



NYSERDA Environmental and Fisheries Mitigation Plans – Sunrise Wind

August 17, 2021



NYSERDA

NYSERDA OREC18-1

Select Contract Requirements

- Consult with relevant State agencies around fishing, wildlife, and the environment (Sec. 12.03)
- Participate in New York's technical working groups (TWGs) (Sec. 12.04)
- Evolve appended fisheries & environmental mitigation plans (MPs) over the course of the project (Sec. 12.05/12.06)
- Make environmental data collected during site assessment publicly available (Sec. 12.07)
 - Each developer devising approach
 - [Wildlife Data Standardization and Sharing](#): Environmental Data Transparency for New York State Offshore Wind Energy
- Implement lighting controls to minimize nighttime visibility (Sec. 12.08)



NYSERDA OREC18-1

Mitigation Plans

- Submitted MPs were “standardized” and included in the contract
- MPs will be presented to the TWGs (without other developers)
- Anticipate updating based on guidance from State/federal agencies, TWGs and other stakeholders
- Pre-populated the MPs in 2020 OREC solicitation based on TWG feedback
- Lessons learned from TWG discussions around MPs, and other regional MP processes will be considered in future OREC solicitations



Mitigation Plan Meeting Purpose

Sunrise Wind

- Provide project overview and update on evolving environmental and fisheries mitigation approaches
- Review past TWG feedback and how it has informed the mitigation plans
- Solicit feedback from TWGs on specific work Sunrise is currently developing
- Begin identifying issues needing further discussion at future E-TWG and F-TWG discussions with Sunrise Wind

Sunrise Wind

A Joint Venture of Ørsted and Eversource

08.17.2021

E-TWG, F-TWG Meeting

**Sunrise
Wind**

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Ørsted &
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Agenda

- 01 Project Overview
- 02 EMP Overview
- 03 FMP Overview
- 04 Fisheries and Benthic Monitoring Plan
- 05 Other Funding Initiatives

SUNRISE WIND

PROJECT OVERVIEW



Offshore Wind Pioneer

- 20+ years of experience building offshore wind farms
- Built the first offshore wind farm in the world
- Owns and operates America's first offshore wind farm - Block Island Wind Farm

Proven Expertise

- 28 successful offshore wind farms, with over 1,500 turbines installed worldwide and the largest project portfolio in the country



National Energy Leader with Northeast Roots

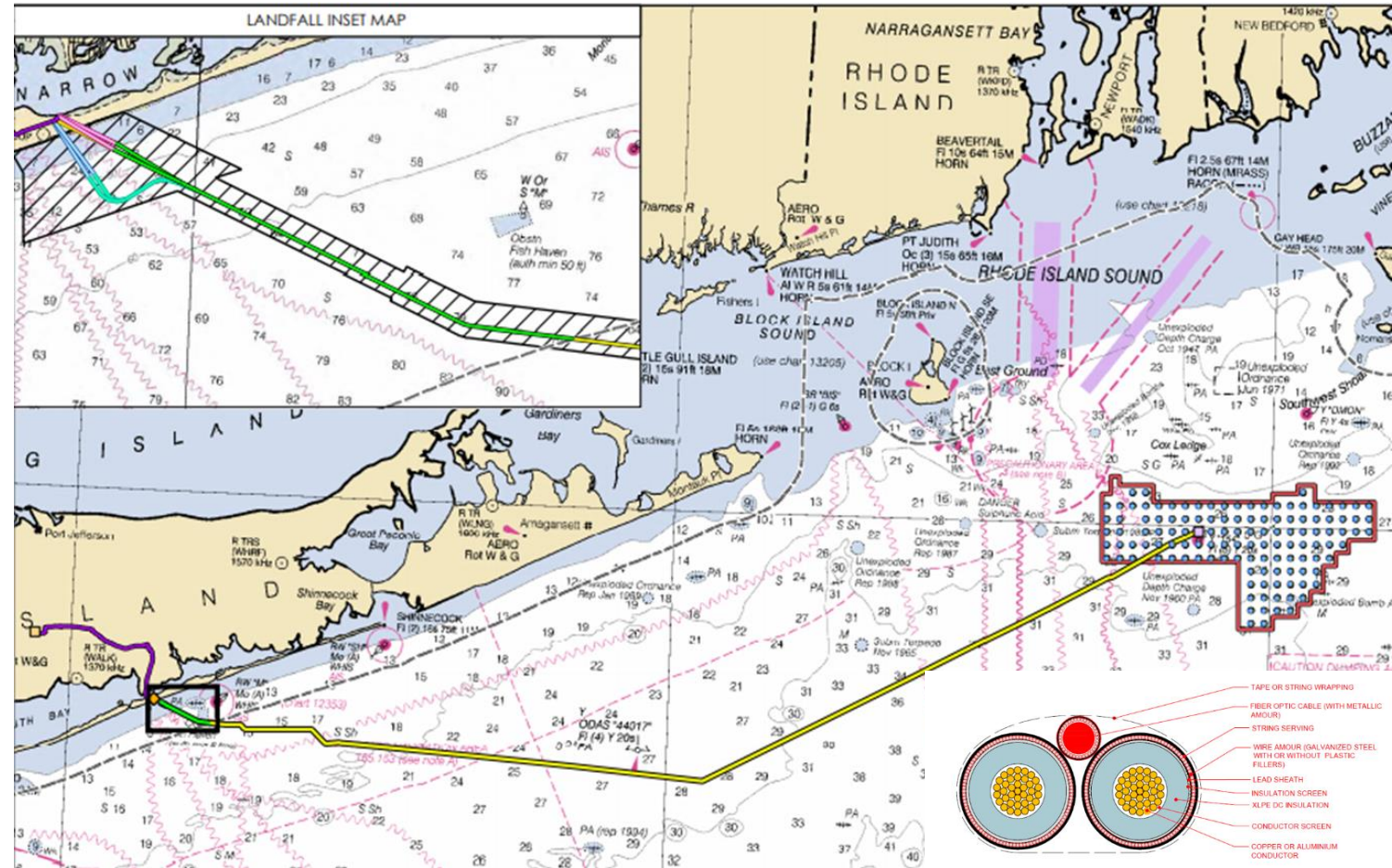
- 100+ year history of operation in Northeast New England's largest energy company
- Deep-rooted knowledge of the region's electrical system with unparalleled expertise in energy transmission

Catalyst for Clean Energy Solutions

- Leading driver of northeast, clean energy economy supporting economic development across the region

Project Overview - Offshore

- Lease Area OCS-A 0487
- Up to 1,300 MW
- Up to 122 Wind Turbine Generators (WTG)
 1. 1 x 1 nm layout
 2. Monopiles
 3. 8-15 MWs
- One Offshore Converter Station (OCS-DC)
 1. Piled Jacked
 2. CWIS (4-12 mgd)
- Inter-array Cables (IAC)
 1. Up to 186 mi (300 km)
 2. 3-7 ft (1-2 m) target burial depth
- One DC cable bundle (SRWEC)
 1. Up to 106 mi (170 km) corridor
 2. 3-7 ft (1-2 m) target burial depth
- Landfall HDD at Smith Point County Park



Project Overview - Onshore

Onshore Transmission Cable

- Approximately 17 miles
- Buried in single duct bank
- HDD crossings of ICW, Carmans River, SR27
- Trenchless crossing at LIRR

