MA Offshore Wind Fisheries Working Group

May 10, 2024

Agenda

8:30 AM	Coffee, Poster Session, and Networking
9:00	Welcome & State Updates – Dan McKiernan (DMF)
9:20	MA Offshore Wind Roadmap Strategic Plan – Seth Lattrell (VHB)
9:45	Gulf of Maine Wind Energy Areas and Proposed Sale Notice – Zach Jylkka (BOEM)
10:35	Break
10:45	Fishing Industry Updates
10:55	Developer Updates
11:20	Fisheries Compensation Funds Updates – Crista Banks (VW1), Ross Pearsall (Ørsted)
11:35	South Fork Navigation Enhancement and Training Program – Ross Pearsall (Ørsted)
11:50	Wrap-up and Next Steps – Dan McKiernan (DMF)
12:00 PM	Adjourn

Welcome!

1 min introductions:

- Name
- Affiliation

State Updates

Dan McKiernan, Department of Marine Fisheries

11 states RFA and Vineyard Wind 1 Innovation Fund Panel Meeting Updates

Update on the eleven states initiative

- NYSERDA RFP for regional fund administrator reviewing applicants
- RFA Roles
 - Develop and design fund and claims process
 - Apply advice and guidance from Design and Oversight Committee (DOC)
 - Establish fisheries engagement plan from NC to ME
 - Design and development phase

Multi-stakeholder group meeting

- Comprised of eleven states, fisheries advisors offshore wind developers

Met this week to discuss

- Lessons learned from current compensation programs
- Discuss the Design and Oversight Committee Protocols and roles to the RFA
- Discuss RFA engagement with fisheries stakeholders

DOC

- 3 sectors (fisheries, offshore wind developers and states)
 - 6 fishing community reps, 3 state reps, and 3 developers
 - alternates
- Roles to the RFA
 - Guiding the technical details of the claims process (e.g. eligibility, data sources and verification)
 - Liaison between respective caucuses and the RFA
 - Advise on stakeholder engagement, governance process, and work plans

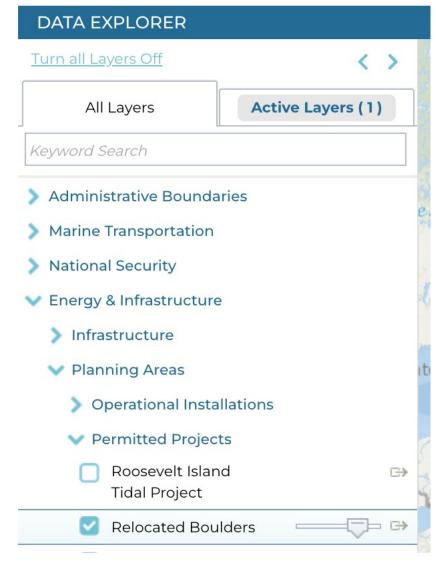
Summary of April meeting

- Eligibility = MA home ports, non-profits, local MA fishing businesses
 - Eligibility may need to be expanded in the future as effects of wind development become more
- Research priorities
 - Limit redundancies with other research efforts and funds
 - Navigation and safety upgrades should be near-term priority
 - Technological upgrade studies, marketing, data collection ideas discussed
- An RFP will be drafted with the panel in June
 - Identify criteria for evaluation of proposals
 - E.g. broader impacts, project longevity, cost, effort, feasibility

Summary continued

- Orsted coastal community fund also requires fisheries panel
- Current VW panel meets criteria
- Merging panels could expedite funds from these innovation and community funds

NORTHEAST OCEAN DATA



Regional Wildlife Science Collabora for Offshore Wind	ABOUT EVENTS SCIENCE PLAN NEWS CONTACT						
RESEARCH PLANNING MAP							
Turn all Layers Off	RELOCATED BOULDERS X						
All Layers (2)	Source: RWSC, Revolution Wind, South Fork Wind, Vineyard Wind Zoom to Basemaps Add Layer Draw & Measure Share This Save Image						
Keyword Search	Description: This dataset displays the point locations where boulders (usually defined as pieces of						
> Visual Surveys	fl rock +256 millimeters or -10 inches in diameter) on or within the seafloor were relocated during offshore wind construction projects. The Bureau of Ocean Energy Management						
> Bird & bat tagging	(BOEM) may require that offshore wind companies develop a "Boulder Identification						
> Fish & sea turtle tagging	and Relocation Plan' as part of their Construction and Operation Plan approval. Different offshore wind projects may have different requirements. Several offshore wind						
Seafloor Characterization	companies have posted the coordinates of relocated boulders on their websites. This boulder relocation dataset is made up of all publicly available sites of moved boulders						
Relocated Boulders	and was compiled by the Regional Wildlife Science Collaborative for Offshore Wind						
> Plankton surveys	Cou buy						
> Oceanographic data collection	Boulders are usually relocated because they are obstructing the site where offshore wind infrastructure (eq. turbine, substation, cable) is being installed. Ocean users and						
V Northeast Ocean Data Portal Catalog	researchers may be interested in the locations of boulders in and around offshore wind						
> Administrative Boundaries	farms as this information may inform the deployment of research equipment or other activities that interact with the seafloor.						
Marine Transportation	Date of last update. May 6, 2024						
> National Security	Data: Metadata Source Data Web Service Zoom to Laver						
Energy & Infrastructure Infrastructure	Nantucket						
 Planning Areas 	Sound						
Operational Installations							
> Permitted Projects							
> Projects in Review	Rhode Island						
V Lease Areas	93						
Active Renewable	Nanturi						
OCS-A 0482 - GSOE	Nantucket Shoals						
OCS-A 0483 - Virginia Electric and Power Company							
CCS-A 0486 - ↔ Revolution Wind, LLC							
OCS-A 0487 - ↔ Sunrise Wind LLC							

[but also available now at www.northeastoceandata.org]

[coming soon]

83 C IV Procurement

Contact: Austin Dawson, DOER

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https://macleanenergy.com/

Offshore Wind Strategic Plan

MA Fisheries Working Group

May 10, 2024



Interagency Offshore Wind Council Overview

- On April 20, 2023, Secretary Tepper announced the establishment of the Interagency Offshore Wind Council (IOWC) to advance the responsible development of offshore wind to meet our ambitious climate goals through communication, alignment, collaboration, and joint execution.
- The IOWC will be responsible for developing and maintaining an Offshore Wind Strategic Plan with stakeholder and community input, which will
 - 1. lay out the current status of the offshore wind industry in the Commonwealth, existing legal and policy frameworks, and progress made to date;
 - 2. identify key drivers, gaps and needs, and findings; and
 - 3. recommend specific actions and strategies necessary to advance the Plan's goals and objectives before 2040

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IOWC Members

Interagency Offshore Wind Council

- **§** Department of Energy Resources
- **§** Massachusetts Clean Energy Center
- **§** Office of Coastal Zone Management
- **§** Dept of Fish and Game / Division of Marine Fisheries
- **§** Dept of Fish and Game / Natural Heritage and Endangered Species Program

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- **§** Dept of Environmental Protection
- **§** Dept of Public Utilities
- **§** Executive Office of Economic Development
- **§** Executive Office of Labor and Workforce Development
- **§** Executive Office of Education

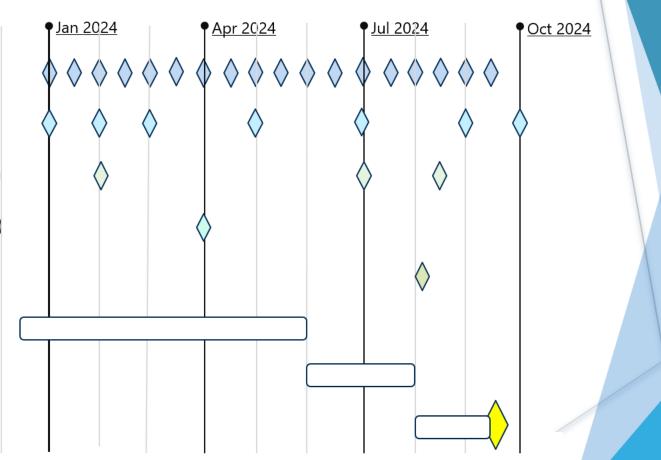
Strategic Plan Overview

Strategic Plan Goals

- The Strategic Plan will:
 - Ensure Comprehensive Planning with Robust Stakeholder Engagement.
 - ▶ Implement Efficient and Effective Environmental Reviews and Support for Mutual Co-Existence.
 - Establish a Long-Term Offshore Wind Energy Target and Plan for Procurements and Offtake.
 - ▶ Grow Massachusetts as a National Hub for Offshore Wind Economic Development.
 - Develop a Modern and Resilient Transmission System with Efficient Interconnection of Offshore Wind.
 - Promote Research and Innovation for New Technologies, Solutions, and Services to Support entrepreneurs and early-stage companies in technology and intellectual property development and commercialization and forge closer ties to developers, suppliers, and universities.
 - Advance rigorous long-term monitoring, assessment, and reporting on offshore wind performance and contribution to energy needs, industry growth, workforce expansion, diversity and equity, environmental sustainability, and compatibility with ocean users.

Strategic Plan Process

- 1. Steering Committee (bi-weekly)
- 2. IOWC Council
- 3. Council Subcommittees (recurring)
- 4. Stakeholder Interviews (April 2024)
- 5. Virtual Public Meeting (Aug 2024)
- 6. Strategic Plan Draft 1
- 7. Strategic Plan Draft 2
- 8. Strategic Plan Final Version



Stakeholder Session Summary Environment, Ecology & Marine Uses

- Cumulative impact analysis and expanded ecological analysis
- Improved data sharing
- Siting concerns in priority areas
- Shared cable corridors
- Impact of array spacing on fishing access and insurance



Q&A Period

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Gulf of Maine Proposed Sale Notice

Presentation to the Massachusetts HWG and FWG

Zach Jylkka, Renewable Energy Program Specialist May 9-10, 2024

Focus for Today

- Renewable Energy Authorization Process
- Where are we, and how did we get here?
- $_{\circ}~$ Proposed Sale Notice
 - Lease area attributes
 - $\circ\,$ Lease stipulations
 - $\circ~$ Bidding Credits
- Public Meeting Schedule
- Questions & Answers

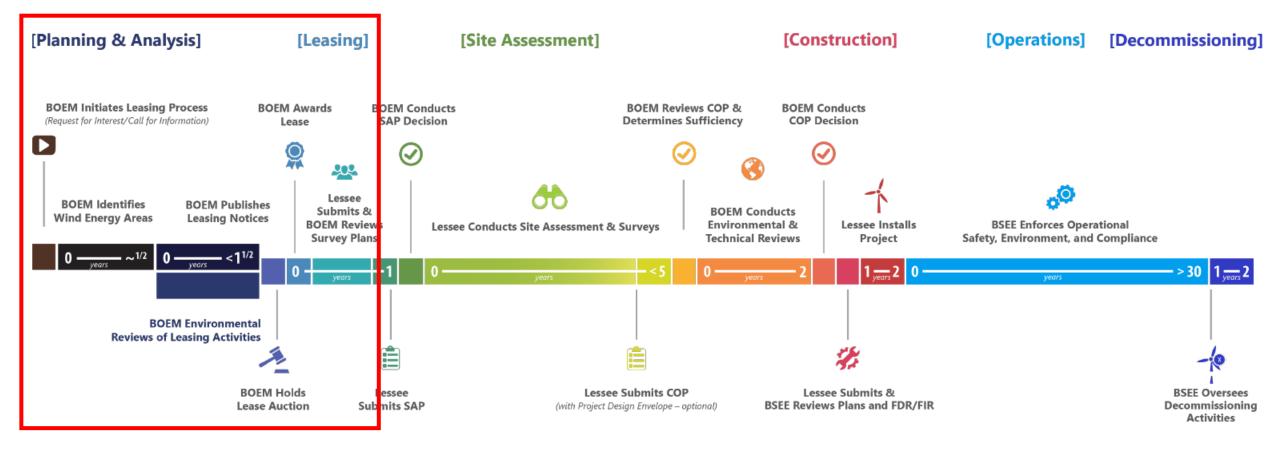


Presentation Table of Contents

- <u>Renewable Energy Authorization Process</u>
- Gulf of Maine Planning Process (from Planning Area to PSN Lease Areas)
- PSN Lease Stipulations
- PSN Auction Format & Bidding Credits
- <u>PSN Public Meetings</u>
- PSN Overlay Maps
 - Distance from shore, HVAC vs. HVDC, depth characterization
 - AIS vessel traffic, USCG MNMPARS, National Security
 - Avian Considerations
 - Fishing Industry
 - <u>North Atlantic Right Whale</u>
 - o <u>Habitat</u>
 - o <u>Biomass</u>
 - <u>NMFS Surveys</u>
- Energy Density Estimates
- New 5-Year Renewable Energy Leasing Schedule

