

# Beacon Wind

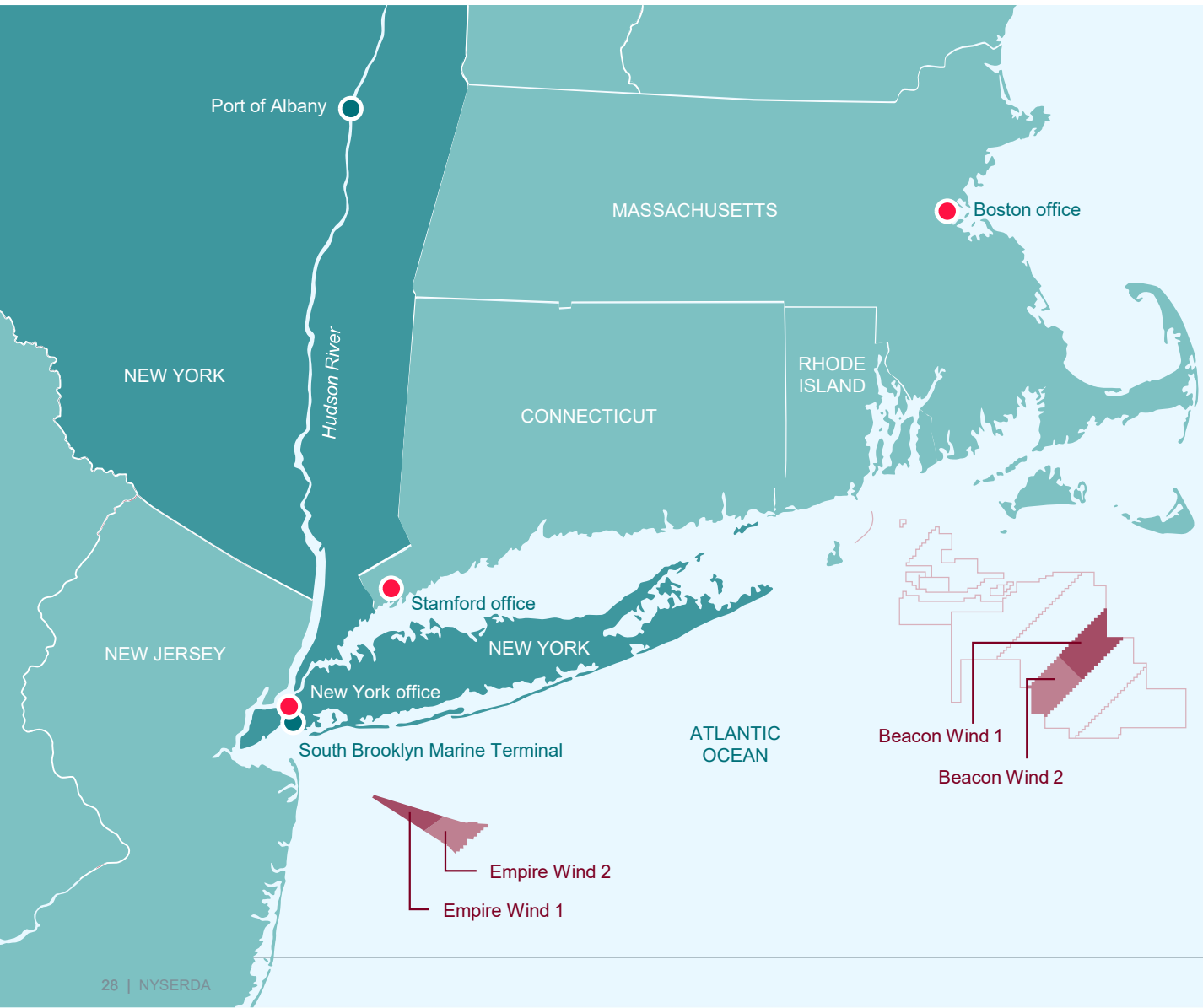
NYSERDA TWG Meeting

September 20, 2022

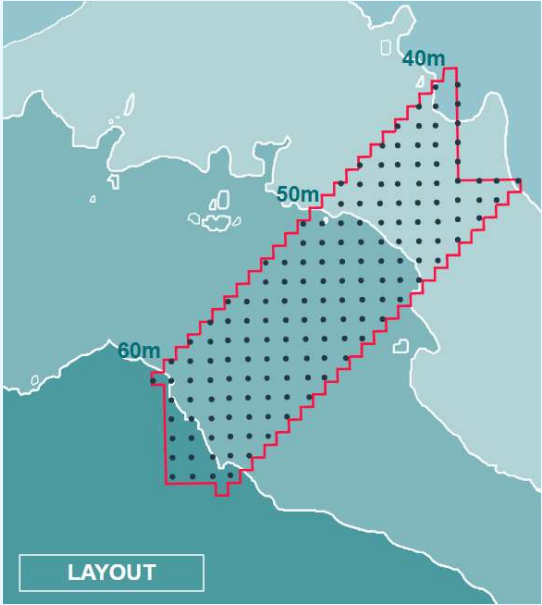


To Get There.

