



Empowering Leaders Around
the World to Collaborate,
Negotiate, and Resolve Conflict

WWW.CBI.ORG

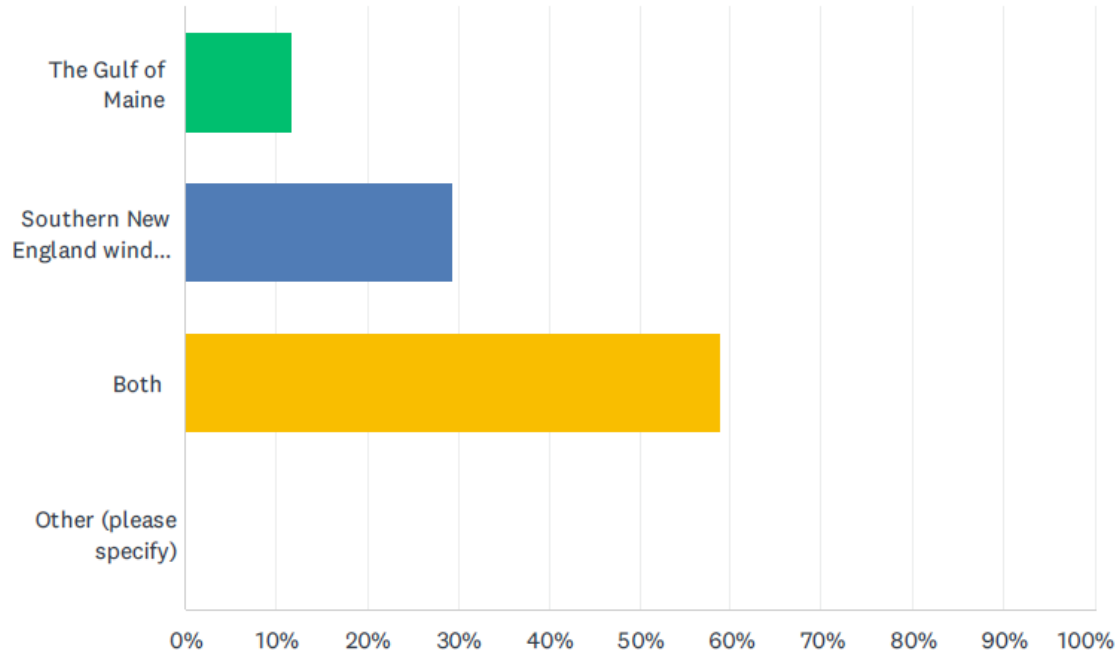
Massachusetts Habitat Working Group Survey Results

Survey Respondents

- 17 responses
 - 6 - environmental NGO
 - 4 - developer
 - 3 - state agency
 - 2 - federal agency
 - 2 - academic

Q3 Where do you primarily work?

Answered: 17 Skipped: 0



| ANSWER CHOICES | RESPONSES | |
|--|-----------|----|
| The Gulf of Maine | 11.76% | 2 |
| Southern New England wind energy areas and surrounds | 29.41% | 5 |
| Both | 58.82% | 10 |
| Other (please specify) | 0.00% | 0 |
| TOTAL | | 17 |

What do you find valuable about your participation in the HWG?



- A space to **provide input** to state agencies
- **Information exchange** about activities, research, ocean management, technology, and environmental initiatives related to OSW projects and habitat in MA and the region.
- **Identifying and discussing issues and concerns** about environmental issues and offshore wind at the local level with different Massachusetts-specific regulatory agencies, eNGOs, stakeholder groups and subject-matter expert.

Is there anything you do not find valuable about the HWG?



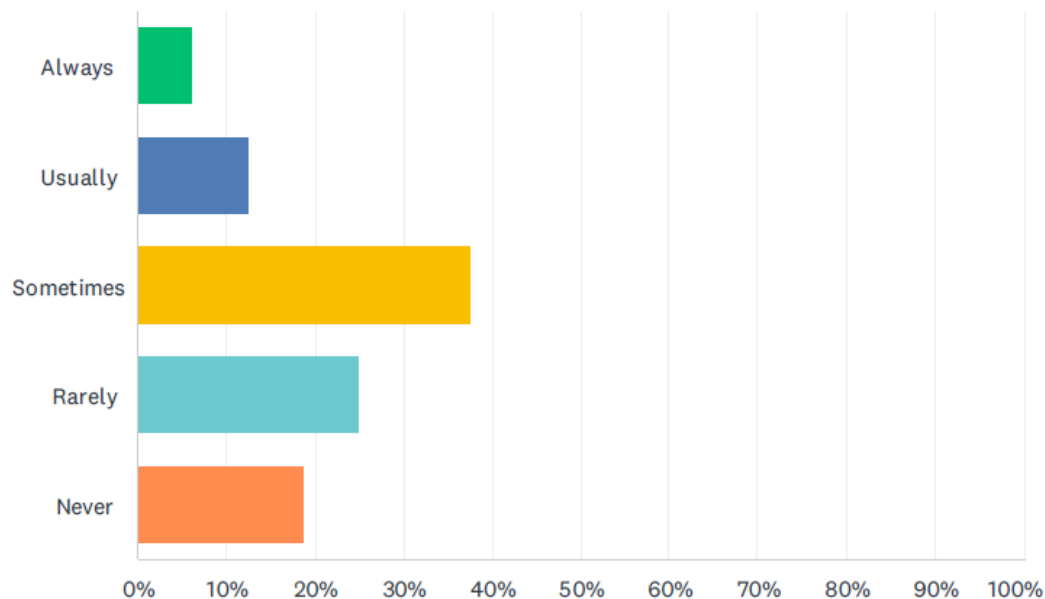
- **Lack of access and influence** on state and procurement processes
- **The HWG does not provide any outputs or guidance**
- **Too many presentations** from developers
- **Not enough engaging discussions**
- **The HWG feels redundant** now that RWSC is in place

Do you have any feedback about the groups and perspectives represented?

- Overall, there is a **good mix** of participants
- It's useful that representation is **focused on Massachusetts**
- **Suggested additions** to current membership: other state agencies and offices, scientists with benthic habitat expertise, the aquaculture industry, commercial and recreational fisheries interests, and developers
- **More information exchanges** with other working groups, states, and countries

Q6 How often have you referenced meeting materials after a HWG meeting?

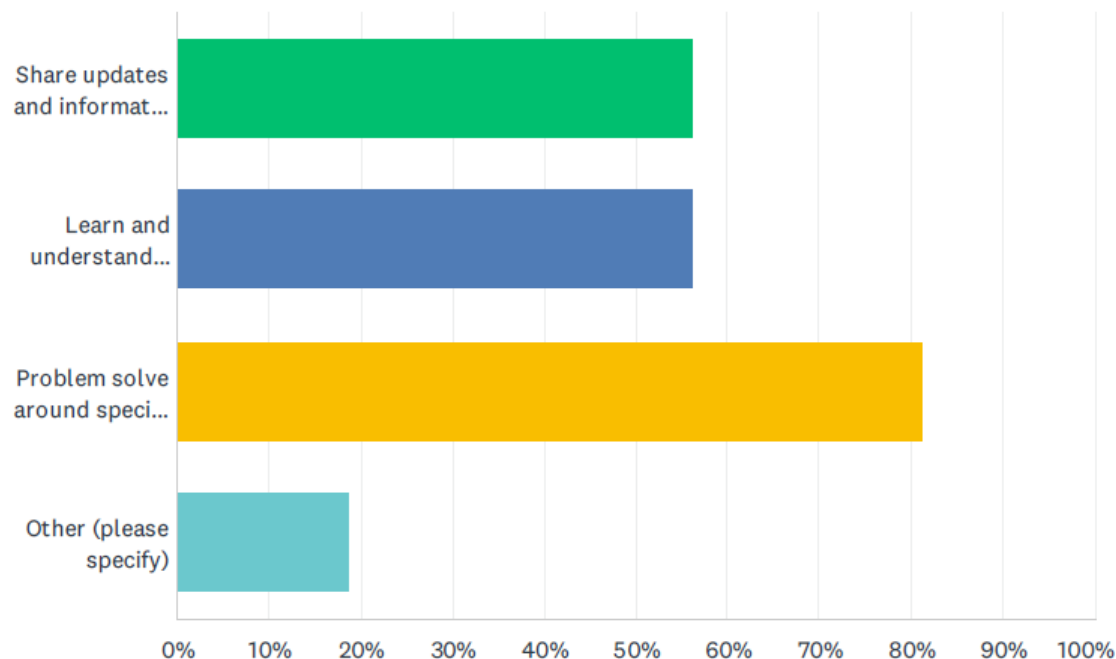
Answered: 16 Skipped: 1



| ANSWER CHOICES | RESPONSES | |
|----------------|-----------|----|
| Always | 6.25% | 1 |
| Usually | 12.50% | 2 |
| Sometimes | 37.50% | 6 |
| Rarely | 25.00% | 4 |
| Never | 18.75% | 3 |
| TOTAL | | 16 |

Q10 What do you think the primary purpose of HWG meetings should be? Select one or more.

Answered: 16 Skipped: 1



| ANSWER CHOICES | RESPONSES | |
|---|-----------|----|
| Share updates and information about all that is going on on OSW | 56.25% | 9 |
| Learn and understand better together about specific OSW topics and issues | 56.25% | 9 |
| Problem solve around specific OSW science or operational topics | 81.25% | 13 |
| Other (please specify) | 18.75% | 3 |
| Total Respondents: 16 | | |

If there was one improvement you could make to the HWG, what would it be?

- **Clarify HWG purpose**, mission, and associated objectives
- Provide structured, **meaningful input** into state decision making processes
- Tackle **focused work**, perhaps via subgroups, on specific topics
- **Limit developer presentations** to habitat assessment updates
- **Advertise upcoming meetings** broadly and allow participation by larger community
- **Revisit membership**

What topics or questions do you think are important for this group to discuss?

Monitoring and Reporting

- **Monitoring, assessment, reporting, and mitigation strategies** related to OSW impacts to wildlife at different life stages (including benthic habitat, marine mammals, turtles, fish, seabirds, etc.)
- The “**Drive Act**” **provisions** that call for monitoring and mitigation plans by developers

Information Sharing

- **Regional study, survey, and information needs**
- **Regional project updates** relevant for regional development and those with MA PPAs
- **OSW issues specific to Massachusetts**
- **Lessons learned from other countries**

OSW Development Processes

- **Participatory decision making processes** to engage stakeholders throughout OSW development processes
- **Expenditure of mitigation funds** (non-price criteria and metrics for evaluation of OSW procurements)

Other

- How developers can increase **habitat opportunities** into their designs
- **How to evaluate OSW impacts** given other habitat stressors like climate change and the beneficial impacts of OSW as a solution to climate change stressors

What topics are particularly ripe for joint problem solving as a group?