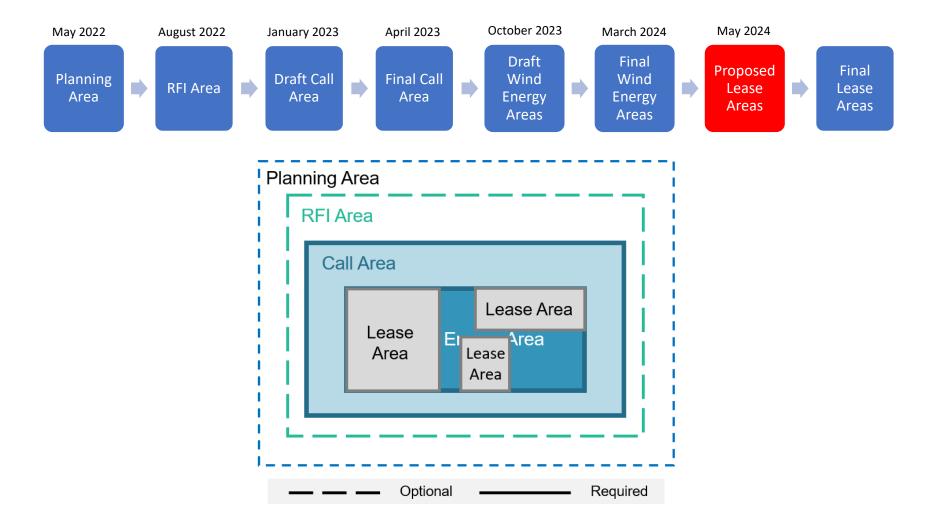


Renewable Energy Authorization Process





Gulf of Maine Planning & Leasing Process

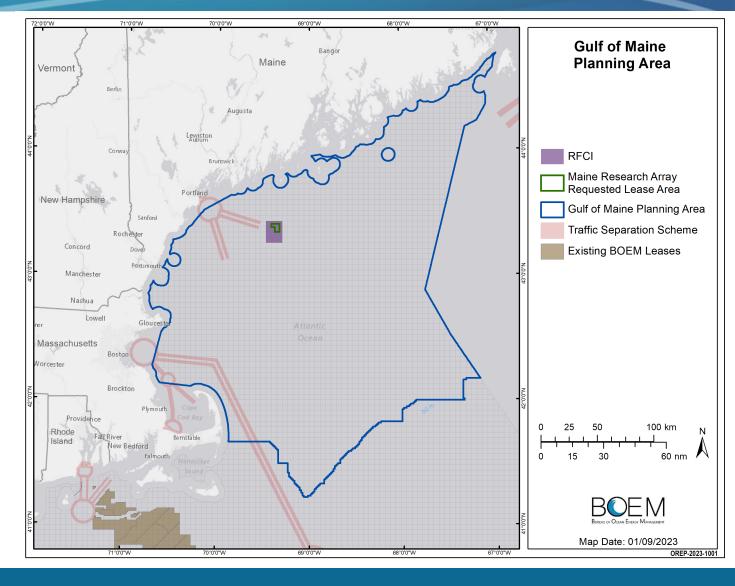




Planning Area



- Preliminary and optional step in the BOEM Planning Process
- Shared Planning Area and Draft RFI Area at the <u>May 2022 Task Force</u> <u>meeting</u>





Request for Interest (RFI) Area

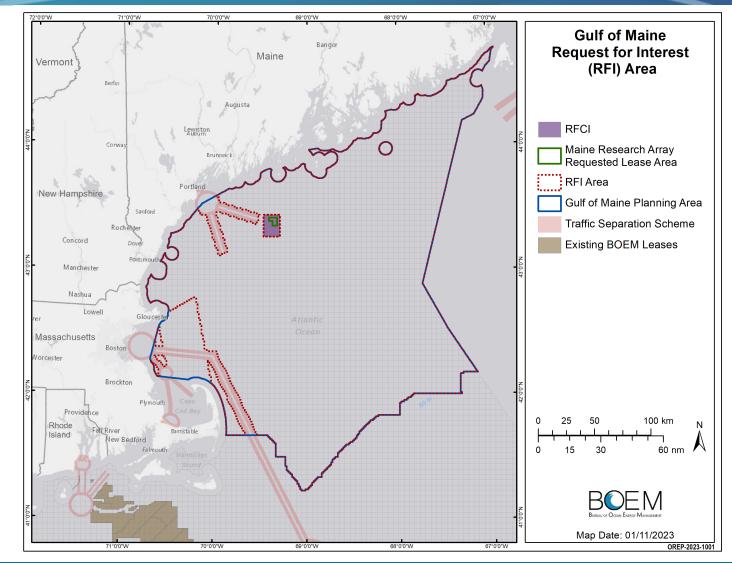


• Published RFI on August 19, 2022

 45-day comment period closed October 3, 2022

RFI Area excluded "incompatible areas"

- National Park System, National Wildlife Refuge System, National Marine Sanctuary System, or any National Monument (§585.204)
- Existing Traffic Separation Schemes (TSS), fairways, or other internationally recognized navigation measures
- Unsolicited lease request areas that are the subject of a separate request for competitive interest

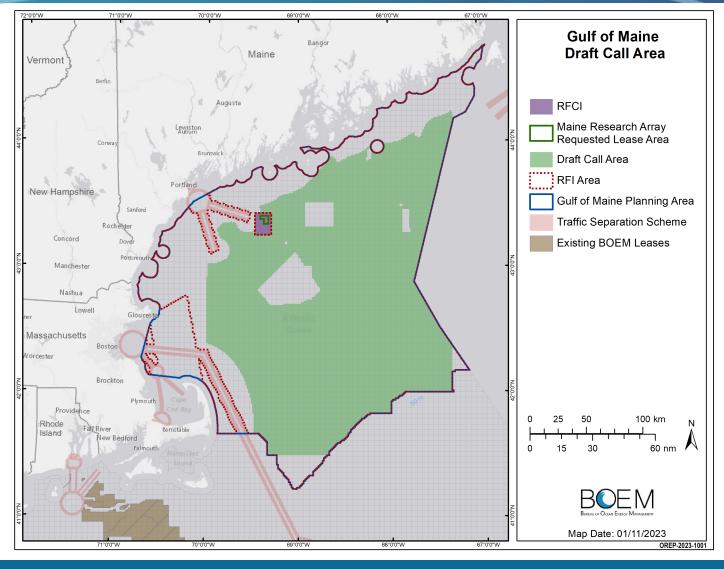




Draft Call Area



- BOEM reviewed responses to RFI and worked with NOAA NCCOS to conduct spatial analysis to inform Draft Call Area
 - 27% reduction from RFI Area
- BOEM held a series of in-person and virtual <u>meetings</u>.

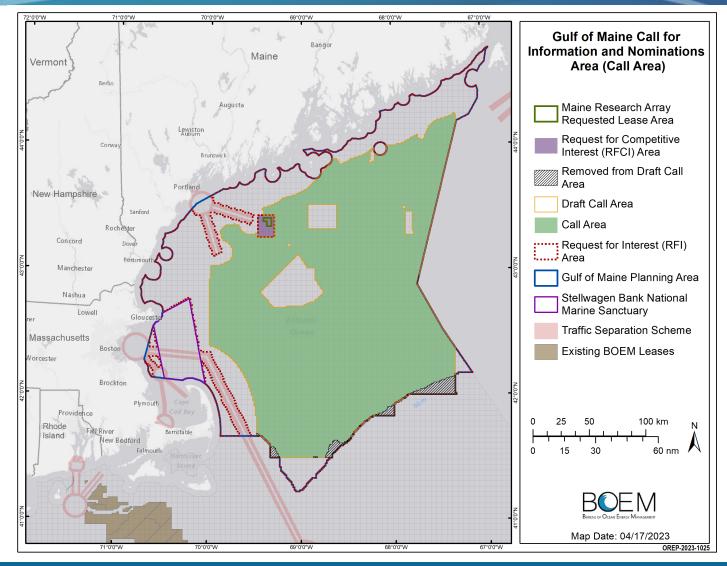




Final Call Area



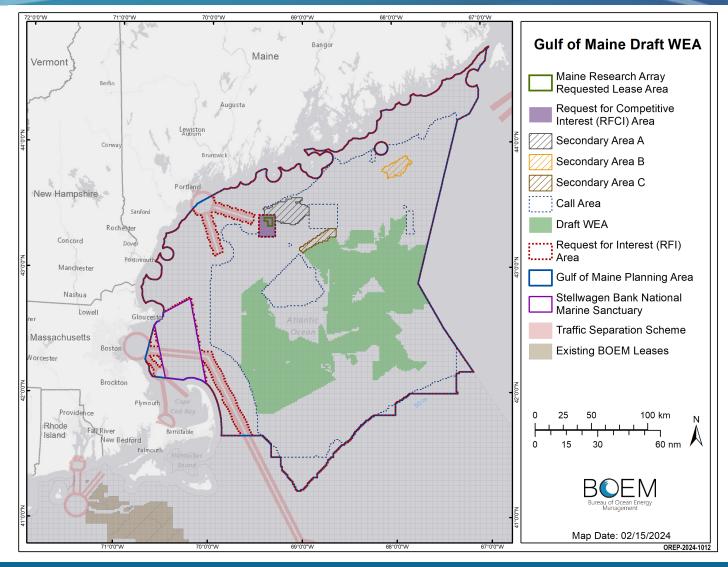
- The Final Call Area was published on April 26, 2023
 - 45-day public comment period (closed June 12, 2023)
- BOEM removed areas from the southern edge of the Call Area to better avoid Georges Bank
- BOEM held a <u>Task Force meeting (May</u> <u>2023)</u> and invited public comment on, and assessed interest in, possible commercial wind energy development in areas within the Call Area.



Area ID: Step 1 (Draft WEA)



- Draft WEA was published on October 19, 2023—opening a 30-day public comment period (closed November 20, 2023)
- ~3.5 million acres, representing a 64% reduction from the Call.
- Request for Comment
 - Explained the Draft WEA and Secondary Areas
 - Asked questions about:
 - Relative developability of different areas
 - Phased leasing
 - Fishing gear used, migration patterns of fish, protected species
- Draft NCCOS Report: Wind Energy Siting Analysis
 - Modeling methodology
 - Model performance across different resource groups/stakeholder interests
- Public Meetings
 - BOEM held public meetings in <u>July 2023</u> on the NCCOS model and underlying data, before holding additional meetings in <u>October 2023</u> on the Draft WEA





Area ID: Step 2 (Final WEA)

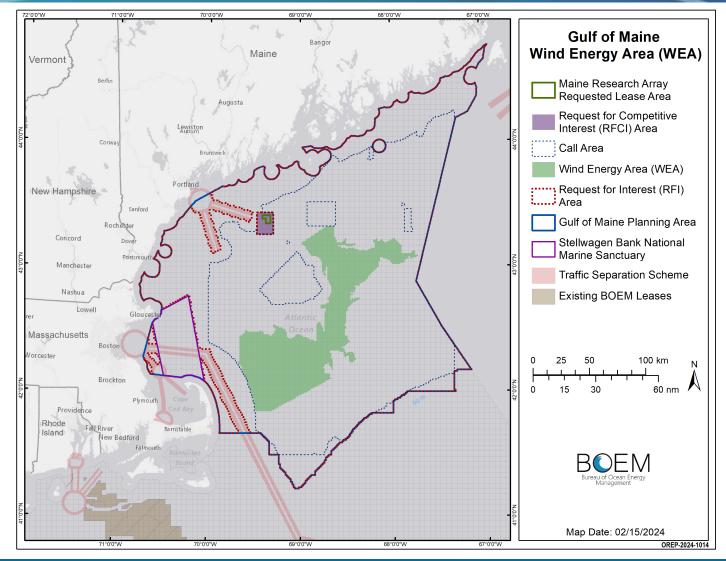


• Area ID Memo: published March 15, 2024

- ~2 million acres (~80% reduction from Call Area; 43% reduction from Draft WEA)
 - Combined capacity of 32 gigawatts (4 MW/km2)
 - Exceeds area/capacity needed for regional offshore wind goals (13-18 gigawatts)
 - Area allows for additional deconfliction
 - Could support multiple GoME Lease Sales
- <u>BOEM worked with NCCOS</u> to run a revised suitability model on the Draft WEA
 - Removed Secondary Areas A & B, included most of C
 - Constrained
 - Area representing top 10% of revenue for the multispecies groundfish (VTR)
 - 5-mile buffer around Cashes Ledge Groundfish Closure/HMA

• Geographic diversity

- Includes areas that are potentially HVAC compatible (within ~75 mi of a POI) for both MA and ME
- Avoids several key fishing grounds and important areas of North Atlantic Right Whale Critical Habitat, Tribal fishing grounds





Proposed Sale Notice (PSN)



• Area summary:

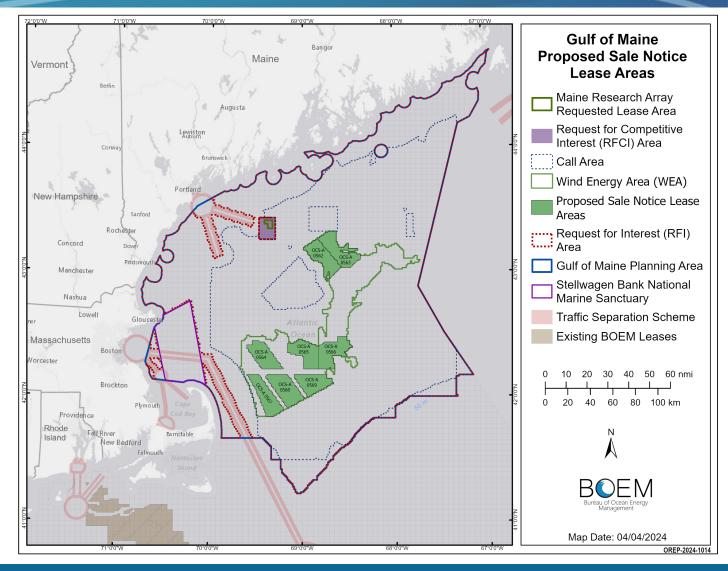
- 8 Leases
- 969,999 acres (944,422 "developable" acres)
- ~50% reduction from the Final WEA; ~90% reduction from the Call Area
- Average lease size: 121,250 acres
- Combined capacity of 15 gigawatts (4 MW/km2)
- Within range of the regional offshore wind goals (13-18 gigawatts)

• Geographic diversity

 Includes areas that are potentially HVAC compatible (within ~75 mi of a POI) for both MA and ME

Areas avoided from Final WEA:

- Several heavily utilized areas for groundfish fishery
- 3 transit corridors in southern region of WEA
- Mayo Swell; Rogers Swell (important fishing/habitat areas)
- Areas furthest offshore and likely most expensive to develop





PSN: Lease Stipulations

Minimal changes from Central Atlantic

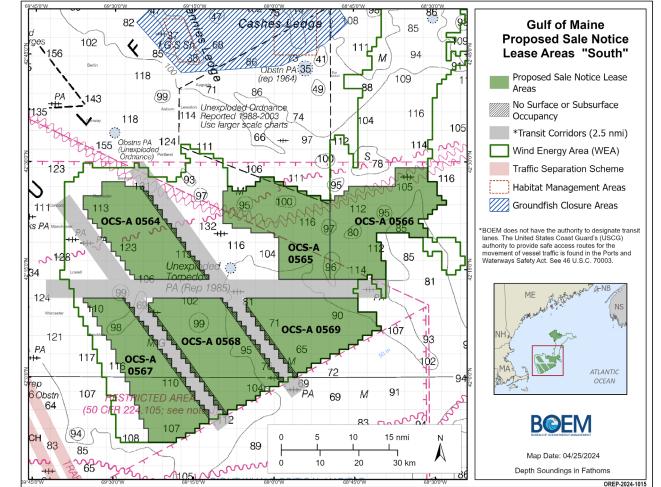
- Areas of no surface/subsurface occupancy in the southern region of the Final WEA.
 - facilitate existing transit (three 2.5 nm corridors).