# TOGETHER



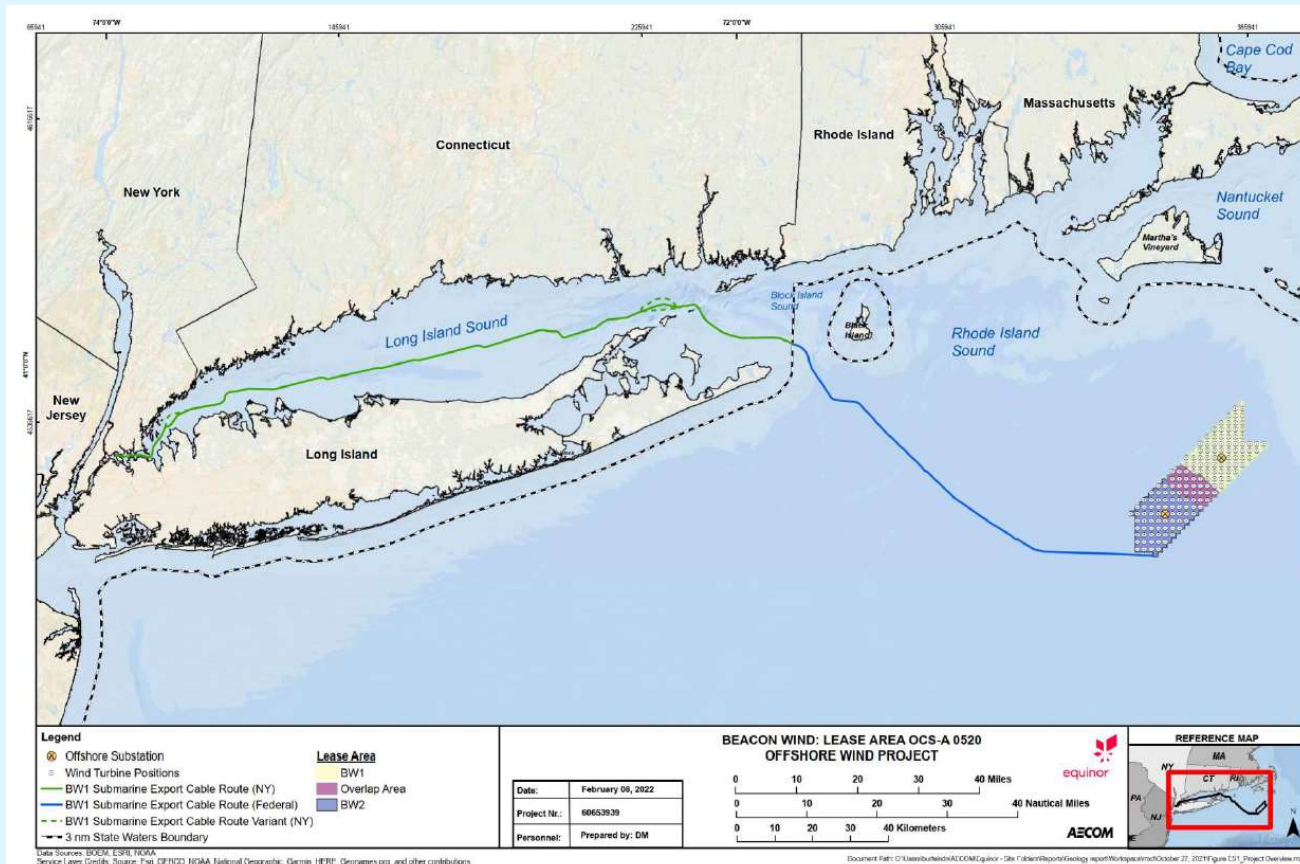
# Equinor is Helping Grow Offshore Wind Along the East Coast





# Project Overview

# Beacon Wind - Key Facts



20 miles south of Nantucket, 60 miles east of Montauk

Operations and Maintenance (O&M) base in South Brooklyn

Commercial Operations Date: late 2020s

Beacon Wind 1 (BW1) power purchase agreement awarded by NYSERDA in 2021 for 1,230 MW

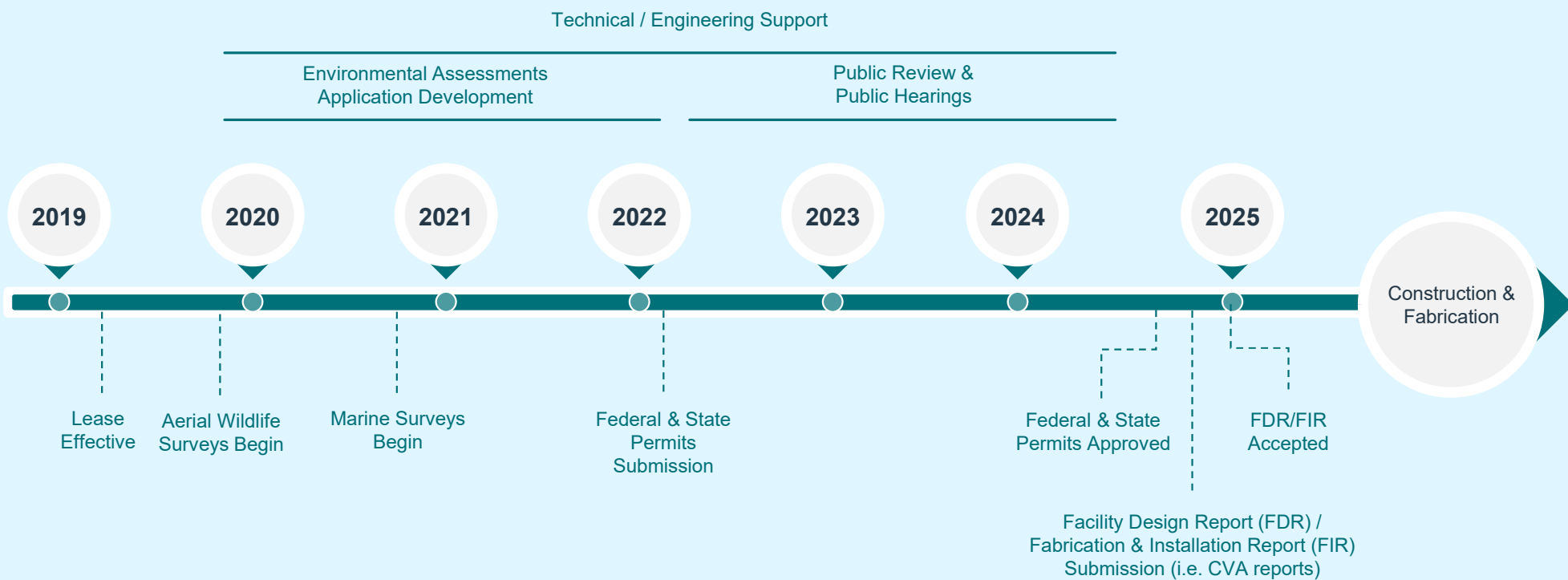
BW1 point of interconnection in Astoria, Queens, NY

BW2 point of interconnection designed to serve northeast markets utilizing existing cable backbone