Monitoring and Reporting

- **Develop a regional monitoring, assessment, and reporting plan** for the southern New England WEAs
- Should what extent should **aerial surveys** continue for marine mammals and sea turtles?
- Ensuring adequate **systems** and **processes** are in place to **document potential impacts of construction activities**

Wildlife, Habitat, and OSW Impacts

- **Right whale** habitat impacts
- **"Quiet" foundations** to avoid/minimize construction impacts on marine life
- Filling key gaps in data on **offshore wildlife presence** and **activity patterns**
- **Collision detection technology** development and deployment

OSW Development Leasing and Procurement

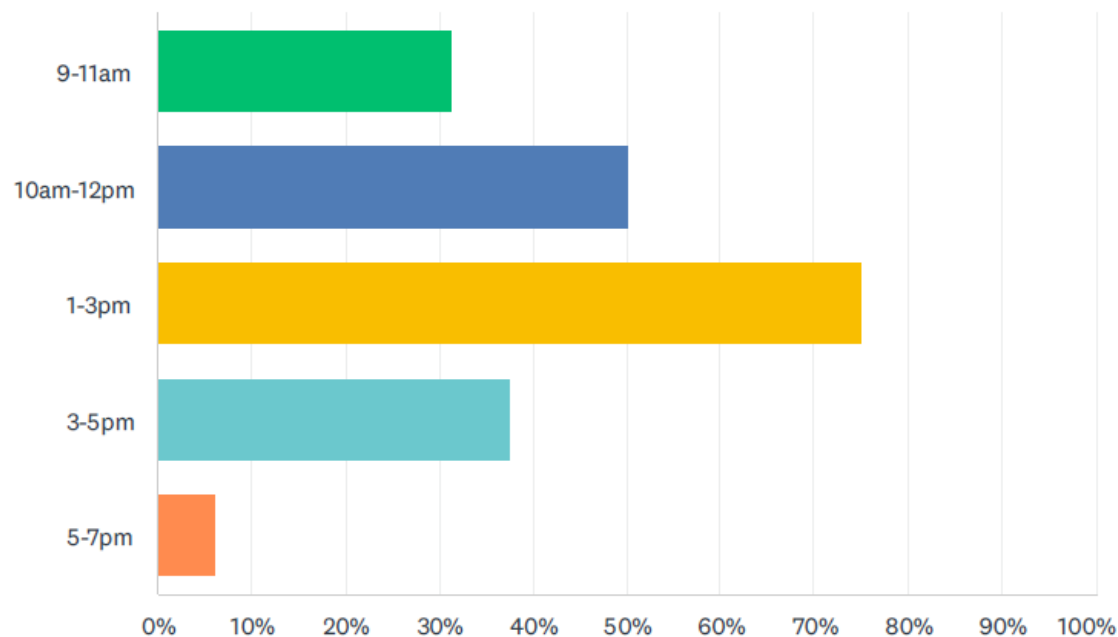
- **State procurement structure** (e.g., non-financial/habitat/fisheries PPA award criteria)
- **Review draft letters to OSW comment periods** and discuss and suggest changes
- Informing the state's position for upcoming **Gulf of Maine OSW Task Force** meetings

Communication and Collaboration

- **Develop a multi-stakeholder engagement plan** to improve communication and collaboration
- Feedback to developers on how to **improve status quo processes**

Q12 What's the best time(s) of day for HWG meetings?

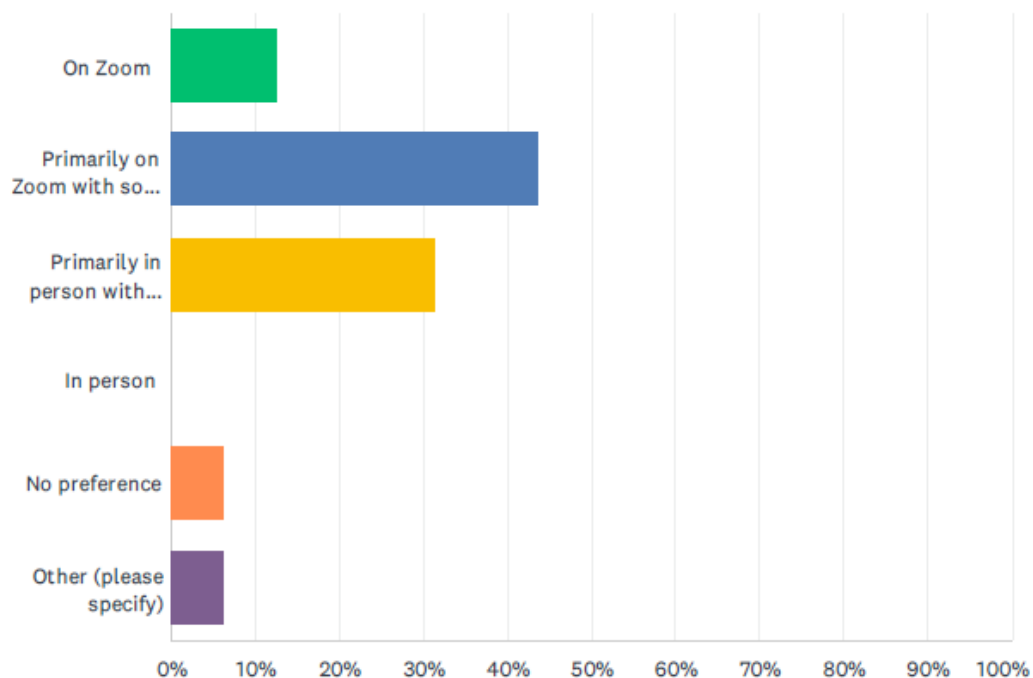
Answered: 16 Skipped: 1



| ANSWER CHOICES | RESPONSES | |
|-----------------------|-----------|----|
| 9-11am | 31.25% | 5 |
| 10am-12pm | 50.00% | 8 |
| 1-3pm | 75.00% | 12 |
| 3-5pm | 37.50% | 6 |
| 5-7pm | 6.25% | 1 |
| Total Respondents: 16 | | |

Q13 Would you prefer meeting on Zoom, in person, or some combination?

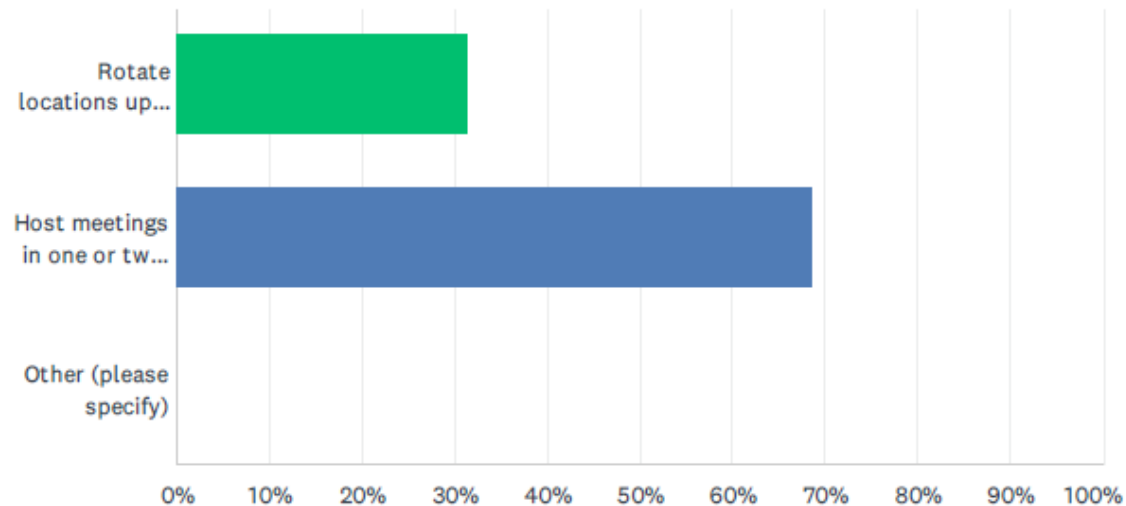
Answered: 16 Skipped: 1



| ANSWER CHOICES | RESPONSES | |
|---------------------------------------|-----------|-----------|
| On Zoom | 12.50% | 2 |
| Primarily on Zoom with some in person | 43.75% | 7 |
| Primarily in person with some on Zoom | 31.25% | 5 |
| In person | 0.00% | 0 |
| No preference | 6.25% | 1 |
| Other (please specify) | 6.25% | 1 |
| TOTAL | | 16 |

Q14 If we meet in person, should we rotate locations up and down the coast or have them in a central location?

Answered: 16 Skipped: 1



| ANSWER CHOICES | RESPONSES | |
|--|-----------|----|
| Rotate locations up and down the coast | 31.25% | 5 |
| Host meetings in one or two more central locations | 68.75% | 11 |
| Other (please specify) | 0.00% | 0 |
| TOTAL | | 16 |



QUESTIONS?

To think about for next meeting?



- How can we **balance updates** - of which there are many - with more focused topics for discussion, not presentation, while keeping everyone informed of all that is happening?
- What are **1 or 2 issues** the HWG could “sink” its teeth into in the next 6 months -- focused on a deep dive, deliberation, and developing recommendations?
- Should we **formalize membership** more, while still being a forum where many can at least listen in?



BOEM Bureau of
Ocean Energy Management

Gulf of Maine – Information Exchange

February 9, 2023

Massachusetts Habitat Working Group

Zach Jylkka, Project Coordinator

Gulf of Maine – Draft Call Area Information Exchanges

- In-Person Information Exchanges:

- January 17: Salem, MA; 4-7 pm (Salem State University)
- January 18: Portsmouth, NH; 5-8 pm (NH DES)
- January 19: Portland, ME; 5-8 pm (Holiday Inn, Portland-by the Bay)

- Virtual Information Exchanges:

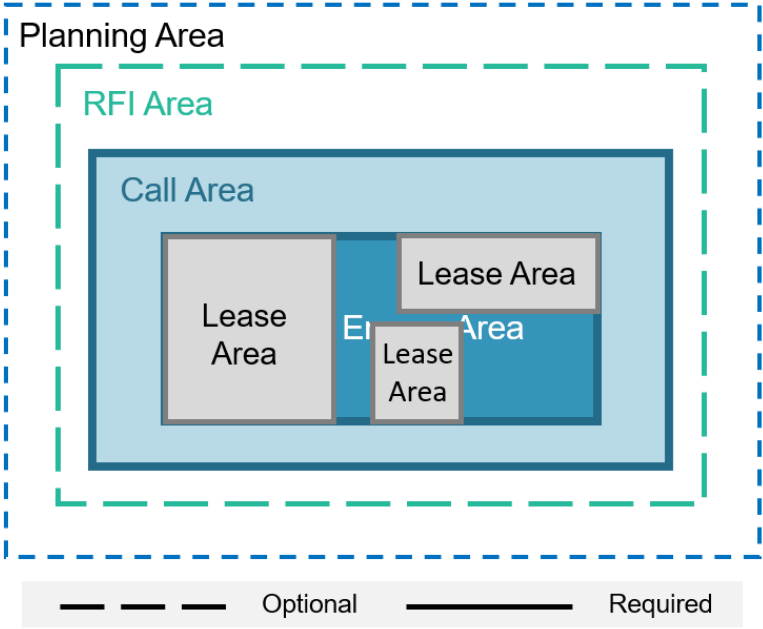
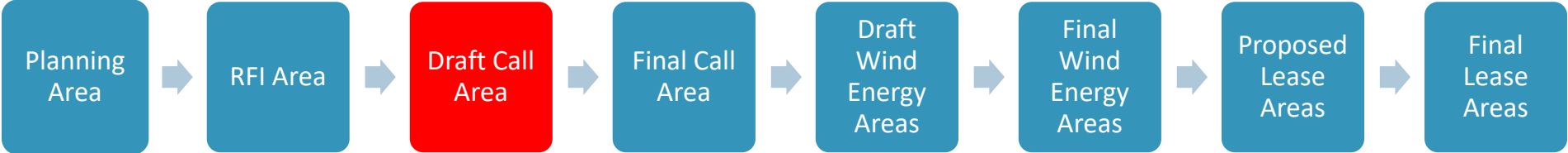
- *Shipping & Commercial Maritime*: January 25; 2-4pm
- *Fisheries Meetings*
 - Maine Fisheries (Fixed Gear Focus): January 27; 10am-12pm
 - Mobile Gear: January 30; 10am-12pm
 - Recreational and HMS: January 30; 2-4pm
 - Fixed Gear (MA/NH Focus): January 31: 5-7pm
- *Environmental NGOs*: January 31; 10am-12pm



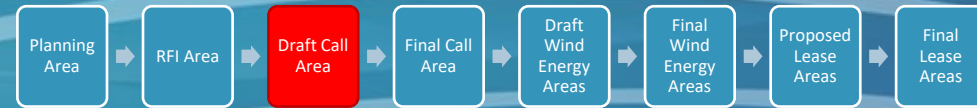
<https://www.boem.gov/renewable-energy/state-activities/gulf-maine-draft-call-area-engagement-meetings>



