



VINEYARD WIND

Osterville Anglers Club

Vineyard Wind 1

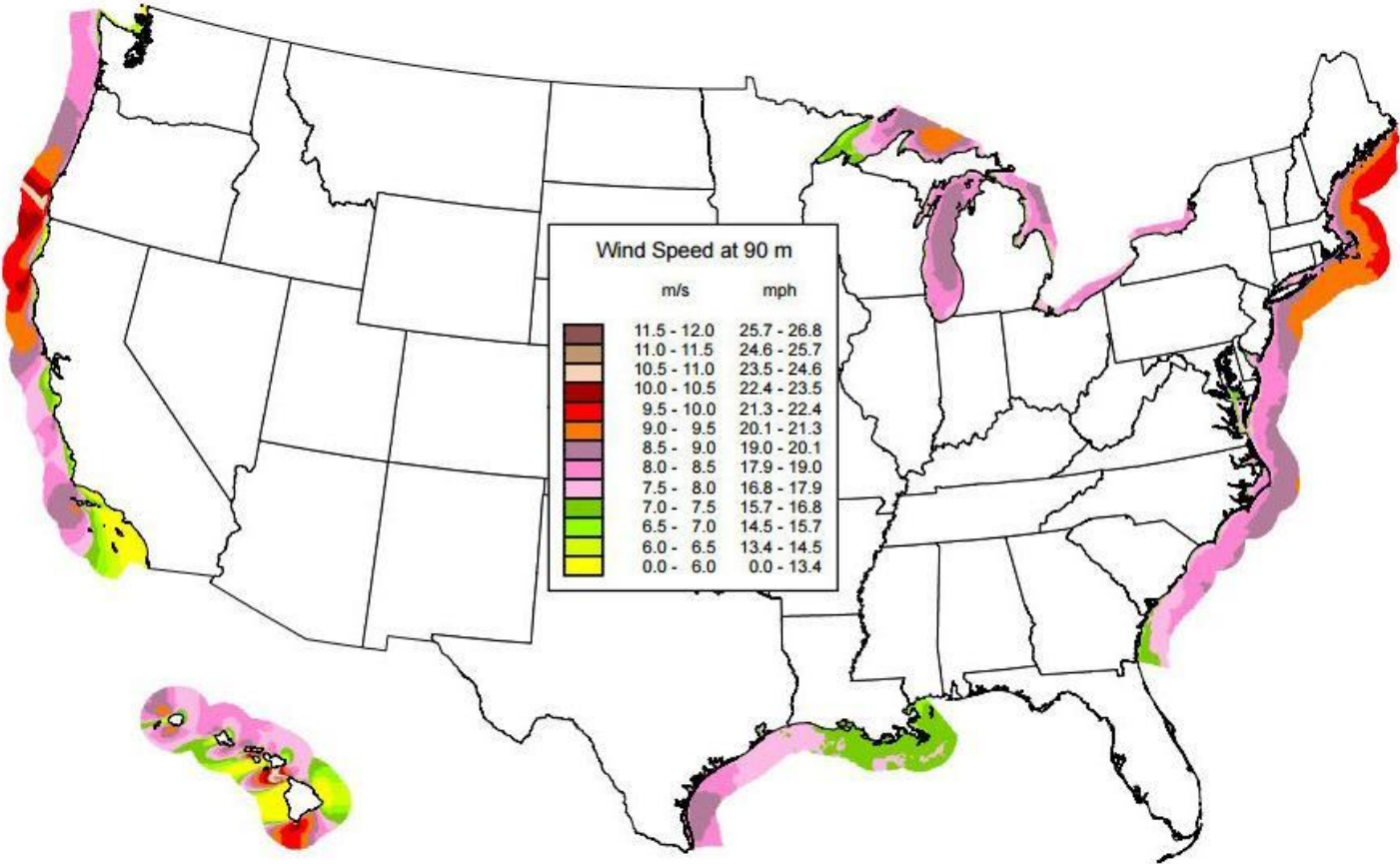
May 12, 2022

Crista Bank, Fisheries Manager

Dana Rebeiro, MA Community Liaison

WHY OFFSHORE WIND

United States - Annual Average Offshore Wind Speed at 90 m



(source: National Renewable Energy Lab)