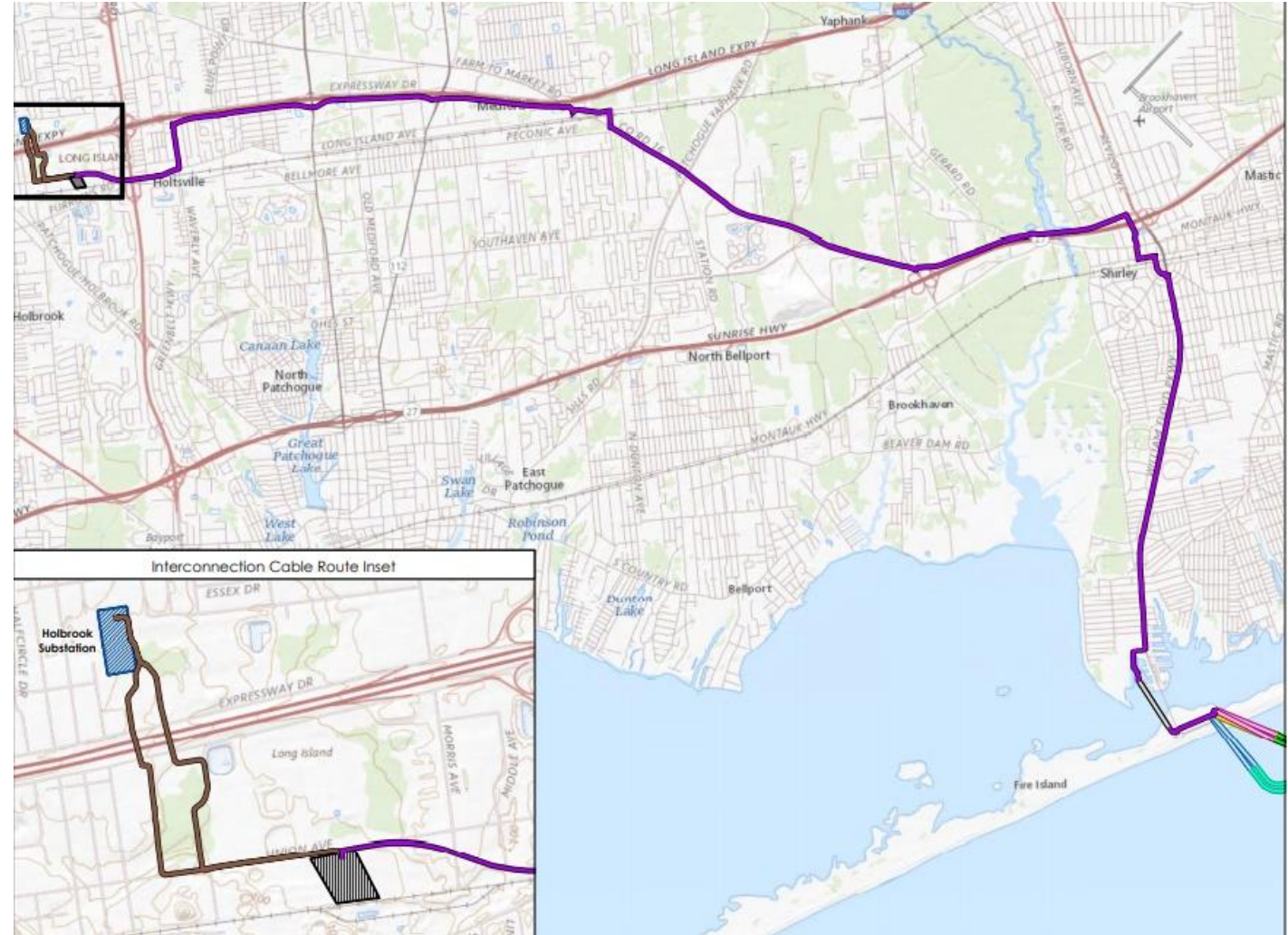
One Onshore Converter Station (OnCS-DC)

- Operational footprint ~6 ac

Onshore Interconnection Cable

- Approximately 1 mile
- Buried in two separate duct banks
- Trenchless crossing of LIE (I-495)

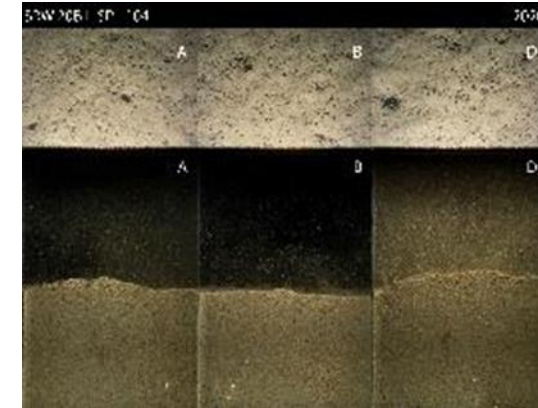
Interconnection at Holbrook Substation



Completed and Ongoing Surveys

Offshore Surveys	Dates
Geophysical Surveys-Lease Area	2018-Feb 2021
Geophysical Surveys- ECR	2019-2020
Geotechnical Survey- Lease Area	2018-2020
Geotechnical Survey- WTG locations	May-Oct 2021
Geotechnical Survey- ECR (inc. Landfall HDD)	2020
Benthic Survey- Federal Waters	April-May, Aug 2020
Benthic Survey and SAV surveys-NY Waters *	Sep 2020
Onshore Surveys	Dates
Baseline Noise Assessment	Sep 2020
Wetland, habitat and T&E Species	2020, 2021
Terrestrial Arch Surveys	Nov 2020-Aug 2021

* NYS-Waters Benthic Report in Article VII filing here: [Part 1](#) and [Part 2](#)



Permitting Overview and Status

COP Submitted to BOEM September 1, 2020

- Multiple Supplemental Filings and Updates submitted since then
- *NOI Anticipated August 31, 2021*

Article VII Application submitted to NYS DPS December 9, 2020

- Docket [20-T-0617](#) ← Link
- Completeness Determination received July 2021

Other Federal Permit Applications to be filed in 2021 and 2022

- NPS: ROW, Temp Construction
- NMFS ITA
- EPA: OCS Air Permit
- USACE 404/10/408
- EPA NPDES 316(b)



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EMP OVERVIEW

Environmental Mitigation Plan Approach, Outline, Updates

Overview of Approach

- Proactive engagement with stakeholders to seek input and feedback on the project, which will help inform decisions made throughout the project lifecycle
- Support of collaborative science

Outline

- Communication/Collaboration Approach
- Monitoring and Research Pre-, During-, Post-Construction
- Supporting Other Research
- Marine Mammals and Sea Turtles
- Birds and Bats
- Fish, Invertebrates, and their Habitats
- Decommissioning
- Additional Considerations

Updates Made since October 2019

- Updated in response with ETWG Comments and COP application
- Change “will” to “has and will continue to” for actions the project is undertaking
- Updated info on data availability and data collected to incorporate surveys the project has completed
- Updated existing collaborations (*more to come*)
- Updated available data sources in response to ETWG Comments and COP assessments
- Updated species at risk to align with COP assessments
- Updated mitigation and monitoring measures to align with COP

EMP- Marine Mammals and Sea Turtles

Mitigation Measures

- Mitigation measures aligned with Environmental Protection Measures identified in the COP
- Specifics of the mitigation measures will be outlined in the Protected Species Mitigation and Monitoring Plan (PSMMP), which is under development
- Sunrise Wind co-funded with other developers the 2020/21 NEAQ aerial surveys

Future Updates

- Additional “announcements” later in presentation
- PSMMP development for ITA Application and DEIS
- Developing long-term PAM Monitoring Plan (Pre, during and post construction) per anticipated agency requirements and convening a Scientific Review Group

EMP- Birds and Bats

Mitigation Measures

- Mitigation measures aligned with Environmental Protection Measures identified in the COP
- Additions include:
 - Added 1nm x 1nm WTG spacing to minimize risk of potential collision, barrier effects or displacement
 - Use of ADLS or related means, pursuant to approval by FAA and BOEM and commercial and technical feasibility
 - Limiting construction and O&M lighting to the minimum necessary
 - Onshore cables will be buried and primarily within previously disturbed or developed areas

Future Updates

- Avian Monitoring Plan is under development – will circulate to ETWG for feedback when the plan is further progressed
- Looking to support other regional research – does the ETWG have suggestions on priorities and organizations that we could support?

