277152	39.307895
503	562346.7421	4351247.3075	-74.276846	39.308374
504	562347.2076	4351248.1901	-74.276841	39.308382
505	562350.6733	4351254.2629	-74.276800	39.308436
506	562356.0392	4351277.0362	-74.276736	39.308641

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
507	562356.4026	4351277.7126	-74.276732	39.308647
508	562360.7901	4351286.4067	-74.276680	39.308725
509	562361.0803	4351287.0153	-74.276676	39.308730
510	562387.6070	4351346.0376	-74.276363	39.309260
511	562387.9724	4351346.7933	-74.276359	39.309267
512	562400.8352	4351371.5984	-74.276208	39.309490
513	562401.0614	4351372.0534	-74.276205	39.309494
514	562436.8972	4351447.2970	-74.275782	39.310169
515	562436.9595	4351447.4262	-74.275782	39.310170
516	562453.6378	4351481.5985	-74.275585	39.310477
517	562453.8637	4351482.0830	-74.275582	39.310481
518	562638.6830	4351867.8668	-74.273403	39.313944
519	562646.8978	4351886.3414	-74.273306	39.314110
520	562647.0515	4351886.6761	-74.273304	39.314113
521	562657.4191	4351908.5294	-74.273182	39.314309
522	562657.6285	4351908.9908	-74.273179	39.314313
523	562664.6708	4351925.2303	-74.273096	39.314459
524	562670.2873	4351935.7719	-74.273030	39.314554
525	562670.5787	4351936.3416	-74.273026	39.314559
526	562681.2194	4351958.2927	-74.272901	39.314756
527	562681.3624	4351958.5799	-74.272899	39.314758
528	562692.3139	4351979.9926	-74.272770	39.314950
529	562692.5479	4351980.4708	-74.272767	39.314955
530	562705.7292	4352008.6709	-74.272612	39.315208
531	562705.8499	4352008.9228	-74.272610	39.315210
532	562715.1599	4352027.9098	-74.272501	39.315380
533	562715.3837	4352028.3873	-74.272498	39.315385
534	562741.5592	4352086.8902	-74.272189	39.315910
535	562741.8931	4352087.6016	-74.272185	39.315916
536	562743.8633	4352091.8855	-74.272162	39.315955
537	562744.4975	4352093.3236	-74.272154	39.315968
538	562746.3320	4352097.6674	-74.272133	39.316007
539	562746.6321	4352098.3938	-74.272129	39.316013
540	562746.8097	4352098.7761	-74.272127	39.316017
541	562759.6831	4352125.5061	-74.271975	39.316257
542	562759.8273	4352125.8143	-74.271973	39.316259
543	562765.0874	4352137.4019	-74.271911	39.316363
544	562765.4232	4352138.0940	-74.271907	39.316370
545	562781.5658	4352169.2951	-74.271717	39.316650
546	562781.7588	4352169.6817	-74.271715	39.316653

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
547	562814.3788	4352237.4481	-74.271330	39.317261
548	562814.5201	4352237.7339	-74.271329	39.317264
549	562831.6351	4352271.4368	-74.271127	39.317566
550	562977.1468	4352631.6710	-74.269405	39.320801
551	562977.4321	4352632.2649	-74.269402	39.320807
552	562987.9105	4352655.3602	-74.269278	39.321014
553	562988.0373	4352655.6475	-74.269277	39.321017
554	562994.0236	4352669.6124	-74.269206	39.321142
555	562994.5056	4352670.6295	-74.269200	39.321151
556	563000.6148	4352682.3621	-74.269128	39.321256
557	563000.8894	4352682.9173	-74.269125	39.321261
558	563001.6439	4352684.8685	-74.269116	39.321279
559	563002.1194	4352686.9057	-74.269110	39.321297
560	563027.2133	4352743.8792	-74.268814	39.321809
561	563069.1071	4352832.0893	-74.268320	39.322600
562	563070.7115	4352835.8620	-74.268301	39.322634
563	563072.2589	4352839.1611	-74.268282	39.322664
564	563073.9254	4352842.4016	-74.268263	39.322693
565	563075.7089	4352845.5793	-74.268242	39.322722
566	563076.3709	4352846.4079	-74.268234	39.322729
567	563078.2690	4352849.5185	-74.268212	39.322757
568	563079.3960	4352851.2811	-74.268199	39.322773
569	563081.4061	4352854.3204	-74.268175	39.322800
570	563087.0952	4352862.8350	-74.268108	39.322876
571	563087.5851	4352863.4547	-74.268102	39.322882
572	563089.7047	4352866.4187	-74.268078	39.322908
573	563090.8388	4352868.1768	-74.268064	39.322924
574	563093.0650	4352871.0617	-74.268038	39.322950
575	563095.6861	4352874.2138	-74.268007	39.322978
576	563174.6236	4352966.2300	-74.267083	39.323801
577	563200.1218	4352993.3669	-74.266785	39.324044
578	563201.5678	4352994.8789	-74.266768	39.324058
579	563208.0624	4353002.2712	-74.266692	39.324124
580	563208.7130	4353002.9814	-74.266684	39.324130
581	563230.6400	4353028.5212	-74.266427	39.324359
582	563231.0098	4353028.9692	-74.266423	39.324363
583	563270.1017	4353078.2426	-74.265965	39.324804
584	563270.5435	4353078.7738	-74.265960	39.324808
585	563281.1802	4353090.9804	-74.265835	39.324918
586	563295.3558	4353107.2482	-74.265669	39.325063

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
587	563325.1349	4353141.4225	-74.265321	39.325369
588	563325.4103	4353141.7477	-74.265317	39.325372
589	563363.7941	4353188.4112	-74.264868	39.325789
590	563374.8510	4353200.5478	-74.264738	39.325898
591	563892.1145	4353800.0435	-74.258680	39.331261
592	563911.3855	4353821.1443	-74.258455	39.331450
593	563933.2351	4353845.0685	-74.258199	39.331664
594	563933.8643	4353845.8038	-74.258192	39.331671
595	563990.2233	4353916.1364	-74.257531	39.332300
596	563996.4594	4353923.9186	-74.257458	39.332370
597	564008.8430	4353938.0702	-74.257313	39.332496
598	564009.7119	4353939.1329	-74.257303	39.332506
599	564023.9087	4353954.9729	-74.257137	39.332648
600	564024.9414	4353956.0165	-74.257125	39.332657
601	564050.9229	4353984.9805	-74.256820	39.332916
602	564051.7314	4353985.8818	-74.256811	39.332924
603	564069.2324	4354005.3917	-74.256606	39.333099
604	564069.6392	4354005.8646	-74.256601	39.333103
605	564153.0097	4354106.9698	-74.255624	39.334008
606	564154.9153	4354109.1267	-74.255602	39.334027
607	564155.1459	4354109.3997	-74.255599	39.334029
608	564170.4286	4354127.0582	-74.255420	39.334187
609	564171.0463	4354127.8210	-74.255413	39.334194
610	564176.1037	4354134.3476	-74.255354	39.334253
611	564183.0033	4354141.6122	-74.255273	39.334317
612	564183.4689	4354142.1256	-74.255268	39.334322
613	564225.1129	4354190.2436	-74.254780	39.334753
614	564225.3164	4354190.4837	-74.254777	39.334755
615	564230.4254	4354196.6438	-74.254718	39.334810
616	564234.0960	4354201.0694	-74.254675	39.334849
617	564246.4275	4354215.9377	-74.254530	39.334982
618	564799.5014	4354827.4061	-74.248054	39.340451
619	565424.8273	4355518.7549	-74.240731	39.346632
620	565425.2597	4355519.2393	-74.240726	39.346637
621	565427.8364	4355522.1635	-74.240696	39.346663
622	565428.2629	4355522.6539	-74.240691	39.346667
623	565429.8820	4355524.4835	-74.240672	39.346684
624	565431.4611	4355526.3480	-74.240653	39.346700
625	565874.1658	4356042.1206	-74.235465	39.351314
626	566141.0153	4356364.2213	-74.232337	39.354196

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
627	566159.6891	4356378.3003	-74.232119	39.354321
628	566170.4554	4356399.1332	-74.231992	39.354508
629	566552.1921	4356843.8750	-74.227517	39.358486
630	566972.3971	4357351.0836	-74.222590	39.363023
631	566972.8436	4357351.6104	-74.222584	39.363028
632	566977.6779	4357357.3878	-74.222528	39.363080
633	566978.5508	4357358.4580	-74.222517	39.363089
634	566983.2385	4357364.3550	-74.222462	39.363142
635	566984.0843	4357365.4468	-74.222452	39.363152
636	566988.6224	4357371.4596	-74.222399	39.363206
637	566989.4405	4357372.5723	-74.222390	39.363215
638	566993.8263	4357378.6971	-74.222338	39.363270
639	566994.6161	4357379.8300	-74.222329	39.363280
640	566998.8467	4357386.0630	-74.222279	39.363336
641	566999.6079	4357387.2154	-74.222270	39.363347
642	567003.6807	4357393.5527	-74.222222	39.363403
643	567004.4127	4357394.7238	-74.222214	39.363414
644	567008.3250	4357401.1614	-74.222168	39.363472
645	567009.0274	4357402.3505	-74.222159	39.363482
646	567012.7769	4357408.8843	-74.222115	39.363541
647	567013.1169	4357409.4855	-74.222111	39.363546
648	567015.7418	4357412.7819	-74.222080	39.363576
649	567017.9215	4357415.7481	-74.222055	39.363602
650	567019.9846	4357418.7965	-74.222030	39.363630
651	567021.9281	4357421.9225	-74.222008	39.363658
652	567023.7490	4357425.1215	-74.221986	39.363686
653	567025.6901	4357428.8617	-74.221963	39.363720
654	567143.9623	4357641.0907	-74.220569	39.365623
655	567236.1271	4357827.4227	-74.219481	39.367294
656	567260.4619	4357874.3214	-74.219193	39.367715
657	567260.9140	4357875.2150	-74.219188	39.367723
658	567263.4251	4357880.0673	-74.219159	39.367767
659	567264.3781	4357881.8295	-74.219147	39.367782
660	567267.0642	4357886.5871	-74.219116	39.367825
661	567267.5647	4357887.4551	-74.219110	39.367833
662	567267.7280	4357887.7791	-74.219108	39.367836
663	567365.9327	4358054.5486	-74.217951	39.369331
664	567469.0316	4358265.5755	-74.216733	39.371224
665	567484.9354	4358282.7294	-74.216547	39.371377
666	567485.0526	4358282.9640	-74.216545	39.371379

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
667	567545.1220	4358384.9729	-74.215838	39.372294
668	567624.0104	4358539.5304	-74.214906	39.373680
669	567625.8293	4358542.7384	-74.214885	39.373709
670	567627.3517	4358545.6413	-74.214867	39.373735
671	567628.9565	4358548.9614	-74.214848	39.373765
672	567629.1588	4358549.3731	-74.214846	39.373769
673	567712.0104	4358724.7403	-74.213866	39.375342
674	567894.4247	4359118.4825	-74.211709	39.378875
675	567894.6661	4359118.9703	-74.211706	39.378880
676	567918.3071	4359164.6393	-74.211427	39.379289
677	567918.5926	4359165.1648	-74.211423	39.379294
678	567936.9378	4359197.3869	-74.211207	39.379583
679	567937.4751	4359198.4094	-74.211201	39.379592
680	567981.2833	4359290.0691	-74.210683	39.380414
681	567986.3707	4359312.9448	-74.210621	39.380620
682	568016.2105	4359376.7403	-74.210269	39.381193
683	568062.5389	4359476.7403	-74.209720	39.382090
684	568062.8640	4359477.4027	-74.209717	39.382096
685	568078.6902	4359509.1721	-74.209530	39.382381
686	568092.8409	4359527.8220	-74.209363	39.382548
687	568285.8217	4359931.5947	-74.207082	39.386171
688	568475.0611	4360340.0691	-74.204843	39.389836
689	568489.4248	4360358.5271	-74.204674	39.390001
690	568496.7092	4360386.1450	-74.204587	39.390249
691	568497.7047	4360388.3583	-74.204575	39.390269
692	568498.6507	4360390.5935	-74.204564	39.390289
693	568503.9638	4360403.4971	-74.204501	39.390405
694	568504.0083	4360403.5859	-74.204500	39.390406
695	568530.6713	4360457.1865	-74.204185	39.390887
696	568530.8206	4360457.4955	-74.204183	39.390889
697	568571.8094	4360544.8554	-74.203698	39.391673
698	568572.0676	4360545.3790	-74.203695	39.391678
699	568576.8466	4360554.6118	-74.203639	39.391761
700	568771.7975	4360962.5067	-74.201333	39.395420
701	568772.4192	4360963.8709	-74.201326	39.395433
702	568785.0316	4360988.2535	-74.201177	39.395651
703	568785.7824	4360989.7086	-74.201168	39.395664
704	568802.4679	4361021.8398	-74.200971	39.395952
705	568802.9818	4361022.7530	-74.200965	39.395961
706	568833.7383	4361082.1728	-74.200602	39.396494