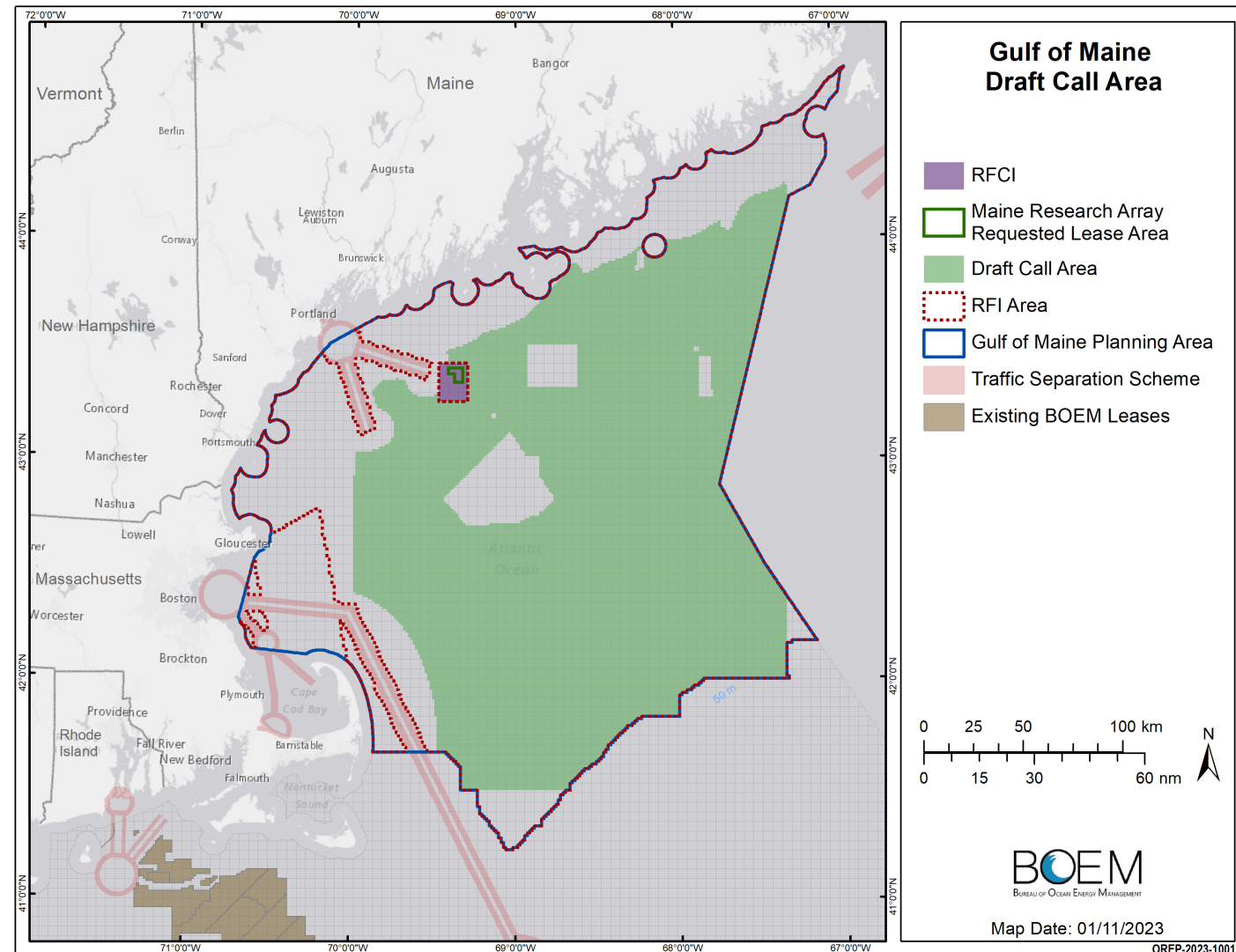
Gulf of Maine Planning Process



Draft Call Area



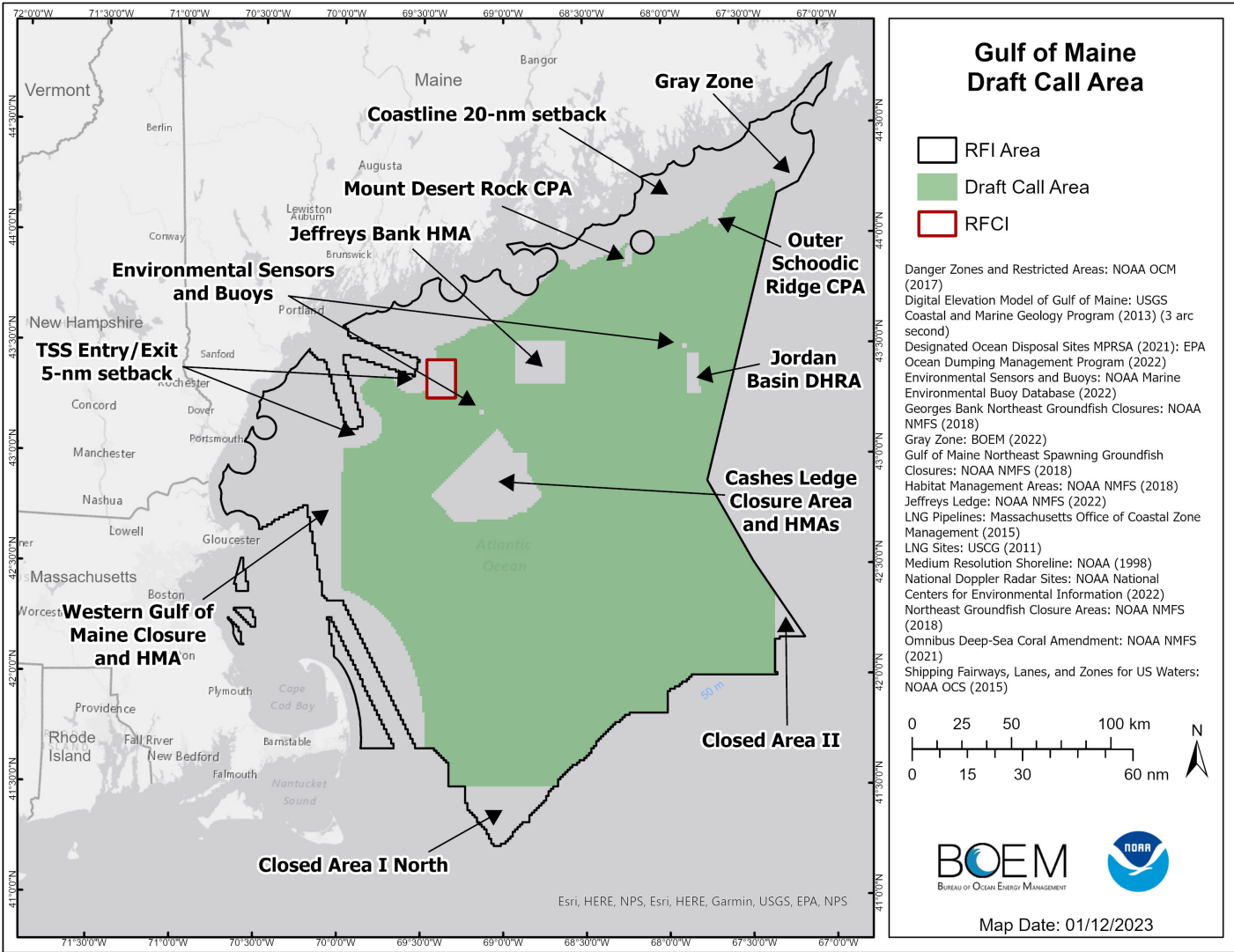
- BOEM reviewed responses to RFI and worked with NOAA NCCOS to conduct spatial analysis to inform Draft Call Area
 - 27% reduction from RFI Area



Draft Call Area: Explained



| Data Layer | Acres Constrained |
|--|-------------------|
| Coastline (20nm setback) | 2,470,690 |
| Groundfish Closure Areas (Cashes Ledge Closure Area, Western Gulf of Maine Closure Area, and Closed Area II) | 804,780 |
| Habitat Management Areas (HMAs) and Coral Protection Areas (CPAs) | 792,070 |
| TSSs (2nm recommended buffer/setback from sides) | 266,870 |
| Closed Area I North | 197,070 |
| TSSs (5nm recommended buffer/setback from entry) | 182,230 |
| Gray Zone | 155,190 |
| Jeffreys Ledge (depths shallower than 120 m) | 154,810 |
| Jordan Basin Dedicated Habitat Research Area | 26,960 |
| Gulf of Maine Cod Spawning Protection Area | 23,780 |
| Radar Sites/Zones | 20,950 |
| EPA Ocean Disposal Sites | 5,740 |
| Danger and Restricted Zones | 4,710 |
| Environmental Sensors and Buoys | 1,840 |
| LNG Sites and Pipelines | 1,150 |
| All Constraints Combined* | 3,684,090 |



*Many of the “constraints layers” overlapped (e.g., the 20 nm coastline setback encompassed all EPA Ocean Disposal Sites), and therefore, “All Constraints Combined” is not simply a sum of the “Acres Constrained” listed above, but instead represents the total acres removed from the RFI Area. This acreage total increased slightly to 3,749,985 acres removed when BOEM defined the Draft Call Area using OCS blocks and aliquots.

BOEM/NOAA NCCOS Partnership

- On September 16, 2022, BOEM announced that it was enhancing its process to identify future Wind Energy Areas (WEAs).
 - Incorporation of the best available science and modeling, including application of NOAA NCCOS spatial modeling. To achieve this, leveraging much of the data in the NE Ocean Data Portal.
 - Commitment to providing draft WEAs for public comment prior to completion of Area ID.

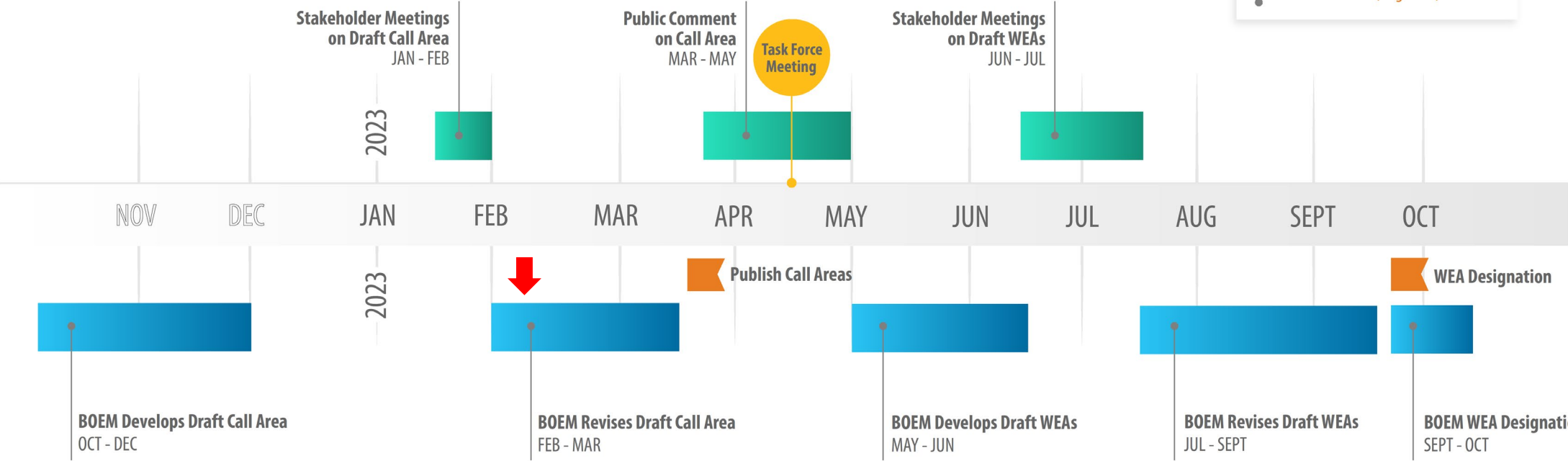


Next Steps and Engagement Opportunities

Gulf of Maine Path to Wind Energy Area (WEA) Designation

**Prior Milestones**

- Task Force Meeting #1 (Dec 2019)
- Task Force Meeting #2 (May 2022)
- Publish RFI (Aug 2022)



NOTE: The dates of proposed meetings and planning/leasing milestones are all tentative.