Southern New England Wind Energy Area

5 Developers with lease areas

Orsted/Eversource

Southfork, Revolution Wind
Bay State Wind

Vineyard Offshore

Vineyard Wind 1
Lease area 522
Lease area 544

Avangrid Renewables

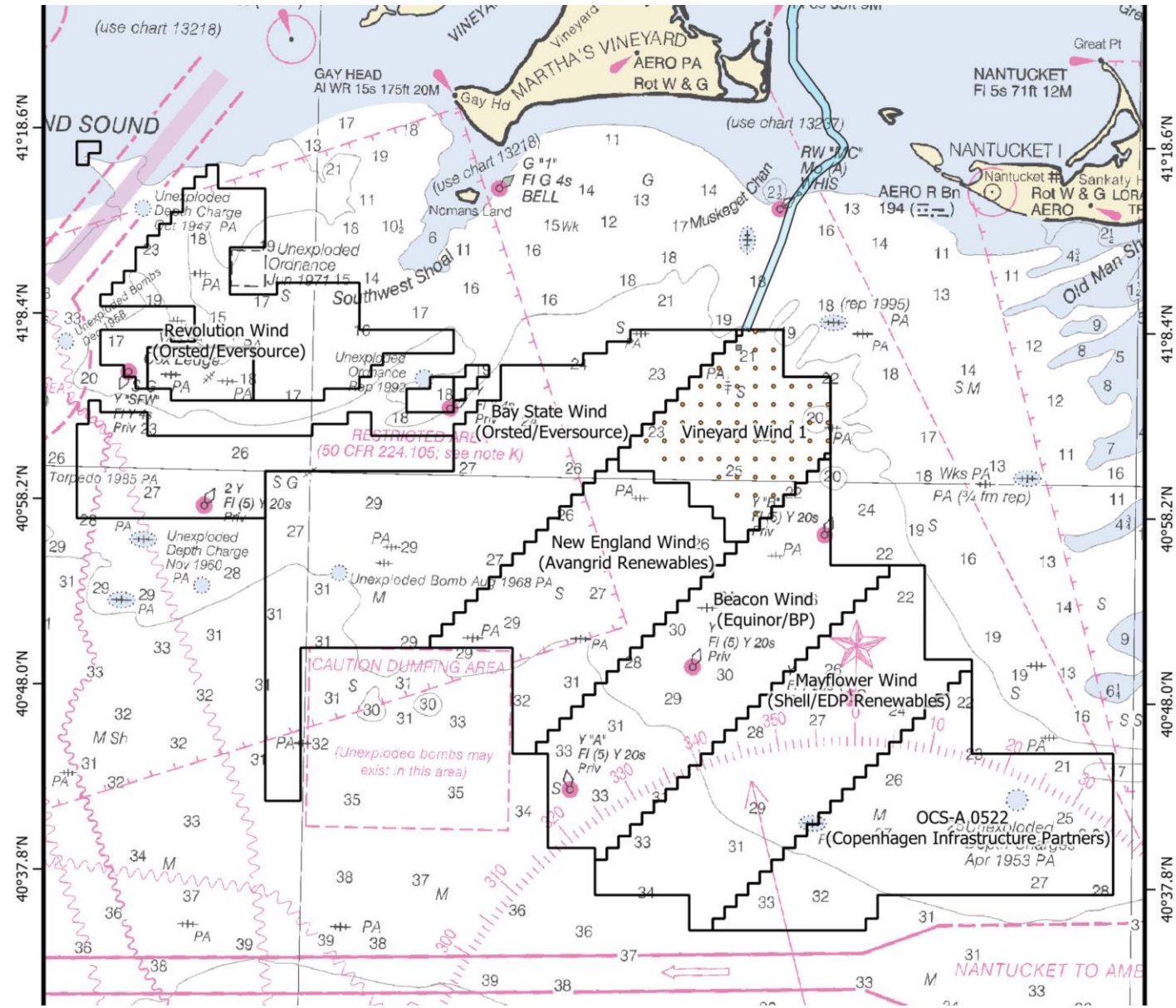
Vineyard Wind 1
New England Wind

Equinor/BP

Beacon Wind

Shell/EDP Renewables

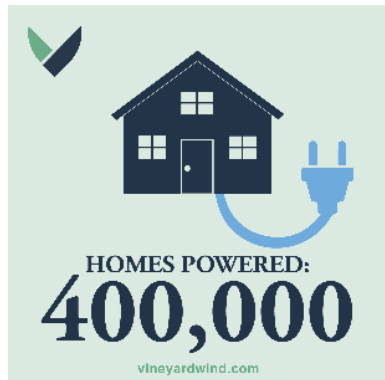
Mayflower Wind



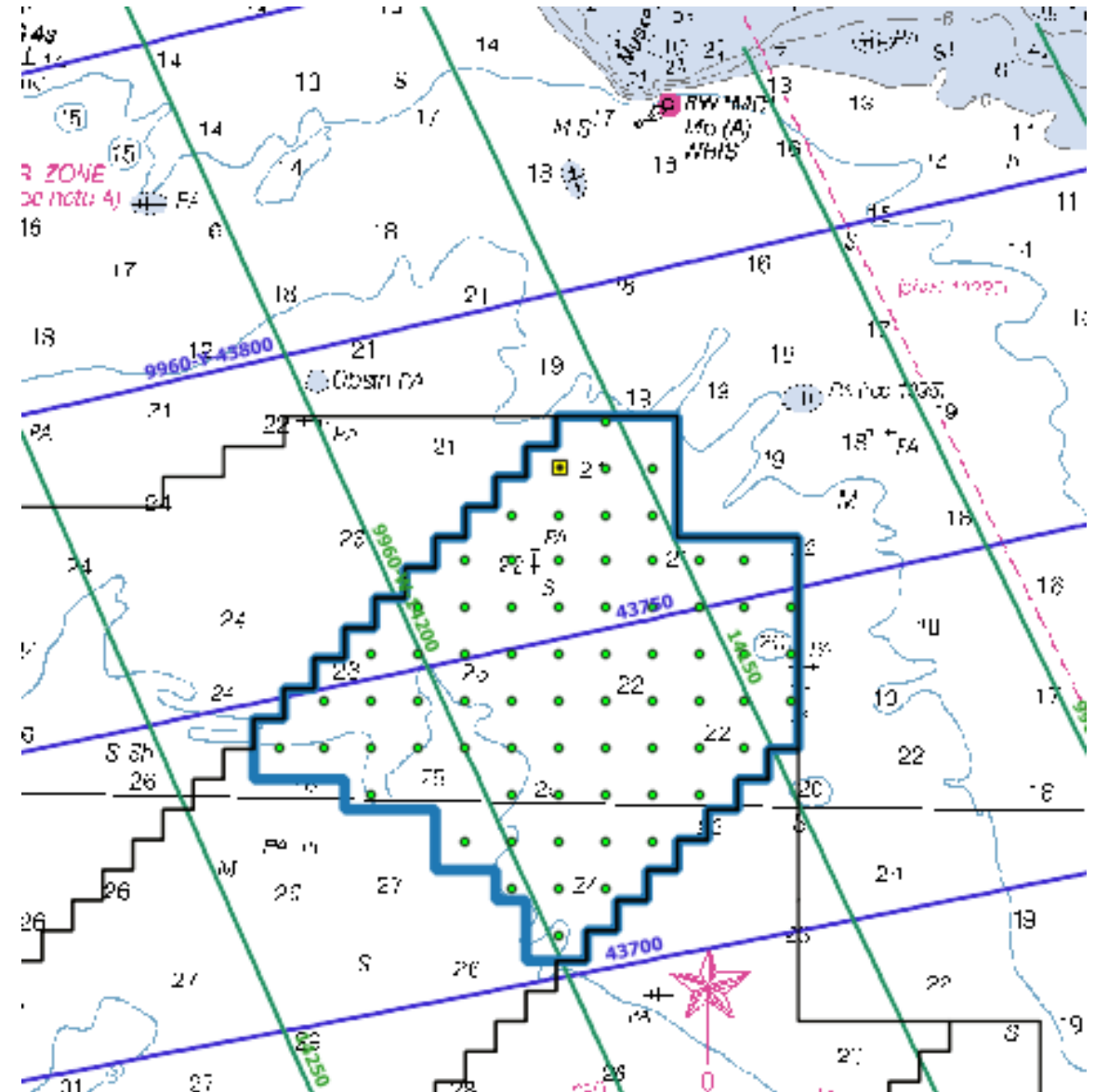
Vineyard Wind 1

FISHING IS ALLOWED IN WIND FARMS!

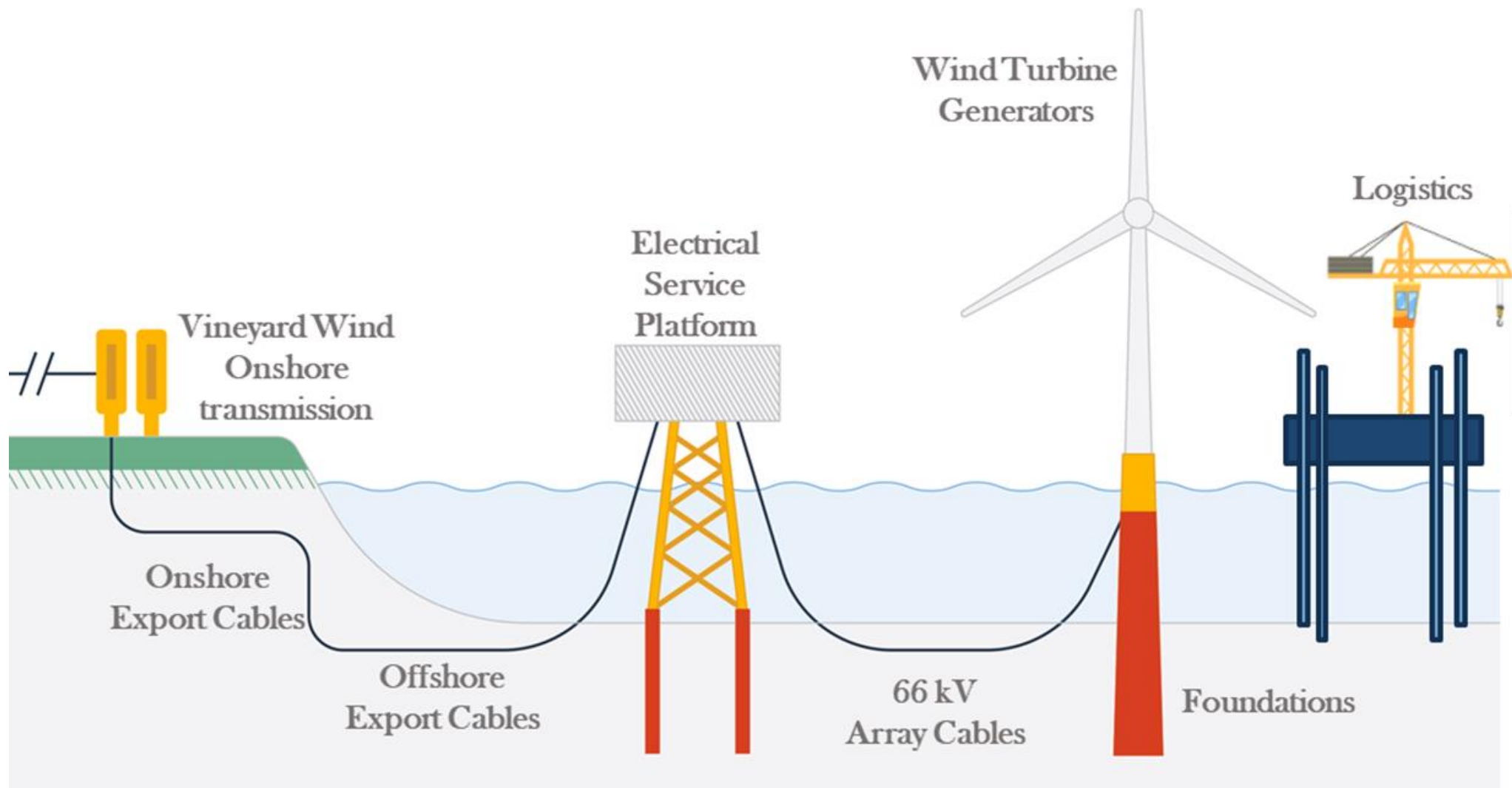
- 1 x 1 nautical mile spacing
- 13 MW GE Haliade-X turbine
- 62 turbines
- 800 Megawatts (MW)