"Good Neighbor" stipulation

 neighboring leases must maintain 2 common lines of orientation (WTG layout) or have a setback from the lease boundary.

o PSN Questions:

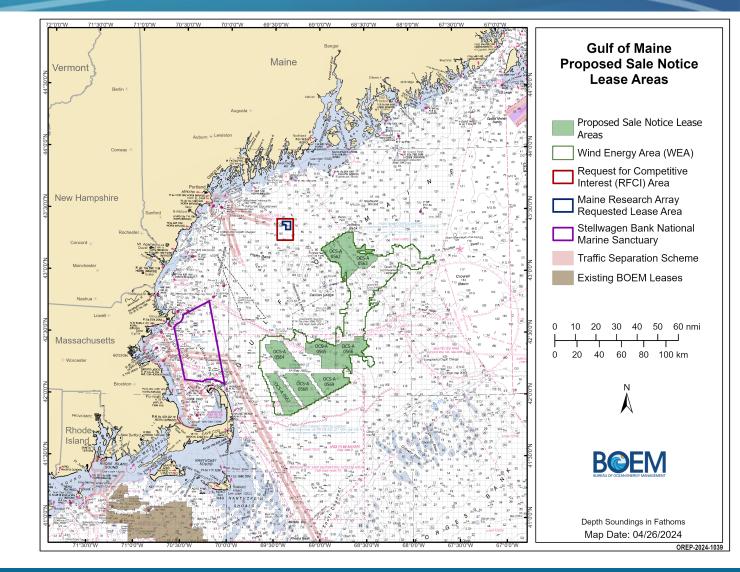
- Transit
- Baseline monitoring for marine mammals/habitat





PSN: Lease Stipulations

PSN Areas	Region	Total Acres	Developable Acres
OCS-A 0562	North	121,339	121,339
OCS-A 0563	North	132,369	132,369
OCS-A 0564	South	110,308	105,499
OCS-A 0565	South	115,290	115,290
OCS-A 0566	South	127,388	127,388
OCS-A 0567	South	123,118	117,391
OCS-A 0568	South	134,149	123,389
OCS-A 0569	South	106,038	101,757
Total		969,999	944,422
Average		121,250	118,053





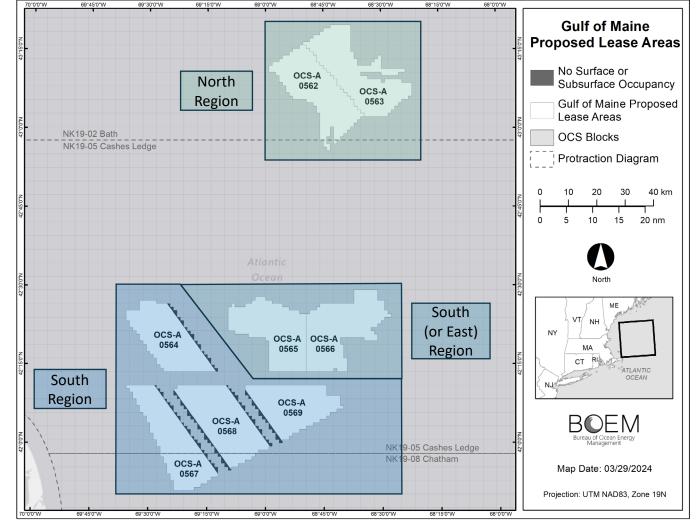
PSN: Auction Format

• As proposed, a bidder can win a maximum of two South Region leases, or one North Region lease and one South Region lease.

- Supports competitive bidding and States' desire for a competitive offtake procurement process.
- BOEM is soliciting public comment on the proposal, as well as an alternative structure that includes three regions.
 - Under this alternative, bidders could win a maximum of two leases, with a limit of one per region.

• Multiple-factor auction format.

- The bidding system will be a combination of monetary (75%) and non-monetary factors (25%).
- Winning bidders will pay the 'second price' which is highest bid amount where there was competition.
- The proposed minimum bid is \$50 per acre.



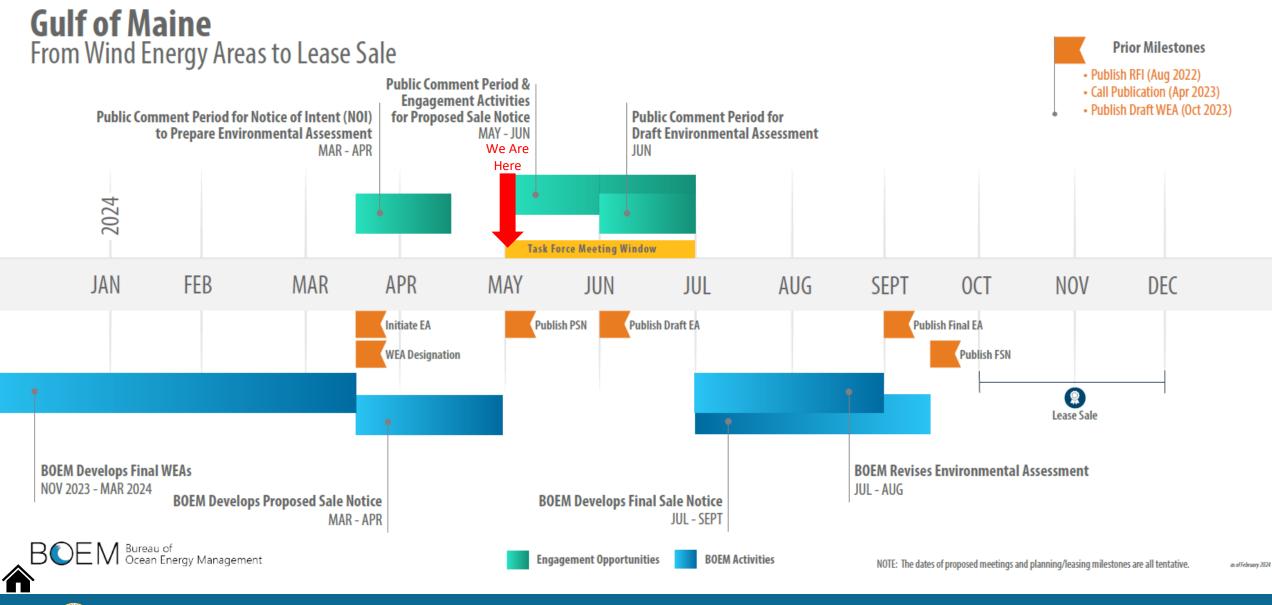
PSN: Bidding Credits

- Bidders may receive bidding credits up to 25% in exchange for committing to a qualifying monetary contribution to programs or initiatives supporting offshore wind.
 - The proposed bidding credits are the same as those offered in GOMW-1, although the individual credit percentages may vary.
 - Bidding credits are calculated as a percentage of the bid.

Two bidding credits are proposed:

- 12.5% bidding credit for a commitment to invest in programs that will advance U.S. floating offshore wind energy workforce training and/or supply chain development.
 - The credit is intended to incentivize investments that would not occur otherwise.
 - Includes investments in port infrastructure related to component manufacturing and assembly areas for offshore wind construction and deployment (e.g., foundations, turbine components).
- 12.5% bidding credit for establishing or contributing to a Fisheries Compensatory Mitigation Fund.
 - BOEM encourages lessees to work together to establish or contribute to a single regional fund.





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BOEM BUREAU OF OCEAN ENERGY MANAGEMENT

PSN: Public Meetings (In-Person)

• For the most up-to-date public meeting information, see <u>BOEM's website</u>.

- Open House Portland, Maine
 - o Date: Tuesday, May 28, 2024
 - Time: 5-8pm
 - Location: Holiday Inn Portland-by the Bay (88 Spring Street Portland, ME 04101

Open House – Portsmouth, New Hampshire

- o Date: Wednesday, May 29, 2024
- Time: 5-8pm
- Location: Urban Forestry Center (45 Elwyn Rd, Portsmouth, NH 03801)

• Open House – Danvers, Massachusetts

- Date: Thursday, May 30, 2024
- o Time: 5-8pm
- Location: DoubleTree by Hilton, North Shore (50 Ferncroft Rd, Danvers, MA 01923)

Task Force Meeting – Plymouth, MA

- o Date: Friday, May 31, 2024
- Time: 8:30am-4:30pm
- Location: Hotel 1620 (180 Water St, Plymouth, MA 02360)



PSN: Public Meetings (Virtual)

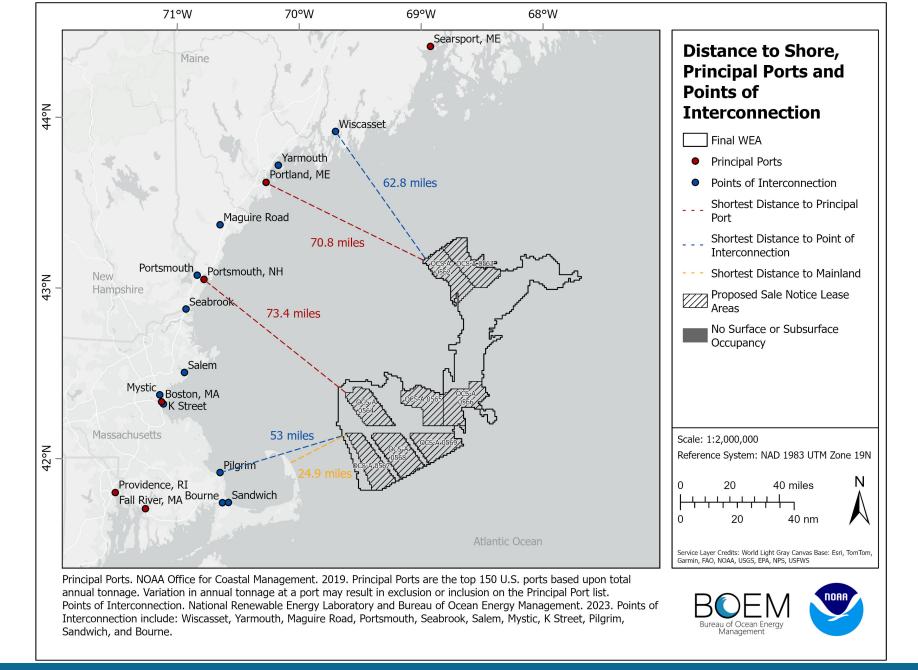
- For the most up-to-date public meeting information, see <u>BOEM's website</u>.
- General Public
 - Date: Thursday, May 23, 2024
 - Time: 6-8pm
- Commercial Fishing (Mobile & Fixed Gear)
 - Date: Thursday, June 6, 2024
 - Time: 5-7pm
- Recreational Fishing and Highly Migratory Species
 - Date: Tuesday, June 11, 2024
 - Time: 5-7pm
- Environmental Non-Governmental Organizations (eNGOs)
 - Date: Monday, June 10, 2024
 - Time: 1:30-3:30pm
- Commercial Maritime (Shipping)
 - Date: Monday, June 10, 2024
 - Time: 4-6pm