 Engagement Opportunities  BOEM Activities

BOEM Bureau of Ocean Energy Management

as of January 2023



Gulf of Maine: Commercial Leasing Milestones

| Milestone* | Action | Target Date** |
|---|---|----------------|
| Publish Request for Interest | Publish RFI <i>45-Day Comment Period</i> | Q3 2022 |
| Publish Call for Information & Nominations | Publish Call <i>45-Day Comment Period</i> | Q1 2023 |
| Area Identification | Designate Wind Energy Areas (WEAs) | Q3 2023 |
| Lease Sale | Proposed Sale Notice (PSN) | Q4 2023 |
| | Final Sale Notice (FSN) | Q2 2024 |
| | Hold auction | Q3 2024 |

* Task Forces are incredibly valuable tools in the leasing process and **additional meetings** can be expected, likely to be scheduled around significant process milestones.

** Dates of planning/leasing milestones are all tentative.





Renewable Energy

BOEM facilitates the responsible development of renewable energy resources on the Outer Continental Shelf.

[Read More](#)

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* Email Address

First Name

Last Name



THANK YOU





Bureau of Ocean Energy
Management

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SOUTHCOAST WIND

Project Update to
MA Habitat Working Group

February 9, 2023

Business Proprietary and Confidential

SouthCoast Wind - Overview

- **Lease Area**

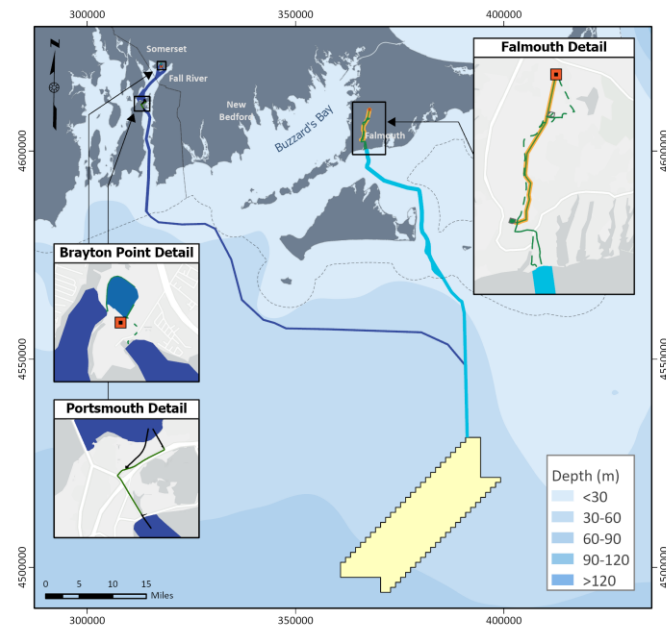
- 127,388 acres
- Up to 149 wind turbine/offshore substation platform positions
- 51 nautical miles from the RI coastline
- 1 x 1 nautical mile grid layout

- **Generation Potential**

- Estimated 2,400 MW+ total generating capacity

- **Two points of interconnection**

- Brayton Point, Somerset, MA
- Falmouth, MA

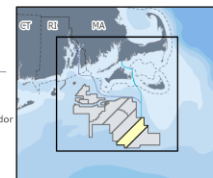


SOUTHCOAST WIND Project Overview

Date: 2/9/2023 Projection: UTM Zone 19N, NAD83 (2011)

LEGEND

- Point of interconnection to grid
- HVDC converter station area
- Preferred onshore cable route
- Alternate onshore cable route
- Eversource transmission route
- Horizontal direction drilling trajectories
- Brayton Point offshore export cable corridor
- Falmouth offshore export cable corridor
- State boundary to coastal waters
- SouthCoast Wind lease area





VINEYARD WIND

Habitat Working Group on Offshore Wind Energy

Vineyard Wind 1 Project Status Update
February 9, 2023

Elizabeth Marsjanik, Manager of Environmental Affairs

(Photo courtesy of General Electric Renewable Energy)

Vineyard Wind 1

Overview

- **Capacity:** 800 MW
- **Lease Area:** OCS-A 0501
- **Federal Permitting:** Complete
- **State Permitting:** Complete
- **Point of Interconnection:** Barnstable Substation (MA)
- **Power Purchase Agreements:** 20-year PPAs with Massachusetts utilities (approved)
- **COD:** 2024
- **Construction Activities:** Offshore export cable installation activities ongoing; scour protection installation to begin Q1 2023

Learn more at: <https://www.vineyardwind.com/offshore-wind-mariner-updates>



VINEYARD WIND 1

Environmental Studies



Photo credit: Jennifer Miksis-Olds



Photo credit: Jennifer Miksis-Olds

Archival Passive Acoustic Monitoring

- **Objective:** Record biological and anthropogenic sounds in Lease Area OCS-A 0501
- **Frequency:** Pre- (30 days), during-, and post-construction (three years) periods
- **Methods:** Multi-channel PAM system capable of continuous monitoring; deployed on lander

Press Release: <https://www.vineyardwind.com/press-releases/2022/4/20/vineyard-wind-and-the-university-of-new-hampshire-partner-on-acoustic-monitoring-for-marine-mammals>



Environmental Studies

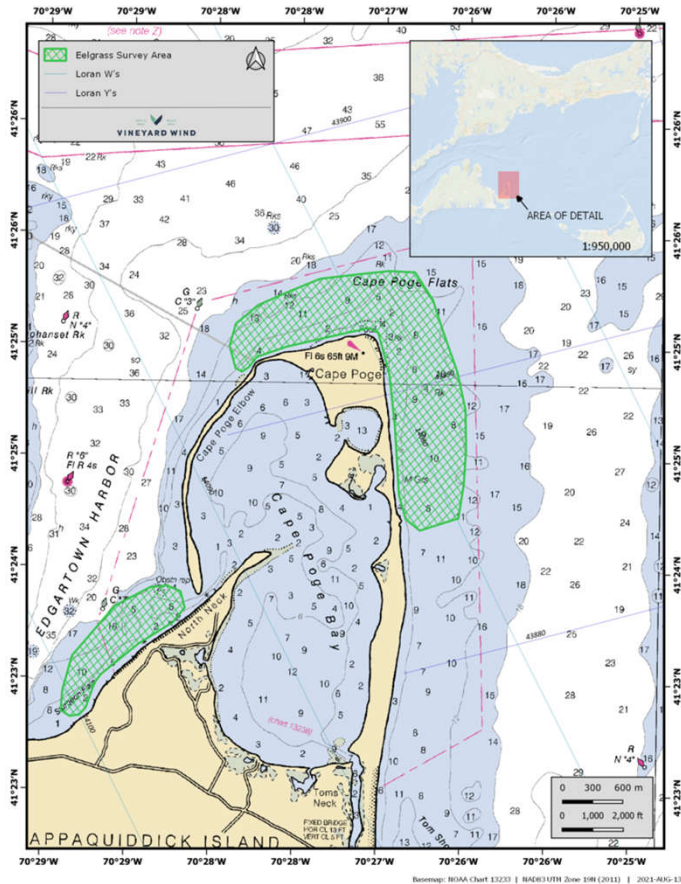
Water Quality Monitoring



- **Objective:** Conduct in-situ water quality monitoring near Cape Poge eelgrass habitat during offshore export cable installation in Muskeget Channel
- **Frequency:** Throughout offshore export cable construction
- **Methods:** Bottom mounted YSI EXO multiparameter sondes



Photo Credit: David Walsh

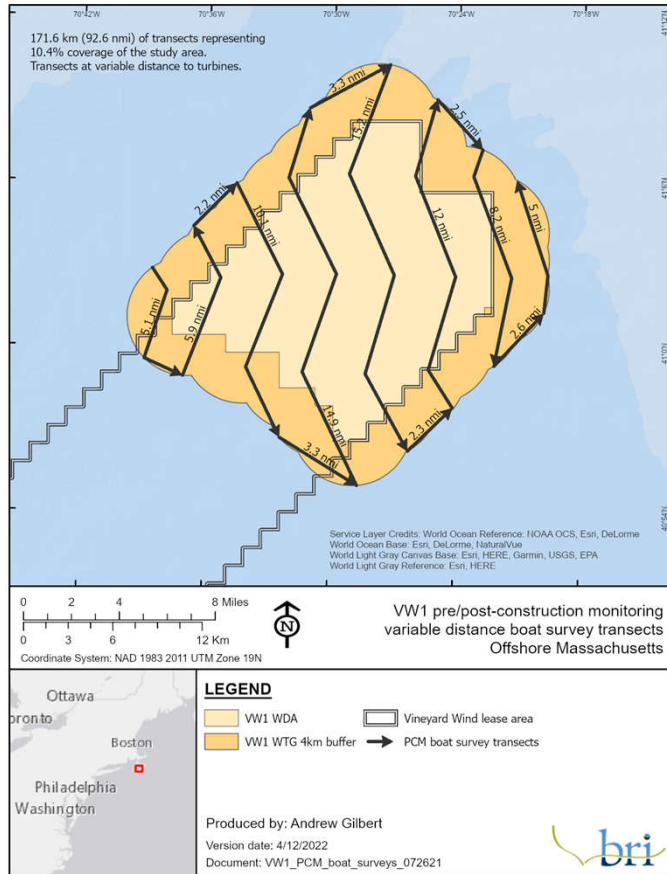


Basemap: NOAA Chart 13233 | NAD83/UTM Zone 18Q (2011) | 2023-06-13



VINEYARD WIND 1

Environmental Studies



Pre-Construction Avian Surveys



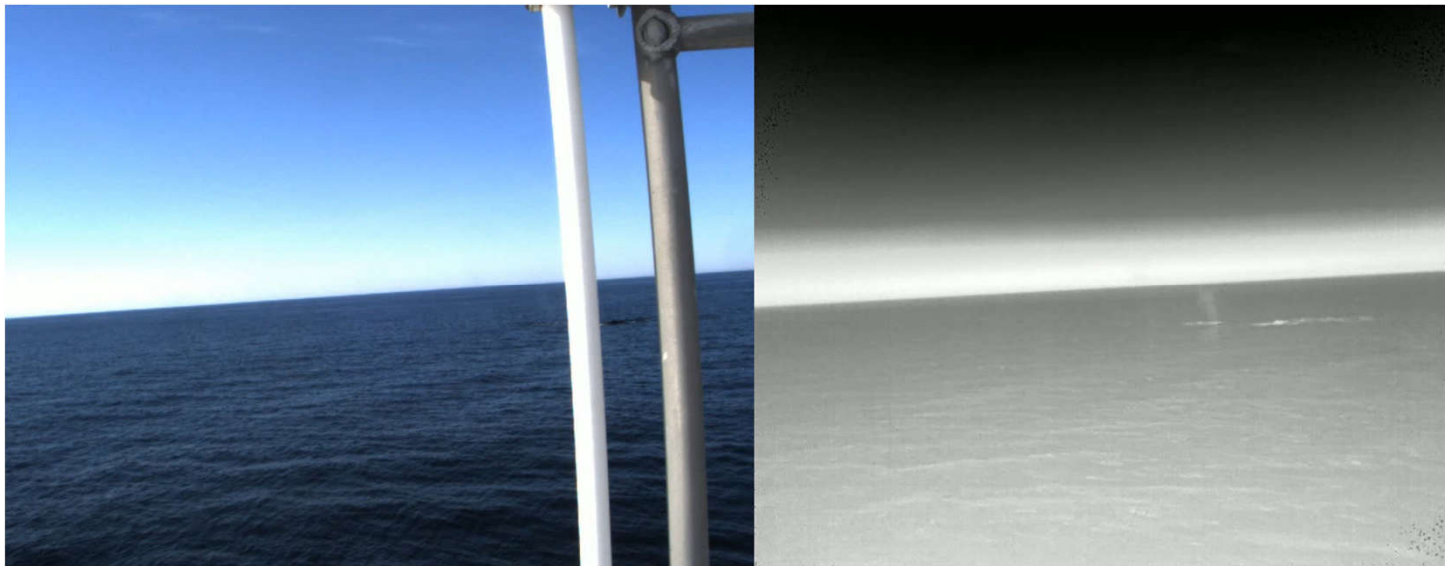
- **Objective:** Monitor occurrence and assess behavior of birds/wildlife within the Vineyard Wind 1 Wind Development Area
- **Frequency:** One survey per month for one year prior to construction
- **Methods:** Boat-based avian surveys following BOEM's Avian Survey Guidelines