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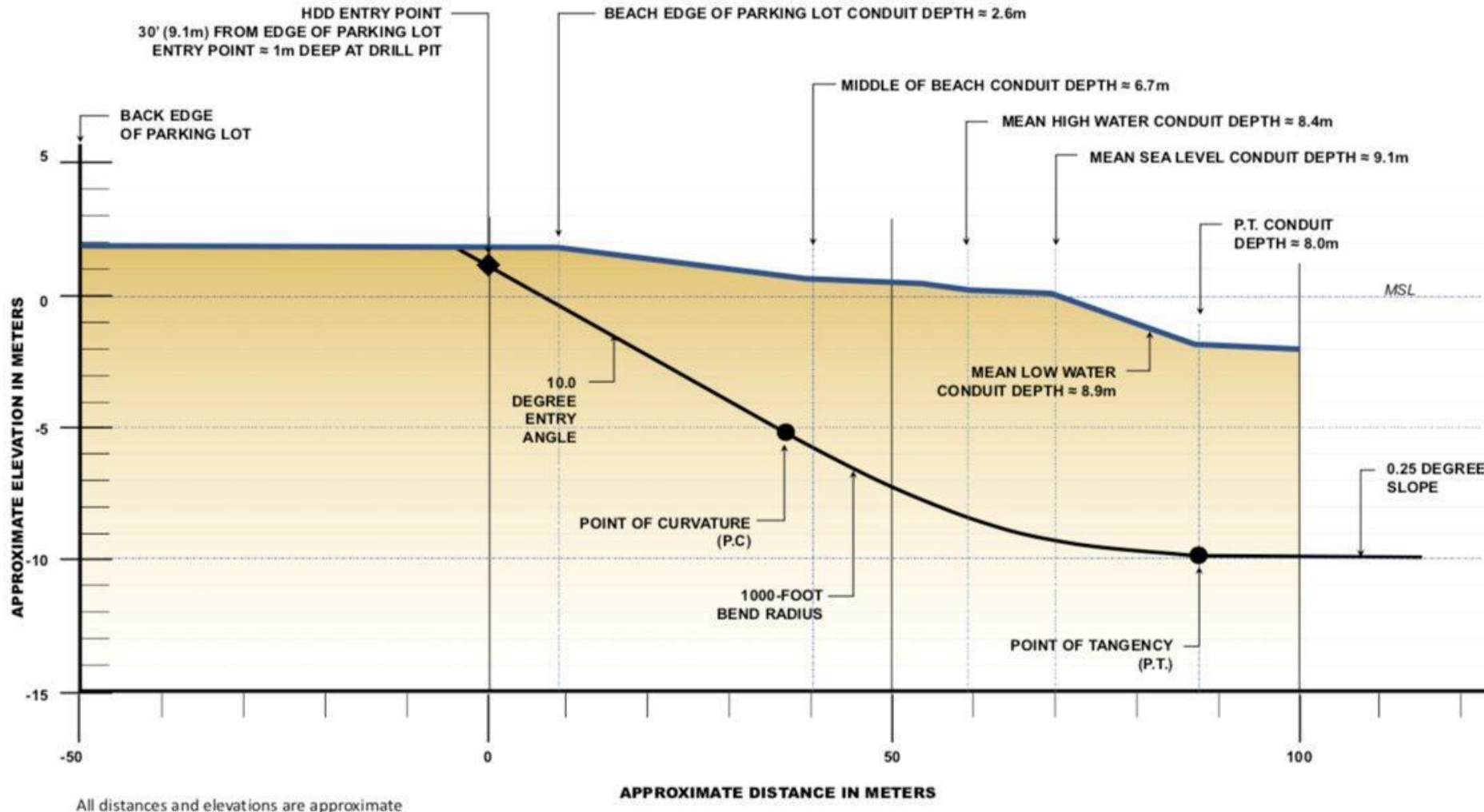
Wind Farm Transmission



CABLE LANDFALL

Stantec Consulting Services, Inc.

HDD DEPTH PROFILE FOR COVELL'S BEACH



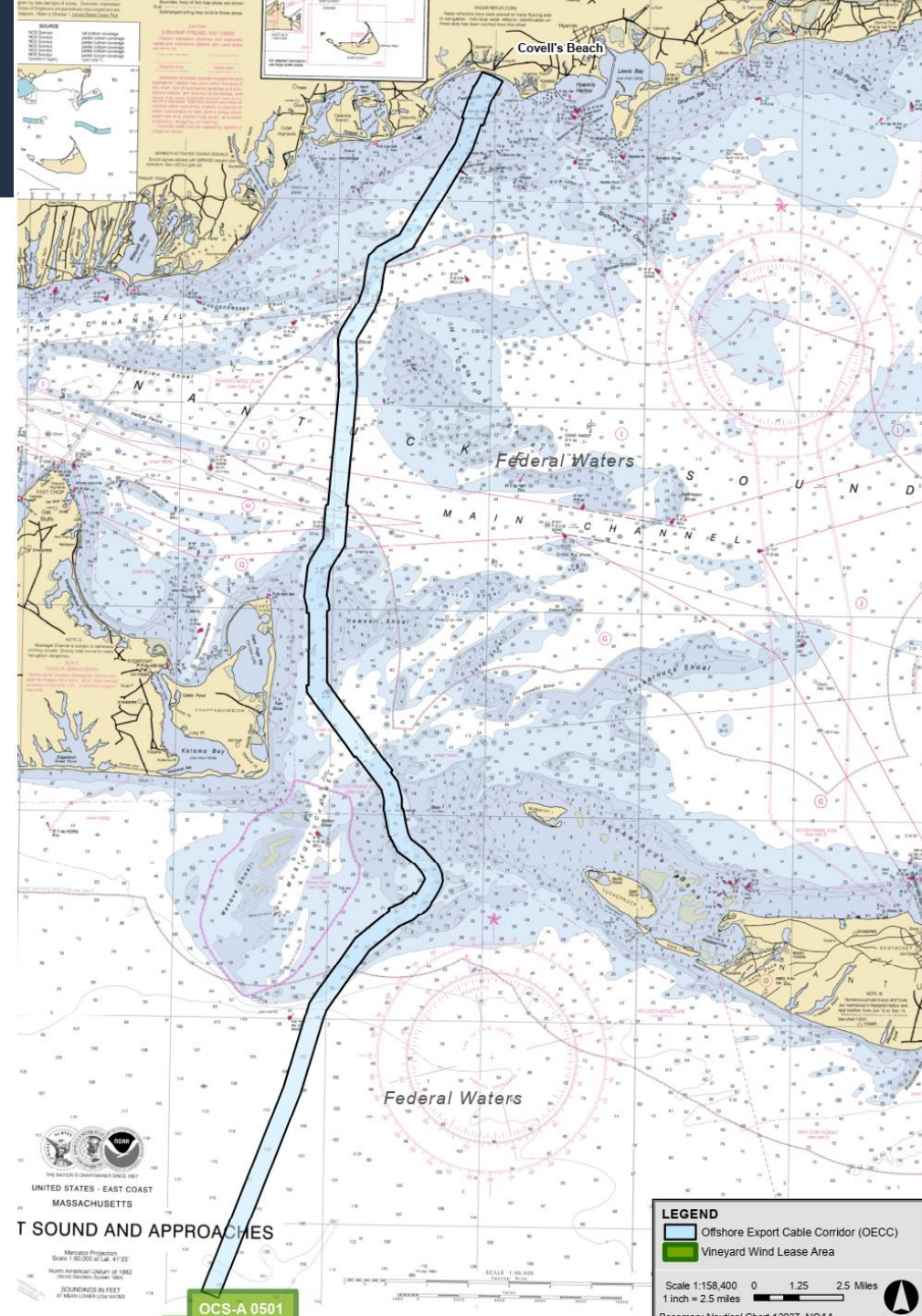
Horizontal Directional Drilling (HDD)

- Tunnels from the beach parking lot to 1,000 feet offshore
- Cable conduit installed approximately 30 feet beneath the beach at the tide line

CONNECTING OFFSHORE WIND TO THE ELECTRIC GRID

Offshore Export Cable Corridor (OECC)