Upcoming RFP rounds for NY and New England as opportunities for BW2

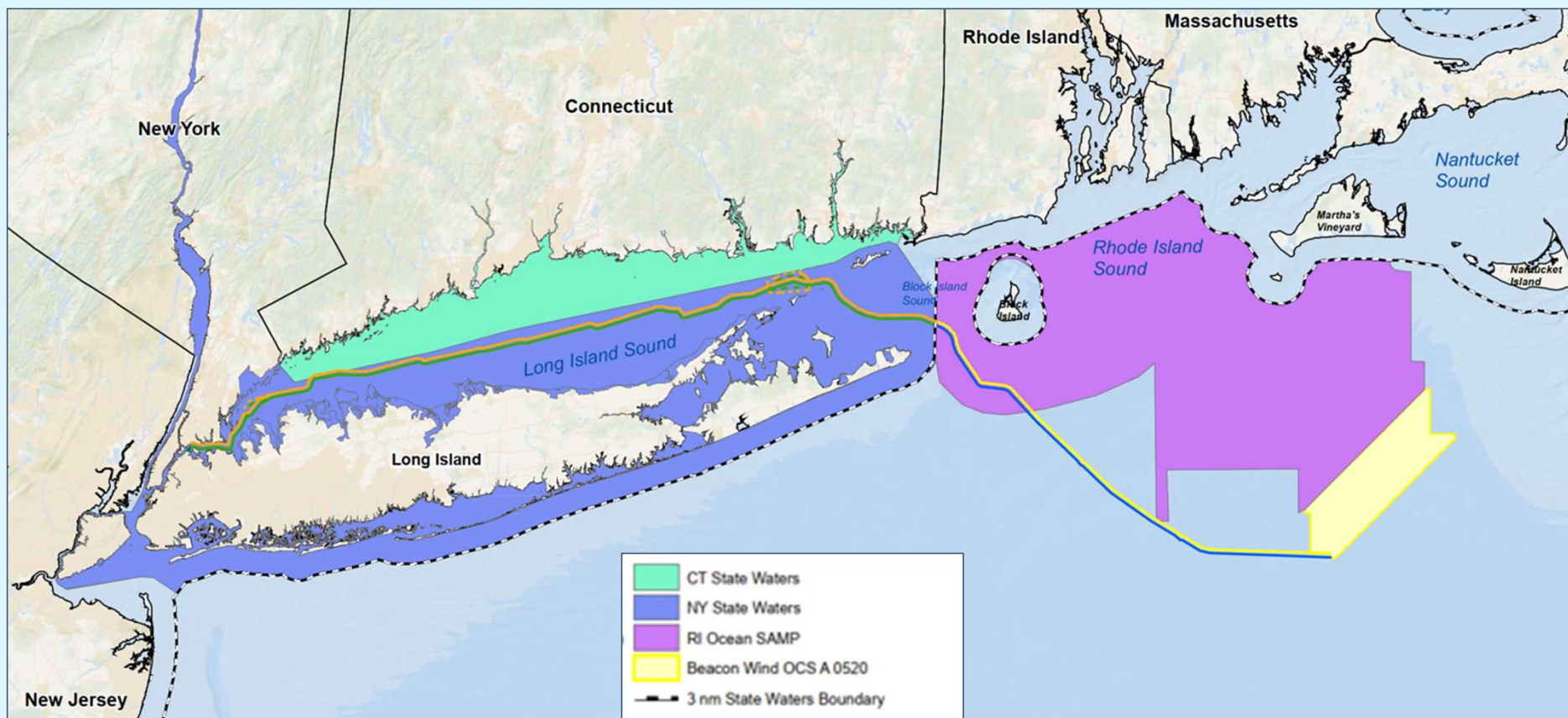
HVDC technology for the cable

# Beacon Wind - Project Schedule



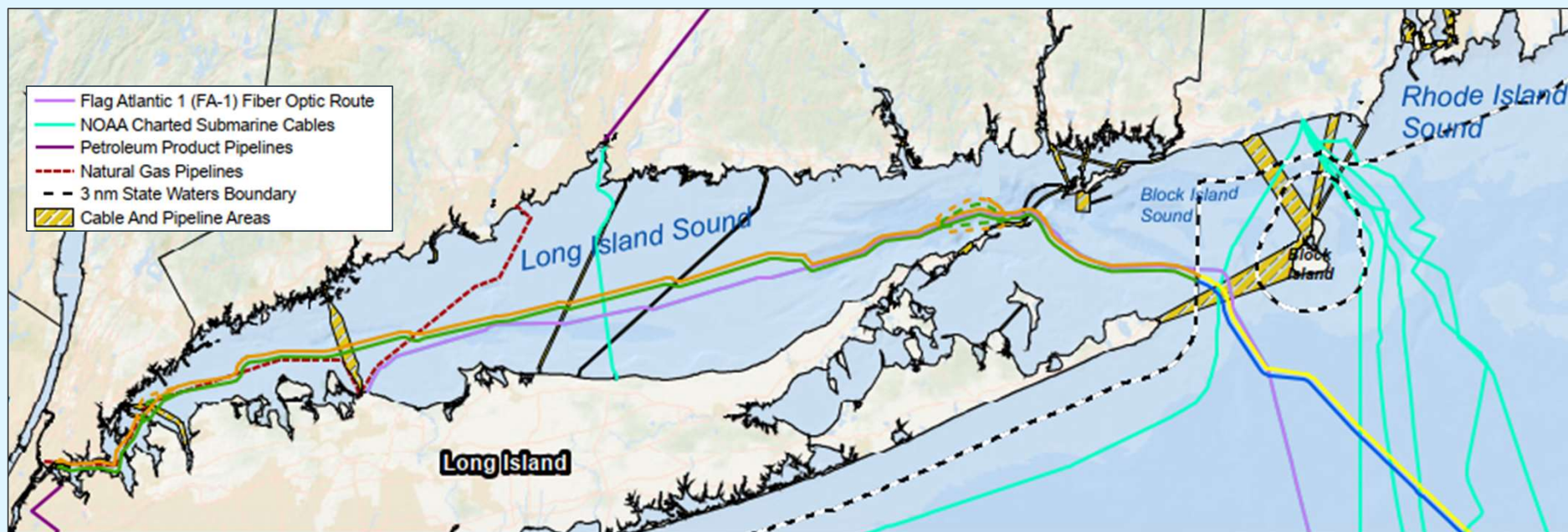


# State Jurisdictions



## Existing Cables and Pipelines

- Long Island Sound already has numerous cables and pipelines crossing it.