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
707	568833.8278	4361082.3485	-74.200601	39.396495
708	568847.8769	4361110.3883	-74.200435	39.396747
709	568848.2054	4361111.0884	-74.200431	39.396753
710	568856.2145	4361129.3707	-74.200336	39.396917
711	568856.5892	4361130.1623	-74.200332	39.396924
712	568876.1417	4361168.5290	-74.200101	39.397268
713	568876.4677	4361169.1340	-74.200097	39.397274
714	568877.1904	4361170.6204	-74.200088	39.397287
715	568882.4258	4361179.8247	-74.200026	39.397369
716	568882.9227	4361180.7759	-74.200020	39.397378
717	568890.9451	4361197.5730	-74.199926	39.397529
718	568891.2640	4361198.2881	-74.199922	39.397535
719	568894.7065	4361206.5840	-74.199881	39.397610
720	568895.2634	4361207.7755	-74.199874	39.397620
721	568901.6553	4361220.0198	-74.199799	39.397730
722	568901.8934	4361220.4964	-74.199796	39.397734
723	568911.8202	4361241.2808	-74.199679	39.397921
724	568972.8768	4361364.7207	-74.198957	39.399028
725	568973.2332	4361365.5270	-74.198953	39.399035
726	568976.6180	4361373.8378	-74.198913	39.399110
727	568977.0405	4361374.7808	-74.198908	39.399118
728	568981.7222	4361384.3327	-74.198852	39.399204
729	568982.1233	4361385.2235	-74.198847	39.399212
730	569001.3538	4361431.9341	-74.198619	39.399631
731	569001.7765	4361432.8080	-74.198614	39.399639
732	569004.0399	4361437.5947	-74.198588	39.399682
733	569004.8387	4361439.3642	-74.198578	39.399698
734	569006.9317	4361444.2278	-74.198553	39.399742
735	569007.3076	4361445.1229	-74.198549	39.399750
736	569007.4974	4361445.6077	-74.198547	39.399754
737	569007.7599	4361446.2928	-74.198543	39.399760
738	569038.8450	4361522.5206	-74.198175	39.400445
739	569039.0996	4361523.1087	-74.198172	39.400450
740	569042.0503	4361529.5432	-74.198137	39.400508
741	569042.2859	4361530.0850	-74.198134	39.400513
742	569042.7674	4361531.2545	-74.198128	39.400523
743	569042.8387	4361531.4245	-74.198127	39.400525
744	569048.5068	4361544.7251	-74.198060	39.400644
745	569048.8262	4361545.5399	-74.198056	39.400651
746	569060.2510	4361572.3490	-74.197921	39.400892

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
747	569060.6187	4361573.1464	-74.197917	39.400899
748	569063.2310	4361579.2762	-74.197886	39.400954
749	569063.4750	4361579.8853	-74.197883	39.400960
750	569070.3444	4361598.1867	-74.197801	39.401124
751	569076.8913	4361611.7766	-74.197724	39.401246
752	569077.3288	4361612.7632	-74.197718	39.401255
753	569093.0444	4361651.9562	-74.197532	39.401606
754	569094.0364	4361654.4302	-74.197520	39.401629
755	569095.3384	4361657.6772	-74.197505	39.401658
756	569095.4432	4361657.9461	-74.197503	39.401660
757	569303.0439	4362164.8072	-74.195040	39.406210
758	569322.5368	4362216.2668	-74.194808	39.406672
759	569325.3884	4362223.7994	-74.194774	39.406740
760	569325.4682	4362224.0053	-74.194773	39.406742
761	569341.4225	4362266.1232	-74.194584	39.407120
762	569358.8252	4362309.5873	-74.194377	39.407510
763	569364.1410	4362321.1752	-74.194314	39.407614
764	569364.3925	4362321.7234	-74.194311	39.407619
765	569375.2840	4362346.7756	-74.194182	39.407844
766	569375.4226	4362347.0848	-74.194180	39.407847
767	569381.9456	4362361.2066	-74.194103	39.407974
768	569383.8011	4362365.2237	-74.194081	39.408010
769	569403.5054	4362407.8824	-74.193848	39.408392
770	569403.9634	4362408.9878	-74.193843	39.408402
771	569418.2522	4362447.7847	-74.193673	39.408751
772	569422.2841	4362470.8207	-74.193623	39.408958
773	569469.1225	4362592.1193	-74.193067	39.410047
774	569537.9677	4362760.2061	-74.192250	39.411556
775	569538.1720	4362760.7081	-74.192247	39.411560
776	569558.6471	4362808.5139	-74.192004	39.411989
777	569558.7442	4362808.7526	-74.192003	39.411992
778	569559.3224	4362810.1853	-74.191996	39.412004
779	569559.4181	4362810.4242	-74.191995	39.412007
780	569616.6738	4362943.6644	-74.191316	39.413202
781	569616.8465	4362944.0838	-74.191314	39.413206
782	569708.2467	4363173.9619	-74.190229	39.415270
783	569729.0125	4363226.6238	-74.189982	39.415743
784	569731.5587	4363233.0965	-74.189952	39.415801
785	569731.7162	4363233.4802	-74.189950	39.415804
786	569741.8321	4363259.1341	-74.189830	39.416035

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
787	569742.8078	4363261.5164	-74.189818	39.416056
788	569783.5154	4363340.1640	-74.189337	39.416761
789	569785.0035	4363343.1464	-74.189319	39.416788
790	569786.2471	4363345.8353	-74.189305	39.416812
791	569787.5559	4363348.9006	-74.189289	39.416840
792	569883.7149	4363576.9517	-74.188148	39.418887
793	569883.8142	4363577.1890	-74.188147	39.418889
794	569884.4069	4363578.6151	-74.188140	39.418902
795	569884.5051	4363578.8532	-74.188139	39.418904
796	570357.8307	4364734.4875	-74.182519	39.429277
797	571068.3985	4366469.3534	-74.174079	39.444850
798	571167.6463	4366728.1674	-74.172899	39.447173
799	571240.2190	4366910.5798	-74.172036	39.448811
800	571293.1774	4366985.1138	-74.171412	39.449478
801	571369.6729	4367065.5322	-74.170515	39.450196
802	572089.5153	4367852.0630	-74.162064	39.457223
803	572593.6011	4368416.9530	-74.156144	39.462270
804	572656.3667	4368503.2556	-74.155405	39.463042
805	572683.8266	4368569.9440	-74.155079	39.463640
806	572689.8593	4368608.7748	-74.155005	39.463990
807	572733.1324	4368942.3381	-74.154465	39.466991
808	572778.9360	4369295.4079	-74.153894	39.470169
809	572779.5397	4369299.4768	-74.153887	39.470205
810	572780.2082	4369303.0715	-74.153879	39.470237
811	572781.0076	4369306.6393	-74.153869	39.470270
812	572781.1335	4369307.5447	-74.153867	39.470278
813	572782.0628	4369311.0809	-74.153856	39.470309
814	572782.8678	4369316.5064	-74.153846	39.470358
815	572783.1691	4369318.3097	-74.153843	39.470375
816	572784.2272	4369321.8096	-74.153830	39.470406
817	572785.2300	4369327.2020	-74.153818	39.470454
818	572785.5970	4369328.9930	-74.153813	39.470471
819	572786.7963	4369334.3452	-74.153799	39.470519
820	572787.9815	4369337.8040	-74.153784	39.470550
821	572788.4138	4369339.5805	-74.153779	39.470566
822	572789.8079	4369344.8852	-74.153762	39.470613
823	572790.3049	4369346.6447	-74.153757	39.470629
824	572791.6158	4369350.0578	-74.153741	39.470660
825	572793.2030	4369355.3080	-74.153722	39.470707
826	572793.7639	4369357.0481	-74.153715	39.470723

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
827	572795.5419	4369362.2368	-74.153694	39.470769
828	572796.9767	4369365.5998	-74.153677	39.470799
829	572797.6009	4369367.3183	-74.153669	39.470815
830	572799.5675	4369372.4385	-74.153646	39.470861
831	572801.1243	4369375.7467	-74.153628	39.470890
832	572801.8109	4369377.4412	-74.153619	39.470906
833	572803.9633	4369382.4861	-74.153594	39.470951
834	572804.7114	4369384.1543	-74.153585	39.470966
835	572806.3881	4369387.4035	-74.153565	39.470995
836	572808.7235	4369392.3663	-74.153537	39.471040
837	572809.5321	4369394.0061	-74.153528	39.471054
838	572812.0474	4369398.8802	-74.153498	39.471098
839	572813.8418	4369402.0659	-74.153477	39.471127
840	572814.7097	4369403.6750	-74.153467	39.471141
841	572817.4015	4369408.4539	-74.153435	39.471184
842	572818.3278	4369410.0302	-74.153424	39.471198
843	572820.2374	4369413.1481	-74.153401	39.471226
844	572823.1022	4369417.8254	-74.153367	39.471268
845	572824.0854	4369419.3668	-74.153356	39.471282
846	572827.1192	4369423.9363	-74.153320	39.471322
847	572829.1416	4369426.9823	-74.153296	39.471350
848	572830.1806	4369428.4867	-74.153284	39.471363
849	572833.3794	4369432.9422	-74.153246	39.471403
850	572835.5117	4369435.9123	-74.153221	39.471430
851	572836.6050	4369437.3777	-74.153208	39.471443
852	572839.9646	4369441.7132	-74.153169	39.471482
853	572841.1107	4369443.1377	-74.153155	39.471494
854	572843.3502	4369446.0278	-74.153129	39.471520
855	572846.8661	4369450.2376	-74.153088	39.471558
856	572848.0635	4369451.6192	-74.153074	39.471570
857	572851.7309	4369455.6977	-74.153031	39.471607
858	572854.0746	4369458.5040	-74.153003	39.471632
859	572854.6920	4369459.1782	-74.152996	39.471638
860	572857.4424	4369462.2369	-74.152963	39.471665
861	573068.0618	4369688.0212	-74.150490	39.473681
862	573301.5220	4369938.2909	-74.147749	39.475916
863	573302.1575	4369938.9597	-74.147741	39.475922
864	573306.0073	4369942.9370	-74.147696	39.475958
865	573307.3148	4369944.2388	-74.147681	39.475969
866	573311.3088	4369948.0714	-74.147634	39.476004

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
867	573312.6635	4369949.3241	-74.147618	39.476015
868	573316.7961	4369953.0067	-74.147570	39.476048
869	573318.1961	4369954.2086	-74.147553	39.476058
870	573322.4618	4369957.7362	-74.147503	39.476090
871	573323.9052	4369958.8857	-74.147486	39.476100
872	573328.2981	4369962.2535	-74.147435	39.476130
873	573329.7829	4369963.3489	-74.147417	39.476140
874	573334.2971	4369966.5523	-74.147365	39.476168
875	573335.8213	4369967.5922	-74.147347	39.476177
876	573340.4507	4369970.6269	-74.147293	39.476204
877	573342.0122	4369971.6098	-74.147274	39.476213
878	573346.7504	4369974.4716	-74.147219	39.476238
879	573348.3471	4369975.3962	-74.147200	39.476247
880	573353.1876	4369978.0813	-74.147144	39.476270
881	573354.8174	4369978.9464	-74.147125	39.476278
882	573359.7537	4369981.4510	-74.147067	39.476300
883	573362.4790	4369984.2723	-74.147035	39.476325
884	573364.1396	4369985.0766	-74.147016	39.476332
885	573369.1650	4369987.3974	-74.146957	39.476353
886	573370.0061	4369987.7765	-74.146947	39.476356
887	573372.5145	4369990.1983	-74.146918	39.476378
888	573375.1058	4369992.5311	-74.146887	39.476399
889	573377.7768	4369994.7722	-74.146856	39.476419
890	573380.5243	4369996.9187	-74.146824	39.476438
891	573383.3451	4369998.9682	-74.146791	39.476456
892	573386.2355	4370000.9181	-74.146757	39.476473
893	573389.1922	4370002.7660	-74.146722	39.476490
894	573392.2115	4370004.5098	-74.146687	39.476505
895	573395.2898	4370006.1472	-74.146651	39.476520
896	573398.4232	4370007.6762	-74.146615	39.476533
897	573402.0063	4370009.2726	-74.146573	39.476547
898	573767.9964	4370164.7370	-74.142301	39.477917
899	574552.5036	4370509.6177	-74.133142	39.480956
900	574560.6087	4370512.9706	-74.133047	39.480986
901	574874.3818	4370634.7886	-74.129385	39.482056
902	575951.9090	4371092.4982	-74.116806	39.486085
903	575955.5402	4371093.9738	-74.116763	39.486098
904	576357.9410	4371264.9048	-74.112065	39.487603
905	576380.9218	4371269.2342	-74.111797	39.487640
906	576400.0001	4371282.7707	-74.111574	39.487760