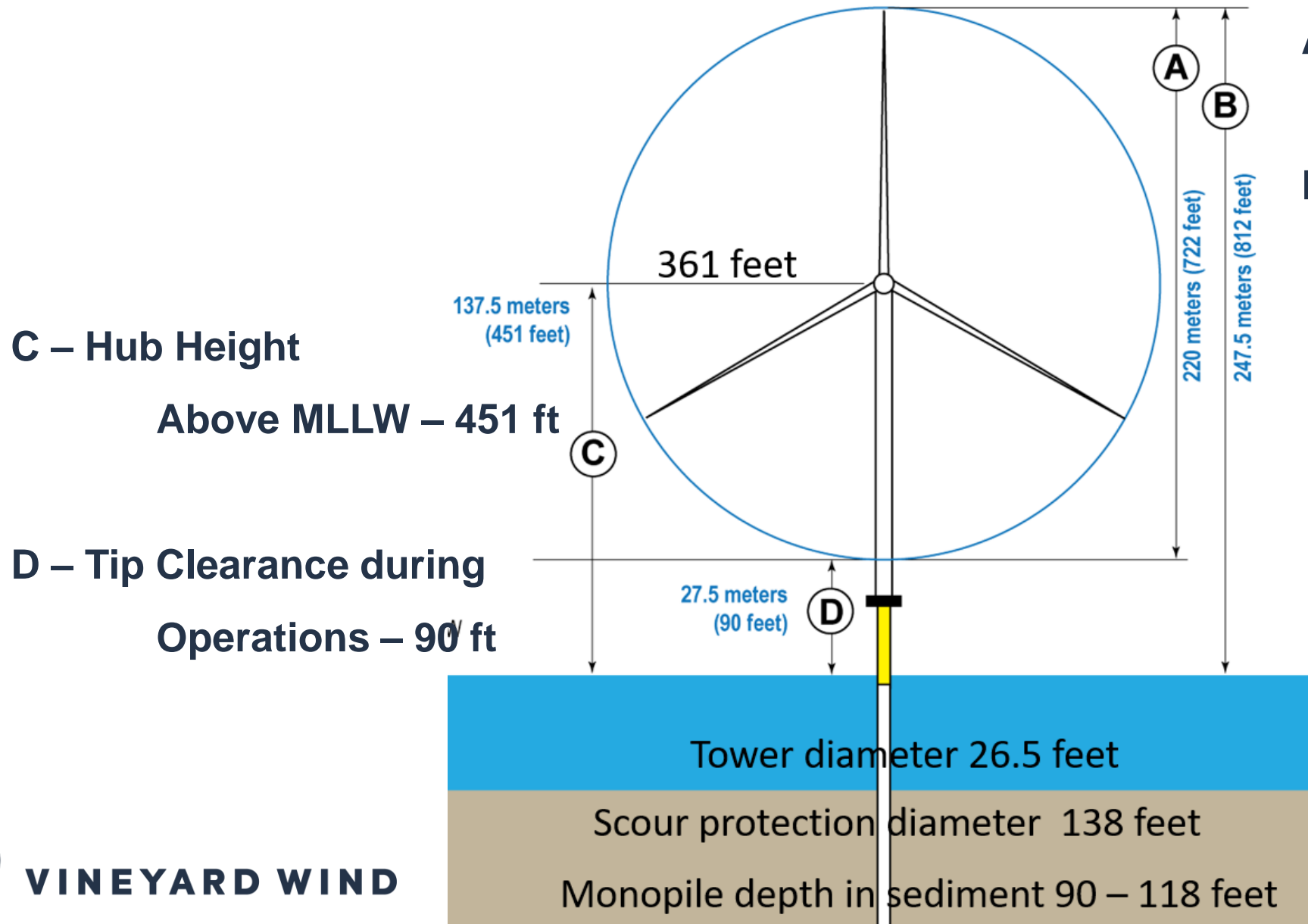
- Width: 1,805 ft (550 m) (0.3 nm)
- Length: 34 miles
- Number of cables: 2
- Target burial depth: 5 – 8 feet
- Temporary trench width per cable: 3.5 feet



Electrical Service Platform



GE Haliade-X 13MV



A – Rotor Diameter – 772 ft

B – Total Blade Tip Height
Above MLLW – 812 ft

GEOPHYSICAL AND GEOTECHNICAL DATA COLLECTION

- Geophysical surveys - remote sensing
 - Side scan sonar
 - Multibeam sonar
 - Magnetometer
- Geotechnical surveys - physical sampling
 - Cone penetration testing (CPT)
 - Benthic grabs
 - Vibracore



Fishermen onboard survey vessels

- Help communicate with fishing vessels in area
- Help locate and navigate around fixed gear

2020 – 10 fishermen on 6 vessels

2021 – 6 fishermen on 7 vessels

2022 – 7 fishermen on 6 vessels



FISHING VESSELS

Scout Vessels

- Work ahead of survey vessel locating fixed gear
- Help communicate with fishermen working in area of survey vessel operations
- 2021 - 3 scout vessels
- 2022 – 5 scout vessels



Survey Objectives

- Monitor the impact of offshore wind projects on fisheries
- Establish baseline pre-construction
- Document impacts post-construction