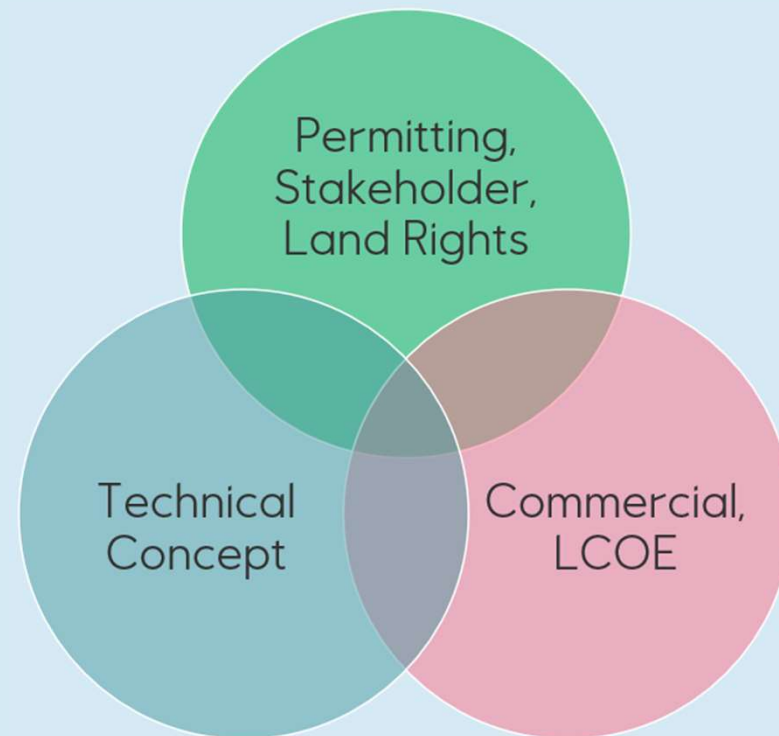


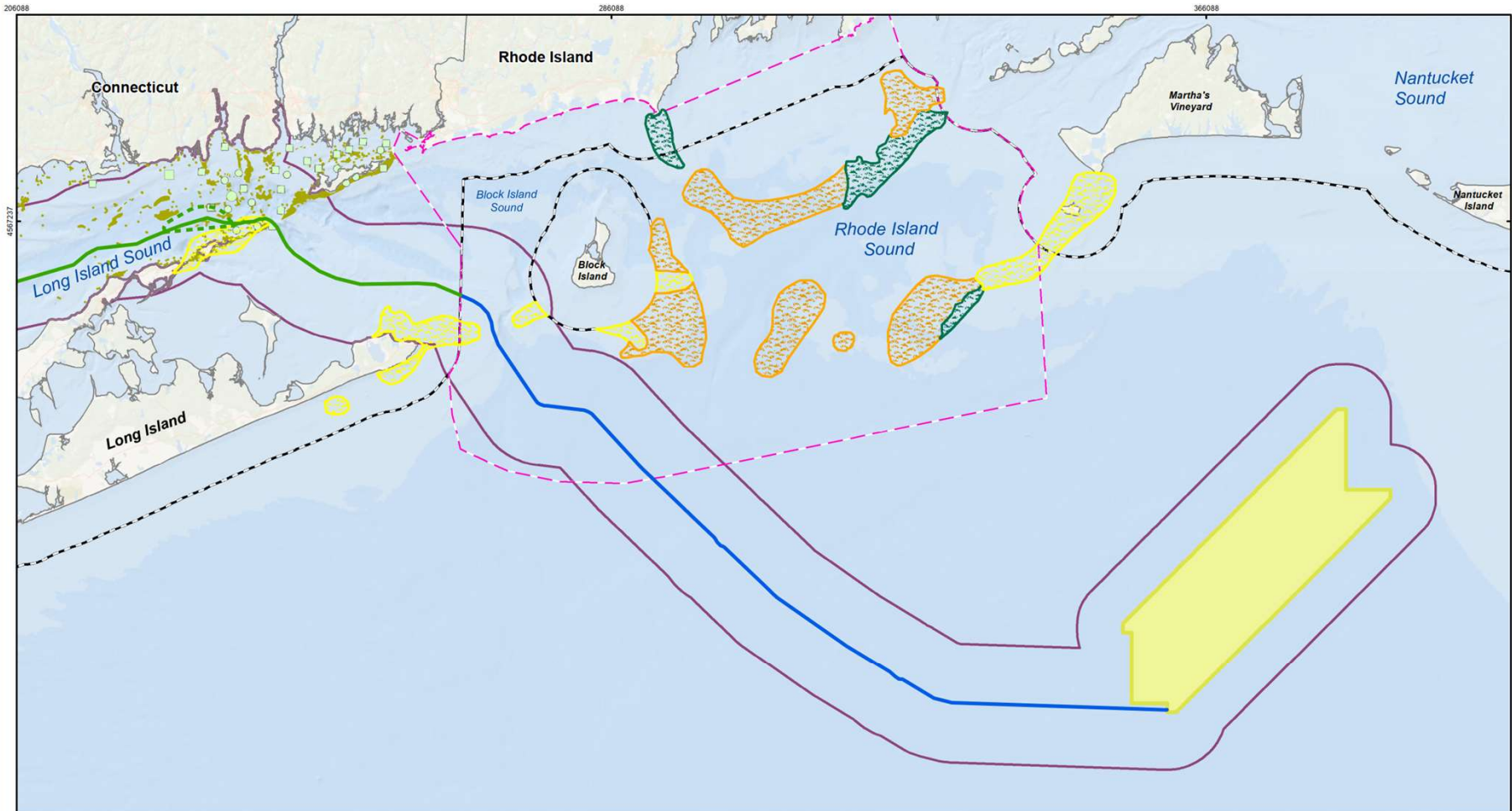
# Long Island Sound Cable Route



## Cable Route Development Strategy: Finding the Right Balance

- Collaboration between technical, permitting, commercial, stakeholder, and more
- Safe to construct and operate
- Safe for other users
- Lowest environmental impacts and use conflicts
- Lowest technical challenges
- Acceptable economics and LCOE (Levelized Cost of Energy)
- Grid connection (access and related costs)
- Power offtake opportunities