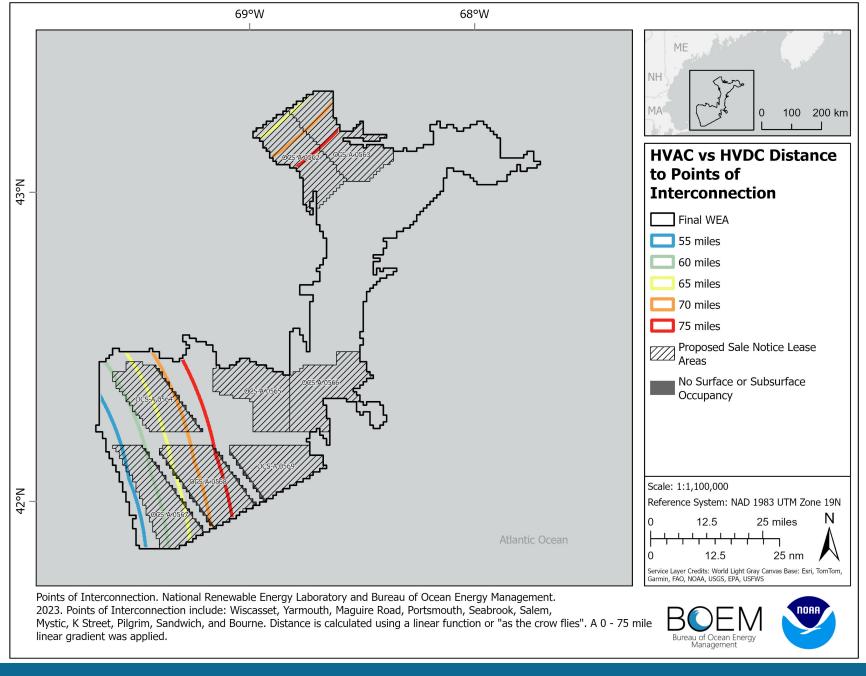




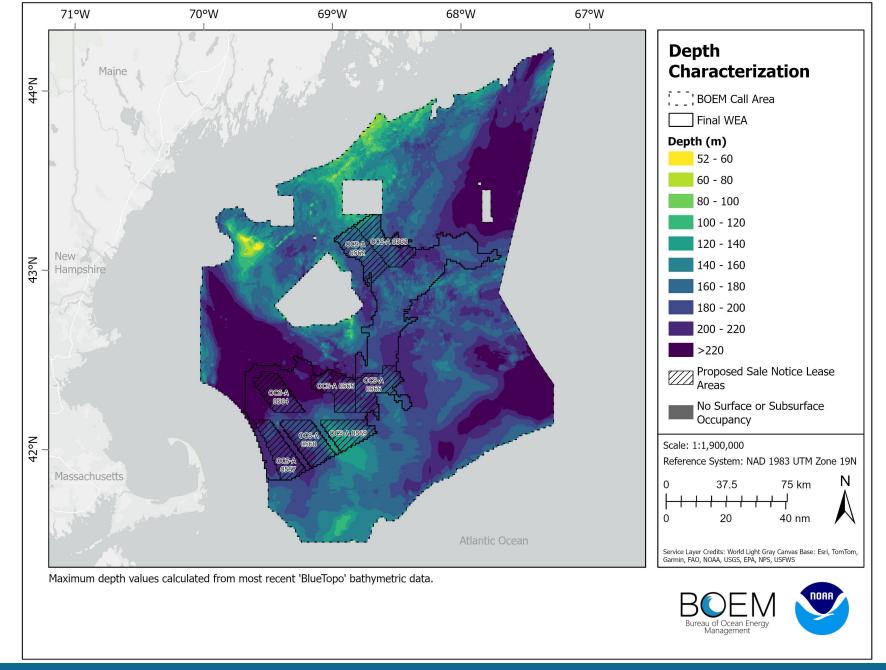
Zach Jylkka | Zachary.Jylkka@boem.gov | (978) 491-7732