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
907	576450.1581	4371304.0766	-74.110988	39.487947
908	576524.1881	4371335.5229	-74.110124	39.488224
909	576527.9766	4371337.2183	-74.110079	39.488239
910	576531.2270	4371338.8244	-74.110041	39.488253
911	576532.1891	4371339.2440	-74.110030	39.488257
912	576535.3759	4371340.9730	-74.109993	39.488272
913	576540.6018	4371343.3115	-74.109932	39.488293
914	576542.5012	4371344.2054	-74.109910	39.488301
915	576547.6340	4371346.7416	-74.109850	39.488323
916	576550.7524	4371348.5910	-74.109813	39.488339
917	576552.6164	4371349.5567	-74.109792	39.488348
918	576557.6486	4371352.2869	-74.109733	39.488372
919	576560.6942	4371354.2539	-74.109697	39.488390
920	576562.5200	4371355.2901	-74.109676	39.488399
921	576567.4444	4371358.2104	-74.109618	39.488425
922	576569.2292	4371359.3154	-74.109597	39.488434
923	576572.1976	4371361.3972	-74.109563	39.488453
924	576577.0070	4371364.5034	-74.109506	39.488480
925	576578.7484	4371365.6757	-74.109486	39.488491
926	576581.6351	4371367.8693	-74.109452	39.488510
927	576586.3224	4371371.1567	-74.109397	39.488540
928	576588.0178	4371372.3946	-74.109377	39.488551
929	576592.5763	4371375.8585	-74.109324	39.488581
930	576595.3772	4371378.1606	-74.109291	39.488602
931	576597.0241	4371379.4623	-74.109272	39.488613
932	576601.4471	4371383.0976	-74.109220	39.488646
933	576604.1581	4371385.5050	-74.109188	39.488667
934	576605.7542	4371386.8686	-74.109169	39.488679
935	576610.0352	4371390.6701	-74.109119	39.488713
936	576611.5780	4371392.0936	-74.109101	39.488726
937	576614.1952	4371394.6026	-74.109070	39.488748
938	576618.3280	4371398.5647	-74.109022	39.488784
939	576619.8154	4371400.0461	-74.109004	39.488797
940	576622.3349	4371402.6532	-74.108975	39.488820
941	576626.3136	4371406.7700	-74.108928	39.488857
942	576627.7433	4371408.3071	-74.108911	39.488871
943	576631.5620	4371412.5728	-74.108866	39.488909
944	576633.9802	4371415.2741	-74.108838	39.488933
945	576635.3503	4371416.8646	-74.108822	39.488947
946	576639.0033	4371421.2730	-74.108779	39.488986

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
947	576641.3167	4371424.0646	-74.108752	39.489011
948	576642.6250	4371425.7063	-74.108736	39.489026
949	576646.1072	4371430.2508	-74.108695	39.489067
950	576648.3124	4371433.1286	-74.108669	39.489092
951	576649.5571	4371434.8190	-74.108655	39.489108
952	576652.8634	4371439.4931	-74.108616	39.489149
953	576653.4613	4371440.3558	-74.108609	39.489157
954	576655.8582	4371443.7444	-74.108580	39.489187
955	577065.5478	4372047.0327	-74.103747	39.494586
956	577489.7915	4372671.7523	-74.098741	39.500176
957	577492.0270	4372675.1811	-74.098714	39.500207
958	577493.8655	4372678.2477	-74.098693	39.500234
959	577495.5874	4372681.3813	-74.098672	39.500263
960	577496.1479	4372682.2231	-74.098666	39.500270
961	577497.7506	4372685.4192	-74.098647	39.500299
962	577500.7647	4372690.0383	-74.098611	39.500340
963	577501.8386	4372691.7519	-74.098598	39.500355
964	577504.6810	4372696.4787	-74.098565	39.500398
965	577506.1623	4372699.7329	-74.098547	39.500427
966	577507.1724	4372701.4849	-74.098535	39.500443
967	577509.8390	4372706.3130	-74.098504	39.500486
968	577511.1968	4372709.6206	-74.098488	39.500516
969	577512.1418	4372711.4086	-74.098476	39.500532
970	577514.6292	4372716.3314	-74.098447	39.500576
971	577515.5079	4372718.1529	-74.098436	39.500592
972	577516.7402	4372721.5093	-74.098422	39.500622
973	577519.0449	4372726.5202	-74.098394	39.500667
974	577519.8560	4372728.3728	-74.098385	39.500684
975	577520.9612	4372731.7732	-74.098371	39.500714
976	577523.0801	4372736.8654	-74.098346	39.500760
977	577523.8225	4372738.7466	-74.098337	39.500777
978	577525.7528	4372743.9133	-74.098314	39.500823
979	577526.8705	4372747.8509	-74.098301	39.500859
980	577527.5433	4372749.7580	-74.098293	39.500876
981	577529.2823	4372754.9922	-74.098272	39.500923
982	577529.8846	4372756.9228	-74.098265	39.500940
983	577531.4300	4372762.2174	-74.098246	39.500988
984	577531.7043	4372763.1906	-74.098243	39.500996
985	577789.3463	4373710.2811	-74.095136	39.509506
986	578074.9087	4374793.4489	-74.091687	39.519239

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
987	578075.0039	4374793.8032	-74.091686	39.519242
988	578075.5160	4374795.7365	-74.091680	39.519259
989	578075.6086	4374796.0911	-74.091679	39.519262
990	578097.8285	4374882.2927	-74.091410	39.520037
991	578098.6910	4374905.6703	-74.091398	39.520248
992	578109.3488	4374926.4831	-74.091271	39.520434
993	578185.5053	4375215.3527	-74.090351	39.523030
994	578291.0291	4375624.7308	-74.089076	39.526708
995	578291.2380	4375625.4982	-74.089073	39.526715
996	578292.5278	4375630.0928	-74.089058	39.526757
997	578292.7489	4375630.8570	-74.089055	39.526763
998	578293.9970	4375635.3506	-74.089040	39.526804
999	578492.2485	4376300.7052	-74.086655	39.532780
1000	578745.6945	4377151.2990	-74.083605	39.540420
1001	578755.5296	4377190.9447	-74.083486	39.540776
1002	578755.8174	4377191.9525	-74.083483	39.540786
1003	578762.1795	4377211.6052	-74.083406	39.540962
1004	578762.4564	4377212.5748	-74.083403	39.540971
1005	578773.9913	4377260.4026	-74.083263	39.541401
1006	578774.2244	4377261.1627	-74.083260	39.541407
1007	578775.6588	4377265.7110	-74.083243	39.541448
1008	578775.7635	4377266.1200	-74.083242	39.541452
1009	578776.2657	4377267.6283	-74.083236	39.541465
1010	578777.8439	4377272.1287	-74.083217	39.541506
1011	578778.3937	4377273.6202	-74.083210	39.541519
1012	578780.1142	4377278.0681	-74.083190	39.541559
1013	578784.2403	4377293.2827	-74.083140	39.541696
1014	578784.5329	4377294.0216	-74.083136	39.541702
1015	578784.6079	4377294.4882	-74.083136	39.541707
1016	578784.7524	4377295.2582	-74.083134	39.541714
1017	578785.6609	4377299.4877	-74.083123	39.541752
1018	578785.8514	4377300.2710	-74.083120	39.541759
1019	578791.6544	4377321.6223	-74.083050	39.541950
1020	578792.2273	4377323.3213	-74.083043	39.541966
1021	578792.9879	4377325.1980	-74.083034	39.541983
1022	578799.2251	4377348.1969	-74.082959	39.542189
1023	578799.6517	4377349.5229	-74.082954	39.542201
1024	578808.1790	4377372.3320	-74.082852	39.542406
1025	578808.5504	4377373.2348	-74.082848	39.542414
1026	578822.7259	4377408.2437	-74.082679	39.542728

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1027	578823.2498	4377410.2691	-74.082672	39.542746
1028	578823.3941	4377410.6804	-74.082670	39.542750
1029	578825.3897	4377416.1137	-74.082647	39.542799
1030	578825.6310	4377416.7285	-74.082644	39.542804
1031	578832.4292	4377432.9865	-74.082563	39.542950
1032	578838.2534	4377449.9207	-74.082493	39.543102
1033	578838.7972	4377451.2866	-74.082486	39.543114
1034	578874.8655	4377530.3591	-74.082057	39.543823
1035	578875.2499	4377531.2863	-74.082053	39.543832
1036	578914.9589	4377639.9445	-74.081578	39.544807
1037	578915.2379	4377640.6517	-74.081574	39.544813
1038	579213.4381	4378376.6024	-74.078017	39.551416
1039	579265.3875	4378499.1057	-74.077397	39.552515
1040	579265.6082	4378499.6562	-74.077395	39.552520
1041	579299.7619	4378589.9764	-74.076986	39.553331
1042	579300.1520	4378590.9114	-74.076982	39.553339
1043	579337.3018	4378672.1070	-74.076540	39.554067
1044	579339.2559	4378678.2125	-74.076516	39.554122
1045	579339.9118	4378679.9750	-74.076508	39.554138
1046	579350.8557	4378704.5469	-74.076378	39.554358
1047	579351.1605	4378705.2832	-74.076375	39.554365
1048	579354.2059	4378713.0551	-74.076338	39.554435
1049	579356.9727	4378720.6246	-74.076305	39.554502
1050	579407.3543	4378852.1345	-74.075703	39.555683
1051	579409.9461	4378859.7657	-74.075672	39.555751
1052	579412.3615	4378867.4546	-74.075643	39.555820
1053	579414.5991	4378875.1971	-74.075616	39.555890
1054	579416.6580	4378882.9890	-74.075591	39.555960
1055	579418.5368	4378890.8262	-74.075568	39.556030
1056	579420.2348	4378898.7047	-74.075547	39.556101
1057	579421.7508	4378906.6201	-74.075529	39.556172
1058	579423.0842	4378914.5684	-74.075512	39.556244
1059	579432.1247	4378940.1240	-74.075404	39.556473
1060	579433.2748	4378948.1008	-74.075390	39.556545
1061	579433.4522	4378949.2384	-74.075388	39.556555
1062	579434.7665	4378958.3549	-74.075371	39.556637
1063	579434.9177	4378959.4962	-74.075369	39.556647
1064	579435.8838	4378967.4975	-74.075357	39.556719
1065	579436.9878	4378976.6418	-74.075343	39.556802
1066	579437.1127	4378977.7864	-74.075342	39.556812

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1067	579437.8942	4378985.8077	-74.075332	39.556884
1068	579438.7875	4378994.9750	-74.075320	39.556967
1069	579438.8859	4378996.1221	-74.075319	39.556977
1070	579439.4826	4379004.1594	-74.075311	39.557049
1071	579440.1646	4379013.3448	-74.075302	39.557132
1072	579440.2366	4379014.4939	-74.075301	39.557142
1073	579440.6480	4379022.5427	-74.075295	39.557215
1074	579441.1183	4379031.7415	-74.075289	39.557298
1075	579441.1638	4379032.8919	-74.075288	39.557308
1076	579441.3899	4379040.9481	-74.075284	39.557381
1077	579441.6482	4379050.1552	-74.075280	39.557463
1078	579441.6672	4379051.3064	-74.075280	39.557474
1079	579441.7077	4379059.3656	-74.075278	39.557546
1080	579441.7539	4379068.5762	-74.075277	39.557629
1081	579441.7464	4379069.7275	-74.075277	39.557640
1082	579441.5806	4379078.9368	-74.075277	39.557723
1083	579441.4355	4379086.9948	-74.075278	39.557795
1084	579441.4015	4379088.1456	-74.075278	39.557806
1085	579441.0237	4379097.3486	-74.075282	39.557889
1086	579440.6931	4379105.4011	-74.075285	39.557961
1087	579440.6326	4379106.5509	-74.075285	39.557972
1088	579440.0430	4379115.7427	-74.075291	39.558055
1089	579439.5270	4379123.7855	-74.075296	39.558127
1090	579439.4401	4379124.9336	-74.075297	39.558137
1091	579438.6390	4379134.1094	-74.075305	39.558220
1092	579437.9380	4379142.1382	-74.075312	39.558293
1093	579437.8246	4379143.2840	-74.075314	39.558303
1094	579436.8124	4379152.4389	-74.075324	39.558385
1095	579435.9268	4379160.4494	-74.075334	39.558458
1096	579435.7871	4379161.5923	-74.075335	39.558468
1097	579434.5644	4379170.7215	-74.075348	39.558550
1098	579434.3984	4379171.8608	-74.075350	39.558561
1099	579433.3285	4379179.8488	-74.075361	39.558633
1100	579431.8959	4379188.9475	-74.075377	39.558715
1101	579431.7037	4379190.0827	-74.075379	39.558725
1102	579430.4502	4379198.0439	-74.075393	39.558797
1103	579428.8085	4379207.1072	-74.075411	39.558879
1104	579428.7027	4379207.6730	-74.075412	39.558884
1105	579427.2149	4379215.8865	-74.075428	39.558958
1106	579369.8345	4379513.1052	-74.076061	39.561641