**Legend**

- BW1 Submarine Export Cable Route (NY)
- BW1 Submarine Export Cable Route (Federal)
- BW1 Submarine Export Cable Route Variants (NY)
- Beacon Wind OCS-A 0520 Lease Area
- Study Area
- 3 nm State Waters Boundary
- End Moraine - Blocky
- End Moraine - Boulder
- End Moraine - Boulder, Cobble, Sand
- Rhode Island SAMP
- ESA - Hard Bottom sublayer

**Ecologically Significant Area**

- Cold Water Corals
- Blocks
- Stations

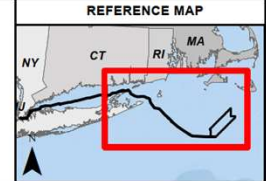
**BEACON WIND: LEASE AREA OCS-A 0520  
RI SAMP - GLACIAL GEOLOGY, COLD WATER CORALS,  
HARD BOTTOM SUBLAYER**

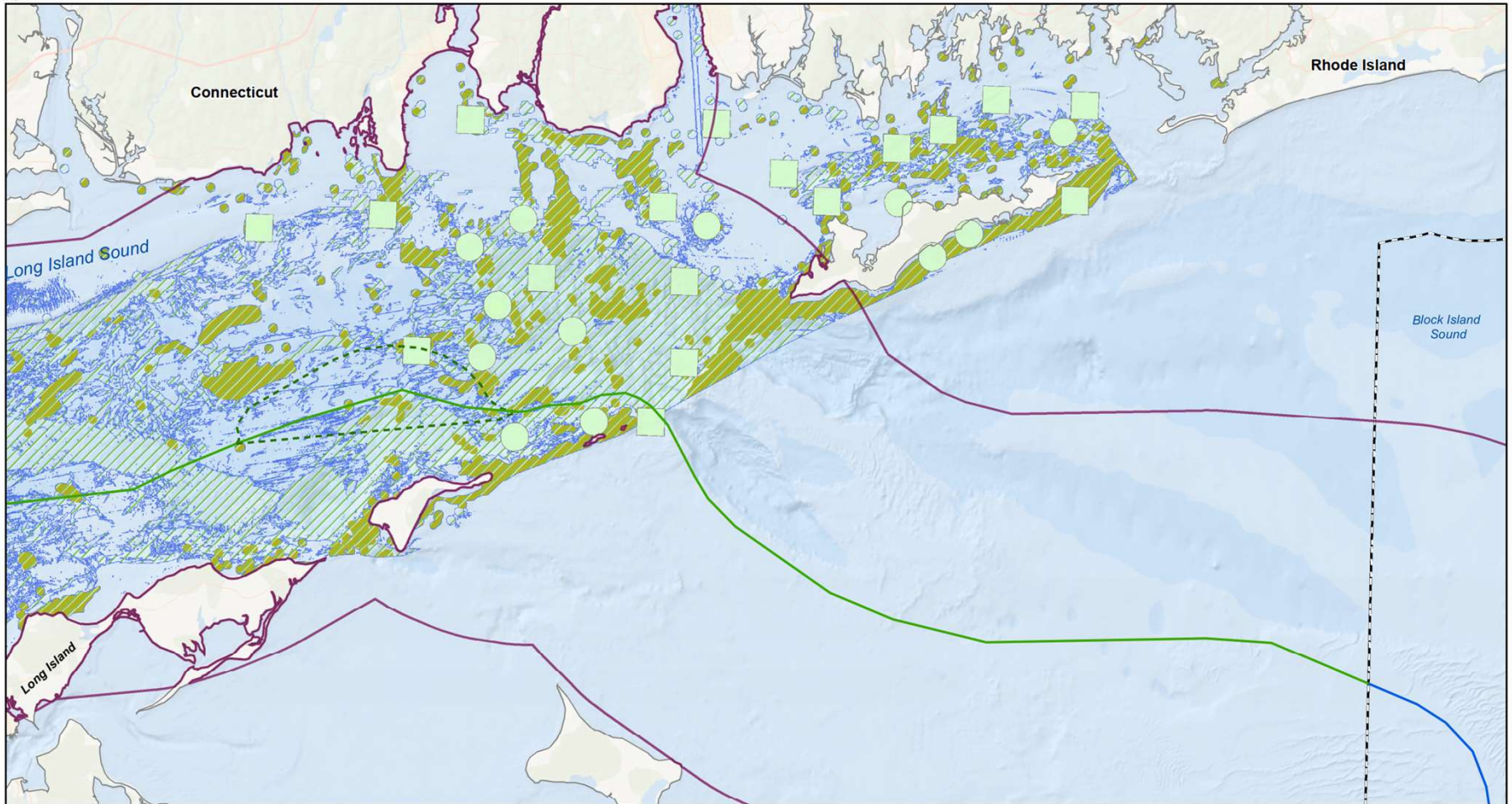
Date:	September 13, 2022
Project Nr.:	60653939
Personnel:	Prepared by: DM

0 4 8 12 16 Miles

0 4 8 12 16 Nautical Miles

0 4 8 12 16 Kilometers





**Legend**

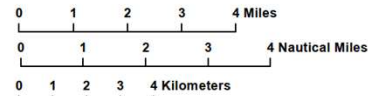
- BW1 Submarine Export Cable Route (NY)
- BW1 Submarine Export Cable Route (Federal)
- BW1 Submarine Export Cable Route Variants (NY)
- Study Area
- 3 nm State Waters Boundary

**Ecologically Significant Areas**

- ESA - Cold Water Corals
- Blocks
- Stations
- ESA - Hard and Complex Seafloor
- ESA - Hard Bottom sublayer