Survey Design

- Before and After Control Impact (i.e., BACI) Design

Local Fishing Vessel Participation

- 9 fishing vessels have participated over the past 2 years



Fisheries Science – Trawl Survey



UMass | Dartmouth

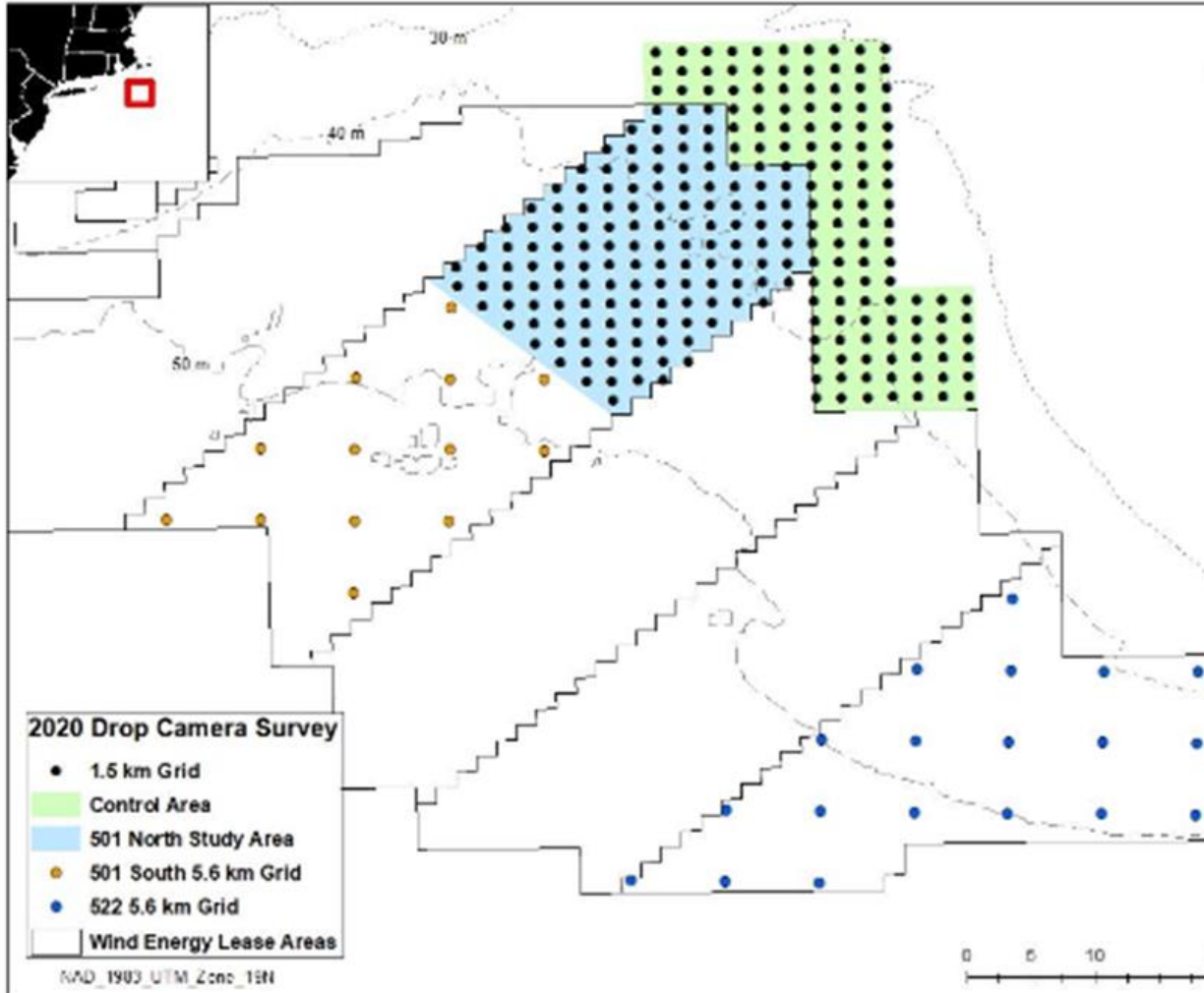


VINEYARD WIND

Fisheries Science - Drop Camera



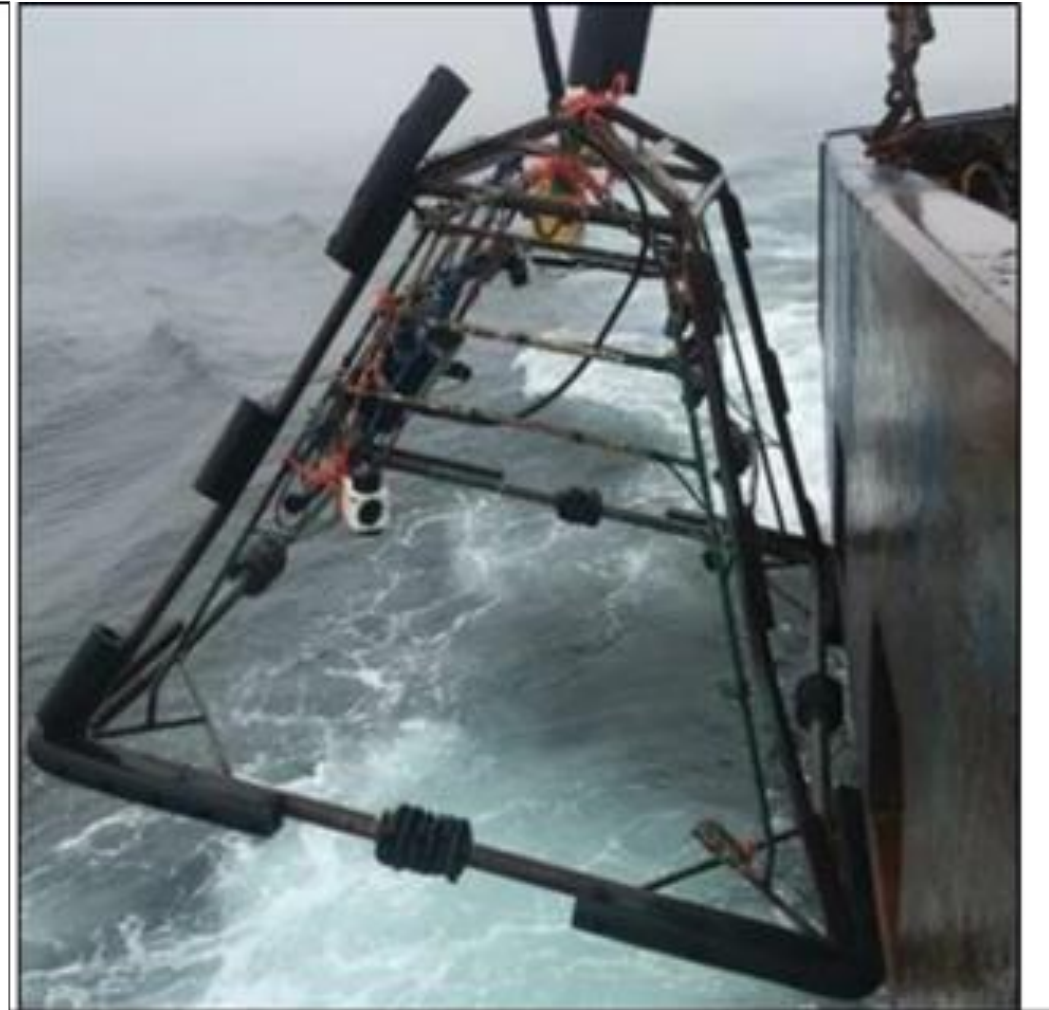
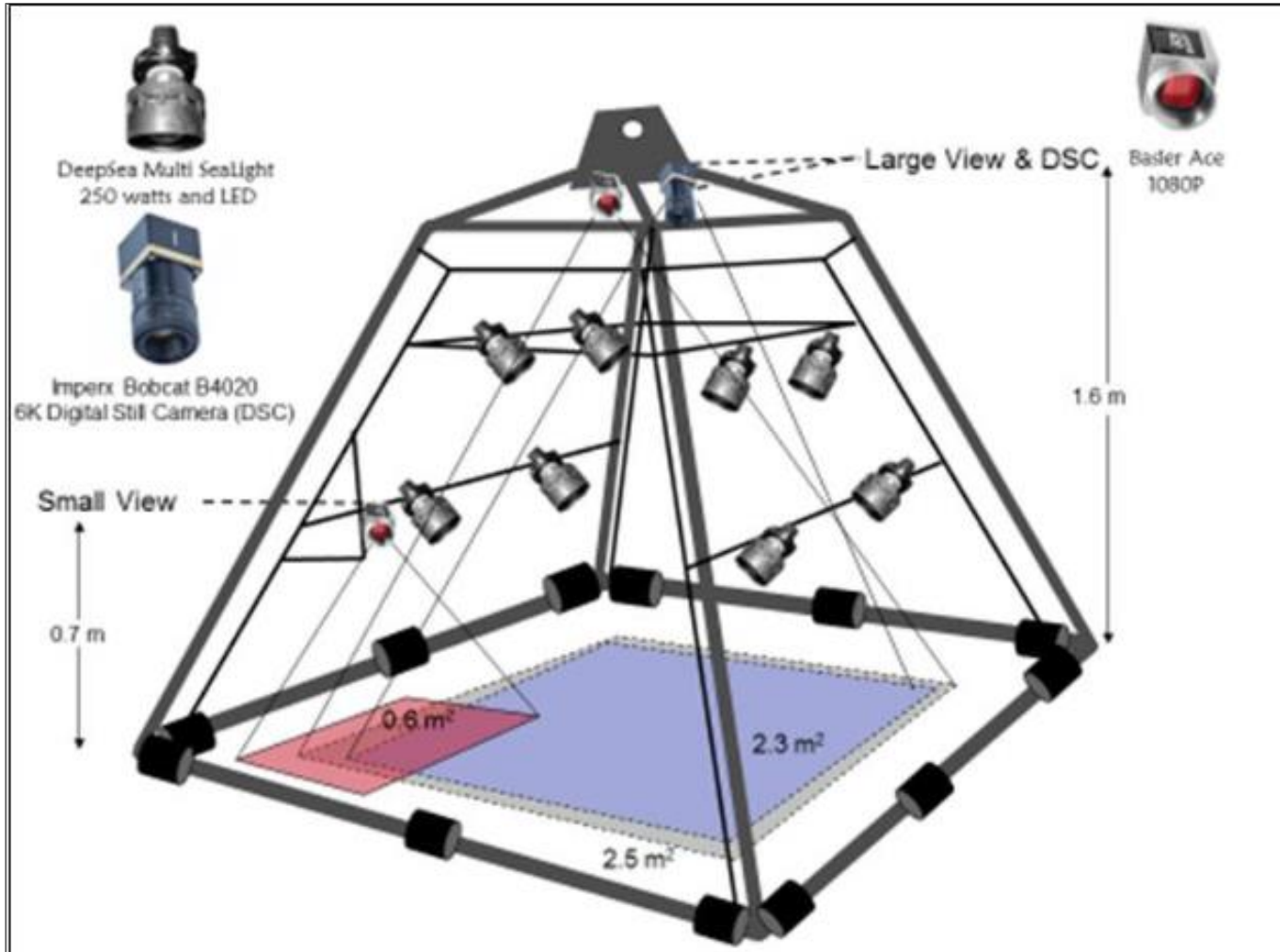
UMass | Dartmouth