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1107	579369.5031	4379514.3293	-74.076064	39.561652
1108	579369.3347	4379515.0146	-74.076066	39.561658
1109	579365.5457	4379530.9059	-74.076108	39.561802
1110	579365.4407	4379531.3191	-74.076110	39.561805
1111	579364.0012	4379537.3441	-74.076126	39.561860
1112	579363.9059	4379537.7707	-74.076127	39.561864
1113	579242.7274	4380165.4510	-74.077462	39.567530
1114	579236.4543	4380195.5671	-74.077532	39.567802
1115	579236.4094	4380195.7913	-74.077532	39.567804
1116	579233.9950	4380208.3379	-74.077559	39.567917
1117	579232.1892	4380216.5956	-74.077579	39.567992
1118	579231.9980	4380217.6445	-74.077581	39.568001
1119	579226.1932	4380248.7130	-74.077645	39.568282
1120	579226.0417	4380249.4449	-74.077646	39.568288
1121	579225.6685	4380251.5038	-74.077651	39.568307
1122	579223.5188	4380263.1014	-74.077674	39.568411
1123	579222.1931	4380270.2441	-74.077689	39.568476
1124	579222.1460	4380270.5114	-74.077689	39.568478
1125	579218.0108	4380295.2831	-74.077734	39.568702
1126	579217.8923	4380295.9104	-74.077736	39.568708
1127	579213.6934	4380315.8071	-74.077782	39.568887
1128	579213.6388	4380316.0551	-74.077783	39.568889
1129	579212.1930	4380322.3091	-74.077799	39.568946
1130	579206.1723	4380344.1396	-74.077866	39.569143
1131	579206.0445	4380344.5768	-74.077868	39.569147
1132	579204.6538	4380349.0808	-74.077884	39.569188
1133	579204.3812	4380350.0866	-74.077887	39.569197
1134	579203.9115	4380352.0930	-74.077892	39.569215
1135	579203.7816	4380352.7052	-74.077893	39.569221
1136	579200.2135	4380366.7637	-74.077933	39.569348
1137	579200.1415	4380367.0270	-74.077934	39.569350
1138	579197.3928	4380377.4438	-74.077965	39.569444
1139	579197.3548	4380377.5909	-74.077965	39.569445
1140	579192.2117	4380397.9146	-74.078023	39.569629
1141	579192.0778	4380398.4916	-74.078024	39.569634
1142	579188.6172	4380414.8606	-74.078062	39.569782
1143	579188.5630	4380415.1294	-74.078063	39.569784
1144	579187.0225	4380423.1375	-74.078080	39.569857
1145	579186.7716	4380425.2145	-74.078083	39.569875
1146	579186.8122	4380427.3062	-74.078082	39.569894

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1147	579187.0106	4380428.7401	-74.078079	39.569907
1148	579187.5792	4380431.7649	-74.078072	39.569934
1149	579187.6126	4380431.9493	-74.078072	39.569936
1150	579189.1515	4380440.7403	-74.078053	39.570015
1151	579189.1762	4380440.8774	-74.078053	39.570016
1152	579190.7628	4380449.4694	-74.078033	39.570094
1153	579190.8344	4380449.8910	-74.078032	39.570097
1154	579191.0919	4380451.5484	-74.078029	39.570112
1155	579191.1338	4380451.8367	-74.078029	39.570115
1156	579191.5891	4380455.1976	-74.078023	39.570145
1157	579191.6571	4380455.7867	-74.078022	39.570150
1158	579192.2372	4380461.8681	-74.078015	39.570205
1159	579192.0671	4380462.7959	-74.078016	39.570213
1160	579192.0884	4380463.0401	-74.078016	39.570216
1161	579191.1206	4380468.6161	-74.078027	39.570266
1162	579190.8331	4380470.4806	-74.078030	39.570283
1163	579191.6142	4380480.3771	-74.078020	39.570372
1164	579190.8575	4380485.9857	-74.078028	39.570423
1165	579190.6405	4380487.8596	-74.078030	39.570439
1166	579190.6556	4380488.0692	-74.078030	39.570441
1167	579190.8525	4380492.1441	-74.078027	39.570478
1168	579190.3079	4380497.7773	-74.078033	39.570529
1169	579190.2894	4380504.3496	-74.078032	39.570588
1170	579190.1433	4380506.2304	-74.078034	39.570605
1171	579189.8116	4380511.8801	-74.078037	39.570656
1172	579189.8197	4380512.4153	-74.078037	39.570661
1173	579189.7446	4380514.3003	-74.078037	39.570678
1174	579189.8794	4380518.3970	-74.078035	39.570715
1175	579189.7610	4380524.0552	-74.078036	39.570766
1176	579189.7572	4380525.9416	-74.078036	39.570783
1177	579189.7691	4380526.2241	-74.078036	39.570785
1178	579189.8643	4380531.8827	-74.078034	39.570836
1179	579190.0117	4380534.7283	-74.078032	39.570862
1180	579190.0215	4380534.8983	-74.078032	39.570863
1181	579190.0888	4380536.7836	-74.078031	39.570880
1182	579190.3973	4380542.4346	-74.078026	39.570931
1183	579190.7167	4380547.4865	-74.078022	39.570977
1184	579190.8550	4380549.3678	-74.078020	39.570994
1185	579190.8660	4380549.5286	-74.078020	39.570995
1186	579191.3875	4380555.1640	-74.078013	39.571046

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1187	579191.5968	4380557.0388	-74.078011	39.571063
1188	579192.2536	4380565.9129	-74.078002	39.571142
1189	579192.9873	4380571.5246	-74.077993	39.571193
1190	579193.2671	4380573.3902	-74.077989	39.571210
1191	579194.2120	4380578.9701	-74.077978	39.571260
1192	579194.2602	4380579.4963	-74.077977	39.571265
1193	579194.6102	4380581.3500	-74.077973	39.571281
1194	579195.7649	4380586.8904	-74.077959	39.571331
1195	579196.7164	4380595.5752	-74.077946	39.571409
1196	579197.1361	4380597.4144	-74.077941	39.571426
1197	579198.4989	4380602.9072	-74.077925	39.571475
1198	579198.9877	4380604.7293	-74.077919	39.571492
1199	579199.0959	4380605.5213	-74.077918	39.571499
1200	579200.6650	4380610.9588	-74.077899	39.571548
1201	579200.8031	4380611.8013	-74.077897	39.571555
1202	579201.3602	4380613.6036	-74.077890	39.571571
1203	579201.5336	4380614.4925	-74.077888	39.571579
1204	579203.3067	4380619.8670	-74.077867	39.571628
1205	579203.9314	4380621.6470	-74.077859	39.571644
1206	579205.6437	4380633.5849	-74.077838	39.571751
1207	579207.6183	4380638.8887	-74.077814	39.571799
1208	579208.3097	4380640.6439	-74.077806	39.571814
1209	579208.3954	4380641.3449	-74.077805	39.571821
1210	579210.5686	4380646.5704	-74.077779	39.571867
1211	579211.3258	4380648.2983	-74.077770	39.571883
1212	579213.6946	4380653.4381	-74.077742	39.571929
1213	579214.5164	4380655.1362	-74.077732	39.571944
1214	579216.8854	4380671.3382	-74.077703	39.572090
1215	579219.4464	4380676.3850	-74.077672	39.572135
1216	579219.8812	4380677.2221	-74.077667	39.572143
1217	579219.8939	4380677.3069	-74.077667	39.572144
1218	579221.1506	4380685.5710	-74.077651	39.572218
1219	579221.2169	4380686.0609	-74.077650	39.572222
1220	579221.5615	4380688.9690	-74.077646	39.572248
1221	579221.9520	4380691.0244	-74.077641	39.572267
1222	579222.6248	4380693.0053	-74.077633	39.572285
1223	579223.5307	4380694.8126	-74.077622	39.572301
1224	579224.0708	4380695.7299	-74.077616	39.572309
1225	579233.2716	4380714.1931	-74.077507	39.572475
1226	579233.6225	4380714.8554	-74.077503	39.572481

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1227	579245.8957	4380736.6785	-74.077357	39.572676
1228	579252.6857	4380749.9912	-74.077276	39.572795
1229	579252.9483	4380750.4832	-74.077273	39.572800
1230	579267.6870	4380776.9034	-74.077099	39.573036
1231	579271.3973	4380784.1149	-74.077055	39.573101
1232	579271.8367	4380784.9089	-74.077049	39.573108
1233	579278.4068	4380797.2360	-74.076971	39.573219
1234	579278.6503	4380797.7341	-74.076969	39.573223
1235	579295.0425	4380829.7544	-74.076774	39.573510
1236	579295.2457	4380830.1374	-74.076771	39.573513
1237	579487.1408	4381191.2436	-74.074494	39.576749
1238	579499.2741	4381213.3444	-74.074350	39.576947
1239	579505.8499	4381226.4243	-74.074272	39.577064
1240	579506.1066	4381226.9124	-74.074269	39.577069
1241	579515.4965	4381243.9939	-74.074158	39.577222
1242	579516.8263	4381246.5295	-74.074142	39.577244
1243	579516.9906	4381246.8341	-74.074140	39.577247
1244	579525.1994	4381261.6448	-74.074043	39.577380
1245	579551.5332	4381309.5494	-74.073730	39.577809
1246	579564.3938	4381333.9736	-74.073578	39.578028
1247	579564.5777	4381334.3347	-74.073576	39.578031
1248	579579.8077	4381365.2580	-74.073395	39.578308
1249	579580.0498	4381365.7283	-74.073392	39.578312
1250	579595.6034	4381394.6842	-74.073207	39.578572
1251	579601.9288	4381417.2422	-74.073131	39.578774
1252	579611.3139	4381436.2462	-74.073019	39.578945
1253	579611.6801	4381436.9413	-74.073015	39.578951
1254	579617.2181	4381446.8159	-74.072949	39.579039
1255	579617.4766	4381447.2589	-74.072946	39.579043
1256	579622.9468	4381456.3976	-74.072881	39.579125
1257	579623.2738	4381457.0294	-74.072877	39.579131
1258	579627.3744	4381464.5114	-74.072829	39.579198
1259	579628.8213	4381467.2509	-74.072812	39.579222
1260	579633.4129	4381475.9442	-74.072757	39.579300
1261	579637.1029	4381483.1489	-74.072713	39.579365
1262	579637.3072	4381483.5634	-74.072711	39.579369
1263	579640.7561	4381490.8419	-74.072670	39.579434
1264	579641.3301	4381491.9346	-74.072663	39.579444
1265	579645.1431	4381498.5198	-74.072618	39.579503
1266	579645.4613	4381499.0984	-74.072614	39.579508

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1267	579656.2730	4381519.8256	-74.072486	39.579694
1268	579843.9065	4381836.6123	-74.070263	39.582530
1269	580283.7931	4382664.3860	-74.065041	39.589947
1270	580285.2364	4382667.1730	-74.065024	39.589972
1271	580285.2973	4382667.2893	-74.065023	39.589973
1272	580291.8352	4382679.6469	-74.064946	39.590083
1273	580297.7008	4382690.5368	-74.064876	39.590181
1274	580307.5288	4382709.4458	-74.064759	39.590350
1275	580307.8704	4382710.0597	-74.064755	39.590356
1276	580328.7134	4382749.2539	-74.064508	39.590707
1277	580498.3771	4383067.8927	-74.062494	39.593562
1278	580498.8546	4383068.8138	-74.062488	39.593570
1279	580501.4111	4383073.8614	-74.062458	39.593615
1280	580503.1542	4383077.2862	-74.062437	39.593646
1281	580504.0565	4383079.1543	-74.062426	39.593663
1282	580506.4209	4383084.2948	-74.062398	39.593709
1283	580507.2521	4383086.1957	-74.062388	39.593726
1284	580508.6680	4383089.2393	-74.062371	39.593753
1285	580510.8368	4383094.4653	-74.062345	39.593800
1286	580511.5958	4383096.3961	-74.062336	39.593817
1287	580512.9034	4383099.4879	-74.062321	39.593845
1288	580514.8735	4383104.7920	-74.062297	39.593893
1289	580515.5591	4383106.7501	-74.062289	39.593910
1290	580516.7566	4383109.8861	-74.062274	39.593938
1291	580518.5253	4383115.2607	-74.062253	39.593987
1292	580519.1366	4383117.2433	-74.062246	39.594004
1293	580520.7014	4383122.6807	-74.062227	39.594053
1294	580521.7873	4383125.8571	-74.062214	39.594082
1295	580522.3233	4383127.8613	-74.062207	39.594100
1296	580523.6819	4383133.3539	-74.062191	39.594149
1297	580524.6549	4383136.5667	-74.062179	39.594178
1298	580524.8945	4383137.5759	-74.062176	39.594187
1299	580525.8778	4383141.2909	-74.062164	39.594220
1300	580592.2125	4383411.1041	-74.061359	39.596645
1301	580661.7626	4383716.9222	-74.060512	39.599394
1302	580662.4905	4383720.4239	-74.060503	39.599425
1303	580663.0818	4383723.9178	-74.060496	39.599457
1304	580663.5425	4383727.4313	-74.060490	39.599488
1305	580663.8717	4383730.9595	-74.060486	39.599520
1306	580664.1001	4383732.0115	-74.060483	39.599529