Photo credit: BRI

Wind & Whales Fund

Artificial Intelligence & Thermal Imaging Camera Project



Video credit: Ross Eaton, Charles River Analytics

Press release: <https://www.vineyardwind.com/press-releases/2022/11/17/vineyard-wind-partners-with-local-tech-firm-on-enhanced-marine-mammal-detection>



Environmental Initiatives

Environmental Initiatives

- **Go Energize:** Partnership with Greentown Labs and MassCEC aimed at 1) advancing offshore turbine monitoring and ecological data collection and 2) digital solutions to improve turbine efficiency and longevity

Application Deadline: **April 4, 2023**

Press Release: https://www.prnewswire.com/news-releases/greentown-labs-deepens-partnership-with-vineyard-wind-announces-go-energize-2023-supported-by-masscec-301717199.html?tc=eml_cleartime

Industry Advisor

- Project WOW Wildlife and Offshore Wind
- Wind Forecast Improvement Project 3
- Wind Turbine Radar Interference Mitigation



Questions

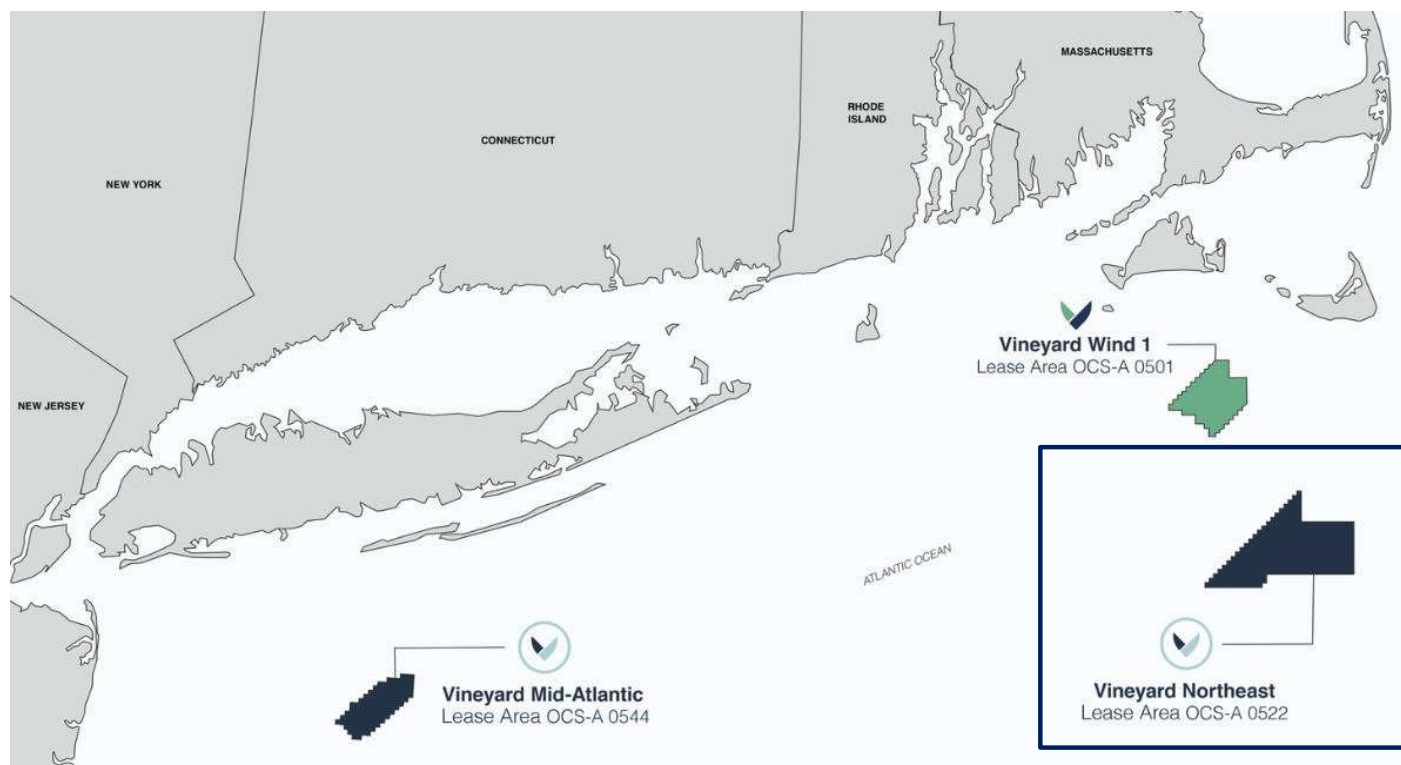
Thank you



Habitat Working Group on Offshore Wind Vineyard Offshore Update

February 9, 2023

Our Projects and Lease Areas

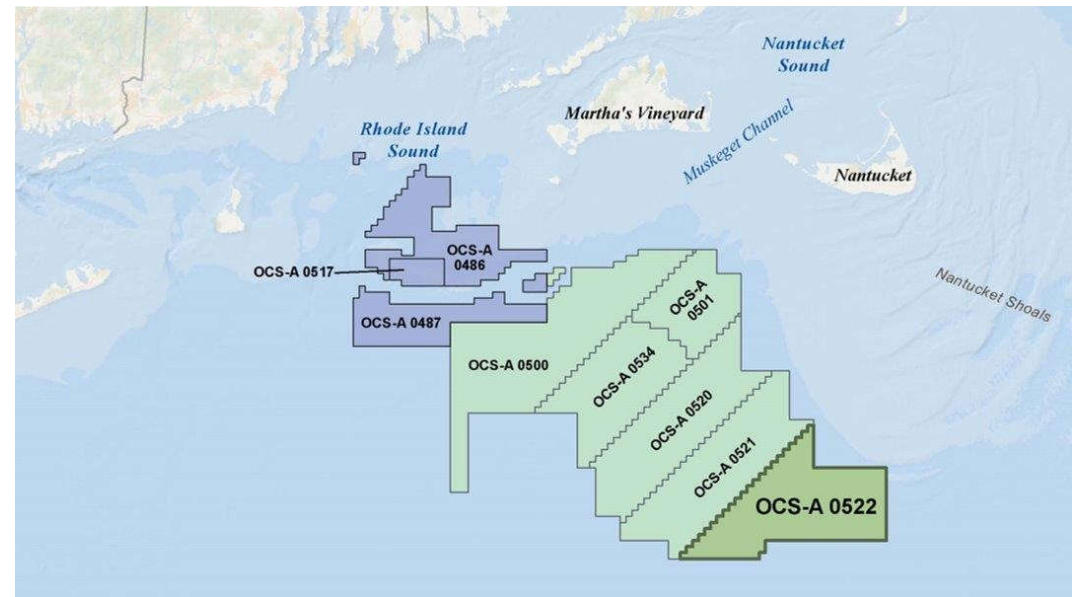


Combined with the Vineyard Wind 1 project, Vineyard Offshore will develop enough clean, renewable and cost-effective energy to power at least 2.4 million homes.

Vineyard Northeast

Overview

- Lease Area OCS-A 0522
- Located in the Massachusetts Wind Energy Area, 29 miles south of Nantucket
- Approximately 132,370 acres in size
- Abuts Mayflower Lease Area OCS-A 0521 along the northwestern edge
- Acquired in 2018



Lease and Cable Corridor Activities

FLiDAR Buoy Deployment

- **Update:** Vineyard Northeast FLiDAR weather buoy is deployed
- **Duration:** Approximately 1 to 2 years
- **Purpose:** The buoy will collect weather data, including wave height and direction, surface current, and air temperature. The buoy is equipped with an acoustic receiver to track the movement of Highly Migratory Species



VINEYARD OFFSHORE



@VineyardOFSHR



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VINEYARDOFFSHORE.COM



Massachusetts Habitat Working Group

Lease Area OCS-A 0534 Update

February 9, 2022



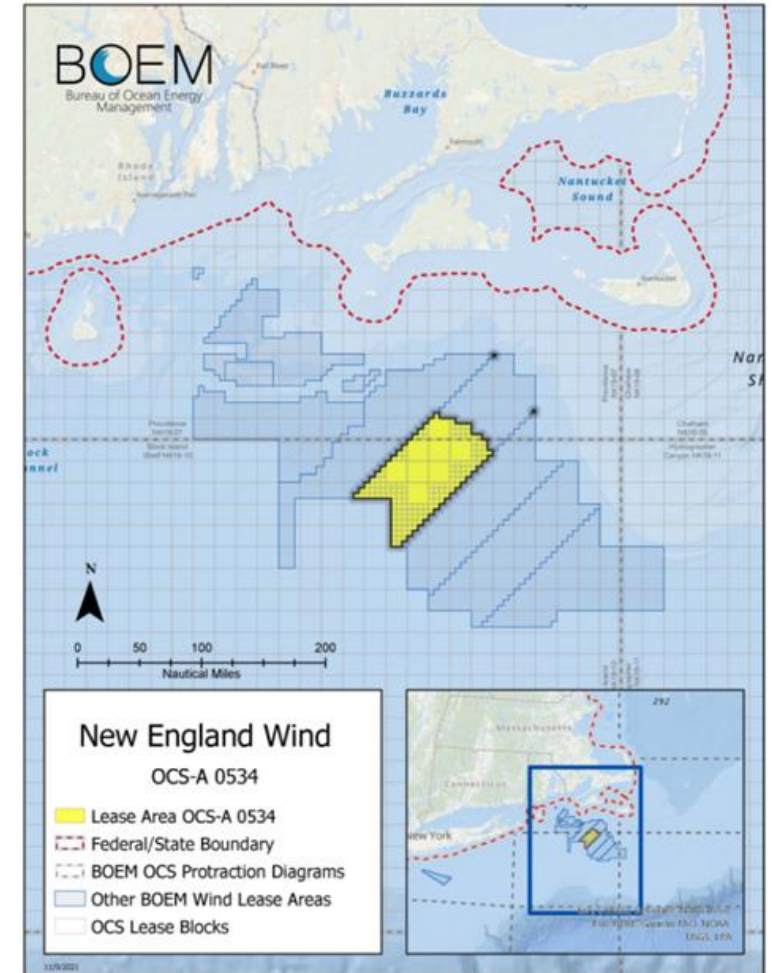
Permitting Update

Federal Permitting

- Lead Federal Agency: BOEM (Bureau of Ocean Energy Management)
 - New England Wind (comprised of Park City Wind and Commonwealth Wind) Construction and Operations Plan (COP) submitted July 2, 2020
 - [Draft Environmental Impact Statement](#) released Dec.19, 2023
 - 60 day comment period open (through Feb. 21, 2023)
 - Public Meetings held Jan. 27, Feb. 1, and Feb. 6, 2023

State Permitting

- New England Wind 1 Connector: Encompasses the portions of Park City Wind's offshore export cable located in state waters and onshore infrastructure in Massachusetts
 - MEPA Review Complete
 - EFSB Review underway
 - State and local permitting underway
- New England Wind 2 Connector: Encompasses the portions of Commonwealth Wind's offshore export cable located in state waters and onshore infrastructure in Massachusetts
 - MEPA ENF Certificate Received December 9, 2022
 - EFSB Petition filed November 2022
 - State and local permitting underway



Environmental Surveys

Highly Migratory Species Study

Purpose

- Document presence, residency time, and movement patterns of high migratory species across the MA and RI/MA Wind Energy Areas
- Monitor baseline residency and movement metrics over time to evaluate impacts