Fisheries Science - Drop Camera



UMass | Dartmouth



Fisheries Science - Drop Camera



UMass | Dartmouth

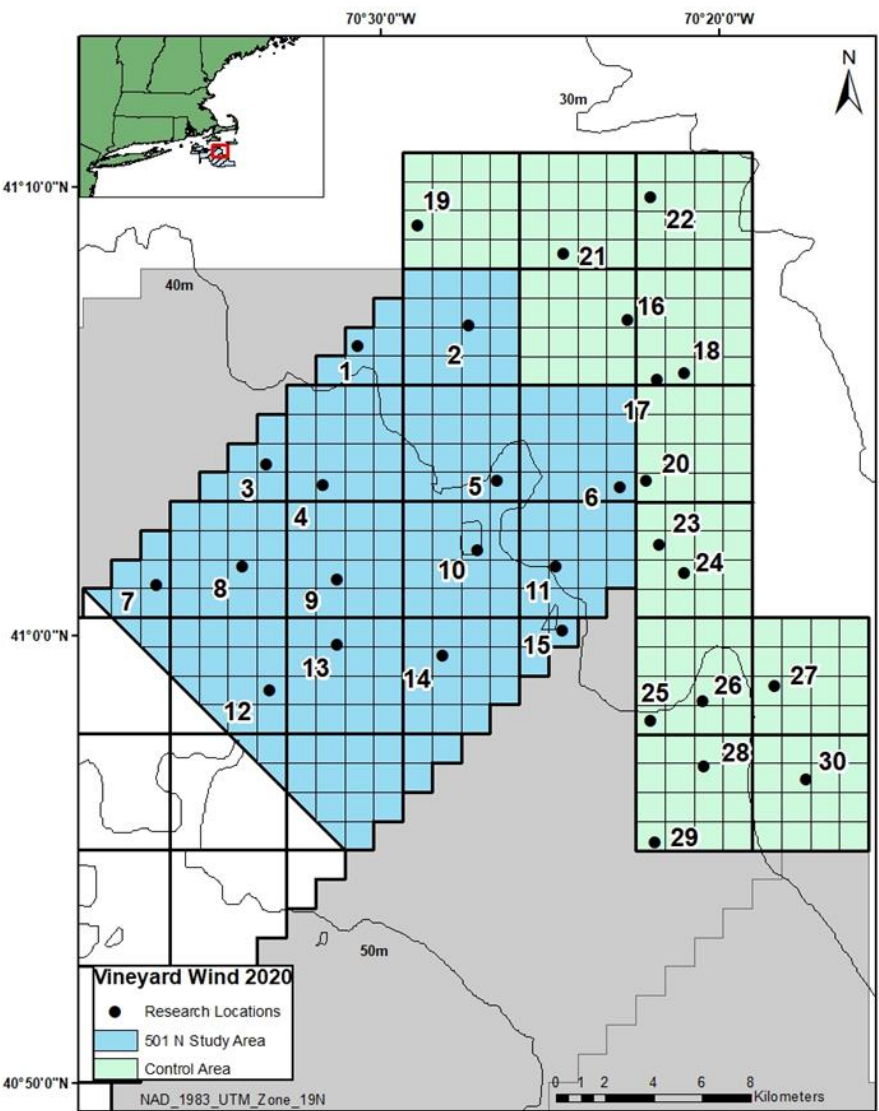


VW_501BACI Temperature: 9.62°C 40.944418N 70.526958W
Station: 52 Quadrat: 3 Depth: 26.86 Fathom 8:29:39.000 AM 7/16/2019



VW_501BACI Temperature: 11.69°C 40.987257N 70.350068W
Station: 210 Quadrat: 1 Depth: 21.89 Fathom 3:51:39.000 PM 7/17/2019

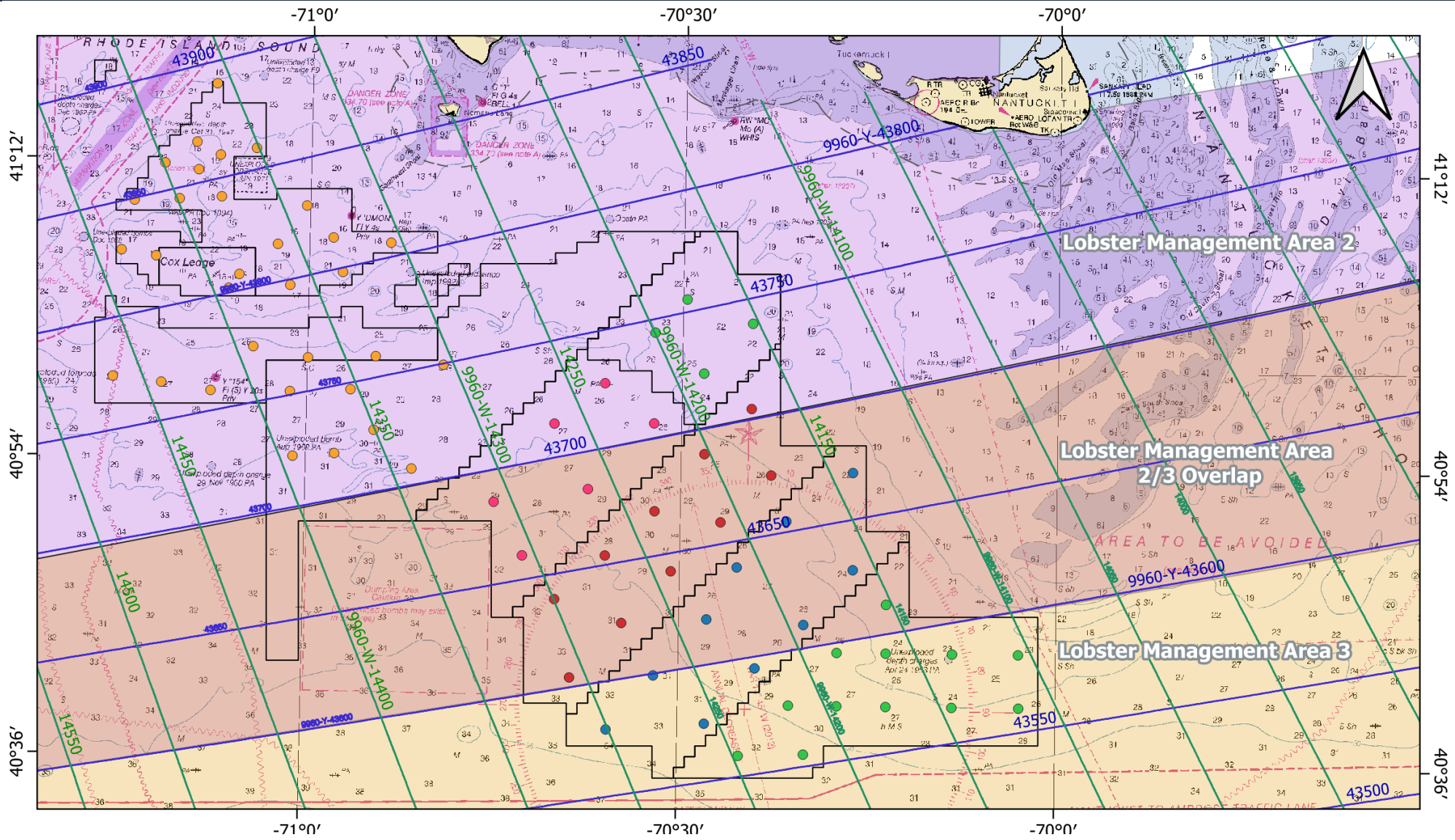
Fisheries Science – Lobster, Plankton, Black Sea Bass