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1307	580665.2900	4383737.7615	-74.060468	39.599581
1308	580665.4874	4383741.2995	-74.060466	39.599613
1309	580665.8823	4383743.4160	-74.060461	39.599632
1310	580666.8462	4383749.2081	-74.060449	39.599684
1311	580666.9115	4383752.7510	-74.060448	39.599716
1312	580667.2233	4383754.8813	-74.060444	39.599735
1313	580667.9597	4383760.7067	-74.060435	39.599788
1314	580668.1879	4383762.8476	-74.060432	39.599807
1315	580668.1210	4383766.3905	-74.060432	39.599839
1316	580668.6289	4383772.2402	-74.060425	39.599891
1317	580668.7731	4383774.3884	-74.060423	39.599911
1318	580668.5741	4383777.9264	-74.060425	39.599943
1319	580668.8526	4383783.7915	-74.060421	39.599995
1320	580668.9126	4383785.9436	-74.060420	39.600015
1321	580668.9614	4383791.8152	-74.060419	39.600068
1322	580668.6306	4383795.3433	-74.060422	39.600100
1323	580668.6064	4383797.4961	-74.060422	39.600119
1324	580668.4253	4383803.3651	-74.060424	39.600172
1325	580667.8963	4383807.3871	-74.060430	39.600208
1326	580667.7878	4383809.5373	-74.060431	39.600228
1327	580667.3772	4383815.3947	-74.060435	39.600280
1328	580667.1846	4383817.5390	-74.060437	39.600300
1329	580666.5451	4383823.3759	-74.060443	39.600352
1330	580666.2687	4383825.5110	-74.060446	39.600372
1331	580665.4012	4383831.3183	-74.060456	39.600424
1332	580665.2318	4383832.3815	-74.060458	39.600434
1333	580619.2167	4384137.9923	-74.060956	39.603191
1334	580527.5858	4384678.7458	-74.061958	39.608072
1335	580527.1520	4384681.4031	-74.061962	39.608096
1336	580526.6525	4384684.0490	-74.061968	39.608119
1337	580487.0779	4384880.3178	-74.062405	39.609891
1338	580487.4645	4384903.6978	-74.062398	39.610102
1339	580478.7118	4384925.4234	-74.062497	39.610299
1340	580413.0784	4385250.9382	-74.063222	39.613237
1341	580413.0324	4385251.1691	-74.063222	39.613239
1342	580394.3602	4385346.0793	-74.063428	39.614096
1343	580394.3305	4385346.3243	-74.063429	39.614098
1344	580392.5616	4385359.6174	-74.063448	39.614218
1345	580392.4838	4385360.1334	-74.063449	39.614223
1346	580389.1481	4385384.0588	-74.063484	39.614439

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1347	580389.0445	4385384.8173	-74.063486	39.614446
1348	580386.0801	4385407.8263	-74.063517	39.614653
1349	580385.8153	4385409.5142	-74.063520	39.614669
1350	580380.4806	4385436.4265	-74.063579	39.614911
1351	580380.3390	4385437.1576	-74.063581	39.614918
1352	580368.5657	4385490.7919	-74.063711	39.615402
1353	580368.4834	4385491.1931	-74.063712	39.615406
1354	580360.2224	4385534.4338	-74.063803	39.615796
1355	580360.1490	4385534.8497	-74.063804	39.615800
1356	580350.9693	4385591.5140	-74.063904	39.616311
1357	580140.6066	4386832.9559	-74.066204	39.627516
1358	580140.5129	4386833.4761	-74.066205	39.627520
1359	580124.7978	4386937.6627	-74.066376	39.628460
1360	580124.5577	4386939.7411	-74.066378	39.628479
1361	580121.9590	4386953.6399	-74.066407	39.628605
1362	580121.8501	4386954.1691	-74.066408	39.628609
1363	580115.4824	4386986.5609	-74.066478	39.628902
1364	580115.3873	4386987.0274	-74.066479	39.628906
1365	580109.9160	4387014.9294	-74.066540	39.629158
1366	580109.7289	4387015.9257	-74.066542	39.629167
1367	580103.4888	4387049.2860	-74.066610	39.629468
1368	580103.1578	4387051.3518	-74.066614	39.629487
1369	580094.7130	4387096.1441	-74.066707	39.629891
1370	580094.5031	4387097.1364	-74.066709	39.629900
1371	580087.6347	4387135.6428	-74.066785	39.630248
1372	580087.4132	4387136.7582	-74.066787	39.630258
1373	580085.1293	4387146.4044	-74.066813	39.630345
1374	580076.9334	4387189.1671	-74.066903	39.630731
1375	580076.8357	4387189.6360	-74.066904	39.630735
1376	580072.0432	4387215.1286	-74.066957	39.630965
1377	580071.7176	4387216.6247	-74.066960	39.630979
1378	580068.0256	4387235.3743	-74.067001	39.631148
1379	580058.1220	4387280.9052	-74.067111	39.631559
1380	580058.0329	4387281.3516	-74.067112	39.631563
1381	580056.2497	4387291.0565	-74.067132	39.631651
1382	580055.9267	4387292.9202	-74.067135	39.631667
1383	580053.2177	4387304.2495	-74.067165	39.631770
1384	580053.0275	4387305.2323	-74.067167	39.631779
1385	580051.3926	4387315.6024	-74.067185	39.631872
1386	580051.1193	4387316.9384	-74.067188	39.631884

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1387	580047.3743	4387331.7694	-74.067230	39.632018
1388	580047.1580	4387332.8930	-74.067232	39.632028
1389	580045.5055	4387344.1678	-74.067250	39.632130
1390	580045.3731	4387344.9326	-74.067252	39.632137
1391	580041.0934	4387366.3405	-74.067299	39.632330
1392	580040.9266	4387367.0776	-74.067301	39.632337
1393	580038.0419	4387382.0572	-74.067333	39.632472
1394	580037.7418	4387383.9882	-74.067336	39.632490
1395	580035.2996	4387394.9410	-74.067363	39.632588
1396	580035.1475	4387395.7199	-74.067365	39.632596
1397	580033.2615	4387406.9458	-74.067385	39.632697
1398	580033.1559	4387407.5081	-74.067387	39.632702
1399	580027.3649	4387435.4141	-74.067451	39.632954
1400	580027.2670	4387435.9312	-74.067452	39.632959
1401	580025.4735	4387446.4096	-74.067471	39.633053
1402	580022.7946	4387457.5541	-74.067501	39.633154
1403	580022.6592	4387458.2466	-74.067503	39.633160
1404	580022.3481	4387459.9870	-74.067506	39.633176
1405	580017.2665	4387483.0808	-74.067563	39.633384
1406	580017.1026	4387484.0523	-74.067564	39.633393
1407	580016.3094	4387490.0168	-74.067573	39.633447
1408	580014.8002	4387502.7565	-74.067589	39.633562
1409	580014.6952	4387503.4288	-74.067590	39.633568
1410	580010.5231	4387520.9894	-74.067636	39.633726
1411	580010.1827	4387523.0537	-74.067640	39.633745
1412	580010.1775	4387523.1095	-74.067640	39.633746
1413	580002.1189	4387568.0065	-74.067729	39.634151
1414	580000.7467	4387583.2328	-74.067743	39.634288
1415	579999.9577	4387587.3771	-74.067752	39.634325
1416	579999.8608	4387587.9456	-74.067753	39.634331
1417	579998.0878	4387599.7034	-74.067772	39.634437
1418	579997.9947	4387600.2879	-74.067773	39.634442
1419	579996.3697	4387611.9778	-74.067790	39.634547
1420	579996.2648	4387612.9756	-74.067791	39.634556
1421	579995.4936	4387623.7892	-74.067799	39.634654
1422	579995.4807	4387623.9577	-74.067799	39.634655
1423	579990.6513	4387652.4577	-74.067852	39.634913
1424	579990.3340	4387654.5257	-74.067856	39.634931
1425	579986.3471	4387668.1183	-74.067900	39.635054
1426	579983.4047	4387685.3061	-74.067933	39.635209

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1427	579982.9574	4387687.3498	-74.067938	39.635228
1428	579982.7198	4387688.9431	-74.067940	39.635242
1429	579982.6654	4387689.3532	-74.067941	39.635246
1430	579981.1386	4387697.1840	-74.067958	39.635316
1431	579978.2966	4387727.8526	-74.067987	39.635593
1432	579974.1672	4387762.6644	-74.068031	39.635907
1433	579974.1230	4387763.0781	-74.068031	39.635911
1434	579970.5045	4387784.4325	-74.068071	39.636104
1435	579966.5236	4387817.4027	-74.068113	39.636401
1436	579963.6226	4387833.6890	-74.068145	39.636548
1437	579963.4558	4387834.7496	-74.068147	39.636558
1438	579961.7301	4387843.6368	-74.068166	39.636638
1439	579961.5800	4387844.7375	-74.068168	39.636648
1440	579961.3577	4387846.8178	-74.068170	39.636666
1441	579960.0244	4387861.1200	-74.068184	39.636795
1442	579960.0217	4387861.2014	-74.068184	39.636796
1443	579959.9621	4387861.7366	-74.068184	39.636801
1444	579955.2800	4387897.8677	-74.068235	39.637127
1445	579955.2028	4387898.3907	-74.068235	39.637132
1446	579951.2023	4387922.5450	-74.068279	39.637350
1447	579951.0780	4387923.5486	-74.068280	39.637359
1448	579950.3794	4387931.4340	-74.068288	39.637430
1449	579950.3081	4387932.0792	-74.068288	39.637436
1450	579949.8895	4387934.1289	-74.068293	39.637454
1451	579914.0343	4388145.7263	-74.068685	39.639364
1452	579911.2069	4388155.2097	-74.068717	39.639449
1453	579908.5353	4388168.3523	-74.068747	39.639568
1454	579908.2267	4388170.1296	-74.068750	39.639584
1455	579908.2267	4388170.1296	-74.068750	39.639584
1456	579907.6046	4388172.1269	-74.068757	39.639602
1457	579907.6046	4388172.1269	-74.068757	39.639602
1458	579902.4377	4388226.6273	-74.068811	39.640094
1459	579902.4377	4388226.6273	-74.068811	39.640094
1460	579901.8405	4388230.5753	-74.068817	39.640129
1461	579901.4347	4388234.1012	-74.068821	39.640161
1462	579901.1542	4388237.6393	-74.068824	39.640193
1463	579900.9994	4388241.1851	-74.068826	39.640225
1464	579900.9706	4388244.7342	-74.068826	39.640257
1465	579901.0677	4388248.2821	-74.068824	39.640289
1466	579901.2907	4388251.8243	-74.068821	39.640321

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1467	579901.6829	4388255.7979	-74.068816	39.640357
1468	579888.5558	4388256.9256	-74.068969	39.640368
1469	579906.8547	4388413.8077	-74.068737	39.641780
1470	579969.4475	4388828.7152	-74.067957	39.645512
1471	579969.4692	4388829.0846	-74.067957	39.645515
1472	579969.5493	4388829.9840	-74.067956	39.645523
1473	579969.8975	4388832.8989	-74.067951	39.645549
1474	579969.9860	4388833.5267	-74.067950	39.645555
1475	579970.0666	4388834.0224	-74.067949	39.645559
1476	579974.3504	4388870.7492	-74.067895	39.645890
1477	579974.4420	4388871.9125	-74.067894	39.645900
1478	579974.5608	4388872.9548	-74.067892	39.645910
1479	579974.7737	4388874.3777	-74.067889	39.645923
1480	579982.5962	4388941.4423	-74.067790	39.646526
1481	579983.3778	4388947.4085	-74.067780	39.646580
1482	579984.2722	4388953.0006	-74.067769	39.646630
1483	579985.3246	4388958.5652	-74.067756	39.646680
1484	579986.5341	4388964.0977	-74.067741	39.646730
1485	579987.7463	4388973.0728	-74.067726	39.646811
1486	579987.8076	4388973.5976	-74.067725	39.646815
1487	579987.9173	4388974.2916	-74.067724	39.646822
1488	579989.0629	4388981.2238	-74.067710	39.646884
1489	579990.6214	4388992.7947	-74.067690	39.646988
1490	579990.8700	4388994.1778	-74.067687	39.647000
1491	579992.2100	4389001.0751	-74.067671	39.647062
1492	579992.2590	4389001.4801	-74.067670	39.647066
1493	579992.5463	4389002.8557	-74.067667	39.647078
1494	579994.0796	4389009.7125	-74.067648	39.647140
1495	579995.9772	4389027.4336	-74.067624	39.647300
1496	579996.3031	4389028.8006	-74.067620	39.647312
1497	579998.0284	4389035.6116	-74.067599	39.647373
1498	579998.3926	4389036.9689	-74.067594	39.647385
1499	580000.3087	4389043.7287	-74.067571	39.647446
1500	580000.7109	4389045.0752	-74.067566	39.647458
1501	580001.0782	4389047.1349	-74.067562	39.647477
1502	580003.1836	4389053.8382	-74.067537	39.647537
1503	580003.6234	4389055.1729	-74.067531	39.647549
1504	580005.9163	4389061.8144	-74.067504	39.647608
1505	580006.5667	4389063.8028	-74.067496	39.647626
1506	580007.0439	4389065.1245	-74.067490	39.647638