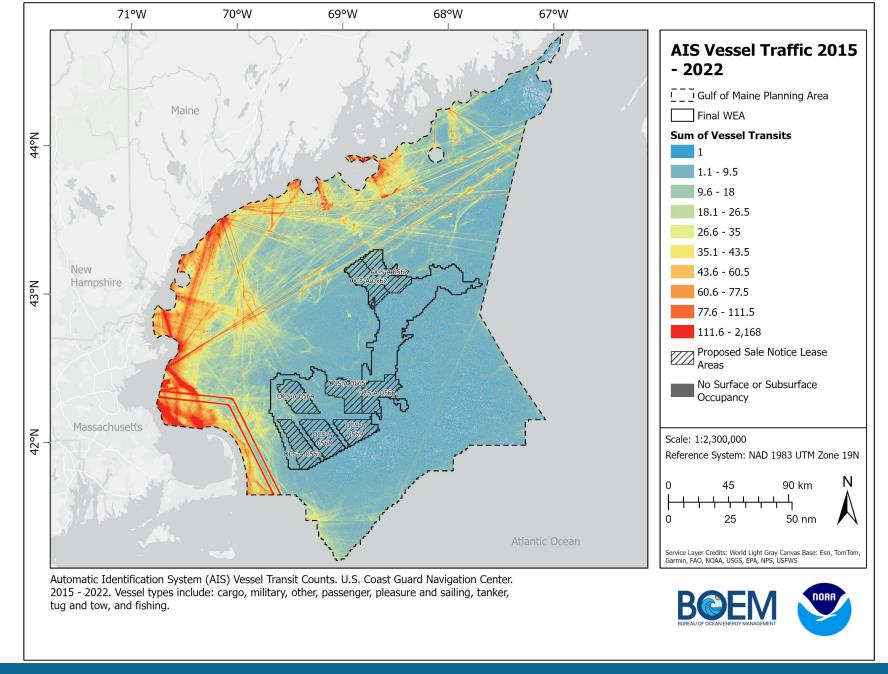


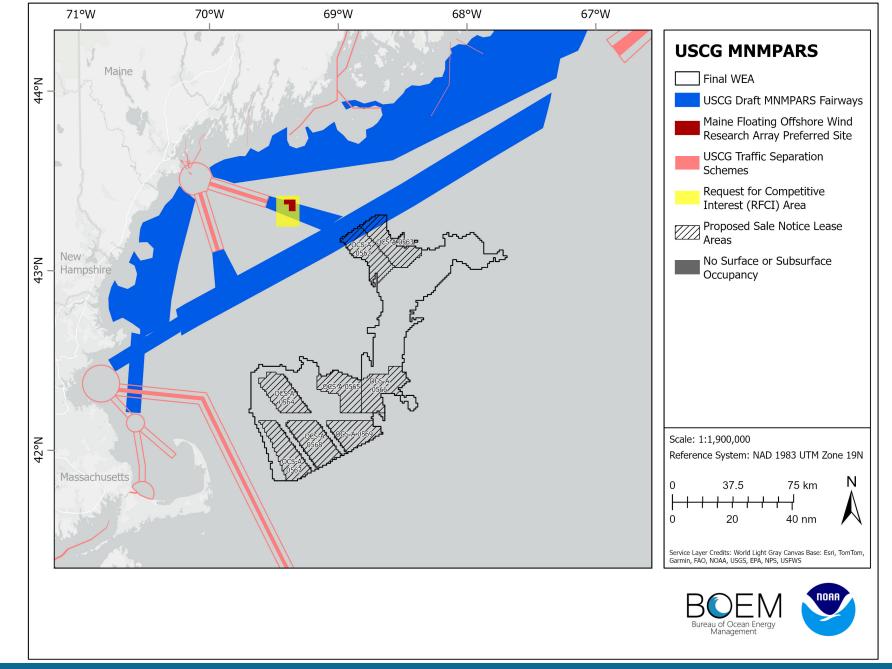


BOORD BUREAU OF OCEAN ENERGY MANAGEMENT

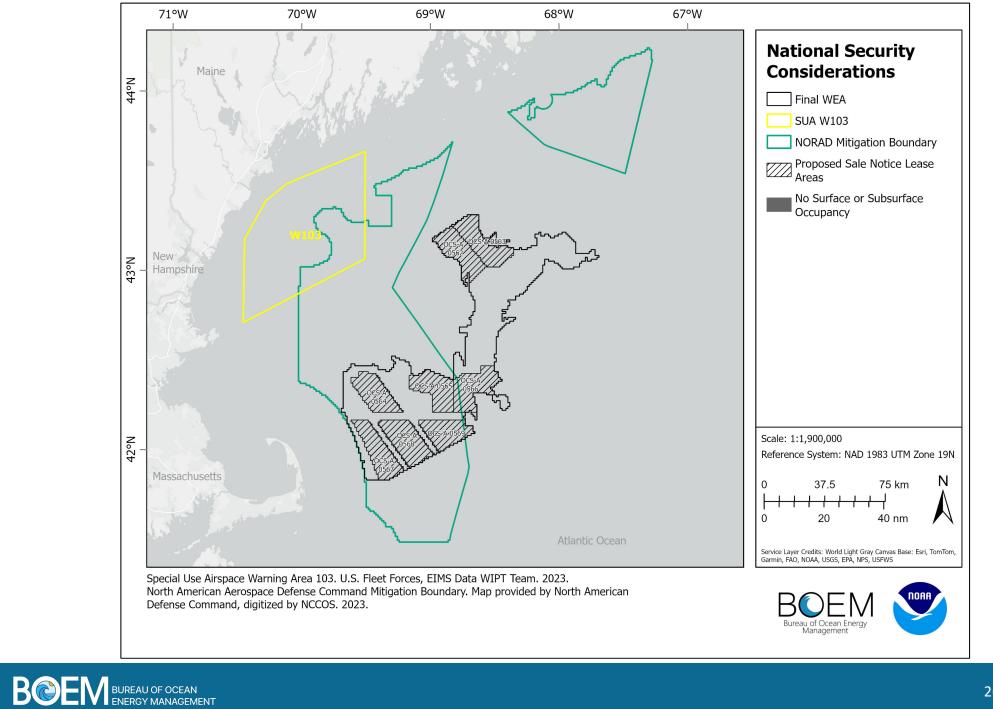


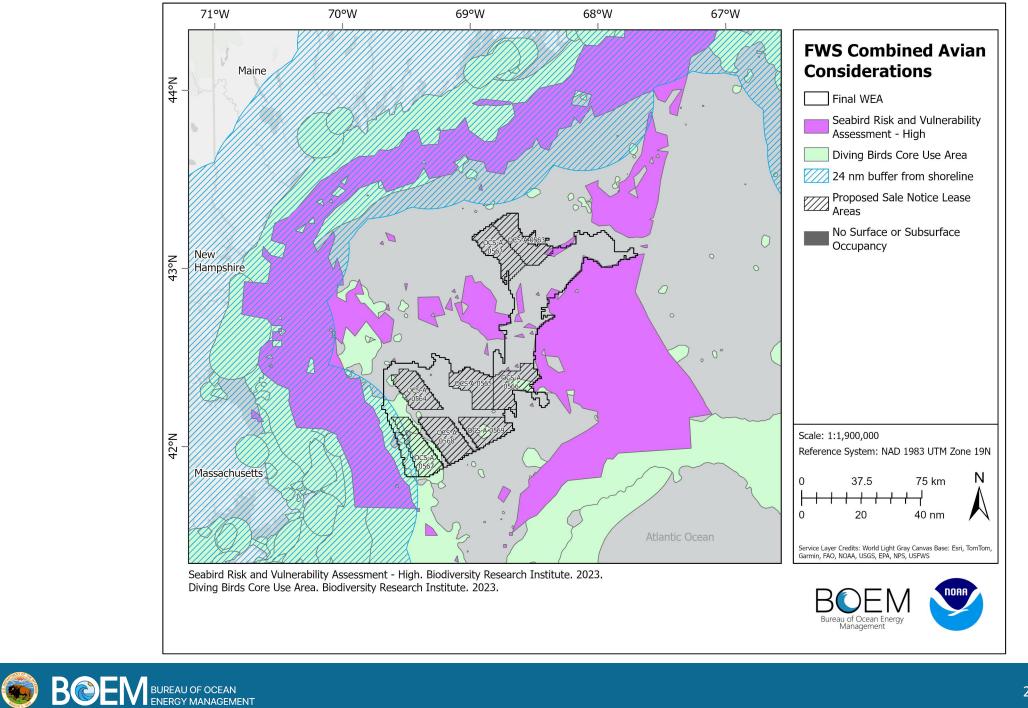


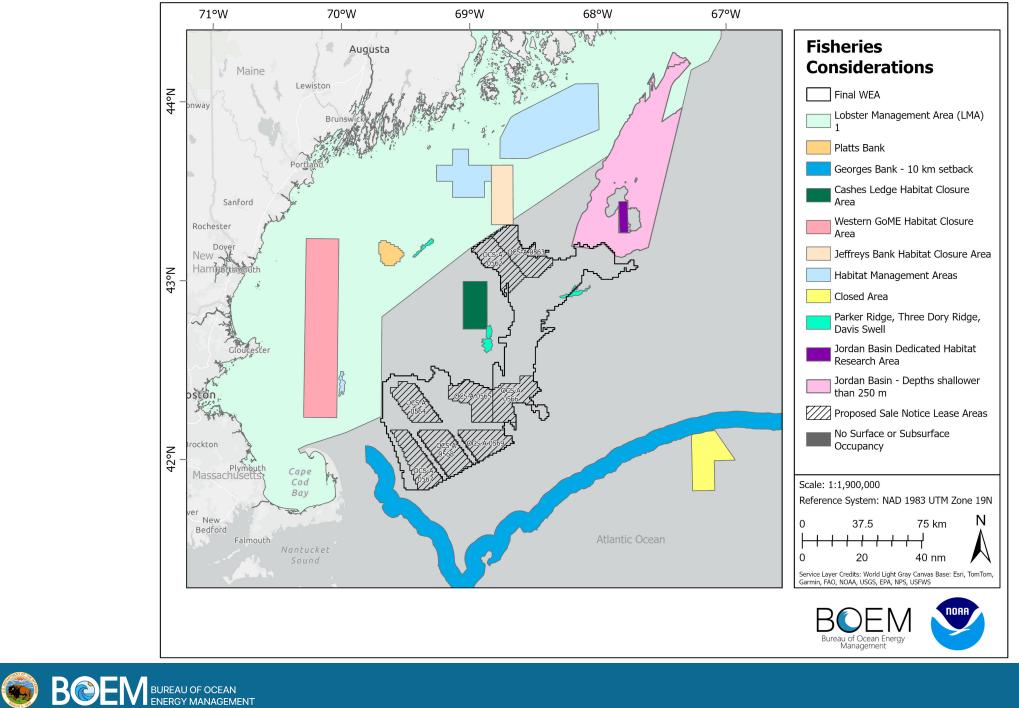


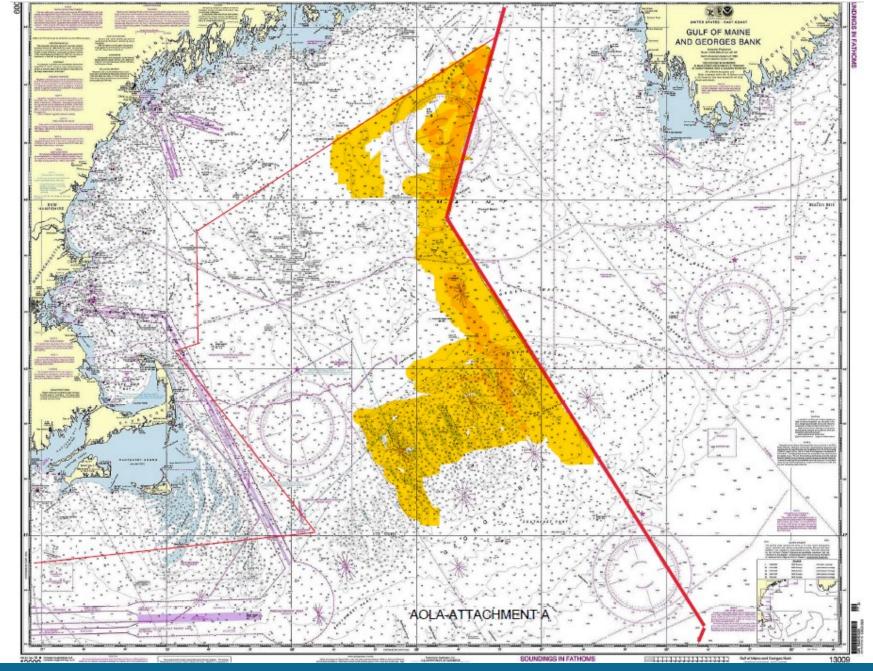




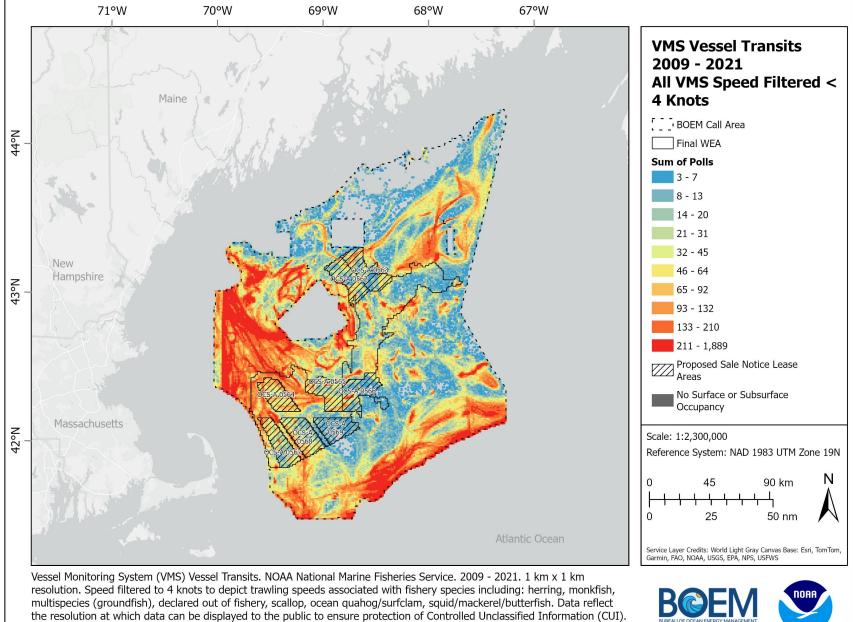






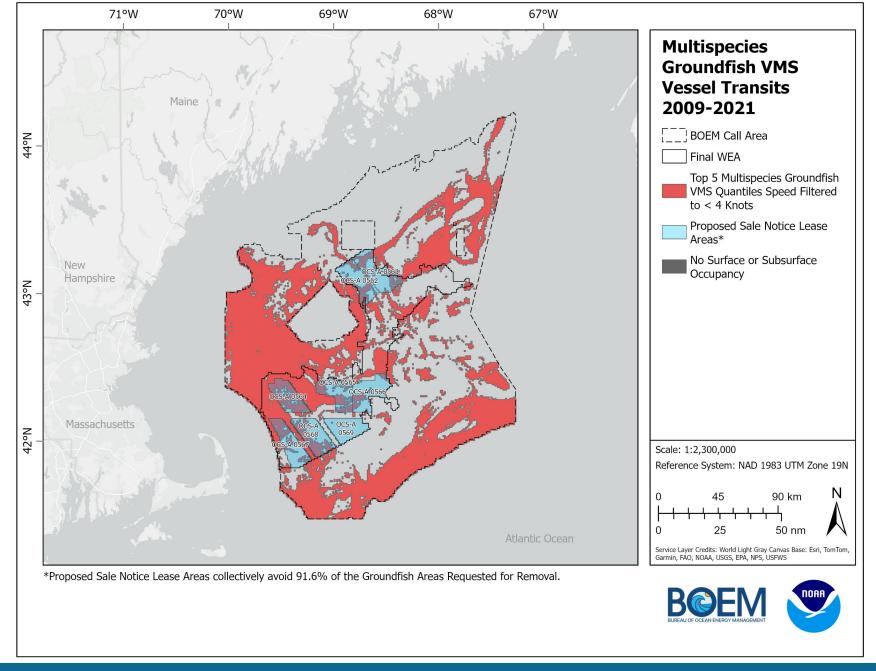




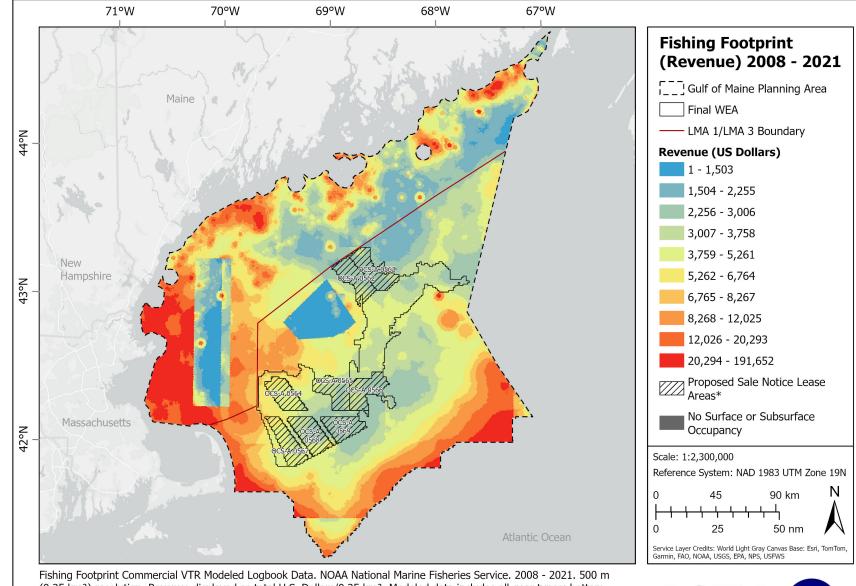


multispecies (groundfish), declared out of fishery, scallop, ocean quahog/surfclam, squid/mackerel/butterfish. Data reflect the resolution at which data can be displayed to the public to ensure protection of Controlled Unclassified Information (CUI). Cells with < 3 unique vessels not displayed on map.







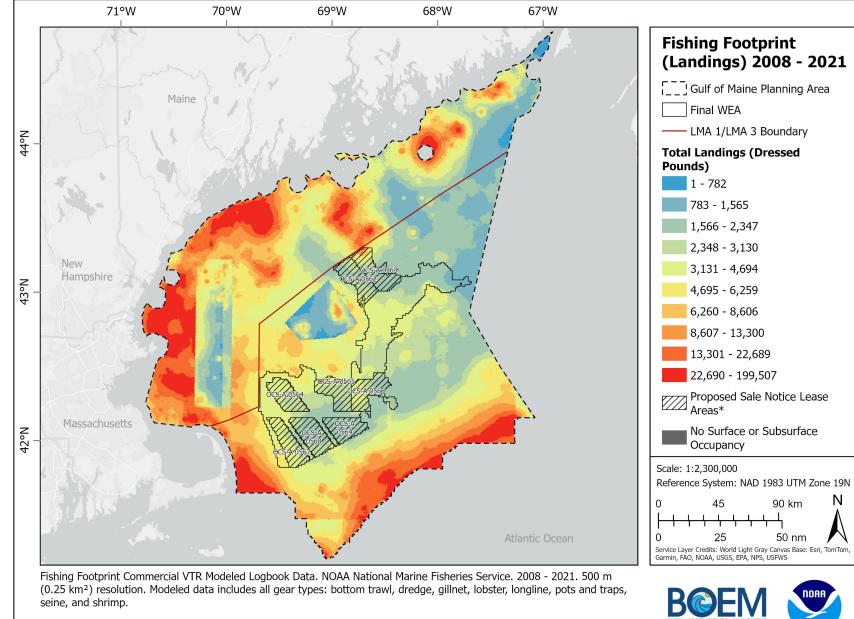


Fishing Footprint Commercial VTR Modeled Logbook Data. NOAA National Marine Fisheries Service. 2008 - 2021. 500 m (0.25 km²) resolution. Revenue displayed as total U.S. Dollars/0.25 km². Modeled data includes all gear types: bottom trawl, dredge, gillnet, lobster, longline, pots and traps, seine, and shrimp.

*Proposed Sale Notice Lease Areas collectively avoid 97% of the total fishing footprint revenue within the Planning Area.



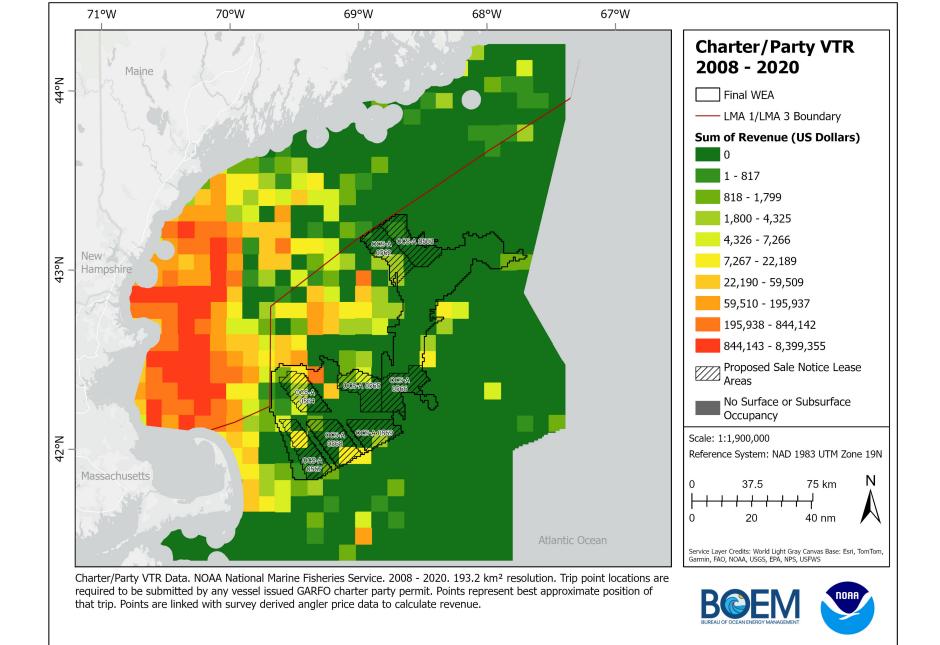




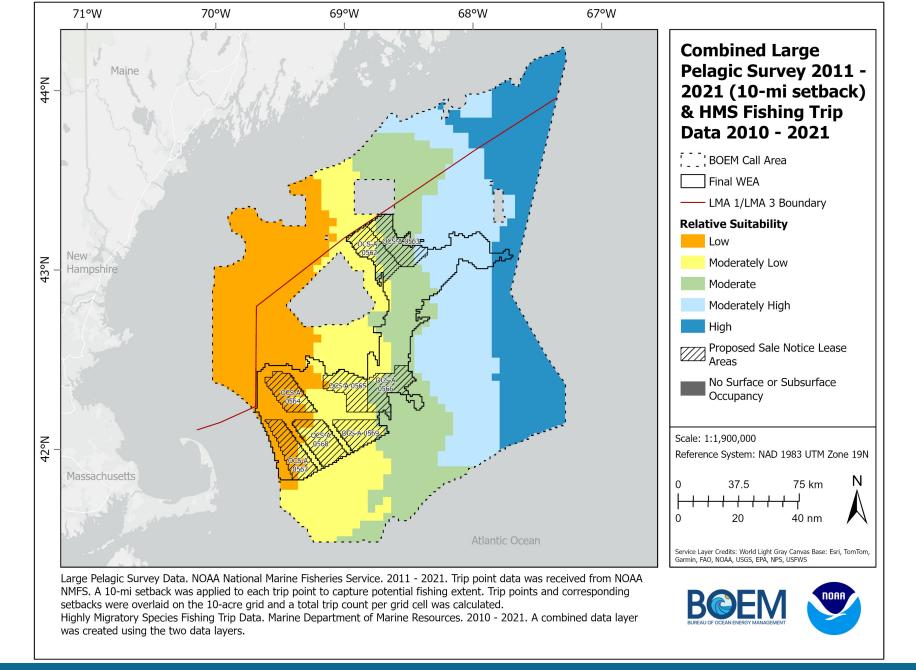
(0.25 km²) resolution. Modeled data includes all gear types: bottom trawl, dredge, gillnet, lobster, longline, pots and traps, seine, and shrimp.