Fisheries Science – Lobster, Plankton, Black Sea Bass

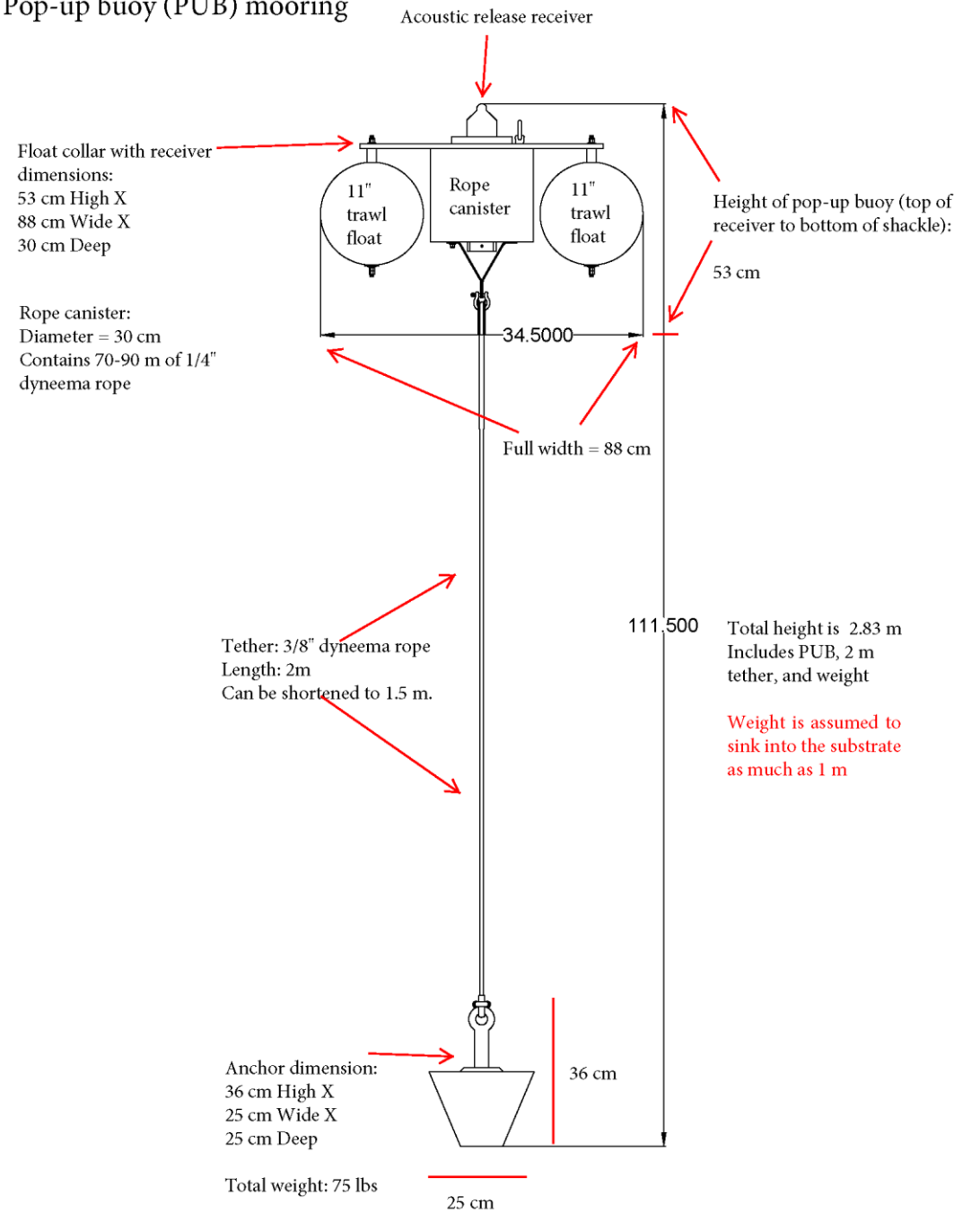


Highly Migratory Species Tagging and Acoustic Receiver Deployment 2022





Pop-up buoy (PUB) mooring



Cable Monitoring Plans

Benthic Habitat Monitoring Plan (pre and post)

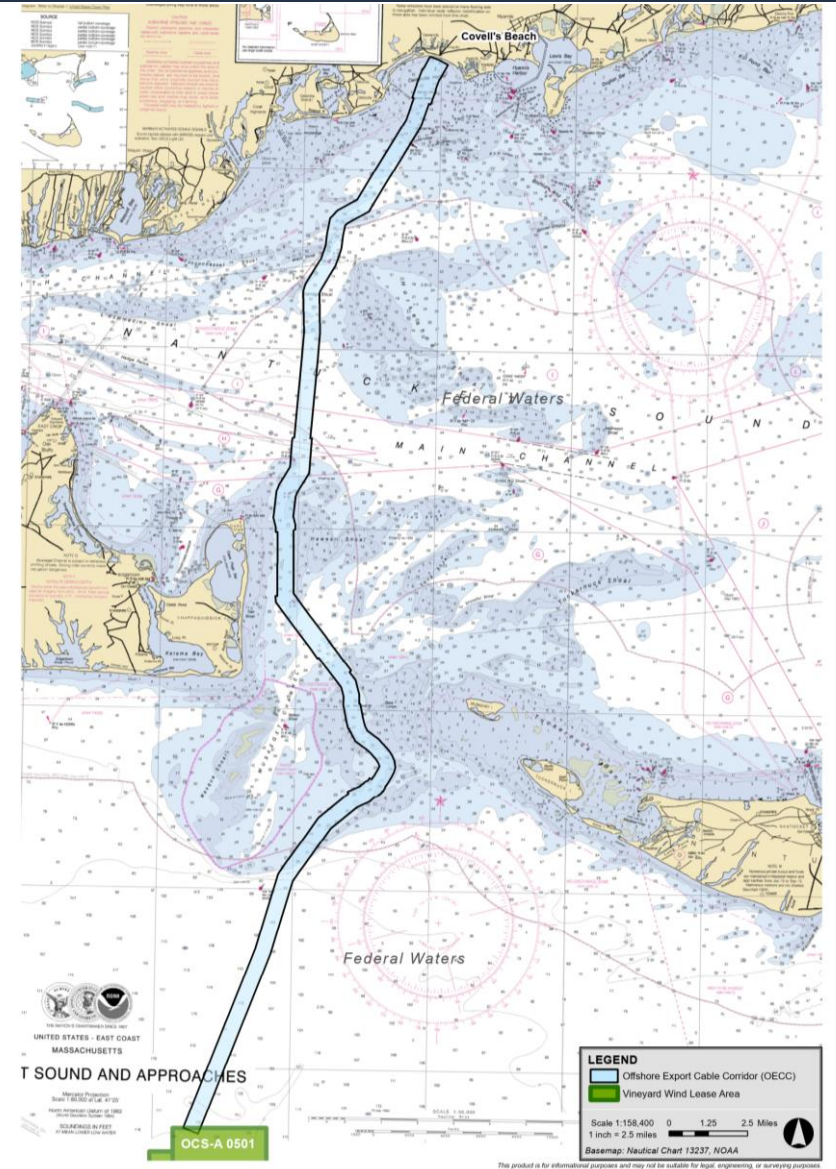
- A study of benthic habitats in and around seafloor areas that may be impacted by construction activities within the northern portion of Lease Area OCS-A 0501 and the offshore export cable corridor.

Cape Poge Eel Grass Survey (pre and post)

- A monitoring study of eelgrass beds around Cape Poge off Martha's Vineyard

Cable burial (post)

- Geophysical surveys - compare bathymetry data sets to look for changes in the seafloor
- Cable temperature is monitored constantly – changes in temp may indicate changes in burial



The product is for informational purposes and may not be suitable for legal, engineering, or surveying purposes.

Vineyard Wind Project

VINEYARD WIND

Figure 1
Vineyard Wind Offshore Export Cable Corridor (OCEC)

Fisheries Outreach

Fisheries Representatives

Fisheries Representatives are independent fishermen or fishing organizations that represent their fisheries/port interests, not Vineyard Wind's interest. They help facilitate two-way communication between the industries.

- Massachusetts Lobstermen's Association
- New Bedford Seafood Consulting
- New Bedford Port Authority
- Martha's Vineyard Fishermen's Preservation Trust
- Commercial Fisheries Center of Rhode Island
- Coastal Asset Management – Connecticut
- Montauk Fish Dock – New York
- Tyler Macallister
- The American Saltwater Guides Association



FISHERIES OUTREACH



MONTHLY PORT HOURS

FISHERIES LIAISONS FROM EQUINOR, ØRSTED/EVERSOURCE, MAYFLOWER WIND AND VINEYARD WIND WILL BE AVAILABLE DURING MONTHLY PORT HOURS FOR COMMERCIAL AND RECREATIONAL FISHING INQUIRIES, COMMENTS AND FEEDBACK FOR THE RI/MA WIND ENERGY AREAS



Dear Fishermen,

UMass Dartmouth's School for Marine Science and Technology (SMAST) is hosting a virtual meeting for fishermen to provide an overview of Vineyard Wind's fisheries survey methods and results to date, feedback from the fishermen and scientific review groups, and survey plans going forward. There will be time for questions and discussion. Details [here](#).



When: Thursday, June 3rd, 9:00am-11:00am
Where: <https://umassd.zoom.us/j/938892755419?pwd=dFBudzc2bDlqUzZkaJmR0tMTkFDdz09>

Meeting ID: 938 9275 5419

Passcode: 859402

Mobile: 648-876-9923

Who: Fishermen, and open to the general public.

This meeting will be recorded.