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1507	580009.5225	4389071.6990	-74.067461	39.647697
1508	580010.0366	4389073.0068	-74.067454	39.647709
1509	580012.6990	4389079.5091	-74.067423	39.647767
1510	580013.6198	4389081.3876	-74.067412	39.647784
1511	580014.1705	4389082.6804	-74.067405	39.647796
1512	580017.0145	4389089.1053	-74.067371	39.647853
1513	580017.6013	4389090.3821	-74.067364	39.647865
1514	580020.6248	4389096.7246	-74.067328	39.647921
1515	580021.7981	4389098.4566	-74.067314	39.647937
1516	580022.4205	4389099.7165	-74.067307	39.647948
1517	580025.6210	4389105.9714	-74.067269	39.648004
1518	580026.2787	4389107.2133	-74.067261	39.648015
1519	580027.6816	4389108.7652	-74.067244	39.648029
1520	580031.0566	4389114.9277	-74.067204	39.648085
1521	580031.7488	4389116.1506	-74.067196	39.648095
1522	580035.2957	4389122.2159	-74.067154	39.648150
1523	580036.2047	4389123.0219	-74.067143	39.648157
1524	580036.9311	4389124.2249	-74.067135	39.648168
1525	580040.6470	4389130.1880	-74.067091	39.648221
1526	580041.4069	4389131.3701	-74.067082	39.648232
1527	580050.3169	4389138.6483	-74.066977	39.648296
1528	580054.1989	4389144.5047	-74.066931	39.648349
1529	580067.7520	4389159.6897	-74.066771	39.648484
1530	580068.5448	4389160.8499	-74.066762	39.648495
1531	580072.5899	4389166.5949	-74.066714	39.648546
1532	580075.9719	4389171.1374	-74.066674	39.648587
1533	580076.7970	4389172.2749	-74.066664	39.648597
1534	580081.0019	4389177.9039	-74.066615	39.648647
1535	580081.8586	4389179.0178	-74.066605	39.648657
1536	580085.3679	4389183.4627	-74.066563	39.648697
1537	580089.7293	4389188.9713	-74.066512	39.648746
1538	580090.6170	4389190.0607	-74.066501	39.648756
1539	580094.2507	4389194.4044	-74.066458	39.648795
1540	580098.7652	4389199.7884	-74.066405	39.648843
1541	580099.6832	4389200.8523	-74.066394	39.648852
1542	580104.3472	4389206.1073	-74.066339	39.648899
1543	580108.1024	4389210.3464	-74.066295	39.648937
1544	580109.0499	4389211.3841	-74.066284	39.648946
1545	580113.8598	4389216.5059	-74.066227	39.648992
1546	580117.7336	4389220.6370	-74.066181	39.649029

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1547	580118.7098	4389221.6477	-74.066170	39.649038
1548	580123.6617	4389226.6323	-74.066112	39.649082
1549	580127.6509	4389230.6520	-74.066065	39.649118
1550	580128.6552	4389231.6349	-74.066053	39.649127
1551	580133.7453	4389236.4784	-74.065993	39.649170
1552	580134.7768	4389237.4327	-74.065981	39.649178
1553	580138.8781	4389241.3378	-74.065932	39.649213
1554	580144.1023	4389246.0364	-74.065871	39.649255
1555	580144.6280	4389246.5025	-74.065865	39.649259
1556	580149.1015	4389250.5268	-74.065812	39.649295
1557	580263.7858	4389350.7930	-74.064463	39.650188
1558	580369.0126	4389442.7907	-74.063226	39.651007
1559	580371.9751	4389445.2920	-74.063191	39.651029
1560	580372.6286	4389445.8535	-74.063183	39.651034
1561	580376.5787	4389449.1887	-74.063137	39.651064
1562	580379.2870	4389451.3199	-74.063105	39.651082
1563	580380.6227	4389452.4087	-74.063089	39.651092
1564	580384.6854	4389455.6058	-74.063042	39.651121
1565	580386.0578	4389456.6480	-74.063026	39.651130
1566	580388.8379	4389458.6847	-74.062993	39.651148
1567	580393.0083	4389461.7399	-74.062944	39.651175
1568	580394.4158	4389462.7341	-74.062927	39.651184
1569	580398.6891	4389465.6438	-74.062877	39.651210
1570	580401.5378	4389467.5834	-74.062844	39.651227
1571	580402.9787	4389468.5286	-74.062827	39.651235
1572	580407.3497	4389471.2893	-74.062776	39.651260
1573	580410.2635	4389473.1296	-74.062741	39.651276
1574	580411.7361	4389474.0245	-74.062724	39.651284
1575	580416.1997	4389476.6329	-74.062672	39.651307
1576	580417.7023	4389477.4766	-74.062654	39.651314
1577	580420.6777	4389479.2154	-74.062619	39.651330
1578	580425.2285	4389481.6685	-74.062566	39.651352
1579	580425.9906	4389482.0708	-74.062557	39.651355
1580	580429.4035	4389483.9105	-74.062517	39.651371
1581	580732.9655	4389640.8509	-74.058960	39.652757
1582	581593.5205	4390085.7544	-74.048876	39.656683
1583	582642.0043	4390627.8166	-74.036587	39.661466
1584	582660.0291	4390642.7639	-74.036375	39.661599
1585	582674.5742	4390650.2950	-74.036205	39.661665
1586	582927.3988	4390780.9930	-74.033242	39.662818

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1587	582950.0001	4390787.0491	-74.032977	39.662871
1588	583125.5671	4390877.8166	-74.030919	39.663671
1589	583143.5918	4390892.7639	-74.030708	39.663804
1590	583161.8249	4390902.1904	-74.030494	39.663887
1591	583184.4262	4390908.2465	-74.030230	39.663940
1592	583199.3603	4390915.9674	-74.030055	39.664008
1593	583202.8676	4390917.8629	-74.030013	39.664024
1594	583205.8685	4390919.6298	-74.029978	39.664040
1595	583206.7432	4390920.0921	-74.029968	39.664044
1596	583211.4915	4390922.6562	-74.029912	39.664067
1597	583213.2153	4390923.6275	-74.029892	39.664075
1598	583216.1494	4390925.5032	-74.029858	39.664092
1599	583220.8024	4390928.2365	-74.029803	39.664116
1600	583222.4902	4390929.2692	-74.029783	39.664125
1601	583227.0418	4390932.1680	-74.029730	39.664151
1602	583229.9052	4390934.1500	-74.029696	39.664169
1603	583231.5547	4390935.2428	-74.029677	39.664178
1604	583235.9991	4390938.3035	-74.029625	39.664205
1605	583238.7879	4390940.3891	-74.029592	39.664224
1606	583240.3971	4390941.5405	-74.029573	39.664234
1607	583244.7286	4390944.7591	-74.029522	39.664263
1608	583246.2953	4390945.9676	-74.029504	39.664273
1609	583249.0058	4390948.1540	-74.029472	39.664293
1610	583253.2187	4390951.5263	-74.029422	39.664323
1611	583254.7409	4390952.7904	-74.029404	39.664334
1612	583258.8297	4390956.3121	-74.029356	39.664365
1613	583261.4582	4390958.5964	-74.029325	39.664386
1614	583262.9340	4390959.9144	-74.029308	39.664397
1615	583266.8935	4390963.5809	-74.029261	39.664430
1616	583267.6134	4390964.2596	-74.029253	39.664436
1617	583270.1564	4390966.6388	-74.029223	39.664457
1618	583272.9658	4390969.4673	-74.029190	39.664483
1619	583373.0417	4391065.5364	-74.028011	39.665338
1620	583386.0712	4391084.9752	-74.027857	39.665512
1621	583561.3918	4391268.0817	-74.025790	39.667145
1622	583669.3107	4391371.6798	-74.024519	39.668067
1623	583688.7346	4391384.7365	-74.024291	39.668183
1624	583721.2630	4391418.7096	-74.023907	39.668486
1625	583721.8753	4391419.3075	-74.023900	39.668491
1626	583725.5180	4391422.9262	-74.023857	39.668524

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1627	583726.7115	4391424.1530	-74.023843	39.668535
1628	583730.2282	4391427.8943	-74.023802	39.668568
1629	583731.3790	4391429.1613	-74.023788	39.668579
1630	583734.7656	4391433.0208	-74.023748	39.668614
1631	583735.8724	4391434.3264	-74.023735	39.668625
1632	583739.1249	4391438.2995	-74.023697	39.668661
1633	583740.2746	4391439.7579	-74.023683	39.668674
1634	583742.3592	4391441.9952	-74.023658	39.668694
1635	583743.2358	4391442.9888	-74.023648	39.668703
1636	583761.6045	4391460.7759	-74.023432	39.668861
1637	583777.9495	4391486.4914	-74.023238	39.669091
1638	583786.0066	4391505.9514	-74.023141	39.669266
1639	583797.3327	4391524.1142	-74.023007	39.669428
1640	583797.5350	4391524.4297	-74.023005	39.669431
1641	583803.6696	4391533.7404	-74.022932	39.669514
1642	584084.1608	4391956.7488	-74.019608	39.673298
1643	584324.9317	4392335.5516	-74.016753	39.676686
1644	584325.4928	4392336.4535	-74.016746	39.676695
1645	584328.5055	4392341.4019	-74.016711	39.676739
1646	584329.5749	4392343.2373	-74.016698	39.676755
1647	584332.3942	4392348.2983	-74.016664	39.676801
1648	584333.3919	4392350.1736	-74.016653	39.676817
1649	584336.0137	4392355.3397	-74.016621	39.676864
1650	584336.9383	4392357.2522	-74.016610	39.676881
1651	584339.3587	4392362.5157	-74.016581	39.676928
1652	584340.2087	4392364.4624	-74.016571	39.676945
1653	584342.4240	4392369.8154	-74.016545	39.676993
1654	584343.1983	4392371.7935	-74.016535	39.677011
1655	584345.3886	4392375.2353	-74.016509	39.677042
1656	584347.3956	4392380.6699	-74.016485	39.677091
1657	584348.0928	4392382.6765	-74.016477	39.677109
1658	584349.8884	4392388.1845	-74.016455	39.677158
1659	584351.6877	4392391.2606	-74.016434	39.677186
1660	584352.3069	4392393.2925	-74.016426	39.677204
1661	584353.8885	4392398.8658	-74.016407	39.677254
1662	584355.5710	4392402.0072	-74.016387	39.677282
1663	584356.1114	4392404.0615	-74.016381	39.677301
1664	584357.4766	4392409.6917	-74.016364	39.677351
1665	584357.7169	4392410.7263	-74.016361	39.677360
1666	584359.2804	4392413.9286	-74.016343	39.677389

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1667	584360.7228	4392417.1873	-74.016325	39.677418
1668	584362.0418	4392420.4979	-74.016310	39.677448
1669	584363.2358	4392423.8555	-74.016295	39.677478
1670	584364.3030	4392427.2556	-74.016282	39.677509
1671	584365.2419	4392430.6934	-74.016271	39.677540
1672	584366.0512	4392434.1639	-74.016261	39.677571
1673	584366.7298	4392437.6623	-74.016253	39.677602
1674	584367.2767	4392441.1837	-74.016246	39.677634
1675	584386.0128	4392559.3144	-74.016012	39.678696
1676	584386.4272	4392562.8539	-74.016007	39.678728
1677	584386.7493	4392566.9208	-74.016003	39.678765
1678	584405.3179	4392697.1970	-74.015770	39.679937
1679	584429.1430	4393091.8667	-74.015441	39.683490
1680	584429.1333	4393091.8770	-74.015441	39.683490
1681	584436.1279	4393124.7815	-74.015356	39.683786
1682	584438.5695	4393165.2445	-74.015322	39.684150
1683	584443.9827	4393204.8958	-74.015254	39.684507
1684	584444.0580	4393205.5560	-74.015253	39.684513
1685	584482.2309	4393838.1727	-74.014727	39.690208
1686	584485.2079	4393863.1823	-74.014689	39.690433
1687	584485.2079	4393863.1823	-74.014689	39.690433
1688	584485.3059	4393863.9410	-74.014688	39.690440
1689	584493.8707	4393928.3585	-74.014579	39.691019
1690	584522.1438	4394641.4384	-74.014158	39.697441
1691	584523.0839	4394679.2502	-74.014143	39.697781
1692	584523.0909	4394679.4699	-74.014142	39.697783
1693	584528.5520	4394817.5934	-74.014061	39.699027
1694	584528.5630	4394818.3290	-74.014061	39.699034
1695	584528.2786	4394848.0743	-74.014060	39.699302
1696	584528.3044	4394848.7407	-74.014060	39.699308
1697	584528.3084	4394849.7871	-74.014060	39.699317
1698	584528.2417	4394851.9317	-74.014060	39.699336
1699	584527.7947	4394898.6937	-74.014059	39.699758
1700	584527.8008	4394899.2872	-74.014059	39.699763
1701	584530.1956	4394979.0285	-74.014021	39.700481
1702	584530.2024	4394979.5023	-74.014021	39.700485
1703	584530.6487	4395012.7784	-74.014012	39.700785
1704	584530.0832	4395054.8972	-74.014013	39.701165
1705	584530.0934	4395055.4760	-74.014013	39.701170
1706	584532.9154	4395131.6537	-74.013970	39.701856