EMP- Fish, Invertebrates, and their Habitats

Mitigation Measures

- Mitigation measures aligned with Environmental Protection Measures identified in the COP
- Additions include:
 - Project cables will be buried using buried using equipment such as mechanical plow, jet plow, and/or mechanical cutter to the extent feasible
 - Dynamic positioning vessel will be used for cable installation to the extent practicable
 - Limiting construction and O&M lighting to the minimum necessary
 - Identification of no-anchorage areas will be developed for vessels prior to construction

Future Updates

- Benthic Habitat Mapping ongoing
- Fisheries and Benthic Monitoring Plan development (*later in presentation*) – we are looking for ETWG/FTWG feedback on the proposed topics

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FMP OVERVIEW

Fisheries Mitigation Plan Approach, Outline, Updates

Overview or Approach

- Commitment to outreach with all maritime stakeholders
- Communication, coordination, collaboration, and coexistence are core principles

Outline

- Communication/ Collaboration Approach
- Monitoring and Research Pre-, During-, Post-Construction
- Supporting Other Research
- Benthic/Fisheries Resources
- Recreational and Commercial Fishing Industry
- Decommissioning
- (Optional) Fisheries Compensation Plan
- Additional Considerations

Updates since November 2019

- New Ørsted Personnel & Fisheries Representatives
- Updates to monitoring and research to include commitment to collaborate with local industry
- Updated mitigation and monitoring measures to align with COP
- Updated available data sources in response to ETWG Comments and COP assessments
- Updated mitigation techniques to include:
 1. Avoidance/minimization for structures
 2. Enumerated discharge/spill prevention measures
- Updated gear loss prevention procedure to include
 1. commitment to scout vessels and on-board fisheries representatives
 2. Claim procedure which includes economic loss
 3. Coordination with NOAA Office of Coast Survey to update charts

Fisheries Communication and Outreach Plan

Keeping the fishing industry informed about Ørsted Offshore North America activities that may affect fishing across all projects.

Collaborating with fishermen to find ways to minimize and mitigate potential impacts of offshore wind development on fishing and identify ways our two industries can work together.

Striving to resolve any conflicts with individual fishermen quickly and fairly.

Identifying the best ways to communicate with fishermen and having an “open door policy” to listen to fishermen's concerns.

Coexistence

Communication

Coordination

Collaboration



A Seat at the Table

Ørsted's commitment to coexistence



1,060+ fisheries stakeholders

1,000+ individual engagements

200+ fisheries organizations consulted

State Stats (Stakeholders/Engagements/Organizations)

MA: 110+/130+/20+

RI: 90+/180+/15+

CT: 25+/20+/5+

NY: 200+/250+/50+

NJ: 210+/350+/30+

DE: 30+/35+/5+

MD: 40+/40+/5+

Initiatives derived from fisheries input

- Uniform grid spacing
- Altered cable landings
- Expansion of project envelopes
- Fair & straight forward gear claim process
- Survey zones & descriptive bi-weekly Mariners Briefings
- Commercial fishing vessels as guard & research vessels
- On-board fisheries representatives
- Verification of layout in simulators
- Shared operations & maintenance facilities
- Opportunities to engage Ørsted

Next Steps for EMP and FMP

Stakeholder Feedback

- The written Plans will be submitted to NYSERDA for distribution following this meeting
- Re-convene TWGs in September or October after review has been completed to discuss further

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FISHERIES AND BENTHIC MONITORING PLAN

Fisheries and Benthic Monitoring Plan

Overview

- Plan intended to facilitate a regional approach to monitoring and was informed by fisheries-dependent and fisheries-independent data, as well as monitoring guidelines and priorities

Core Components

- Trawl Survey
- HMS Acoustic Telemetry
- SRWEC Acoustic Telemetry (EMF)
- Benthic Habitat Monitoring Using Optical Techniques

TWG feedback topics

1. Priority species for biological sampling during the trawl survey
2. Proposed locations of reference sites for the trawl survey
3. Focal species for the telemetry study along the SRW Export Cable route
4. Receiver array locations along the SRW Export Cable route
5. Benthic sampling locations along the SRW Export Cable route

Sunrise Wind Monitoring Approach – Trawl Survey

Trawl survey overview

- Sampling will occur seasonally (i.e., every 3 months), with a target start date in the winter (2021/2022). Sampling will be executed simultaneously with the Revolution Wind trawl survey.
- Field work will occur on a local trawl vessel and will be executed by a local university or research institution. NEAMAP trawl net and sampling protocols will be used.
- Asymmetrical BACI design - Two control sites have been proposed with consideration to depth, habitat, consistency with NEFSC trawl survey strata, and proximity to future offshore wind development.
- Pre-construction monitoring will allow for the characterization of community structure, including relative abundance, spatial distribution, and demographics (size, weight, maturity).
- Primary objective is to determine whether the construction and operational activities associated with the Project lead to a change in the relative abundance of fish and invertebrates within the Project Area.
- Species composition and biological characteristics (e.g., size structure, fish condition, and diet composition) will be compared between pre-construction and post-construction periods.