Survey Reports being discussed:

[Trawl Survey](#)

[Drop Camera](#)

[Ventless Trap](#)

[Highly Migratory Species](#)

If you have any questions please contact the Vineyard Wind Fisheries Liaisons:

Crista Bank: cbank@vineyardwind.com, 508-525-0421

Caela Howard: choward@vineyardwind.com, 508-386-9832



VINEYARD WIND

OFFSHORE WIND MARINER UPDATE NO. 23 WINTER FISHERIES TRAWL SURVEY PLAN

During the month of February, 2020 the University of Massachusetts Dartmouth School for Marine Science and Technology (SMAST) is conducting a fisheries trawl survey following the Northeast Area Monitoring Assessment Program (NEAMAP) protocols within the Vineyard Wind Lease Areas (501 North; 501 South; 522) and a control area (see attached chart).

The first trip will survey in lease area 501 North with 20 tows inside the lease area and 20 tows in the adjacent control area. Subsequent trips will survey in lease areas 501 South and 522 with 10 tows in each.

Date(s)

(Multiple Trips throughout the month of February)

Location(s)

WEBSITE RESOURCES FOR FISHERMEN

www.vineyardwind.com/vesselrfi

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VESSEL REQUEST FOR INFORMATION

TELL US ABOUT YOUR VESSEL

Vineyard Wind is looking to hire local vessels to work on offshore wind projects. If you are at all interested in participating in the development of offshore wind, please fill out the form to the best of your ability.

Vessel owners: Please fill out one form per vessel. Complete the form below or download a PDF copy and submit to info@vineyardwind.com or mail to Vineyard Wind, 700 Pleasant Street, Suite 510, New Bedford, MA 02740.

New Bedford F/V Encourage conducted surveys of lobster, plankton, and walrus populations in the wind energy lease areas.

[Download a copy of the form](#)

[Subscribe to our Mariner Updates](#)

Questions?

+Contact us at info@vineyardwind.com.

+Fishing vessel owners, contact Crista Bank at cbank@vineyardwind.com.

Vessel Request for Information

* 1. Contact Information

Name *

Company

Address *

City/Town *

State/Province *

ZIP/Postal Code *

Country *

Email Address *

vineyardwind.com/offshore-wind-mariner-updates

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OFFSHORE WIND MARINER UPDATES

Vineyard Wind's Offshore Wind Mariner Updates include important details of operational activities within our lease areas (0501 North; 0501 South; 522 and a control area). They include where we are working, an estimated timeline and vessel information. [Sign up for Offshore Wind Mariner Updates here.](#)

ACTIVE UPDATES:

<p>VINEYARD WIND OFFSHORE WIND MARINER UPDATE NO. 30 ENVIRONMENTAL SURVEYS</p> <p>Includes Vessel Information, Vessel Schedule, and Vessel Details. Includes details on the survey area, survey dates, and survey objectives. Includes details on the survey area, survey dates, and survey objectives.</p> <p>Starting Reporting on or about July 21, 2020. Estimated duration 10 days.</p> <p>Locations: Offshore Wind Lease Areas 0501 and 0502 and a control area, Northeast of 0501.</p>	<p>VINEYARD WIND OFFSHORE WIND MARINER UPDATE NO. 29 GEOTECHNICAL & ENVIRONMENTAL SURVEYS</p> <p>Includes Vessel Information, Vessel Schedule, and Vessel Details. Includes details on the survey area, survey dates, and survey objectives. Includes details on the survey area, survey dates, and survey objectives.</p> <p>Starting Reporting on or about July 21, 2020. Estimated duration 10 days.</p> <p>Locations: Offshore Wind Lease Areas 0501 and 0502 and a control area, Northeast of 0501.</p>	<p>VINEYARD WIND OFFSHORE WIND MARINER UPDATE NO. 28 GEOTECHNICAL SURVEYS</p> <p>Includes Vessel Information, Vessel Schedule, and Vessel Details. Includes details on the survey area, survey dates, and survey objectives. Includes details on the survey area, survey dates, and survey objectives.</p> <p>Starting Reporting on or about July 21, 2020. Estimated duration 10 days.</p> <p>Locations: Offshore Wind Lease Areas 0501 and 0502 and a control area, Northeast of 0501.</p>	<p>VINEYARD WIND OFFSHORE WIND MARINER UPDATE NO. 27 GEOPHYSICAL SURVEYS</p> <p>Includes Vessel Information, Vessel Schedule, and Vessel Details. Includes details on the survey area, survey dates, and survey objectives. Includes details on the survey area, survey dates, and survey objectives.</p> <p>Starting Reporting on or about July 21, 2020. Estimated duration 10 days.</p> <p>Locations: Offshore Wind Lease Areas 0501 and 0502 and a control area, Northeast of 0501.</p>
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Jul 31, 2020 OFFSHORE WIND MARINER UPDATE NO. 30 Environmental Surveys

Jul 30, 2020 OFFSHORE WIND MARINER UPDATE NO. 29 Geotechnical & Environmental Surveys

Jul 23, 2020 OFFSHORE WIND MARINER UPDATE NO. 28 Geotechnical Surveys

Jul 21, 2020 OFFSHORE WIND MARINER UPDATE NO. 27 Geophysical Surveys, Nearshore Sound and Manatee Channel

ARCHIVED UPDATES:

<p>VINEYARD WIND OFFSHORE WIND MARINER UPDATE NO. 24 GEOTECHNICAL SURVEYS</p> <p>Includes Vessel Information, Vessel Schedule, and Vessel Details. Includes details on the survey area, survey dates, and survey objectives. Includes details on the survey area, survey dates, and survey objectives.</p> <p>Starting Reporting on or about July 21, 2020. Estimated duration 10 days.</p> <p>Locations: Offshore Wind Lease Areas 0501 and 0502 and a control area, Northeast of 0501.</p>	<p>VINEYARD WIND OFFSHORE WIND MARINER UPDATE NO. 23 GEOTECHNICAL SURVEYS</p> <p>Includes Vessel Information, Vessel Schedule, and Vessel Details. Includes details on the survey area, survey dates, and survey objectives. Includes details on the survey area, survey dates, and survey objectives.</p> <p>Starting Reporting on or about July 21, 2020. Estimated duration 10 days.</p> <p>Locations: Offshore Wind Lease Areas 0501 and 0502 and a control area, Northeast of 0501.</p>	<p>VINEYARD WIND OFFSHORE WIND MARINER UPDATE NO. 22 GEOTECHNICAL SURVEYS</p> <p>Includes Vessel Information, Vessel Schedule, and Vessel Details. Includes details on the survey area, survey dates, and survey objectives. Includes details on the survey area, survey dates, and survey objectives.</p> <p>Starting Reporting on or about July 21, 2020. Estimated duration 10 days.</p> <p>Locations: Offshore Wind Lease Areas 0501 and 0502 and a control area, Northeast of 0501.</p>	<p>VINEYARD WIND OFFSHORE WIND MARINER UPDATE NO. 21 GEOTECHNICAL SURVEYS</p> <p>Includes Vessel Information, Vessel Schedule, and Vessel Details. Includes details on the survey area, survey dates, and survey objectives. Includes details on the survey area, survey dates, and survey objectives.</p> <p>Starting Reporting on or about July 21, 2020. Estimated duration 10 days.</p> <p>Locations: Offshore Wind Lease Areas 0501 and 0502 and a control area, Northeast of 0501.</p>
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vineyardwind.com/fisheries-science

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FISHERIES STUDIES AND SCIENCE

Vineyard Wind firmly believes that offshore wind developers must support good fisheries studies and science as the offshore wind industry grows up alongside the region's oldest offshore industry- fishing. Fisheries related surveys, studies, and key research milestones are provided below. These studies should be in addition to past and on-going basic research such as conducted by the Bureau of Ocean Energy Management.

All fisheries survey and science reports to Vineyard Wind will be provided here, and updates of key milestones provided below.

RESPONSIBLE OFFSHORE SCIENCE ALLIANCE

Vineyard Wind is supportive of the Responsible Offshore Science Alliance (ROSA), founded in March 2019 by the Responsible Offshore Development Alliance.

ROSA advances regional fisheries research and monitoring related to offshore wind development in federal waters. ROSA's organizing framework was developed in partnership with state and federal regulators and support from Vineyard Wind and other offshore wind developers. [Learn more about ROSA and it's framework.](#)

ONGOING SURVEYS

Lobster Ventrals Trap, Black Sea Bass, Plankton Survey	Bottom Trawl Survey	Drop Camera Survey

Contact us:

Crista Bank, Fisheries Manager

cbank@vineyardwind.com

Sign up for EMAIL Updates OR
TEXT ALERTS

www.vineyardwind.com/fisheries

QUESTIONS?



Prysmian Group

Turnkey cable solution for offshore wind industry
High-tech installation capabilities for the most challenging projects