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1707	584557.2772	4396051.4003	-74.013568	39.710139
1708	584557.2872	4396051.8571	-74.013568	39.710143
1709	584557.4701	4396077.3573	-74.013562	39.710373
1710	584557.5112	4396079.2008	-74.013561	39.710390
1711	584557.4726	4396080.1840	-74.013562	39.710399
1712	584558.2993	4396206.4631	-74.013536	39.711536
1713	584558.2993	4396206.4631	-74.013536	39.711536
1714	584558.3079	4396206.8683	-74.013536	39.711540
1715	584558.3079	4396206.8683	-74.013536	39.711540
1716	584560.7560	4396314.1370	-74.013493	39.712506
1717	584560.8054	4396317.7610	-74.013492	39.712539
1718	584562.0659	4396410.2946	-74.013466	39.713372
1719	584566.7529	4396424.5104	-74.013409	39.713500
1720	584568.1983	4396479.0794	-74.013386	39.713991
1721	584568.3553	4396482.7109	-74.013383	39.714024
1722	584568.3858	4396483.5797	-74.013383	39.714032
1723	584568.6145	4396488.7898	-74.013379	39.714079
1724	584568.8576	4396491.9558	-74.013376	39.714107
1725	584568.9640	4396493.6909	-74.013375	39.714123
1726	584569.3737	4396498.8900	-74.013369	39.714170
1727	584569.5404	4396500.6204	-74.013367	39.714185
1728	584569.8891	4396503.7765	-74.013363	39.714214
1729	584570.4793	4396508.9581	-74.013355	39.714260
1730	584570.7060	4396510.6817	-74.013352	39.714276
1731	584571.1600	4396513.8243	-74.013347	39.714304
1732	584571.9300	4396518.9823	-74.013337	39.714350
1733	584572.2165	4396520.6969	-74.013333	39.714366
1734	584573.1652	4396525.8251	-74.013322	39.714412
1735	584573.7240	4396528.9508	-74.013315	39.714440
1736	584574.0700	4396530.6544	-74.013310	39.714455
1737	584575.1964	4396535.7465	-74.013297	39.714501
1738	584576.5491	4396559.8903	-74.013278	39.714718
1739	584576.9541	4396561.5809	-74.013273	39.714734
1740	584578.2569	4396566.6307	-74.013257	39.714779
1741	584578.5449	4396567.6980	-74.013253	39.714789
1742	584578.9294	4396569.0631	-74.013249	39.714801
1743	584578.9941	4396569.2905	-74.013248	39.714803
1744	584826.5733	4397432.4718	-74.010249	39.722555
1745	585071.9703	4398288.0454	-74.007275	39.730238
1746	585074.2878	4398302.6620	-74.007246	39.730369

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1747	585081.4304	4398327.9293	-74.007160	39.730596
1748	585081.4648	4398328.0491	-74.007159	39.730597
1749	585092.5768	4398348.6557	-74.007027	39.730782
1750	585095.5408	4398358.8174	-74.006991	39.730873
1751	585095.6548	4398359.1899	-74.006990	39.730876
1752	585096.5948	4398362.1265	-74.006979	39.730903
1753	585096.7463	4398362.6299	-74.006977	39.730907
1754	585099.0102	4398370.6616	-74.006949	39.730979
1755	585099.9299	4398373.5368	-74.006938	39.731005
1756	585100.1483	4398374.2755	-74.006935	39.731012
1757	585101.8019	4398380.4449	-74.006915	39.731067
1758	585101.9598	4398380.9921	-74.006913	39.731072
1759	585102.9304	4398384.1314	-74.006902	39.731100
1760	585103.0539	4398384.5526	-74.006900	39.731104
1761	585107.2858	4398399.8089	-74.006849	39.731241
1762	585107.3271	4398399.9550	-74.006848	39.731243
1763	585142.2758	4398521.8031	-74.006425	39.732337
1764	585147.5678	4398540.1564	-74.006361	39.732502
1765	585147.6167	4398540.3302	-74.006360	39.732503
1766	585150.9709	4398552.5124	-74.006319	39.732613
1767	585151.0535	4398552.8011	-74.006318	39.732615
1768	585152.9262	4398559.1060	-74.006296	39.732672
1769	585153.0476	4398559.5385	-74.006294	39.732676
1770	585154.4478	4398564.8287	-74.006277	39.732723
1771	585154.5467	4398565.1844	-74.006276	39.732726
1772	585158.0239	4398577.1246	-74.006234	39.732834
1773	585158.0849	4398577.3398	-74.006233	39.732835
1774	585163.6562	4398597.5915	-74.006166	39.733017
1775	585163.9450	4398598.6371	-74.006162	39.733027
1776	585165.4635	4398604.3547	-74.006144	39.733078
1777	585165.9789	4398606.4618	-74.006137	39.733097
1778	585167.2709	4398612.2349	-74.006122	39.733149
1779	585167.3292	4398612.4413	-74.006121	39.733151
1780	585167.7611	4398614.5670	-74.006116	39.733170
1781	585168.8244	4398620.3866	-74.006102	39.733222
1782	585169.1721	4398622.5277	-74.006098	39.733241
1783	585170.0051	4398628.3846	-74.006088	39.733294
1784	585174.7159	4398644.5973	-74.006030	39.733440
1785	585174.9789	4398646.7505	-74.006027	39.733459
1786	585175.5803	4398652.6357	-74.006019	39.733512

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1787	585175.7582	4398654.7976	-74.006017	39.733532
1788	585176.1271	4398660.7020	-74.006012	39.733585
1789	585176.3677	4398661.6425	-74.006009	39.733593
1790	585176.4602	4398663.8097	-74.006008	39.733613
1791	585176.5959	4398669.7240	-74.006005	39.733666
1792	585176.6030	4398671.8932	-74.006005	39.733685
1793	585176.5054	4398677.8083	-74.006005	39.733739
1794	585176.8143	4398679.8774	-74.006001	39.733757
1795	585175.9662	4398823.7103	-74.005993	39.735053
1796	585165.7749	4399105.0218	-74.006075	39.737589
1797	585159.9496	4399127.7107	-74.006140	39.737794
1798	585136.2481	4399781.9461	-74.006332	39.743690
1799	585116.3238	4400336.1440	-74.006493	39.748684
1800	585116.1674	4400336.2355	-74.006495	39.748685
1801	585111.2539	4400374.0425	-74.006547	39.749026
1802	585111.2453	4400374.3552	-74.006547	39.749029
1803	585110.8190	4400399.1989	-74.006549	39.749253
1804	585110.7980	4400399.7758	-74.006549	39.749258
1805	585114.9654	4400422.8515	-74.006498	39.749466
1806	585113.5230	4400448.7353	-74.006511	39.749699
1807	585113.5014	4400449.3514	-74.006511	39.749705
1808	585113.2949	4400463.5546	-74.006512	39.749833
1809	585113.2928	4400463.6714	-74.006512	39.749834
1810	585112.7281	4400488.9469	-74.006515	39.750061
1811	585112.7085	4400489.4490	-74.006515	39.750066
1812	585112.2190	4400498.2039	-74.006520	39.750145
1813	585112.2046	4400498.5196	-74.006520	39.750148
1814	585106.7705	4400648.5196	-74.006564	39.751500
1815	585106.1381	4400666.6996	-74.006569	39.751663
1816	585106.0923	4400667.4597	-74.006570	39.751670
1817	585105.5556	4400673.7169	-74.006575	39.751727
1818	585105.3758	4400678.2496	-74.006576	39.751768
1819	585105.4770	4400688.8813	-74.006574	39.751863
1820	585107.0971	4400724.7126	-74.006550	39.752186
1821	585107.0744	4400725.5176	-74.006551	39.752193
1822	585101.2491	4400748.2065	-74.006616	39.752398
1823	585101.1520	4400753.0353	-74.006616	39.752442
1824	585101.1423	4400753.8399	-74.006616	39.752449
1825	585100.5473	4400902.1168	-74.006604	39.753785
1826	585093.1483	4401106.3522	-74.006664	39.755625

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1827	585093.0674	4401110.3761	-74.006664	39.755662
1828	585090.3192	4401186.2355	-74.006686	39.756345
1829	585094.4866	4401209.3113	-74.006635	39.756553
1830	585088.6613	4401232.0001	-74.006700	39.756758
1831	585085.0385	4401332.0001	-74.006729	39.757659
1832	585079.6043	4401482.0001	-74.006773	39.759011
1833	585083.7716	4401505.0759	-74.006722	39.759218
1834	585077.9463	4401527.7647	-74.006787	39.759423
1835	585069.2122	4401768.8550	-74.006857	39.761596
1836	585056.6308	4402116.1383	-74.006959	39.764726
1837	585056.5951	4402116.9448	-74.006960	39.764733
1838	585056.3416	4402121.7825	-74.006962	39.764777
1839	585056.2310	4402123.3934	-74.006963	39.764791
1840	585055.8214	4402128.2203	-74.006967	39.764835
1841	585055.6589	4402129.8269	-74.006969	39.764849
1842	585055.0937	4402134.6380	-74.006975	39.764893
1843	585054.8794	4402136.2385	-74.006977	39.764907
1844	585054.1591	4402141.0289	-74.006985	39.764951
1845	585054.0326	4402141.8264	-74.006986	39.764958
1846	585053.8317	4402145.6093	-74.006988	39.764992
1847	585053.5401	4402148.9638	-74.006991	39.765022
1848	585053.1356	4402152.3066	-74.006995	39.765052
1849	585052.6189	4402155.6339	-74.007001	39.765082
1850	585051.9904	4402158.9419	-74.007008	39.765112
1851	585051.2509	4402162.2269	-74.007016	39.765142
1852	585025.3634	4402317.3138	-74.007298	39.766542
1853	585024.5137	4402320.5720	-74.007308	39.766571
1854	585023.5548	4402323.7997	-74.007319	39.766600
1855	585022.3544	4402327.3926	-74.007332	39.766633
1856	585022.2038	4402328.2489	-74.007334	39.766640
1857	585021.2555	4402333.3786	-74.007344	39.766687
1858	585020.9098	4402335.0828	-74.007348	39.766702
1859	585019.7838	4402340.1764	-74.007361	39.766748
1860	585019.3790	4402341.8675	-74.007365	39.766763
1861	585018.0765	4402346.9188	-74.007380	39.766809
1862	585017.6131	4402348.5948	-74.007385	39.766824
1863	585016.1358	4402353.5978	-74.007401	39.766869
1864	585015.6145	4402355.2567	-74.007407	39.766884
1865	585013.9641	4402360.2053	-74.007426	39.766929
1866	585013.6818	4402361.0277	-74.007429	39.766937

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1867	584954.0297	4402530.0418	-74.008104	39.768465
1868	584920.5653	4402624.8576	-74.008482	39.769323
1869	584919.1590	4402628.6261	-74.008498	39.769357
1870	584918.8540	4402629.4663	-74.008501	39.769364
1871	584917.4850	4402632.7691	-74.008517	39.769394
1872	584915.6099	4402637.7940	-74.008538	39.769440
1873	584914.9550	4402639.4575	-74.008546	39.769455
1874	584913.4688	4402642.7092	-74.008563	39.769484
1875	584911.4153	4402647.6637	-74.008586	39.769529
1876	584910.7013	4402649.3028	-74.008594	39.769544
1877	584908.4719	4402654.1807	-74.008619	39.769588
1878	584906.8705	4402657.3773	-74.008638	39.769617
1879	584906.0984	4402658.9897	-74.008646	39.769632
1880	584903.6961	4402663.7849	-74.008674	39.769675
1881	584902.8668	4402665.3687	-74.008683	39.769689
1882	584901.1522	4402668.5060	-74.008703	39.769718
1883	584898.5799	4402673.2122	-74.008732	39.769760
1884	584897.6946	4402674.7654	-74.008743	39.769774
1885	584894.9558	4402679.3766	-74.008774	39.769816
1886	584893.1300	4402682.4505	-74.008795	39.769844
1887	584892.1898	4402683.9711	-74.008806	39.769858
1888	584889.2878	4402688.4815	-74.008839	39.769899
1889	584887.3533	4402691.4882	-74.008861	39.769926
1890	584886.3593	4402692.9741	-74.008872	39.769940
1891	584883.2979	4402697.3779	-74.008908	39.769980
1892	584882.2514	4402698.8273	-74.008920	39.769993
1893	584880.2107	4402701.7629	-74.008943	39.770019
1894	584876.9939	4402706.0544	-74.008980	39.770058
1895	584875.8962	4402707.4655	-74.008993	39.770071
1896	584872.5281	4402711.6393	-74.009032	39.770109
1897	584870.3837	4402714.5001	-74.009056	39.770135
1898	584869.2363	4402715.8711	-74.009069	39.770148
1899	584865.7210	4402719.9218	-74.009110	39.770184
1900	584863.4758	4402722.7041	-74.009136	39.770210
1901	584862.8838	4402723.3740	-74.009143	39.770216
1902	584860.2475	4402726.4118	-74.009173	39.770244
1903	584709.3831	4402894.1040	-74.010913	39.771769
1904	584505.8204	4403120.3727	-74.013260	39.773828
1905	584498.3389	4403128.4046	-74.013346	39.773901
1906	584497.9411	4403128.8156	-74.013351	39.773905