**BEACON WIND: LEASE AREA OCS-A 0520  
HARDGROUND AND COLD WATER CORALS EASTERN LONG ISLAND SOUND**

Date:	September 13, 2022
Project Nr.:	60653939
Personnel:	Prepared by: DM

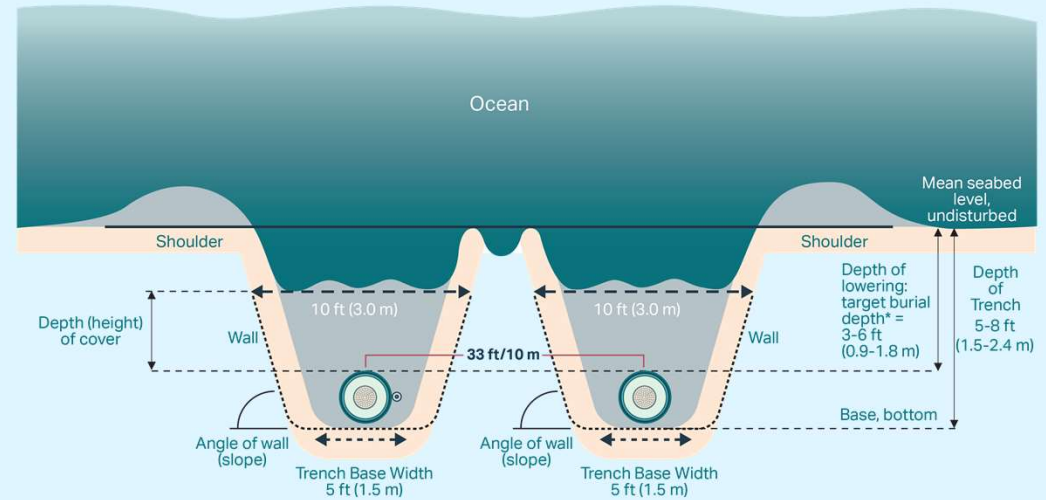
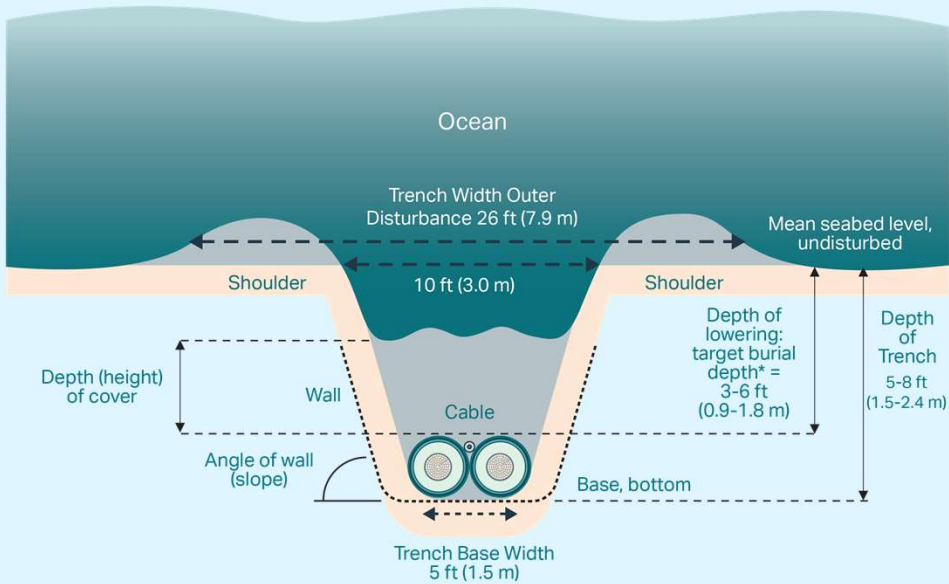


**REFERENCE MAP**



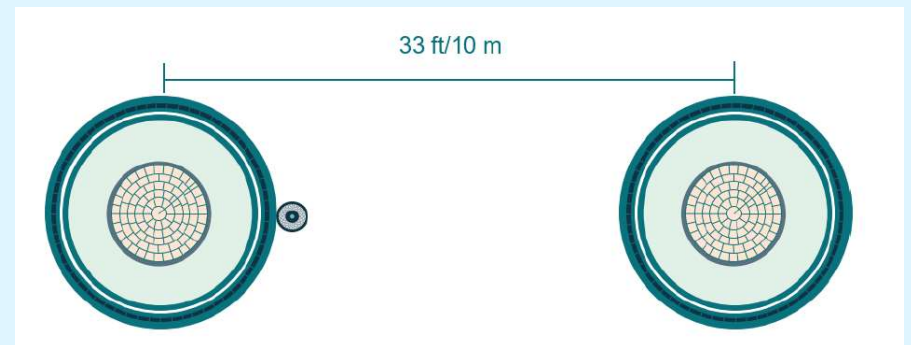
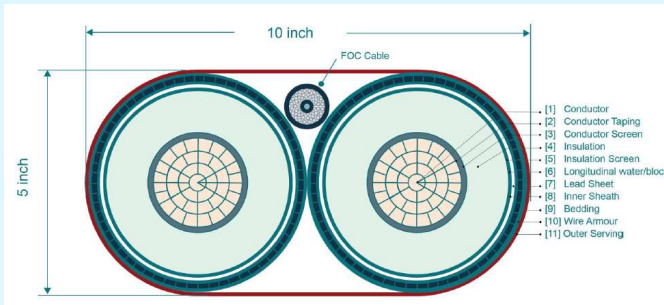


# Submarine Cable Installation



\*Note: Target burial depth will be 15ft (4.7m) below the current (and future) authorized depth or depth of existing seabed (whichever is deeper) in federally maintained navigation features (e.g., anchorages and shipping channels).

\*Note: Target burial depth will be 15ft (4.7m) below the current (and future) authorized depth or depth of existing seabed (whichever is deeper) in federally maintained navigation features (e.g., anchorages and shipping channels).