*Proposed Sale Notice Lease Areas collectively avoid 97.6% of the total fishing footprint landings within the Planning Area.

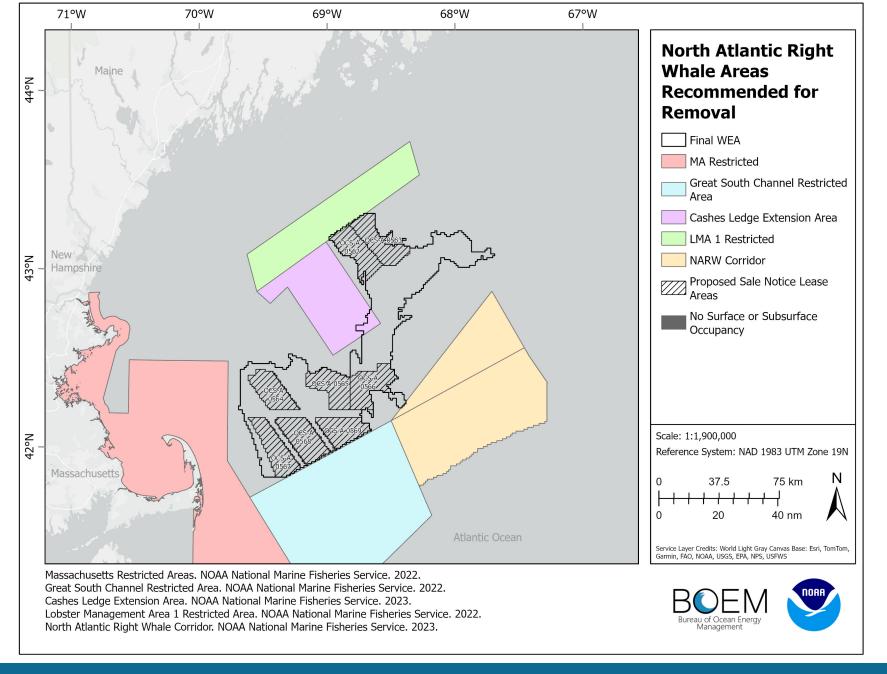




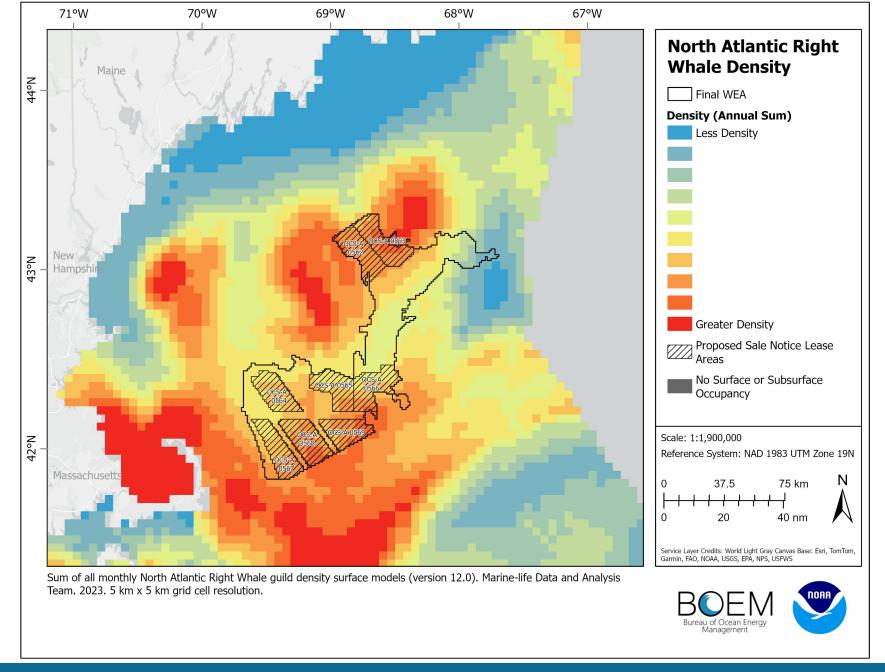




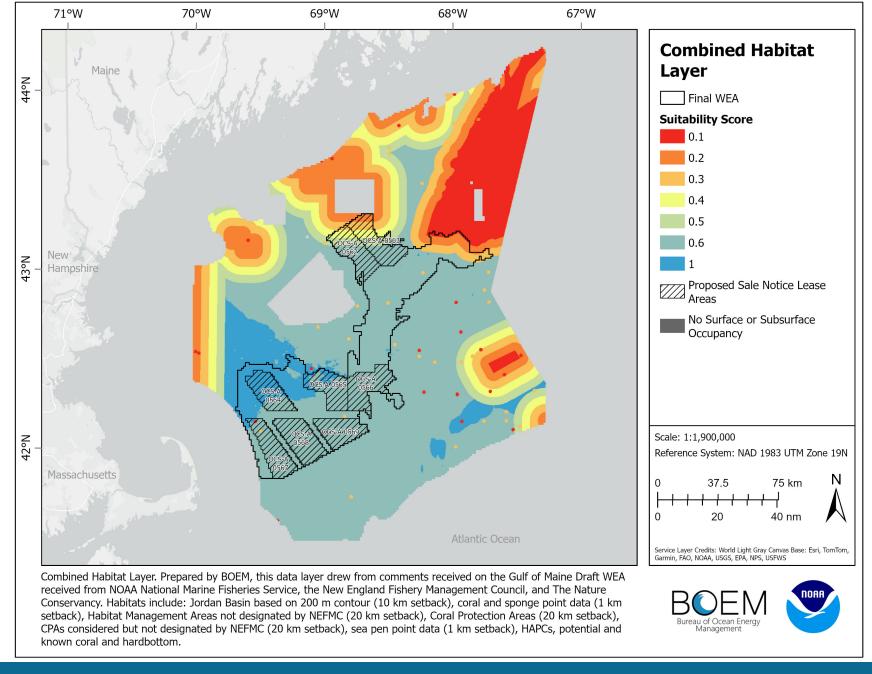


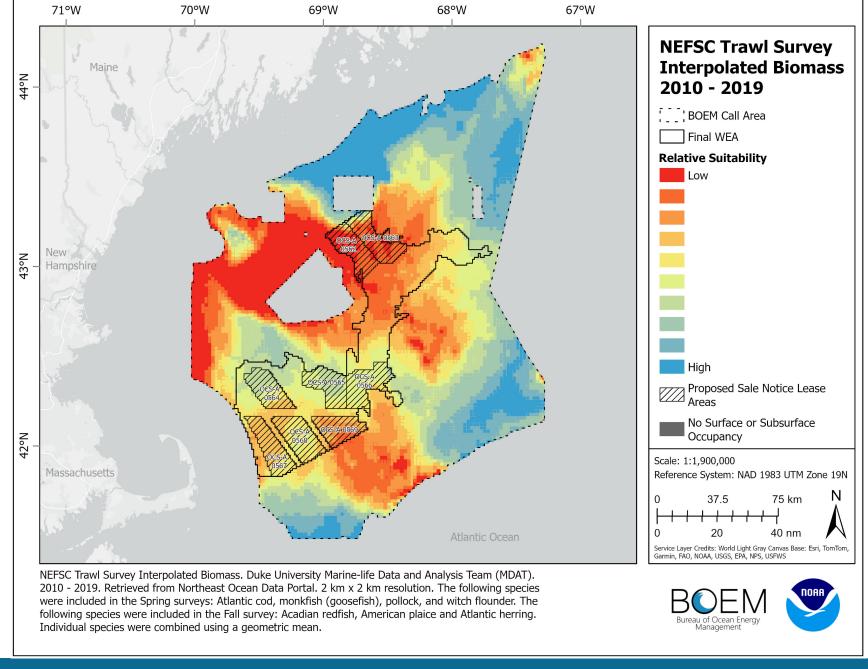




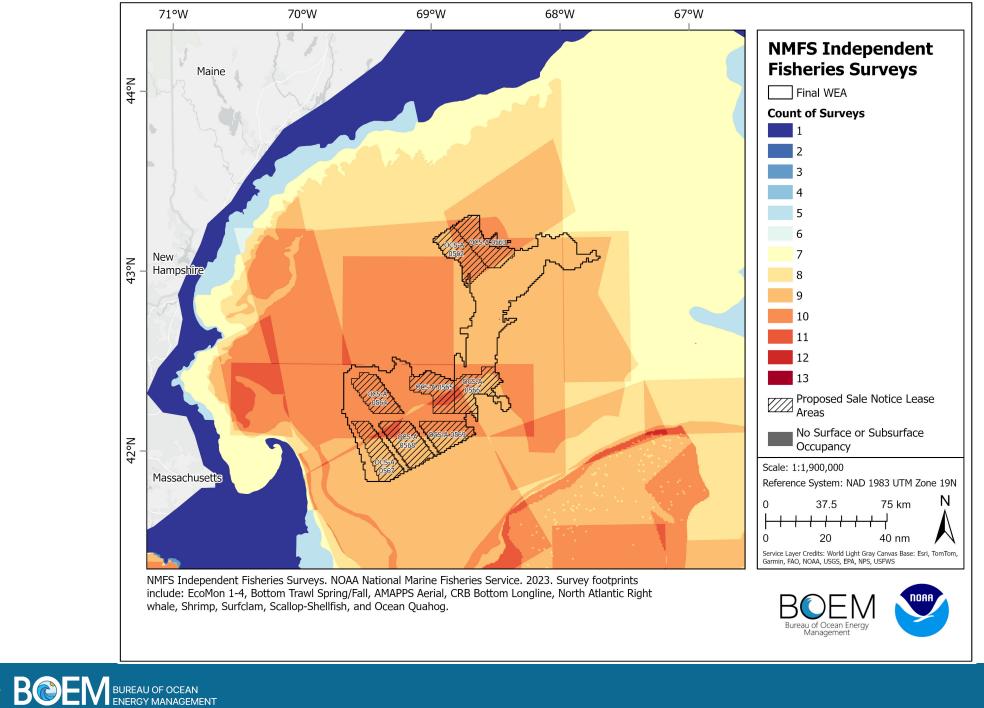








BOEM BUREAU OF OCEAN ENERGY MANAGEMENT





Renewable Energy Goals: How many acres are needed?

- Planning and Analysis phase is based on winnowing – starting large, receiving feedback and deconflicting
- Spatial modeling acreage assumptions
 - Call and Draft WEA comments documented several capacity requests
 - $_{\odot}$ MA 10 GW of capacity by 2050
 - ME 3 GW of capacity by 2040
 - ISO-NE 18GW
 - American Clean Power 20 GW
- PSN Lease Areas are ~ 944,000 acres (developable acres).

Capacity (GW) to acreage – Energy Density*

MW	PLANNING DENSITY (Old) ~0.012 MW/acre or 3 MW/km ²	PLANNING DENSITY (New) ~0.016 MW/acre or 4 MW/km ²	AVERAGE DENSITY OF BOEM PROPOSED PROJECTS ~ 0.019 MW/acre or 4.7 MW/km ²
13,000	1,083,333	812,500	684,211
18,000	1,500,000	1,125,000	947,368
20,000	1,666,667	1,250,000	1,052,632

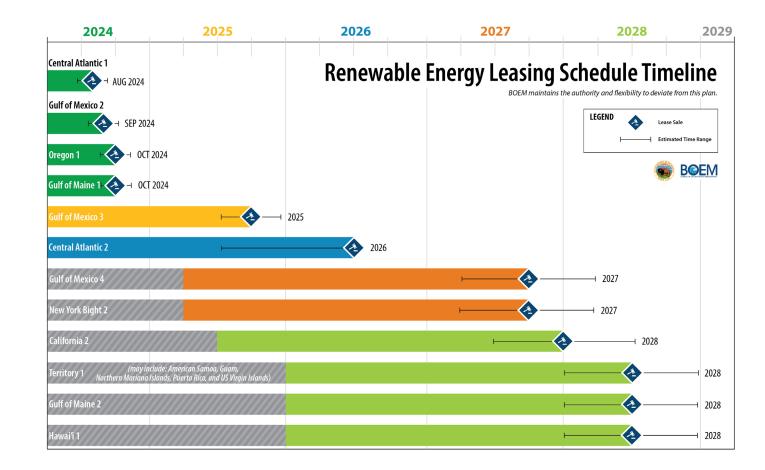
*Energy density estimates are highly variable, and mostly based on fixed offshore wind experience.



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5-Year Renewable Energy Leasing Schedule

- April 2024, Secretary Haaland <u>announced</u> new 5-year renewable energy leasing schedule
- Required under new "Modernization Rule"
- Gulf of Maine-2 sale is envisioned for 2028.
 - BOEM asked about "Phased leasing" approach when we <u>published the Draft</u> <u>WEA</u> in October 2023.
 - <u>Area Identification memo</u> referenced broad support received for a phased leasing; however, recommendations for scale and timing of phases varied widely across individuals and stakeholder groups.
 - The Secretary's announcement is a continuation of this conversation on "phased leasing"
 - The timing and scope of a second Gulf of Maine sale would be directly informed by the results of the 2024 sale, as well as the future position of potentially affected Tribes, Gulf of Maine states, stakeholder engagement, relevant market conditions, and regional energy goals.