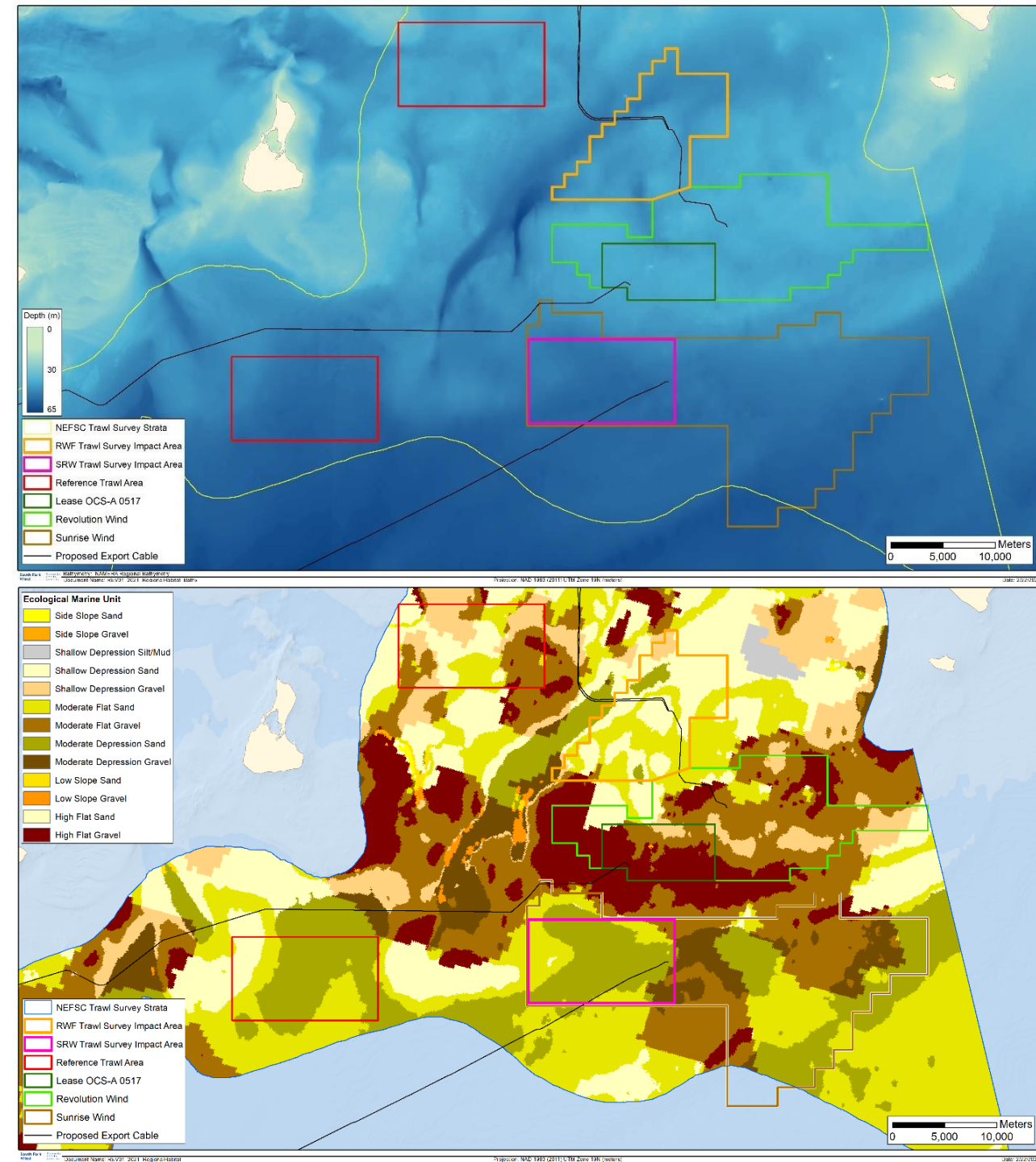
Sunrise Wind Monitoring Approach – Trawl Survey

Survey Design

- Spatially balanced survey
- Proposed sample size target of 15 tows per season in the control and impact areas. Sampling design is informed by power analysis. Adaptive sampling strategy will be employed.

Data Collection

- Station data
 - Latitude/longitude, time, vessel heading, vessel speed
 - Net geometry using net mensuration
- Environmental data
 - Sea state, wind speed, depth, bottom T logger
 - Vertical CTD profile
- Biological data
 - Total weight of each species (CPUE; kg)
 - Individual lengths and weights for priority species



Sunrise Wind Monitoring Approach - Acoustic Telemetry

Ongoing Telemetry Studies in MA/RI WEA

MassCEC funded telemetry study for Highly Migratory Species

- Tagging started in 2020, and the focal species are bluefin tuna, blue sharks, and shortfin mako sharks. Goal is to deploy 60 transmitters (2020 and 2021).
- 15 acoustic receivers deployed on popular HMS fishing grounds

BOEM funded study for Atlantic Cod

- Study started in November 2019. Tagging is ongoing and the goal is to deploy 100 transmitters (2019-2021).
- 10 receivers were deployed in locations where spawning cod have been captured in the past.
- Cod are also being tracked during the spawning season using an autonomous glider with an acoustic receiver.



Sunrise Wind Monitoring Approach - Acoustic Telemetry

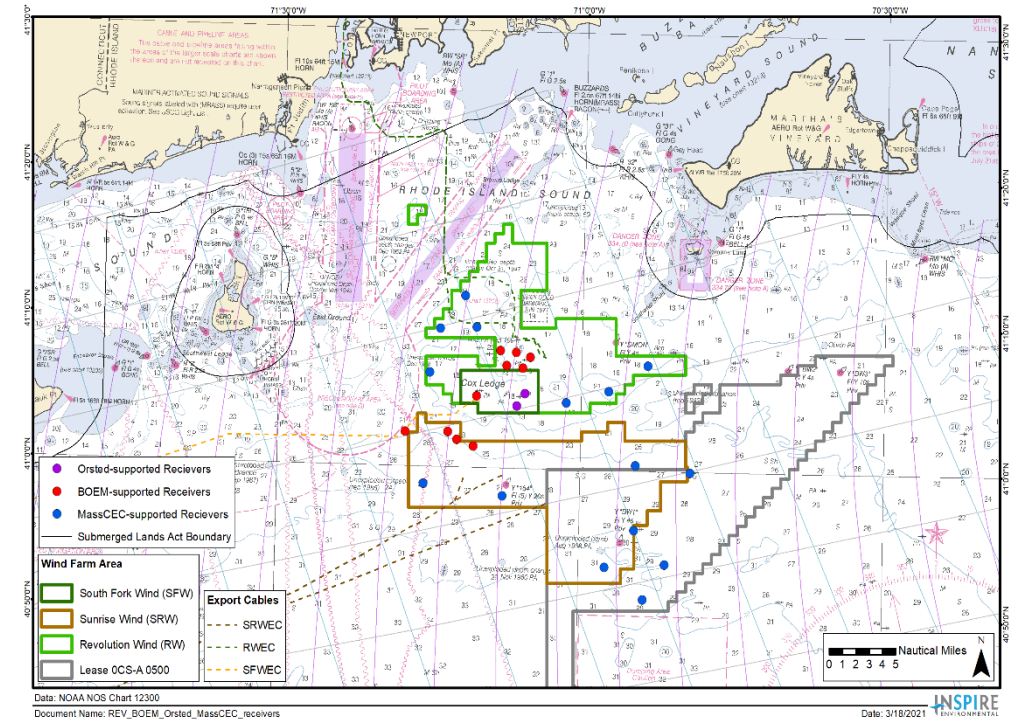
New England Aquarium and Inspire Environmental will carry out a five-year acoustic telemetry monitoring project.

Project Timeline

- **Winter 2021** – Convene a workshop on data sharing
- **2022 - 2026** – 36 receivers deployed in Ørsted lease areas year-round.
- **2023-2025** – 50 transmitters deployed each year on HMS species.
- **2026** – Project ends and final report is delivered.

Objectives

1. Evaluate changes in HMS presence, residency, and movements between the pre-construction, construction, and operational periods.
2. Evaluate HMS connectivity among Ørsted project areas
3. Monitor tagged HMS at spatial scales greater than the Ørsted project areas