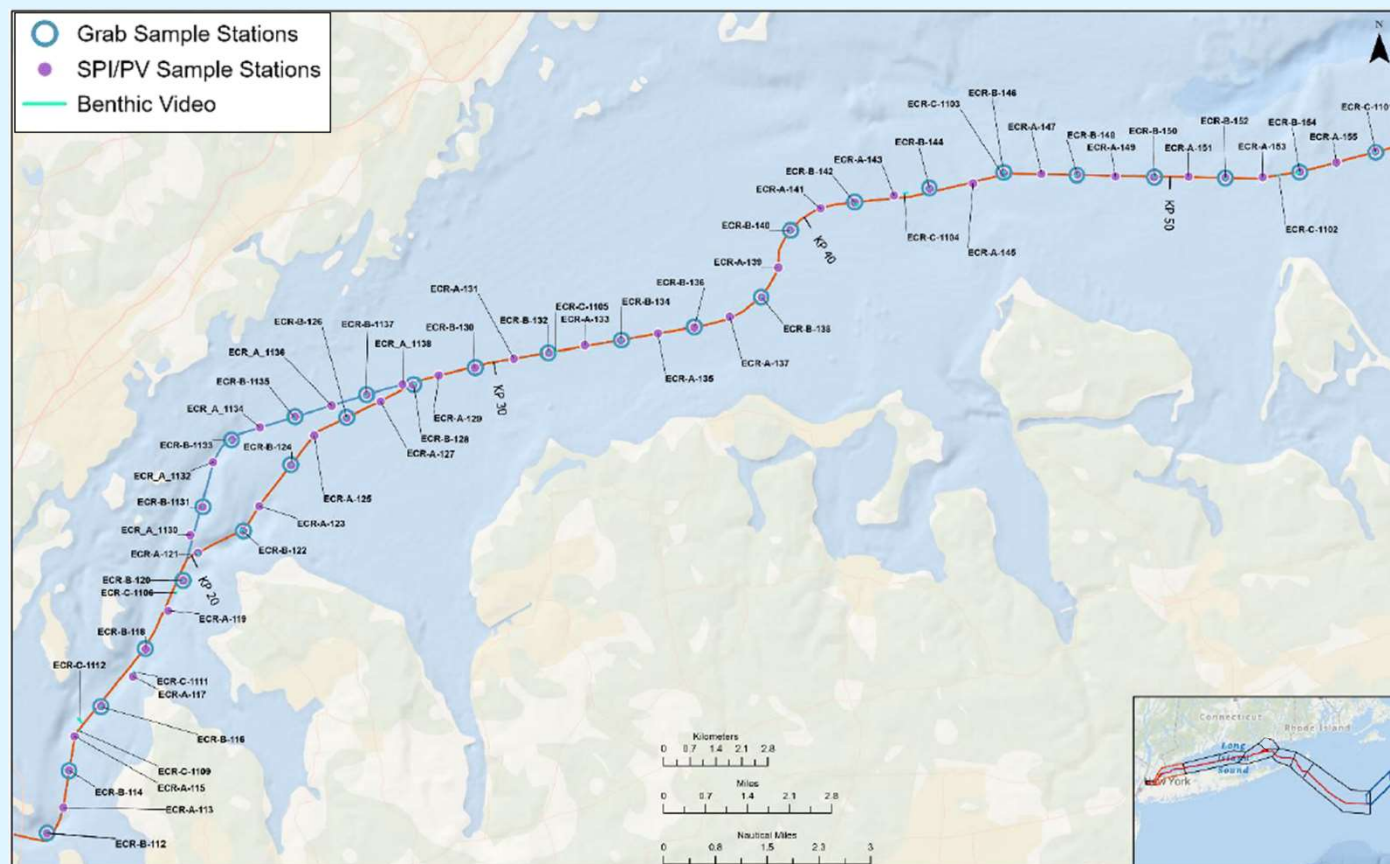


# Environmental Stewardship



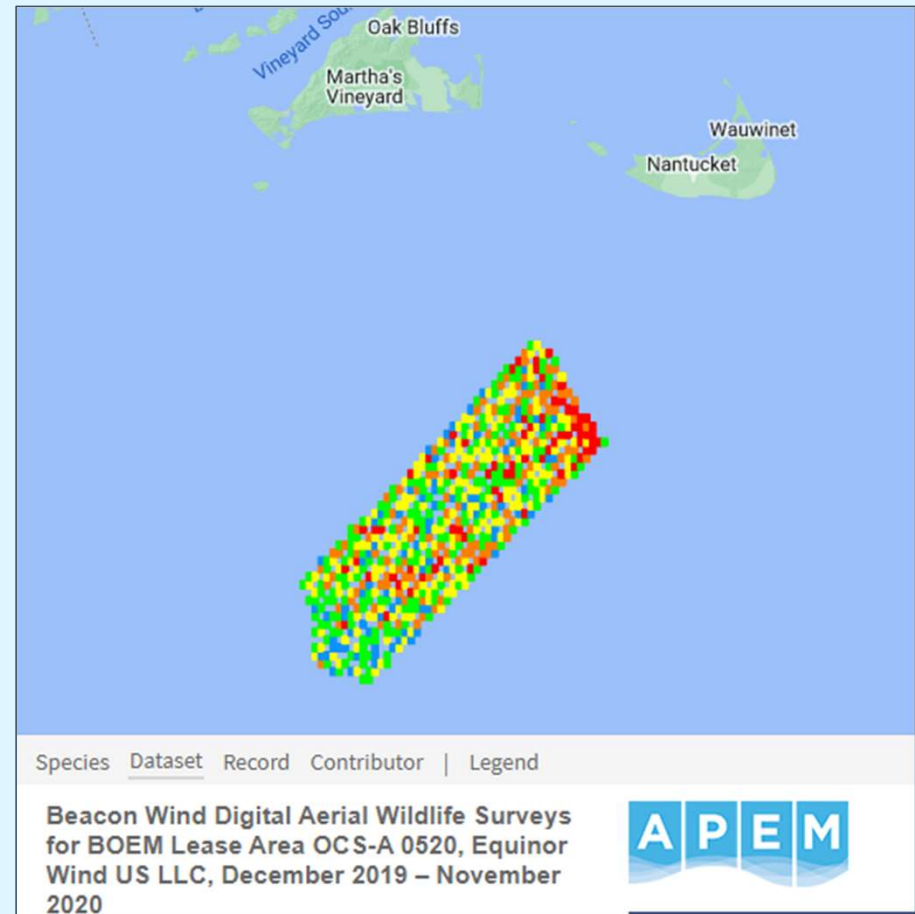
## Surveys Conducted – Benthic, Geotechnical, and High Resolution Geophysical

- High-resolution Geophysical
  - Multibeam echosounder
  - Sub-bottom profiler
  - Side-scan sonar
  - Magnetometer
- Geotechnical
  - Cone penetration tests
  - Vibracores
- Benthic
  - Grab samples
  - Sediment profile image/plan view
  - Video transects