Partners

- New England Aquarium
- Offshore wind developers
- Recreational fishermen

Status

- All receivers have been successfully deployed in Lease Area OCS-A 0534 and tagging efforts are ongoing



Environmental Surveys

Channeled Whelk Study

Primary objectives:

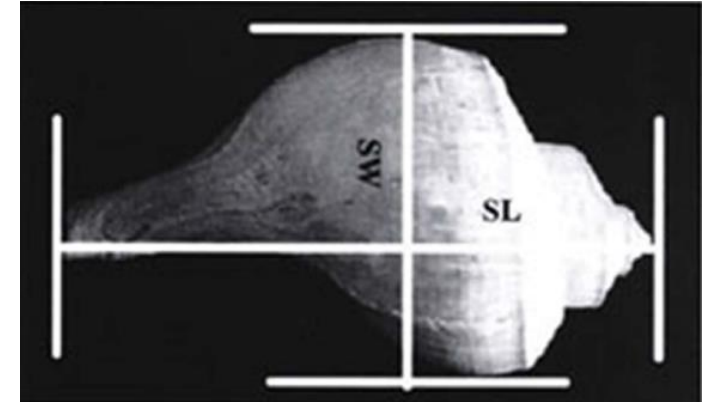
- Estimate the size (shell width) at which 50% of whelks reach sexual maturity. Maturity will be assessed macroscopically and verified histologically.
- Determine if there is a significant difference in whelk size between locations
- Estimate age in relation to size
- Compare statolith aging to operculum aging
- Determine the sex ratio for each size class

Partners

- SMAST
- Commercial Fisheries Research Foundation's whelk study fleet
- Quahog fishery
- Massachusetts Conch Association
- Massachusetts Lobstermen's Association

Status

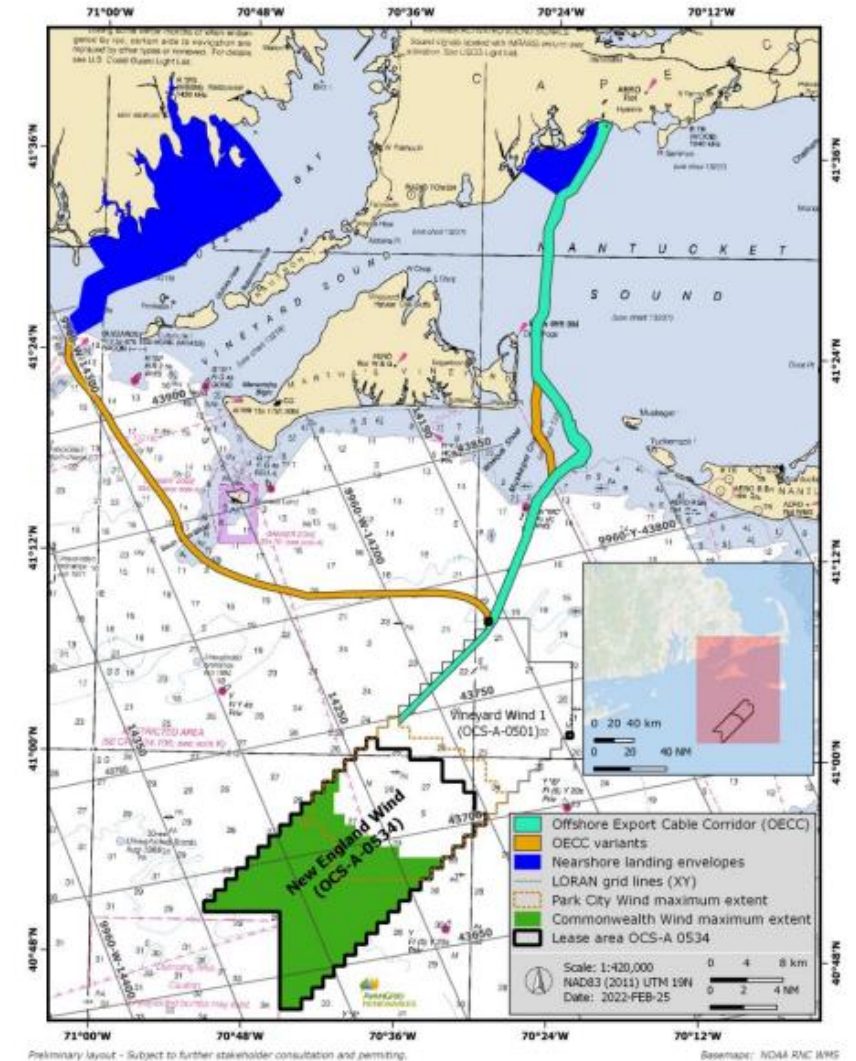
- Multiple sample collections, the development of protocols, dissections, and preliminary analysis completed.



Geotechnical Surveys

Geotechnical Surveys

- Commonwealth Wind deep geotechnical surveys on-going
 - Cone Penetration Test
 - Borings



A large-scale photograph of an offshore wind farm. In the foreground, a single white wind turbine with three blades is prominent, standing on a yellow pile in the water. The water is a deep blue-green. In the background, many other similar turbines are visible, stretching across the horizon under a clear blue sky. The overall scene is peaceful and represents renewable energy.

Thank you

Questions?



**AVANGRID
RENEWABLES**

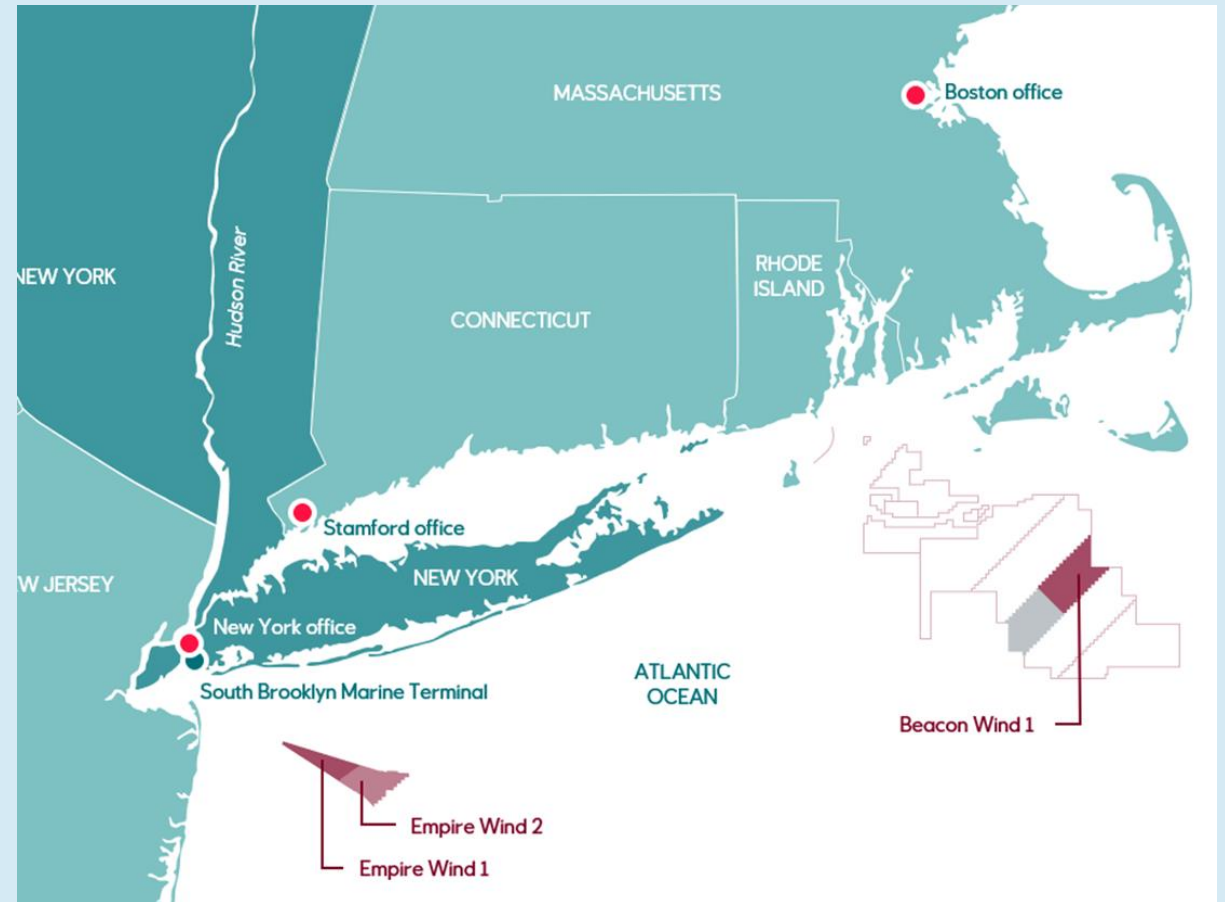
Beacon Wind

EEA Habitat Working Group
February 9, 2023



Beacon Wind | Agenda

- **Beacon Wind Timeline**
- **Survey Program**
- **Monitoring Program**
- **NYSDAPSA Monitoring Plan
Regional Research for Fish and Wildlife**
- **Metocean Facilities**
- **Questions?**



Beacon Wind | Timeline Update

2019 – Lease Acquired

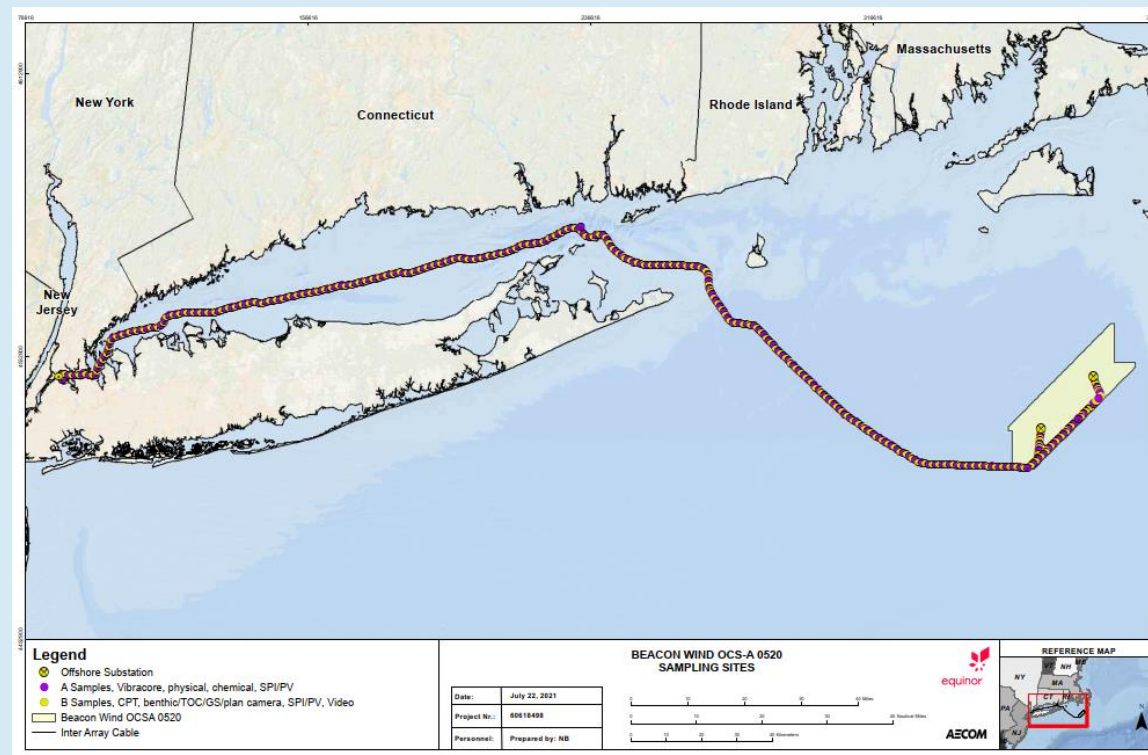
2020 – Aerial Wildlife and Marine Survey Commencement