Sunrise Wind Monitoring Approach - Acoustic Telemetry

Monitoring study focused on assessing potential behavioral impacts from EMF

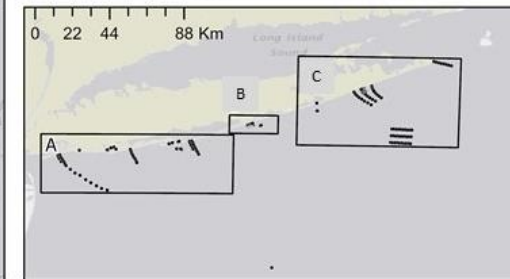
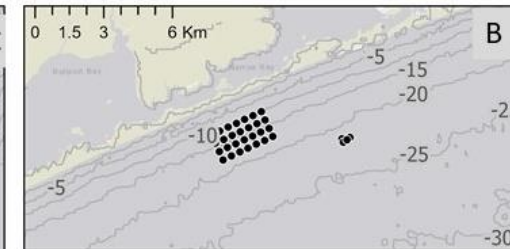
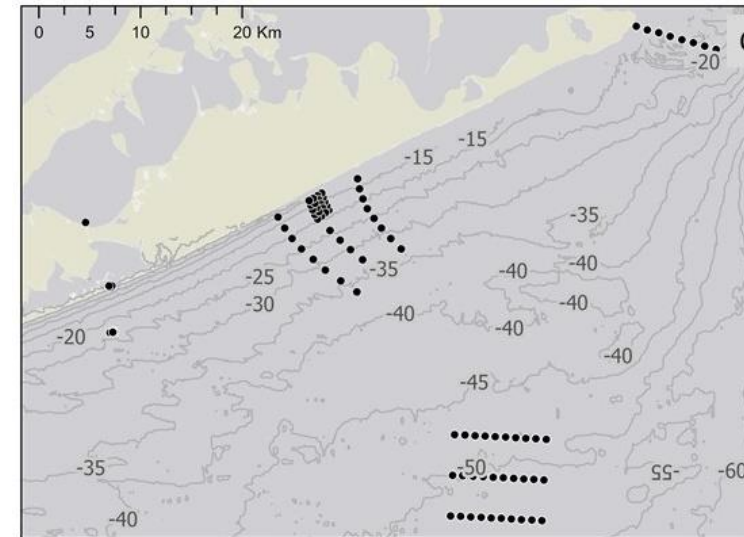
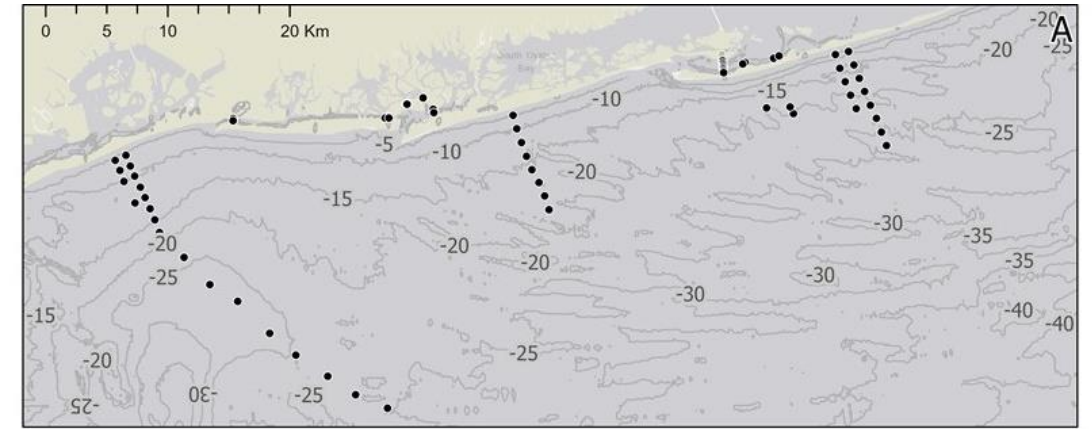
- Assessing behavioral responses to EMF exposure has been identified as a monitoring priority (Petruny-Parker et al., 2015; Mass DMF, 2018; ROSA, 2021).
- Stakeholders have expressed concern that EMF from power transmission cables will affect behavior or act as a barrier to migration.
- Acoustic telemetry is a suitable monitoring approach to evaluate behavior of animals near subsea power cables.
- Sunrise Wind will partner with researchers at Stony Brook University, Cornell Cooperative Extension and the Shark Research and Education Program at the South Fork Natural History Museum to execute an acoustic telemetry study along the SRW Export Cable.



Sunrise Wind Monitoring Approach - Acoustic Telemetry

Monitoring Objective

- Evaluate whether the operation of the SRW Export Cable influences the movement rates, residency, depth preferences, or acceleration of tagged individuals



Benthic Monitoring Approach – Turbine Foundations and Scour Protection Layer

Hypothesis

- Epifaunal community will vary with water depth (zonation).
- Successional development will occur over time.

Monitoring Approach

- Stratified random selection of WTGs within benthic habitat strata
- Collect imagery (ROV/video) along segments of the monopiles, use photogrammetry to estimate % cover, identify key/dominant species, and estimate volume (biomass); compare results over time, across depths, and habitat types