## Surveys Conducted – Aerial Surveys

- High-Resolution aerial surveys have been conducted in the Lease Area.
- This data has been made public on OBIS-SEAMAP
  - Year 1 data is available at: <https://seamap.env.duke.edu/dataset/2192>
  - Year 2 data is available at: <https://seamap.env.duke.edu/dataset/2187>



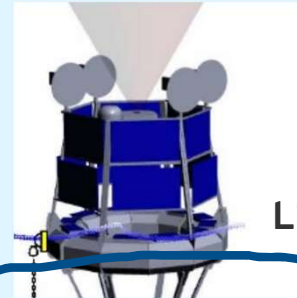
**OBIS-SEAMAP** | Ocean Biodiversity Information System  
Spatial Ecological Analysis of Megavertebrate Populations

# Surveys Conducted – Metocean Buoys

Wave/met buoys



LiDAR buoys



Current moorings



- Wind speed
- Wind direction
- Air temperature
- Relative humidity
- Barometric pressure
- Directional waves

- Vertical profile of wind velocity to ~ 200 m above water
- Wind speed and direction at ~ 3 m above water
- Directional waves

- Water current velocity + water temperature at 3 heights above bottom
- Salinity, temperature, depth at 3 heights above bottom
- Depth sensor at additional height above bottom

What data are collected?

## Surveys Conducted – Metocean Buoys

The Lease Area includes metocean buoys and LiDAR, which Beacon Wind has used to gather wildlife data in addition to meteorological and ocean data.

434 MHz bird tag receivers deployed November 2021:

- LiDAR
- Met Buoy #2

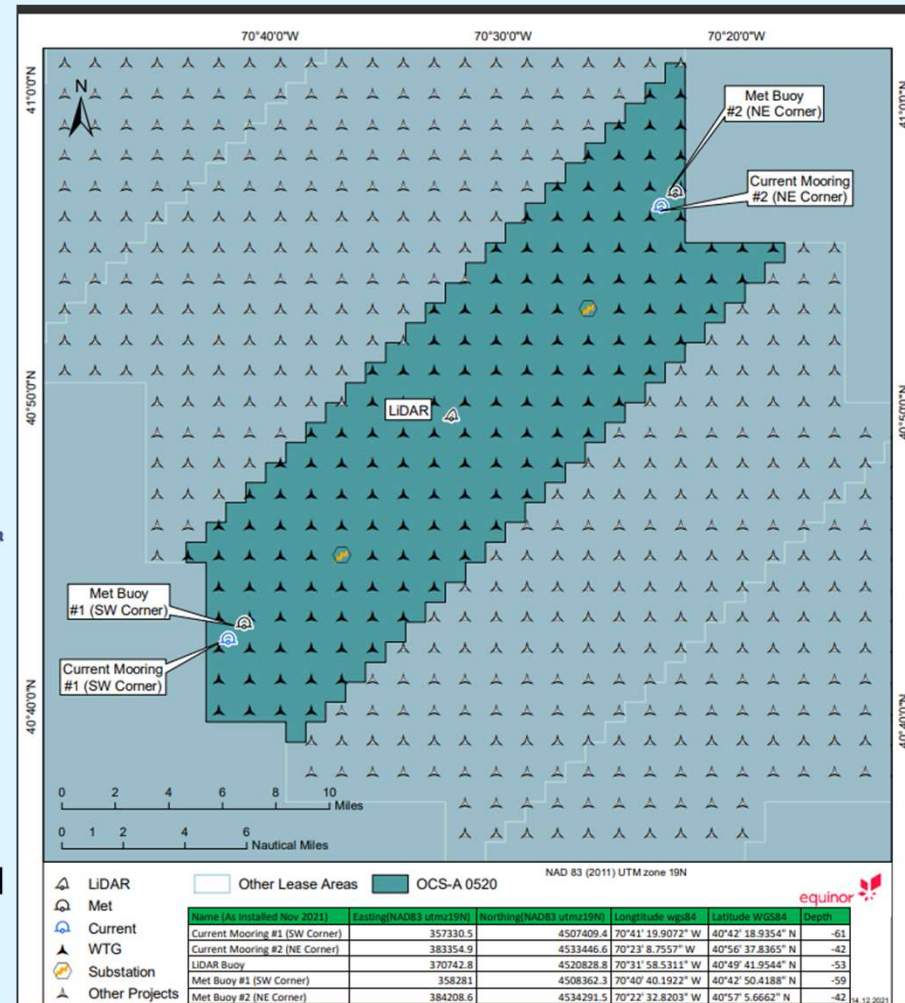
These receivers have been registered on the Motus Wildlife Tracking System, and data will be uploaded once fully processed.

<https://motus.org/data/project?id=538>



Vemco fish tag receivers have also been deployed in collaboration with the New England Aquarium:

- LiDAR
- Current Mooring #1
- Current Mooring #2





equinor

Getting Involved in

# Public Processes





### Sign up for Project Updates:

[www.beaconwind.com](http://www.beaconwind.com)

Twitter: @EquinorWindUS

Beacon Wind hotline: 833-901-3915

Beacon Wind email:  
[beaconwind@equinor.com](mailto:beaconwind@equinor.com)

### Follow Permitting Processes:

Article VII BW1

[www.dps.ny.gov](http://www.dps.ny.gov)

search case number: 22-T-0294

### Meetings & Recordings:

- <https://www.beaconwind.com/community/events/>



To get there  
**Together.**

**Thank you for your attention.**

**To get there. Together.**

Julia Lewis  
Permitting Director- Beacon Wind  
[JULEW@equinor.com](mailto:JULEW@equinor.com)

[www.beaconwind.com](http://www.beaconwind.com)  
Twitter: @EquinorWindUS

© Equinor ASA

This presentation, including the contents and arrangement of the contents of each individual page or the collection of the pages, is owned by Equinor. Copyright to all material including, but not limited to, written material, photographs, drawings, images, tables and data remains the property of Equinor. All rights reserved. Any other use, reproduction, translation, adaption, arrangement, alteration, distribution or storage of this presentation, in whole or in part, without the prior written permission of Equinor is prohibited. The information contained in this presentation may not be accurate, up to date or applicable to the circumstances of any particular case, despite our efforts. Equinor cannot accept any liability for any inaccuracies or omissions.