SouthCoast Wind Project Update – MA FWG

Sam Asci

Fisheries Manager

May 10, 2024

SouthCoast Wind Project Update

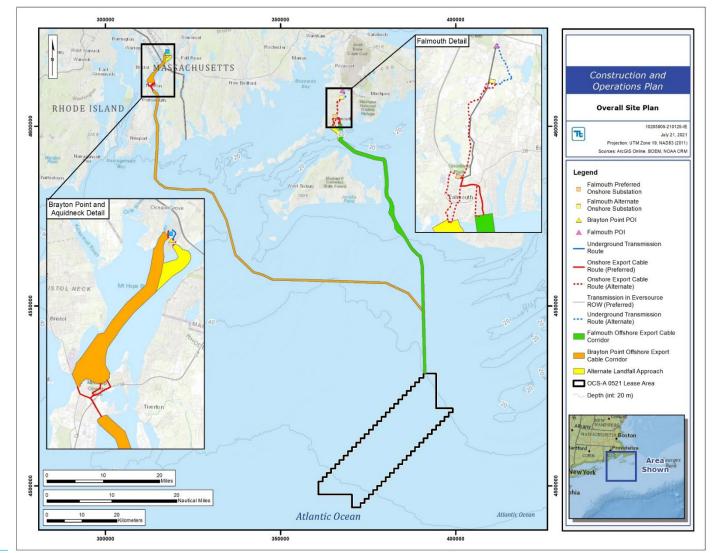
General Updates

- SouthCoast Wind fully owned by Ocean Winds (formerly JV of OW & Shell New Energies)
- Recent submission to Tri-State (MA, RI, CT) Energy Offtake Solicitation

Permitting Updates

- Rhode Island Federal Consistency Concurrence – *December 2023*
- MA CZM Federal Consistency Review – *in progress*
- BOEM Record of Decision anticipated December 2024

UTHCOAST WIND



SouthCoast Wind MA Fisheries Compensation

- \$4,217,000 in direct compensation for MA commercial and for-hire fishermen
 - Based on WHOI assessment of exposure and impact to MA fishermen
 - Supported by Third Party Administrator (TBD)
 - Eligibility to be developed with TPA, MA DMF/CZM
 - Mechanism to roll funds into MA Fisheries Innovation Fund if necessary
- \$1,500,000 to Massachusetts Fisheries Innovation Fund
 - Existing, grant-style program for community level support
 - e.g., support for fisheries science focusing on impacts of OSW, safety/training opportunities, vessel upgrades, gear innovation, etc.
- \$5,717,000 in total compensation

Thank You

Questions and Comments?

samuel.asci@southcoastwind.com





Bluepoint Wind (OCS-A 0537)

ABOUT THE LEASE AREA (OCS-A 0537):

Size of Lease: 71,522 acres (289 km2)

Average Depth: 179 ft (54.5 m)

Distance from Shore: 53 nm to New Jersey; 38 nm to New York

Expected Capacity: 1.7 gigawatts (GW) enough to power up to 900,000 homes annually

Project Activities:

- During 2023 and early 2024 Bluepoint Wind conducted geophysical, geotechnical, and benthic surveys in our Lease Area and along potential Export Cable Corridors (ECCs).
- Bluepoint Wind does not have any active survey vessels or campaigns at this time. Our next projected survey will be geotechnical work in the Lease Area which is expected to begin in late 2024 or early 2025.
- We will communicate with the industry and regulatory bodies in advance of any future survey activities.
- Mariners interested in viewing information on past survey activities can view archived Survey Awareness Flyers and Mariner's Updates on <u>The</u> <u>Project</u> page of the Bluepoint Wind website.
- Upcoming outreach priorities include gathering feedback specific to project design elements and navigation safety, attending commercial and recreational fishing industry events, and soliciting input from fisheries stakeholders.





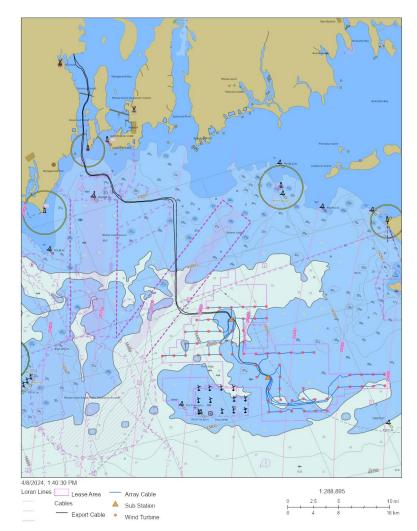
Contact Info: Fisheries Liaisons:

Diana Glinos (<u>Diana.Glinos@bluepointwind.com</u>; 857-278-6552) Calvin Alexander (<u>Fisheries@bluepointwind.com</u>; 908-967-2080) **Fisheries Representative:** Jim Kendall (<u>nbsc@comcast.net</u>)



Revolution Wind

Update for Massachusetts Fisheries Working Group



About Revolution Wind



65 Turbines, 2 Offshore Substations, 2 Export Cables





Power: 2025



Cable landing: Quonset, RI

Revolution Wind Construction

	2024										
	Apr	Ma y	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2025	
Foundation Installation											
WTG Installation											
Export Cable Installation (Offshore)										•	
Export Cable Installation (Nearshore)											
Inter-Array Cable Installation											
Offshore Substation Installation and Commissioning											

Construction Overview

Ports

- Provport
- Davisville
- East Passage Anchorages
- New London
- New Bedford



Commerce in Narragansett Bay



Foundation Installation: May - Nov





Wind Turbine Generator Installation: Summer '24 -> '25





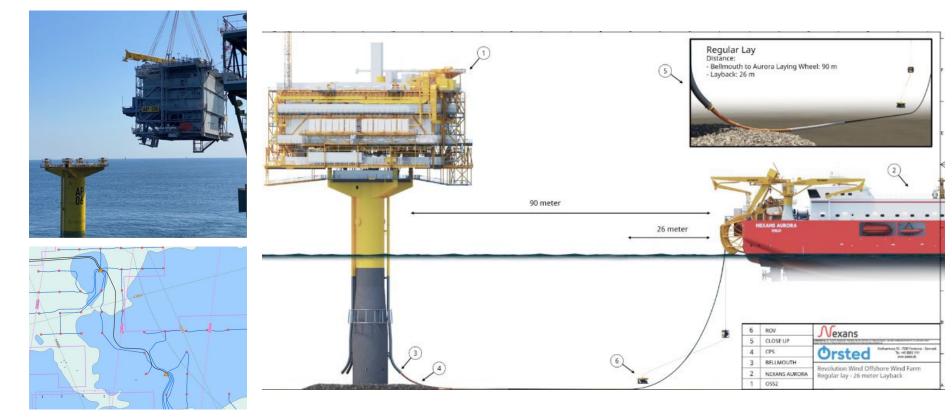


Fishing Liaison Officers

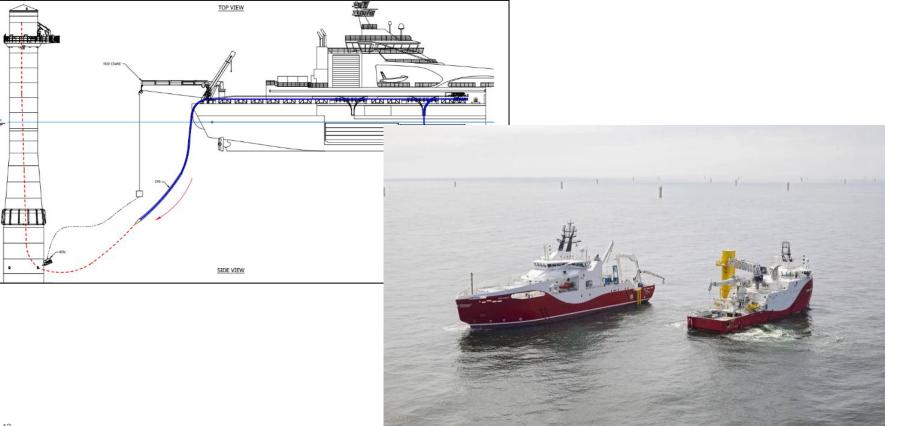
Safety/Scout Vessels



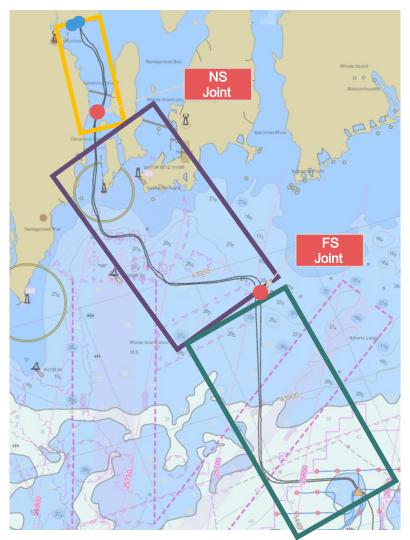
Offshore Substations



Inter - Array Cables



LAT 0.00m



Export Cable

 Nearshore Cables (NS): Quonset to Dutch Island
 Mid-shore Cables (MS):
 Dutch Island to East of Brenton Point Anchorage

Far-shore Cables : Brenton Reef to OSS AF08

Interlink Cable : Joins the two offshore substation.



REV Export Cable Installation

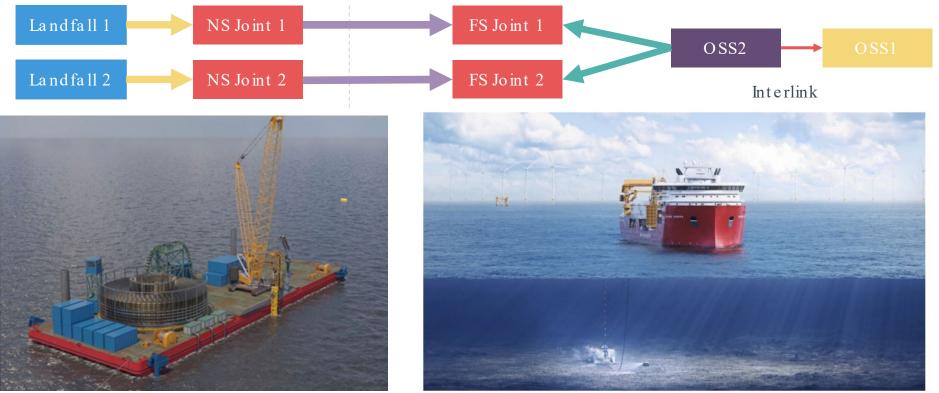


Figure 9-6 Nexans Aurora – simultaneous lay & burial

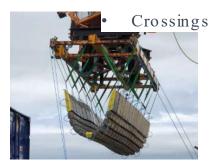
REV Near, Mid and Farshore Cable Pre -Installation Activities



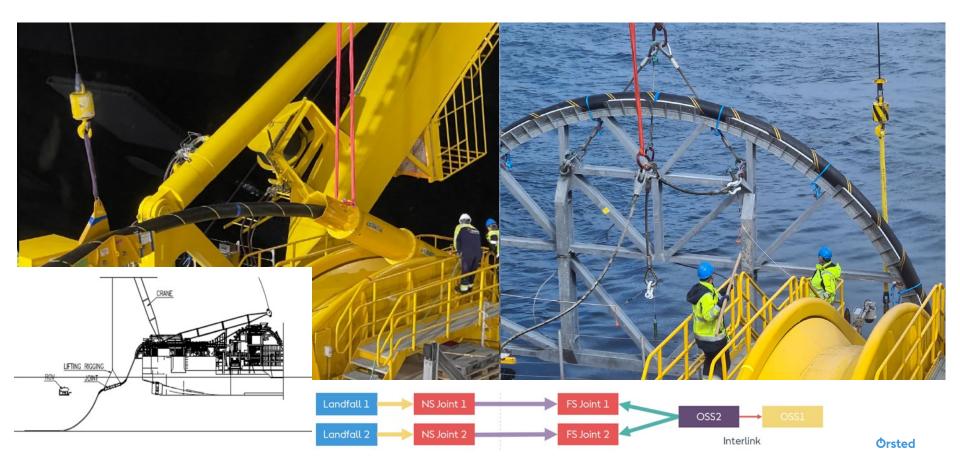
- Boulder relocation
 - PLGR
 - Cable Loadout (Charleston)







Jointing – inline and omega





What can we do?

Live Chart

Mariners Brief

AIS

Securite Call

FLO's, Scout Vessel, Safety Vessels

Lights

Zones

What can you do?

Safe Speed

Lookout

Prudent Seamanship

Communicate

Educate

Resources and Other News

Marine Affairs Resources



Mariners Briefing



Navigation Resources



Programs for Fishermen



us.orsted.com /mariners



Download plotter files

You can access an interactive map of the coast <u>here</u>, and download Navigation System plotter files for Ørsted's offshore wind projects that are in operation and under construction.



Get wind farm coordinates

You can download coordinates for Ørsted's offshore assets, including wind turbines, export cables, and inter-array cables <u>here</u>. Loran C positions are available for all projects in operation and under construction.



Access navigational charts

Ørsted works closely with the <u>National</u> <u>Oceanic and Atmospheric</u> <u>Administration (NOAA)</u> to make our asset locations available to the public. NOAA's navigational charts, which include all projects in operation and under construction, can be found <u>here</u>.



Gear claims and gear bank

Our teams are constantly working to mitigate impacts to commercial fishing operations. In the case of gear loss related to Ørsted's activities, fishermen can follow our <u>claim procedure</u>, completing a <u>gear loss claim</u> <u>application</u> and <u>notice of appeal</u>. Some gear is also available for loan from our gear bank.