Degraer, Carey, et al. 2020



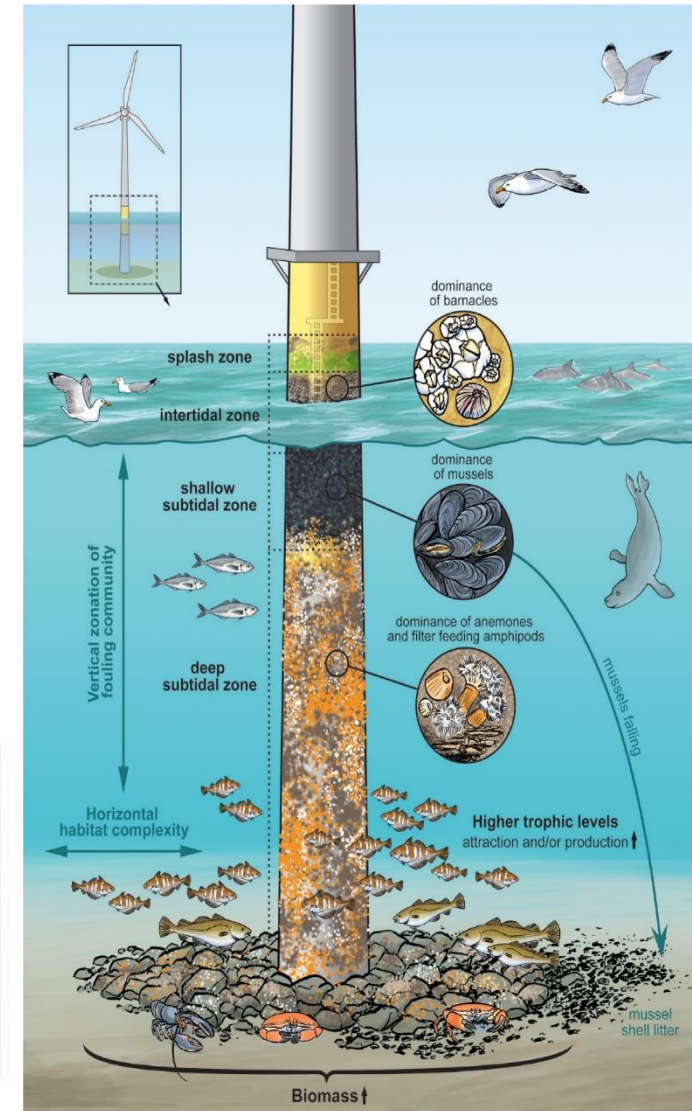
Pioneer stage



Intermediate stage



Climax stage



Benthic Monitoring Approach – Soft Sediment Habitats

Turbine Locations

Hypothesis

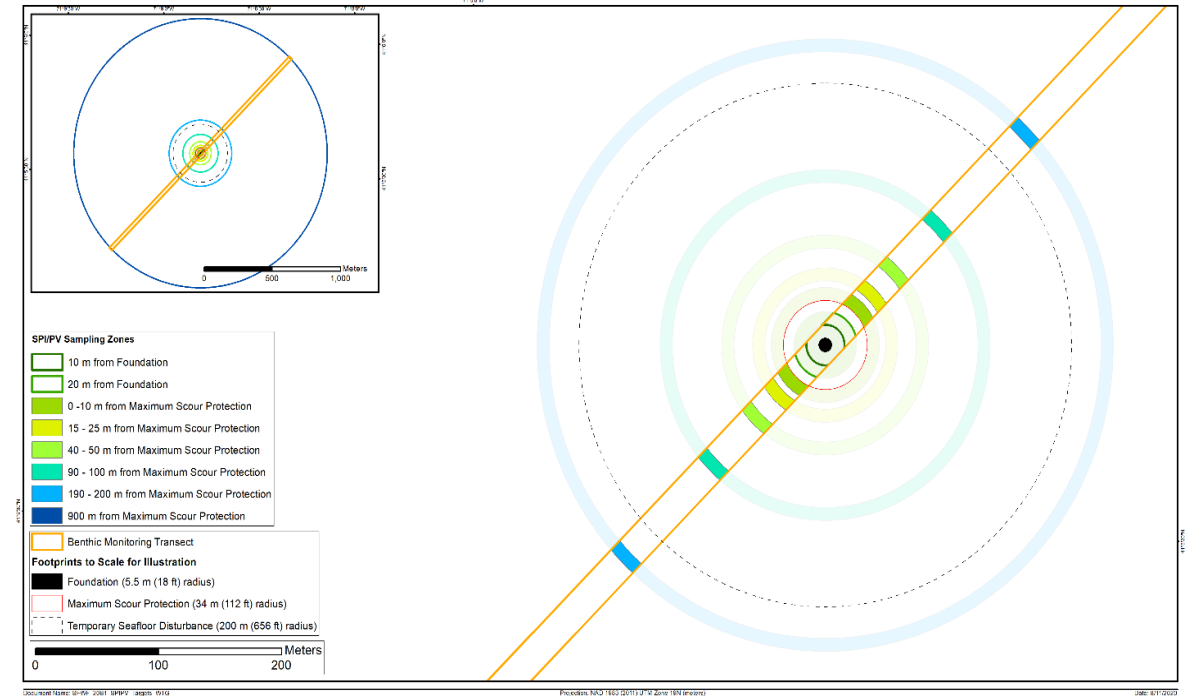
- Biodeposition and detritus from epifaunal growth on WTG foundation will result in sediment fining and higher organic content in surrounding soft bottom
- This organic matter will support deposit feeding benthic invertebrates
- Effects will decrease with increasing distance from WTG

Monitoring Approach

- Use SPI/PV to measure changes in benthic function over time and with distance from WTGs

Design

- Before-after-gradient (BAG) design conducted at the stratified random selection of WTGs within benthic habitat strata



Benthic Monitoring Approach – Soft Sediment Habitats

Export Cable

Hypothesis

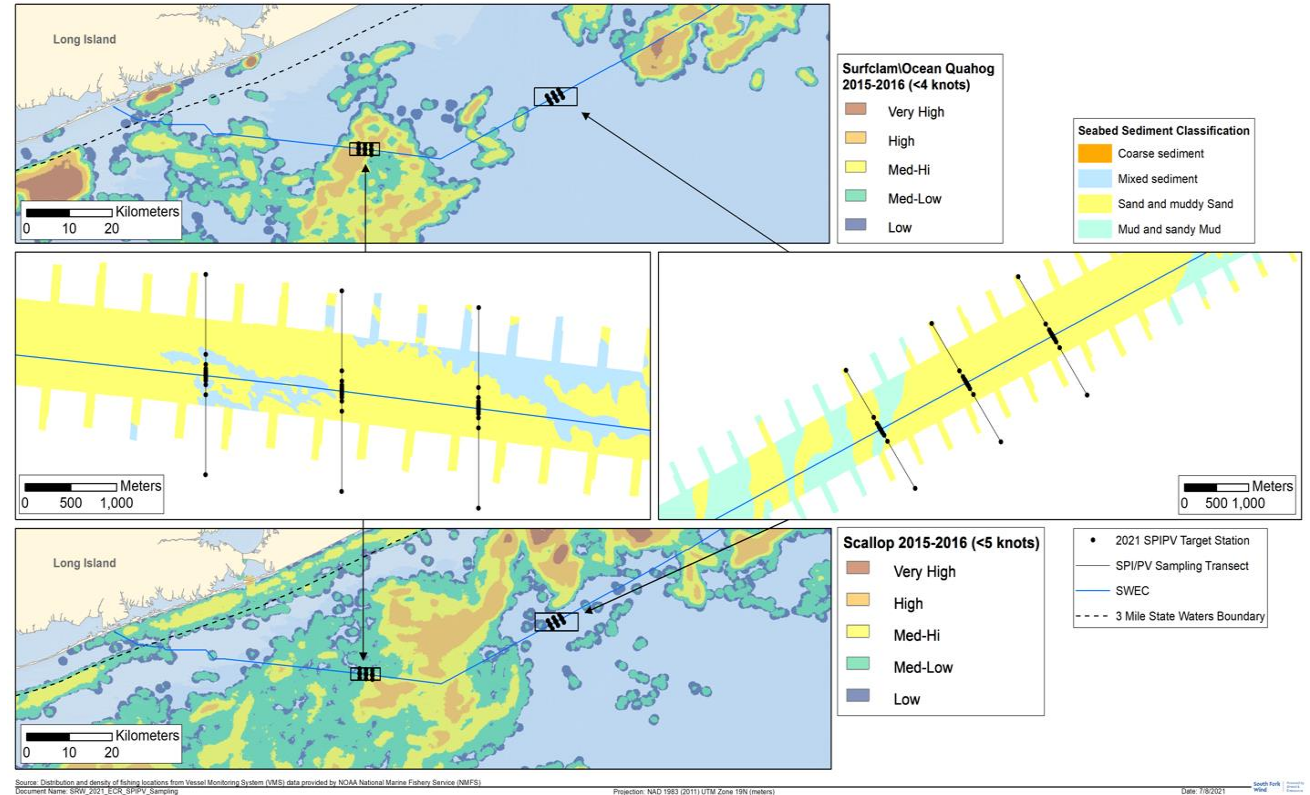
After initial physical disturbance during construction, soft sediment community function is expected to return to baseline conditions.

Monitoring Approach

Use SPI/PV to measure changes in benthic function over time and with distance from cable centerline.

Design

Stratified random selection of cable segments based on benthic habitat and magnitude of fishing activity; BAG at each selected cable segment.



Next Steps

Stakeholder Feedback

- The written Fisheries Monitoring Plan will be submitted to NYSERDA for distribution following this meeting
- Re-convene TWGs in September or October after review has been completed to discuss further
- Additional meetings with Federal and State agencies
- Also review with RI HAB/FAB and MA FWG in the future

TWG feedback topics include:

1. Priority species for biological sampling during the trawl survey
2. Proposed locations of reference sites for the trawl survey
3. Focal species for the telemetry study along the SRW Export Cable route
4. Receiver array locations along the SRW Export Cable route
5. Benthic sampling locations along the SRW Export Cable route

SUNRISE WIND

OTHER FUNDING INITIATIVES

Other Funding Initiatives :

“Sunrise wind has made commitments to third-party environmental research funding for marine mammals and fisheries concerns. The details of these commitments are being finalized and will be announced at a future date.”