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1907	584491.2779	4403135.4432	-74.013428	39.773965
1908	584490.3805	4403136.4184	-74.013438	39.773974
1909	584479.3267	4403148.0024	-74.013566	39.774079
1910	584479.1190	4403148.2743	-74.013568	39.774082
1911	584474.1095	4403152.5574	-74.013626	39.774121
1912	584473.5069	4403153.1133	-74.013633	39.774126
1913	584460.4590	4403165.8268	-74.013784	39.774242
1914	584460.2327	4403166.0521	-74.013786	39.774244
1915	584456.5811	4403169.7651	-74.013829	39.774278
1916	584455.2217	4403171.3554	-74.013844	39.774292
1917	584454.0970	4403173.1194	-74.013857	39.774308
1918	584453.5083	4403173.7855	-74.013864	39.774314
1919	584450.0124	4403177.8131	-74.013904	39.774351
1920	584448.8712	4403179.1761	-74.013917	39.774363
1921	584445.5207	4403183.3254	-74.013956	39.774401
1922	584444.6524	4403185.2287	-74.013966	39.774418
1923	584443.5603	4403186.6315	-74.013978	39.774431
1924	584440.3594	4403190.8973	-74.014015	39.774470
1925	584433.4560	4403203.9000	-74.014094	39.774588
1926	584432.4145	4403205.3407	-74.014106	39.774601
1927	584430.4882	4403208.3288	-74.014128	39.774628
1928	584427.4410	4403212.7057	-74.014163	39.774667
1929	584426.4513	4403214.1825	-74.014175	39.774681
1930	584423.5616	4403218.6649	-74.014208	39.774722
1931	584421.7428	4403221.7196	-74.014229	39.774749
1932	584420.8063	4403223.2306	-74.014239	39.774763
1933	584418.0777	4403227.8130	-74.014271	39.774804
1934	584417.1955	4403229.3563	-74.014281	39.774818
1935	584415.4864	4403232.4737	-74.014300	39.774847
1936	584412.9225	4403237.1501	-74.014330	39.774889
1937	584412.0957	4403238.7239	-74.014339	39.774903
1938	584409.6996	4403243.4885	-74.014366	39.774947
1939	584408.1024	4403246.6647	-74.014385	39.774975
1940	584407.3321	4403248.2669	-74.014393	39.774990
1941	584405.1069	4403253.1137	-74.014419	39.775034
1942	584403.6236	4403256.3446	-74.014436	39.775063
1943	584402.9108	4403257.9732	-74.014444	39.775078
1944	584400.8593	4403262.8960	-74.014467	39.775122
1945	584400.2048	4403264.5488	-74.014475	39.775137
1946	584398.8373	4403267.8304	-74.014490	39.775167

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1947	584396.9621	4403272.8231	-74.014511	39.775212
1948	584396.3668	4403274.4981	-74.014518	39.775227
1949	584394.6703	4403279.5543	-74.014537	39.775273
1950	584393.4203	4403282.8825	-74.014551	39.775303
1951	584392.8848	4403284.5777	-74.014557	39.775318
1952	584391.3692	4403289.6909	-74.014575	39.775365
1953	584390.2383	4403293.0614	-74.014587	39.775395
1954	584389.7634	4403294.7746	-74.014593	39.775411
1955	584388.4305	4403299.9385	-74.014607	39.775457
1956	584388.0169	4403301.6674	-74.014612	39.775473
1957	584387.0065	4403305.0760	-74.014623	39.775504
1958	584385.8579	4403310.2840	-74.014636	39.775551
1959	584385.6742	4403311.1537	-74.014638	39.775559
1960	584384.7857	4403314.5960	-74.014648	39.775590
1961	584383.9243	4403318.5019	-74.014658	39.775625
1962	584353.1032	4403471.1137	-74.014998	39.777003
1963	584316.7821	4403650.9584	-74.015399	39.778627
1964	584316.0270	4403655.0939	-74.015407	39.778664
1965	584315.4937	4403658.7924	-74.015413	39.778697
1966	584315.3246	4403659.6704	-74.015415	39.778705
1967	584314.9298	4403663.3862	-74.015419	39.778739
1968	584313.9620	4403668.6626	-74.015430	39.778786
1969	584313.6709	4403670.4269	-74.015433	39.778802
1970	584312.8925	4403675.7345	-74.015441	39.778850
1971	584312.6368	4403679.4625	-74.015444	39.778884
1972	584312.4090	4403681.2360	-74.015446	39.778900
1973	584311.8209	4403686.5681	-74.015452	39.778948
1974	584311.6566	4403688.3487	-74.015454	39.778964
1975	584311.5404	4403692.0836	-74.015455	39.778998
1976	584311.1433	4403697.4333	-74.015459	39.779046
1977	584311.0428	4403699.2186	-74.015460	39.779062
1978	584310.8372	4403704.5790	-74.015461	39.779110
1979	584310.8607	4403708.3157	-74.015461	39.779144
1980	584310.8241	4403710.1034	-74.015461	39.779160
1981	584310.8103	4403715.4678	-74.015460	39.779208
1982	584310.8377	4403717.2557	-74.015460	39.779224
1983	584311.0211	4403721.4557	-74.015457	39.779262
1984	584311.1991	4403726.8171	-74.015454	39.779311
1985	584311.2904	4403728.6029	-74.015453	39.779327
1986	584311.6601	4403733.9546	-74.015448	39.779375

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
1987	584311.7296	4403734.8459	-74.015447	39.779383
1988	584321.6082	4403893.1275	-74.015312	39.780808
1989	584321.7755	4403895.4577	-74.015309	39.780829
1990	584390.4914	4404741.7264	-74.014398	39.788446
1991	584506.4538	4406073.7397	-74.012872	39.800434
1992	584506.6525	4406076.4118	-74.012870	39.800458
1993	584506.8882	4406079.6645	-74.012867	39.800487
1994	584507.0296	4406082.9225	-74.012865	39.800517
1995	584557.0213	4406853.9333	-74.012181	39.807458
1996	584561.9674	4407025.2772	-74.012101	39.809001
1997	584563.0258	4407030.2975	-74.012088	39.809046
1998	584563.3002	4407032.3714	-74.012085	39.809065
1999	584564.6214	4407044.3552	-74.012068	39.809172
2000	584565.4588	4407059.0511	-74.012056	39.809305
2001	584565.4588	4407059.0511	-74.012056	39.809305
2002	584565.4656	4407059.1841	-74.012056	39.809306
2003	584565.4656	4407059.1841	-74.012056	39.809306
2004	584579.9528	4407340.9212	-74.011851	39.811843
2005	584579.5747	4407356.7406	-74.011853	39.811985
2006	584580.1136	4407376.0420	-74.011844	39.812159
2007	584580.1120	4407376.9333	-74.011844	39.812167
2008	584586.5595	4407476.3721	-74.011756	39.813062
2009	584585.5190	4407509.3409	-74.011764	39.813359
2010	584585.5116	4407509.7725	-74.011764	39.813363
2011	584585.4270	4407540.4924	-74.011761	39.813640
2012	584585.4687	4407541.2076	-74.011760	39.813646
2013	584585.8728	4407549.0122	-74.011755	39.813717
2014	584585.9282	4407550.4438	-74.011754	39.813729
2015	584586.1288	4407558.2563	-74.011750	39.813800
2016	584586.1293	4407558.4253	-74.011750	39.813801
2017	584586.1521	4407561.0995	-74.011750	39.813825
2018	584586.1702	4407562.5321	-74.011749	39.813838
2019	584586.1673	4407570.3472	-74.011748	39.813909
2020	584586.1481	4407571.7798	-74.011748	39.813922
2021	584585.9415	4407579.5921	-74.011750	39.813992
2022	584585.8850	4407581.0237	-74.011750	39.814005
2023	584585.4751	4407588.8280	-74.011754	39.814075
2024	584586.0084	4407630.1871	-74.011743	39.814448
2025	584585.9146	4407631.6168	-74.011743	39.814461
2026	584585.3015	4407639.4077	-74.011750	39.814531

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
2027	584585.1706	4407640.8345	-74.011751	39.814544
2028	584584.3547	4407648.6068	-74.011759	39.814614
2029	584584.1866	4407650.0297	-74.011761	39.814627
2030	584583.1686	4407657.7782	-74.011772	39.814697
2031	584583.1665	4407658.2917	-74.011772	39.814701
2032	584582.9613	4407659.7097	-74.011774	39.814714
2033	584581.7419	4407667.4290	-74.011788	39.814784
2034	584581.8011	4407683.7814	-74.011785	39.814931
2035	584580.3810	4407691.4663	-74.011800	39.815000
2036	584580.1023	4407692.8717	-74.011803	39.815013
2037	584578.4824	4407700.5170	-74.011821	39.815082
2038	584578.1672	4407701.9147	-74.011825	39.815095
2039	584576.3488	4407709.5152	-74.011845	39.815163
2040	584575.8137	4407712.6802	-74.011851	39.815192
2041	584575.4622	4407714.0692	-74.011855	39.815205
2042	584560.9098	4407744.4968	-74.012021	39.815480
2043	584560.1712	4407748.0671	-74.012029	39.815512
2044	584559.3030	4407751.6081	-74.012039	39.815544
2045	584558.3063	4407755.1151	-74.012050	39.815576
2046	584557.1824	4407758.5834	-74.012063	39.815607
2047	584556.8382	4407759.5668	-74.012067	39.815616
2048	584556.4081	4407760.7476	-74.012071	39.815627
2049	584555.1585	4407764.1726	-74.012086	39.815658
2050	584552.4890	4407771.2242	-74.012116	39.815722
2051	584552.0294	4407772.3938	-74.012121	39.815732
2052	584550.6558	4407775.7710	-74.012137	39.815763
2053	584547.8100	4407782.7533	-74.012169	39.815826
2054	584547.3211	4407783.9110	-74.012175	39.815837
2055	584545.8252	4407787.2359	-74.012192	39.815867
2056	584542.8049	4407794.1445	-74.012226	39.815929
2057	584541.1888	4407797.4126	-74.012245	39.815959
2058	584540.6710	4407798.5577	-74.012250	39.815969
2059	584537.4780	4407805.3882	-74.012287	39.816031
2060	584535.7439	4407808.5952	-74.012307	39.816060
2061	584535.1975	4407809.7269	-74.012313	39.816070
2062	584531.8338	4407816.4750	-74.012351	39.816131
2063	584529.7526	4407820.0095	-74.012375	39.816164
2064	584529.1779	4407821.1271	-74.012382	39.816174
2065	584525.6457	4407827.7885	-74.012422	39.816234
2066	584525.0431	4407828.8912	-74.012429	39.816244

<b>Point Number</b>	<b>X Easting</b>	<b>Y Northing</b>	<b>Longitude</b>	<b>Latitude</b>
2067	584521.3446	4407835.4618	-74.012471	39.816304
2068	584520.7144	4407836.5491	-74.012479	39.816313
2069	584516.8520	4407843.0246	-74.012523	39.816372
2070	584516.5267	4407843.5622	-74.012527	39.816377
2071	584334.4929	4408140.2101	-74.014615	39.819068
2072	584160.2553	4408424.1530	-74.016614	39.821643
2073	584158.1557	4408427.4449	-74.016638	39.821673
2074	584157.6954	4408428.1806	-74.016644	39.821679
2075	584154.8958	4408432.5701	-74.016676	39.821719
2076	584153.9374	4408434.0169	-74.016687	39.821732
2077	584151.9707	4408436.8765	-74.016709	39.821758
2078	584149.0205	4408441.1662	-74.016743	39.821797
2079	584148.0125	4408442.5788	-74.016755	39.821810
2080	584144.9151	4408446.7636	-74.016790	39.821848
2081	584142.8504	4408449.5532	-74.016814	39.821873
2082	584141.7939	4408450.9300	-74.016826	39.821886
2083	584138.5532	4408455.0047	-74.016864	39.821923
2084	584136.3930	4408457.7210	-74.016889	39.821948
2085	584135.2894	4408459.0603	-74.016901	39.821960
2086	584131.9092	4408463.0201	-74.016940	39.821996
2087	584131.3402	4408463.6751	-74.016947	39.822002
2088	584128.8052	4408466.6449	-74.016976	39.822029
2089	583949.2690	4408669.7267	-74.019048	39.823876
2090	583713.7743	4408936.1059	-74.021765	39.826299
2091	583660.1974	4408997.0857	-74.022383	39.826854