2021 – Deployment of Metocean Buoys

2022 – Federal & State Permit Submission

2024 – Permits Approved

2025 – Construction and Fabrication



FAST-41 (Federal)

<https://www.permits.performance.gov/permitting-project/beacon-wind>

Beacon Wind 1 Article VII (New York)

<https://www.beaconwind.com/environment-sustainability/article-vii/>

Beacon Wind | Survey Program Update

Beacon Wind has no active surveys

| Completed Surveys | Lease Area | Submarine Export Cable Corridor |
|-----------------------------|------------|---------------------------------|
| High Resolution Geophysical | ✓ | ✓ |
| Geotechnical | ✓ | ✓ |
| Benthic | ✓ | ✓ |
| Geoenvironmental | | ✓ |

Beacon Wind | Monitoring Program Update

| High-resolution aerial wildlife surveys | <ul style="list-style-type: none">• https://remote.normandeau.com/eqn22_overview.php• https://seamap.env.duke.edu/dataset/2192• https://seamap.env.duke.edu/dataset/2187 |
|--|---|
| Highly Migratory Species (HMS) Passive Acoustic Telemetry | <ul style="list-style-type: none">• Deployed May – December 2021• Deployed May – December 2022• Planned May – December 2023• Receivers also located on Beacon Wind metocean LiDAR and current moorings since November 2021 |
| Metocean buoy Motus 434 MHz stations | <ul style="list-style-type: none">• https://motus.org/data/project?id=538 |

Support for Monitoring of Key Commercial Fish Stocks and Wildlife of Conservation Concern

- To support regional monitoring of key regional commercial fish stocks to better understand how offshore wind energy development is potentially altering the biomass and/or distribution of these stocks;
- To support regional monitoring of wildlife of conservation concern to better understand how offshore wind energy development effects distribution and abundance of sensitive species;
- To advance the responsible development of the offshore wind energy industry

Monitoring Plan was submitted to NYSERDA for approval January 13, 2023.

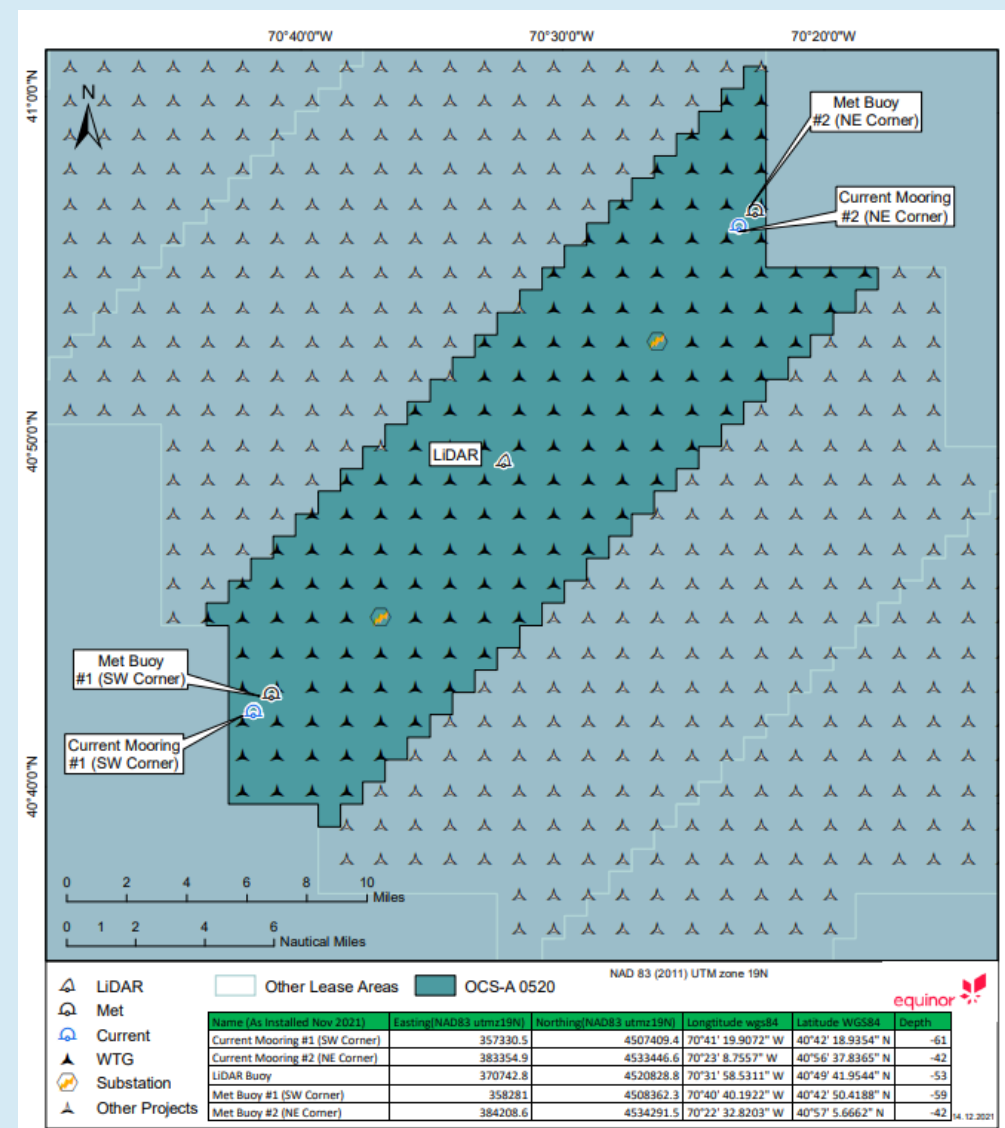
Stay tuned for more information!

Beacon Wind | Metocean Facilities Update

Metocean Buoys and Moorings

1 LiDAR, 2 current moorings, 2 wave/met buoys

- Deployed November 2021
- Service visit #1 June 2022
- Service visit #2 November 2022
- Service visit #3 planned for May 2023
- Decommissioning planned for November 2023



Beacon Wind | Metocean Facilities Update

Metocean Buoys and Moorings

Historical and near-real time data

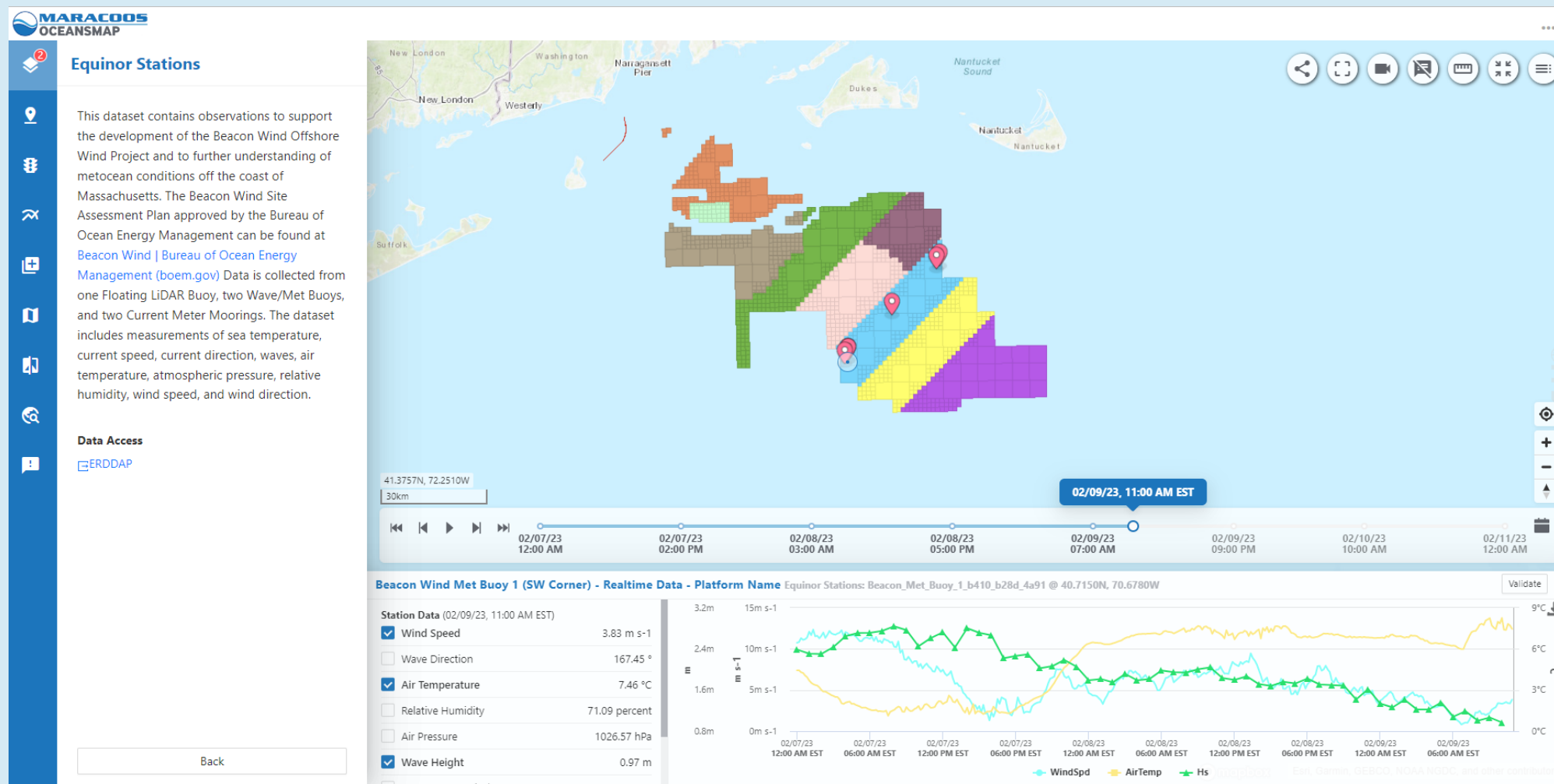
- Wind speed, wind direction, air temperature, relative humidity, barometric pressure, directional waves, current velocity, water temperature, salinity, depth sensor

are now publicly accessible on

- [MARACOOS OceansMap](#)
- [ERDDAP - Search \(maracoos.org\)](#)

LiDAR wind profile data are not publicly available

Beacon Wind | Metocean Facilities Update



Beacon Wind | Metocean Facilities Update



ERDDAP

Easier access to scientific data

Brought to you by NOAA NMFS SWFSC ERD

ERDDAP > search

Do a Full Text Search for Datasets:

Beacon

6 matching datasets, with the most relevant ones listed first.

(Or, refine this search with [Advanced Search](#))

| Grid DAP Data | Sub-set | Table DAP Data | Make A Graph | W M S | Source Data Files | Title | Summary | FGDC, ISO, Metadata | Background Info | RSS | E mail | Institution | Dataset ID |
|---------------|---------|----------------|--------------|-------|-------------------|---|---------|---------------------|----------------------------|-----|--------|-----------------|--|
| | set | data | graph | | | Beacon Wind Current Mooring 1 (SW Corner) - Historical Data | | F I M | background | | | Equinor US Wind | Beacon_Wind_Current_Mooring_1_a80e_34fb_02cd |
| | set | data | graph | | | Beacon Wind Current Mooring 2 (NE Corner) - Historical Data | | F I M | background | | | Equinor US Wind | Beacon_Wind_Current_Mooring_2_8bd5_6c73_f023 |
| | set | data | graph | | | Beacon Wind LiDAR Buoy - Realtime Data | | F I M | background | | | Equinor US Wind | Beacon_Wind_LiDAR_423f_3214_f578 |
| | set | data | graph | | | Beacon Wind Met Buoy 1 (SW Corner) - Historical Data | | F I M | background | | | Equinor US Wind | Beacon_Wind_Wave_Met_Buoy_1_36f0_579c_7497 |
| | set | data | graph | | | Beacon Wind Met Buoy 1 (SW Corner) - Realtime Data | | F I M | background | | | Equinor US Wind | Beacon_Met_Buoy_1_b410_b28d_4a91 |
| | set | data | graph | | | Beacon Wind Met Buoy 2 (NE Corner) - Historical Data | | F I M | background | | | Equinor US Wind | Beacon_Wind_Wave_Met_Buoy_2_1938_e15c_78e6 |

The information in the table above is also available in other file formats (.csv, .htmlTable, .itx, .json, .jsonlCSV1, .jsonlCSV, .jsonlKVP, .mat, .nc, .nccsv, .tsv, .xhtml) [via a RESTful web service](#).