“Sunrise Wind and its affiliates are developing additional commitments and collaborations with third-party researches which will be announced when details of the collaborations are finalized”

Initiatives to Discuss Today

- NOAA-MOA Update
- Strategic Scientific Review
- Atlantic Marine Conservation Society (AMSEAS) Seal Tagging
- Stony Brook University North Atlantic Right Whale Prey Study
- Stony Brook University Thermal Camera Marine Mammal Automated Detection Project
- Syracuse University Baleen Whale Acoustic Ecology
- SUNY Maritime Simulator
- Others are still in development and will be announced in the future

Stakeholder Engagement

- Sunrise Wind will host annual virtual workshops for funded science initiatives to discuss the methods and results with interested stakeholders and to solicit feedback for multi-year projects
- Applicable data (e.g. oceanographic data) will be made available to NOAA and NERACOOS to support multiple weather and climate modeling efforts

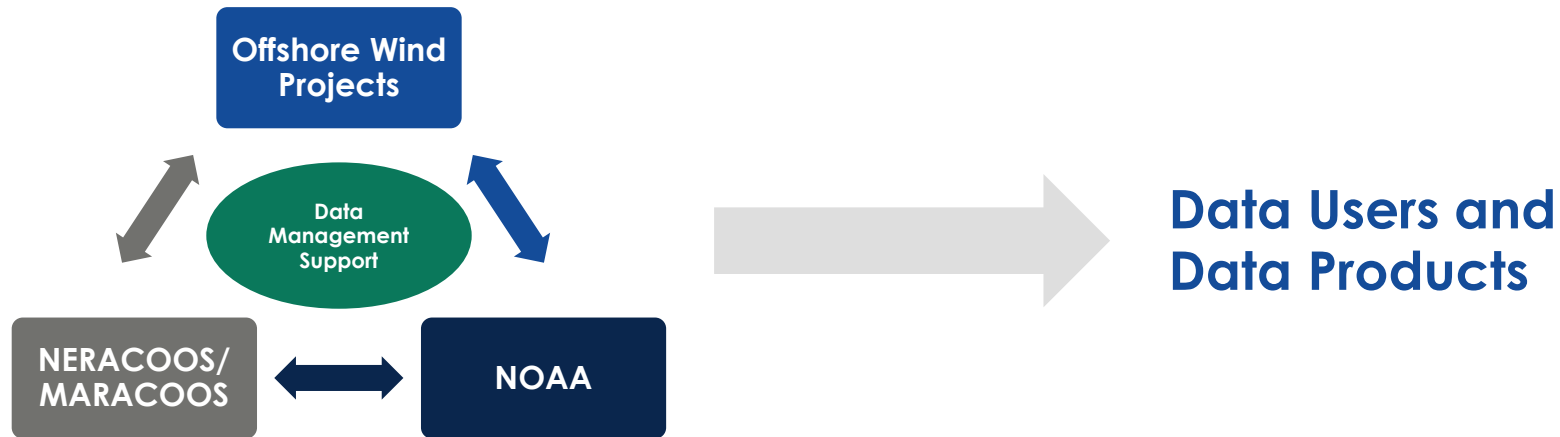
NOAA MOA UPDATE

About

- Sharing, Archiving, and Distributing Project Approved Non-Proprietary Datasets
- January 15, 2021 - September 30, 2025
- Data themes: Air quality, water quality, and emissions' Biological communities; Meteorology; Coastal and ocean currents, circulation, and waves; Hydrographic services and mapping; Physical oceanography
- NOAA provided guidelines on best practices for data/metadata to NOAA data repositories

Next Steps

- Engage with NOAA line offices to identify specific data streams of mutual interest and value
- Utilize existing and public facing pathways and repositories (e.g. NCEI) for sharing and archiving data
- Engage with NOAA/IOOS funded Regional Associations (MARACOOS and NERACOOS) and Regional Ocean Councils (NROC and MAROC) to identify data types and data products of value to regional stakeholders and further facilitate streamlined data share



Science Initiatives Review Group :

Group Leads: Dr. Susan Parks and Dr. Brandon Southall

- Purpose and Need: Planning for Scientific Initiatives occurs during commercially sensitive periods. Implementing a more rigorous internal review process will provide greater assurance to external stakeholders regarding value of selected and announced initiatives.
- Scientific Review Group: The Ørsted/Eversource project portfolio has co-funded a scientific review group for non-fisheries research topics led by Dr's Susan Parks and Brandon Southall. The review group is modeled after a NAVY program review process and will be utilized to provide projects with 3rd party expert review and input on internally developed and planned science initiatives specific to marine mammals and sea turtles.
- The review group will be composed of ~4-6 science experts that cover a broad range of expertise and will be selected by the group leads.
- The review group will leverage existing science recommendations from the recent NYSERDA SOS workshops and other available programmatic recommendations.
- The goals of the review process are to provide greater internal assurance that planned/proposed initiatives:
 1. are scientifically rigorous,
 2. are in alignment with available offshore wind study recommendations (e.g. SOS workshop etc), and
 3. as applicable, can integrate with ongoing or future regional research initiatives
- Planned projects described in the following slides maybe be modified in subsequent years based on the review groups recommendations.



Atlantic Marine Conservation Society (AMSEAS) Seal Tagging - PI: Rob DiGiovanni

- Project Goal: Contribute to assessments of habitat usage of harbor and gray seals in southern New England waters and the New York Bight, including OSW project areas.
- Funding 5+ years of tags for use with harbor and grey seals; option to include sea turtle tagging.
- ~10 Acoustic and ~10 satellite tags per year:
 1. The acoustic tags will communicate with an existing underwater acoustic receiver array, and tag numbers will be shared with other researchers through the Animal Tracking Network.
 2. The satellite tags will collect location, temperature, haul-out behavior, dive depth and duration.
- Supports larger collaborative project underway with the Naval Undersea Warfare Center; Marine Mammals of Maine, Northeast Fisheries Sciences Center and staff at the Marine Sciences Center of Stony Brook University.
- Tagging to be conducted under permits secured by AMSEAS or collaborators.
- Tagged animal tracks will be available in real-time on AMSEAS website.



Stony Brook North Atlantic Right Whale Prey Study:

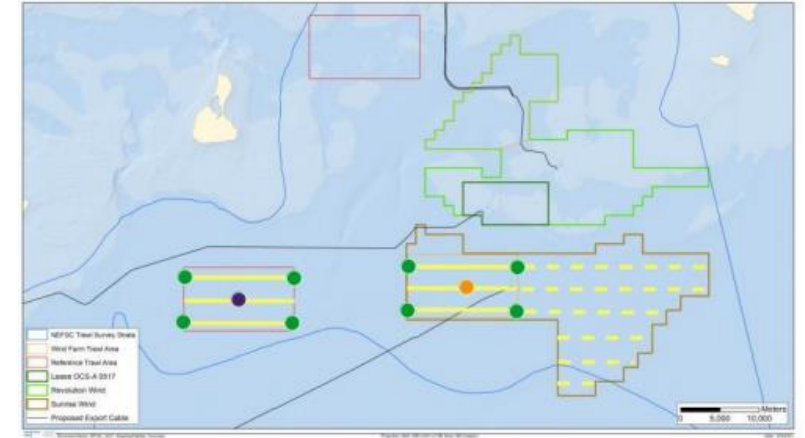
PI's: Dr. Joe Warren and Dr. Lesley Thorne

Project Goal: Using net tows and active acoustic techniques, assess and quantify spatio-temporal dynamics of zooplankton in waters of the Southern New England Shelf and New York Bight, with a focus on the Sunrise Wind Farm area, and integrate zooplankton data into habitat models for NARW to improve our predictive capacity for NARW in OSW areas in both space and time.

Initial funding for two years; option to extend project or integrate into wider regional efforts (e.g. RWSE, DOE, NEFSC funded studies):

- Stationary year-round measurements (bottom lander with upward facing echosounder).
- Four Vessel based seasonal surveys/year with echosounders; vertical ring net tows; CTD profiles; lipid content measured from copepod sub-samples.
- Measurements at control site that will also be used as control site for Sunrise Fisheries studies.
- Desktop analysis of existing historic zooplankton data in the region.
- Initiate development of predictive models for NARWs in collaboration with regional partners at Rutgers (Dr. Josh Kohut), NEAQ (Dr's Jessica Redfern and Dan Pendleton) and the Bigelow Laboratory (DR. Nicholas Record).

Stony Brook will collaborate with other Orsted funded projects including Syracuse University/Susan Parks; Rutgers University (ECO-PAM project); and all Ørsted funded fisheries surveys.



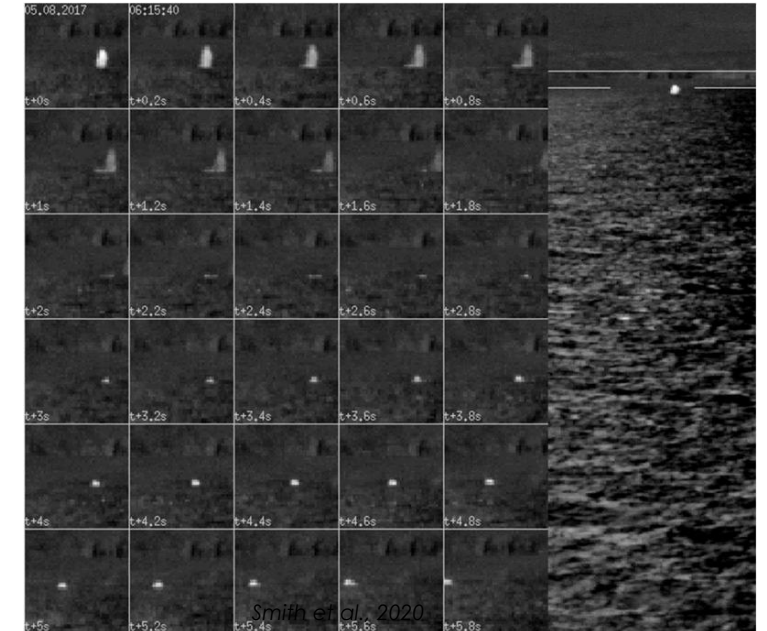
Stony Brook Thermal Camera Marine Mammal Automated Detection Project - PIs: Dr. Alexander Borowicz; Dr. Lesley Thorne

Project Goal: Develop standards and evaluation of autodetection capability for thermal camera systems for detecting marine mammals from platforms associated with offshore wind development, construction and operation.

Funding for one year

- Understand the feasibility and limitations of the automated classification of thermal imagery for at-sea whale detection;
- Develop a training and validation set of images sourced from pre-existing thermal imagery associated with marine mammal observations that could be used to evaluate or develop different autodection models;
- Set benchmarks for model performance; and
- Provide advice and guidelines for the standards of evaluation and implementation for machine-learning image classification models, the interpretation of model outputs and error, and the construction of such models for use in a dynamic, at-sea operational environment.

Project leverages PI's expertise in Machine Learning and Artificial Intelligence (AI) application for remote detection of wildlife (e.g. SPACEWHALE project).



**Stony Brook
University**

Syracuse University Baleen Whale Acoustic Ecology

PI: Dr. Susan Parks

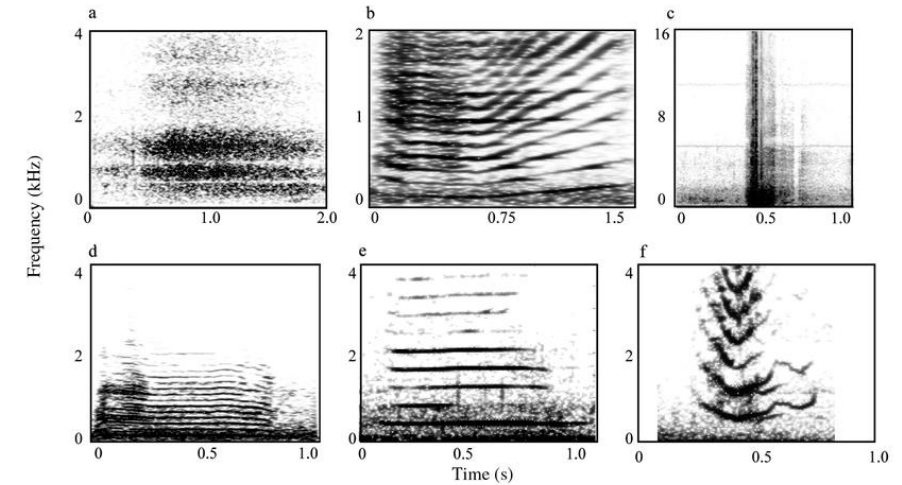
Multi-Project Goals: advance understanding of baleen whale acoustic ecology and impacts of underwater noise; advance analytical techniques to enhance the application of acoustic monitoring for offshore wind development needs; and provide funding support for NYS undergraduate and graduate student research in these areas of interest.

Funding for 5 years; 200k/year

Year 1-2 Projects Planned:

- Acoustic Density Estimation: Using machine learning approaches to improve acoustic density estimation of marine mammals from passive acoustic data. We can explore multiple analysis approaches to determine the feasibility of this approach to count right whales based on call subtle differences in the calls of individuals.
- Opportunistic Focal Data Collection: Collecting opportunistic acoustic data with a floating GPS acoustic array to determine call types, call rates, and associated behavior for baleen whales in wind lease areas. This project would be in collaboration with Stony Brook for deployment of equipment and Woods Hole and Loggerhead Instruments for equipment development use their developing Medusa system (low cost floating recorders with GPS position data in real time) deployed in a floating array of buoys when species of interest are located.

Year 2+ projects will be developed year to year



Parks et al., 2011: *Eubalaena glacialis*. Examples of sounds recorded from tagged right whales stereotyped as (a) exhalation, (b) upcall, (c) gunshot, and variable tonal calls: (d) low-frequency tonal ($F_0 < 100$ Hz), (e) mid-frequency tonal ($100 < F_0 < 300$ Hz), (f) high frequency tonal ($F_0 > 300$ Hz).



Regional Efforts

NYSERDA State of the Science

- Supported the recent workshop effort

ROSA

- Board of Directors
- Greg DeCelles – Member of Advisory Council and Research Advisor. Member of the Working Group that wrote the ROSA Offshore Wind Project Monitoring Framework and Guidelines

RWSE

- Established summer 2021
- Developer Representatives on Steering Committee
- Ørsted committed funds to establish organization
- Sunrise Wind is committed to supporting RWSE's success



THANK YOU

Contact Us

www.sunrisewindny.com

info@sunrisewindny.com

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Next Steps

- Scheduling poll for follow up E-TWG and F-TWG meetings (Aiming for early October 2021)
 - TWG specific meetings will be based on the comments received and be led by developer subject matter experts.
- Mitigation Plans and Survey Documents for comment will be sent out by August 23rd.
 - Details on when comments are due back will be included in the email – likely three to four weeks.
- A meeting summary without attribution will be made available to all E-TWG and F-TWG members and posted on their respective websites.
 - All questions from the chat and those posed by the developer will be included in the summary for TWG members to consider in their comments.
- Please send questions and/or feedback on topics to cover in these meetings to Kate and Morgan.

Thank You

Feedback |

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