ERDDAP, Version 2.02

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SHAPING THE FUTURE OF ENERGY

Thank you for your attention. Questions?

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Ørsted Offshore North America

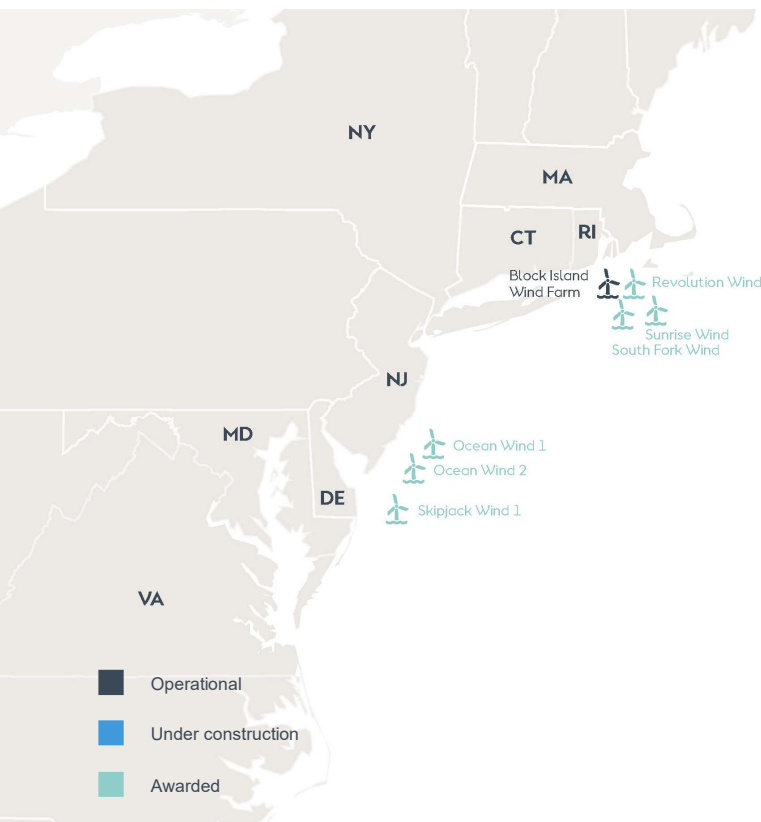
Northeast Program Update



MA EEA Habitat Working Group
Meeting on Offshore Wind
February 2022

Ørsted Offshore North America portfolio

Awarded over 4,000 MW of offshore capacity on the East coast



In Operation

Block Island Wind Farm (BIWF): 30MW

Awarded

Revolution Wind (REV): 50/50 JV w/ Eversource, 704MW (400MW to RI, 304MW to CT)

South Fork Wind (SFW): 50/50 JV w/ Eversource, 132MW

Sunrise Wind (SRW): 50/50 JV w/ Eversource, approximately 924MW

Ocean Wind 1 (OCW1): 75/25 JV with PSEG, 1,100MW

Ocean Wind 2 (OCW2): 1,148MW

Skipjack Wind 1 (SJW1): 120MW

Skipjack Wind 2 (SJW2): 846MW

Orsted Northeast Program 50/50 JV with Eversource

South Fork Wind

- Lease Area OCS-A 0517
- Deliver power to the East Hampton, NY
- NY Article VII approved March 2021
- COP Approval January 2022
- **Onshore: Construction Commenced**
- **Offshore: Pre-construction Fall 2022, Construction Spring 2023**

Revolution Wind

- Lease Area OCS-A 0486
- Interconnect to the existing Davisville Substation, RI
- RI EFSB Order Issued July 2022
- **RI CRMC/RIDEM permit applications December 2022**
- **DEIS September 2022, FEIS June 2023**

Sunrise Wind

- Lease Area OCS-A 0487
- Proposed interconnection at Holbrook Substation, NY
- CECPN Nov 2022, EMCP Nov 2022
- **NY Article VII Settlement meetings Sept 2022**
- 3 • **DEIS December 2022, FEIS July 2023**



Northeast Program Update

FISHERIES SURVEYS

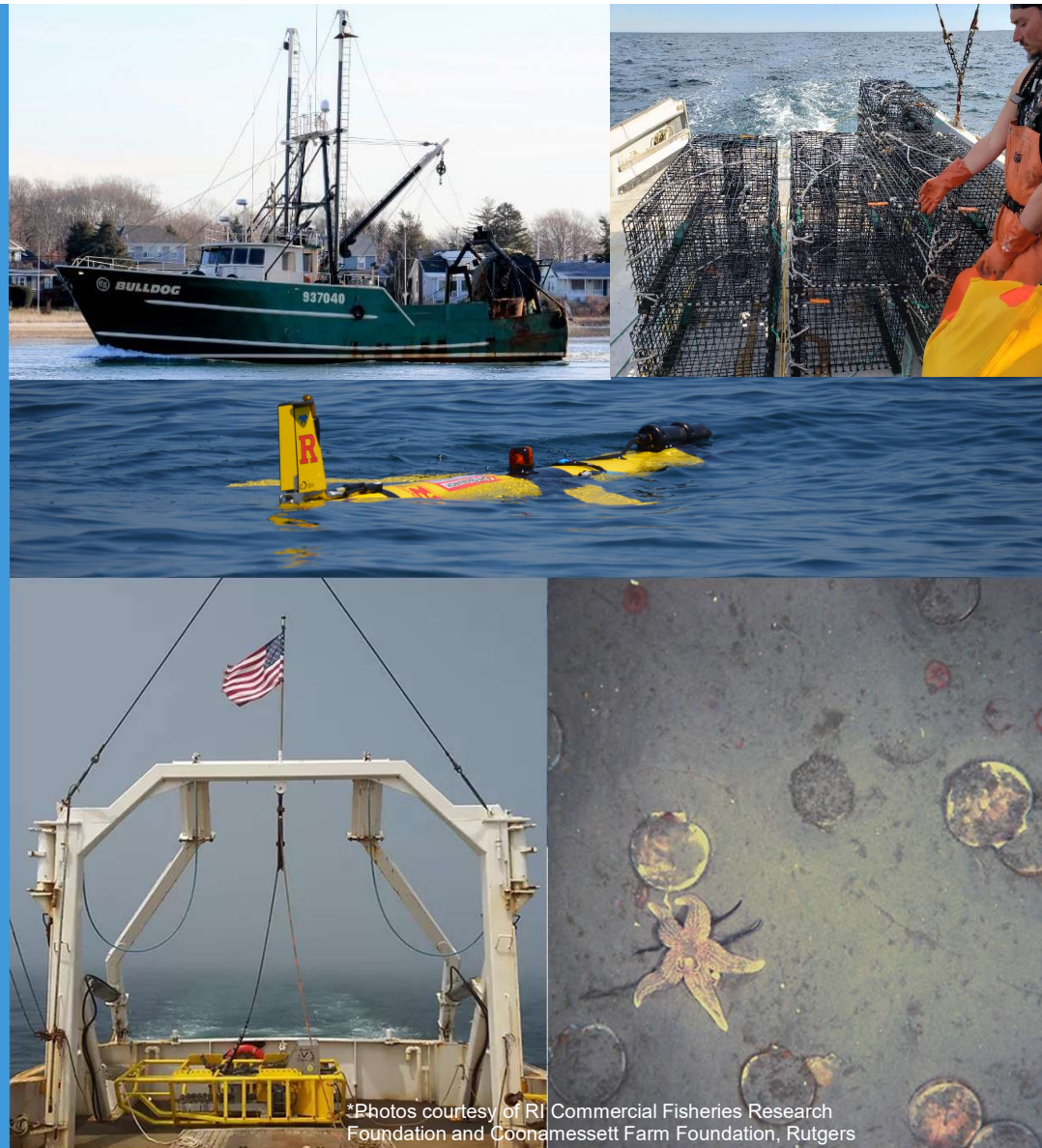
- **SFW (ongoing)**
 - Beam Trawl
 - Gillnet Survey
 - Fish Pot Survey
 - Ventless Trap Survey
 - Cod Spawning Monitoring (PAM)
 - Trawl Survey (Inshore, NY State)
- **REV/SRW (delayed by permitting)**
 - Bottom Trawl Survey
- **REV**
 - Ventless Trap Survey (delayed by permitting)
 - Cable Route Ventless Trap Survey (Jan 2023)
- **SRW (ongoing)**
 - HABCAM survey (Aug 2022)

ACOUSTIC TELEMETRY SURVEYS (ongoing)

- Highly Migratory Species (SFW/REV/SRW- 32 receivers deployed)
- Export Cable (SFW-underway/SRW-array deployed and ~80 sharks tagged to date)

BENTHIC SURVEYS (planned)

- Soft and Hard Bottom Habitats (SFW/REV)
- Soft Bottom Habitats (SRW)



*Photos courtesy of RI Commercial Fisheries Research Foundation and Coonamessett Farm Foundation, Rutgers

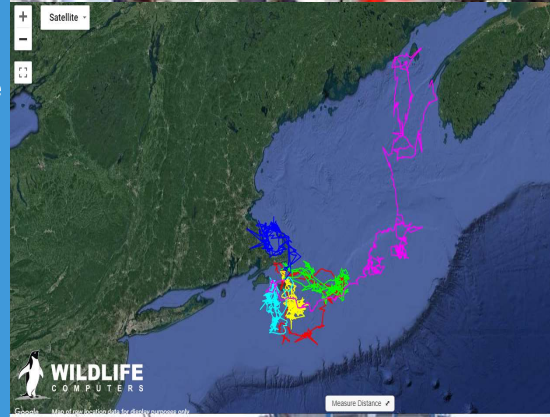
Northeast Program Update

MARINE MAMMAL LONG TERM PAM

- **SFW:** Two Long Term archival recorders (Sept 2022)
- **REV:** Long Term recorder deployments anticipated in 2023/24
- **SRW:** Long Term recorder deployments anticipated in 2023/24

MARINE MAMMAL & SEA TURTLE VOLUNTARY STUDIES

- **REV**
 - **Mystic Aquarium/Dr. Tracy Romano:** studies commencing include laboratory e-DNA and stress studies and seal and ST tagging
- **SRW**
 - **PINNI-POD (AMSEAS/Rob DiGiovanni):** 6 tags deployed to date on harbor and gray seals
 - **Syracuse U/Susan Parks:** acoustic density estimation study using Cape Cod data and Opportunistic Focal data collection of large whales
 - **ECO-POD (Stony Brook U/Joe Warren and Lesley Thorne):** Desktop zooplankton studies underway, Three field surveys completed to date
 - **Thermal Imaging A.I. (Stony Brook, Lesley Throne):** Developing and evaluating benchmarking criteria to test thermal imaging systems and autodetection of cetaceans



*Photos courtesy of JASCO Applied Sciences; Stony Brook U; Stockton U; AMSEAS/Wildlife

Northeast Program Update Bird and Bat Monitoring

Post Construction Monitoring Plan

- **SFW**

- MOTUS receiving stations & funding Roseate Tern movement study
- Continued outreach and coordination with USFWS for onshore MOTUS station refurbishment
- Ship-based avian point count behavioral surveys
- Acoustic monitoring for nocturnal migratory birds and bats
- Worker Incidental Reporting System for dead/injured birds & bats
- Adaptive monitoring
- Reporting

- **REV/SRW**

- MOTUS receiving stations & funding avian tagging study(ies) in coordination with BOEM/USFWS – focus on ESA species
- Bat acoustic monitoring
- Radar monitoring (both horizontal and vertical are under consideration)
- Worker Incidental Reporting System for dead/injured birds & bats
- Adaptive monitoring
- Reporting



Vessel-based observers



Roseate tern

09 February
2023



Thank you

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