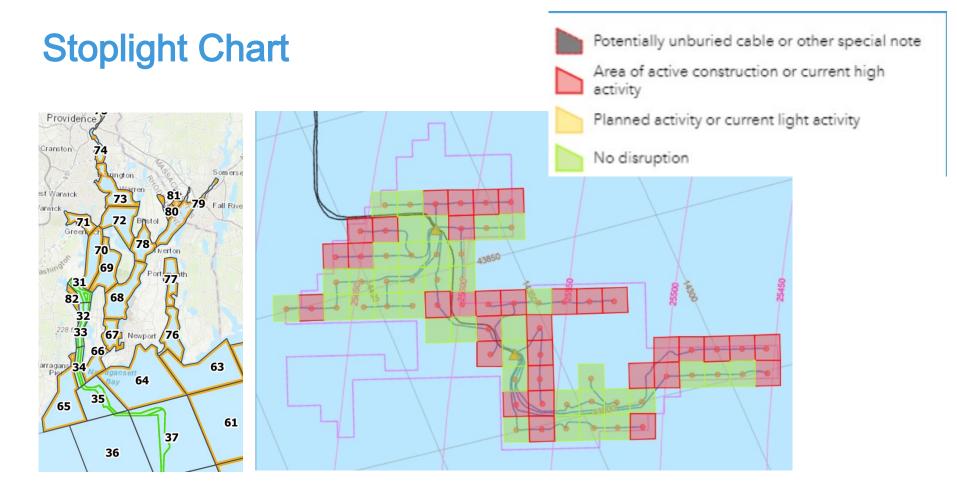


Navigation Enhancement and Training Program

Ørsted's <u>Navigation Enhancement and</u> <u>Training Program</u> offers vouchers for professional training, new pulse compression radar systems, and Automatic identification System transceivers for eligible commercial and for-hire fishermen. Eligible fishing license holders can also access experiential learning opportunities with Ørsted's offshore wind simulation.

Compensation for fishing

Eisheries Direct Compensation <u>Programs</u> are available to compensate eligible commercial and for-hire fishermen for economic losses incurred during the construction, operation, and decommissioning of Ørsted wind farms.



	104111	Connectitut	
84 turbines () 924 MW to New York		Port efferts Port efferts Po	

Sunrise Wind



Survey Work F	Potential Survey	Cable Landfall Wo	rk Installation
Spring 2024	Summer 2024	Fall/Winter 2024	2025

Starboard Wind



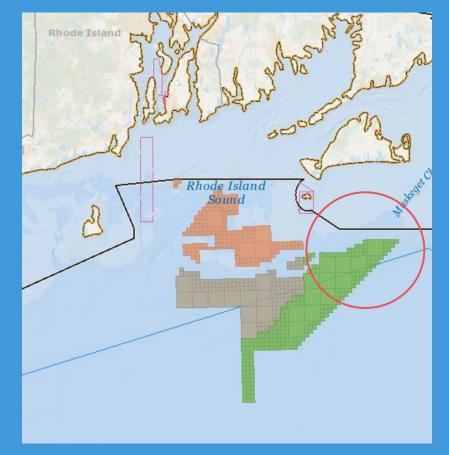
Bid Award in Fall 2024



Will power 600,000 homes in RI and CT $\,$



Upcoming survey activity in Summer/Fall/Winter 2024



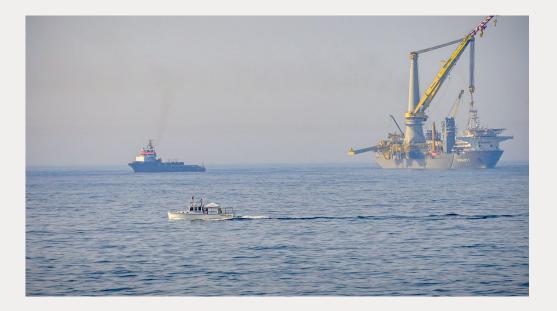


Fishing Compensation Update MA FWG

May 2024

South Fork Wind fisheries compensation program up and running

- <u>fisheriescompensationprogram.com</u>
- Accepting forms for past several months
- Same eligibility process for a) Navigational Enhancement and Training Program and b) compensation claims



Step by step process for seeking eligibility and filing claim



How to File a Claim



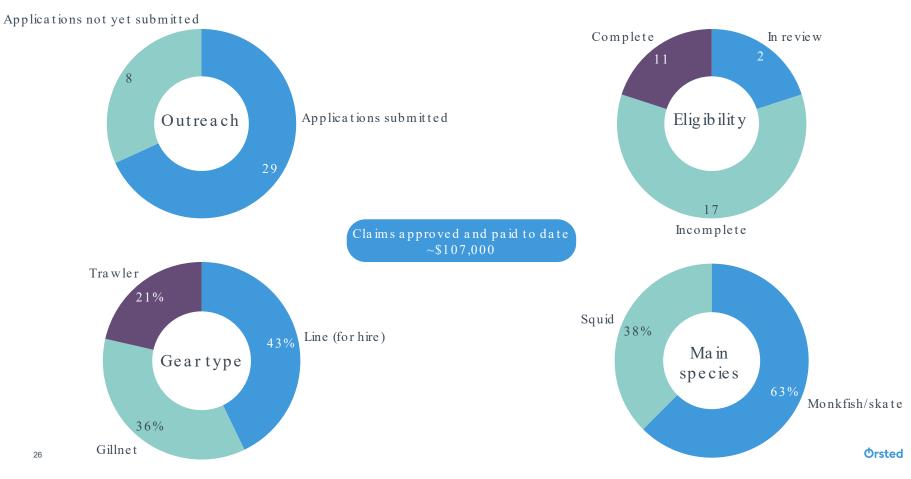
ELIGIBILITY

Complete the Eligibility Application and email the completed form to <u>SouthForkFisheriesClaims@pkfod.com</u>

Note: Eligibility is reviewed for both the Direct Compensation Program and the <u>Navigation Enhancement and Training Program</u>

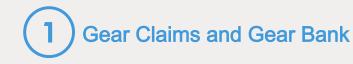


South Fork Fishing Compensation – By the Numbers



Navigation Enhancement and Training Program

Programs for Fishermen

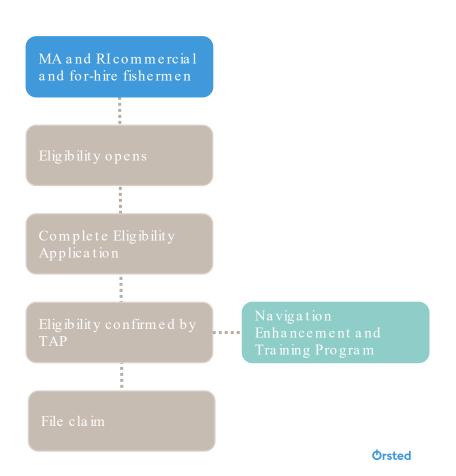








us.orsted.com/mariners

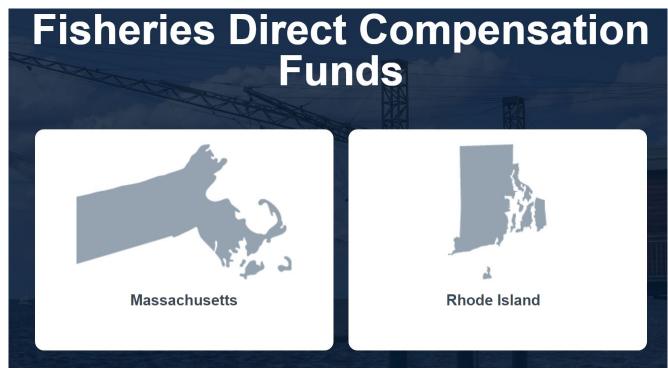


Navigational Enhancement and Training Program

- Who is eligible?
 - Commercial and for-hire fishermen deemed eligible by the South Fork Wind's TAP
 - Do not need to make a claim for the compensation program
- What does it include?
 - o Upgrades for radar and AIS at approved vendors
 - \$10,000 for commercial fishing and inspected passenger vessels
 - \$5,000 for uninspected vessels
 - Vouchers for professional training at approved vendors
 - 2 crewmembers per vessel
 - \$1,000 each

- Who are the current approved vendors?
 - Equipment
 - Chris Electronics Corporation
 - Point Judith Electronic Service Corporation
 - RC Marine Electric
 - Training
 - Narragansett Bay Maritime Training
 - Northeast Maritime Institute
 - US Maritime Resource Center
 - Have suggestions for additional vendors? Let us know!

Where to apply



www.fisheriescompensationprogram.com

Marine Affairs Team



John Mansolillo Northeast Marine Affairs Manager

- Former Coast Guard Officer
- Based in Rhode Island
- JOMAN@Orsted.com



Kara Gross Marine Affairs Team Lead

- Former Fisheries Observer
- KARGR@Orsted.com



Julia Prince Marine Affairs Specia list CT/NY

- Former NY Elected Official, Town of East Hampton
- Based in Long Island
- JULPR@Orsted.com



Ross Pearsall Senior Fisheries Relations Manager

- Former seafood distribution business owner
- ROSPE@Orsted.com



Claire Hodson Marine Affairs Specialist – RI/MA

- Former Charter mate, conch fisher, oyster farmer, URI Sea Grant
- CLAHO@Orsted.com



Laura Gould Marine Affairs Compliance and Execution Manager

- Retired USCG Officer
- LGOUL@Orsted.com

Shared mailbox MANEP@orsted.com



Thank you!



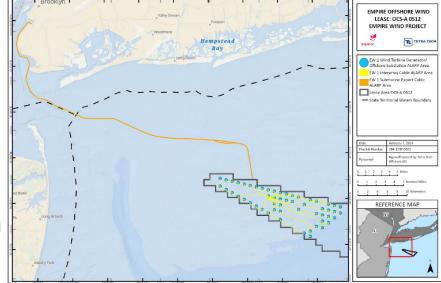
- bp 100% ownership of the Beacon Wind US offshore wind projects, located in federal waters between Cape Cod, Massachusetts, and Long Island, New York.
- Please reach out with any questions or concerns to:

Joe Jackson, Stakeholder Commitments Manager (<u>joseph.jackson@bp.com</u>) James Neveu, Permitting Lead (<u>james.neveu@bp.com</u>)



Empire Wind 1 OOS Cable Removal Pre-lay Grapnel Run and Debris Removal

- > 34 OOS cable removal segments
- debris collected within the pre-lay grapnel run trains will be recovered to deck. Recovered debris will be stored onboard and disposed in a suitable manner at the next port of call.
- Offshore Fisheries Liaison Officer onboard
- Conducted by M/V Go Adventure
- July 2024-August 2024
- EW1 (state waters) ECR Marine debris/boulder removal conducted by M/V Sheila Bordelon
- ➤ July 2024 Nov 2024
- Offshore Fisheries Liaison Officer onboard
- > 2 x Fishing Interest Monitors onboard (Article VII requirement)







Empire Wind Fisheries Monitoring Surveys

Baited Remote Underwater Video with eDNA



- BRUV utilizing stereo video
- Assess change in abundance of individual species or assemblage composition in respect to distance from turbine foundation
- BAG survey design
- 4 BRUV's at distance intervals from planned turbine location
- 8 locations sampled seasonally (4x per year) ٠
- 60-minute deployment
- Paired with eDNA sampling
- Beginning June 2023

Sea Scallop Drop Down Imaging



- BACI design using reference area ٠
- Plan view camera uses a trigger wire, collects image prior to ٠ hitting the seafloor
- 60 stations at each area (lease, reference)
- Beginning June 2023

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Anderson Cabot Center for Ocean Life

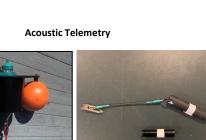
the New England Aquariu

- Assess change in relative biomass, size structure of squid and community composition
- Bottom otter trawl
- 20-minute tows ٠

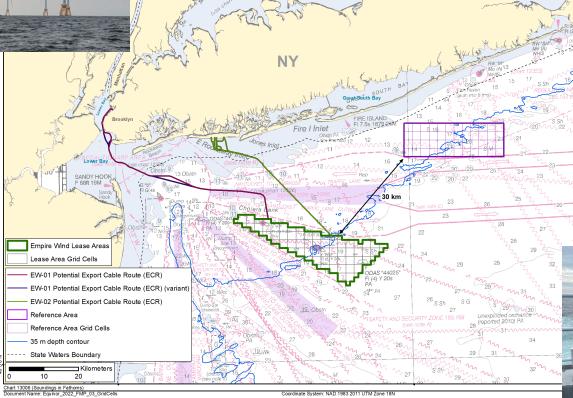
٠

- BACI design using reference area
- 4 survey events per year, 2x each in July and August, 16 tows in each area each total
- Each area stratified by depth: "shallow" < 35m, ٠ "deep" > 35m
- Paired with eDNA sampling
- **Beginning Summer 2024**





- Reference Area 20 10
- Monitor species presence, persistence, and movements
- 48 Receivers (23 in lease area, 9 export cable fed waters, 16 state waters)
- Even Distribution to maximize coverage within the Lease Area and along export cable routes Building upon work of Stony Brook/Monmouth from 2017-2018
- 325 tags per year: Atl. Sturgeon, black sea bass, striped . bass, winter fl., summer fl.
- Year-Round, receivers downloaded 2x per year
- Beginning June 2023



MONMOUTH UNIVERSITY

Stony Brook

University

ANSPIKE

ENVIRONMENTAL

Fisheries and Benthic Monitoring Framework



Survey	Gear/Equipment	Survey Design	Scope/Duration	Timing
Bottom trawl targeting Longfin squid	Bottom Otter Trawl with TED	Before-After, Control- Impact (BACI)	4 trips per year, 1 day each 2x July, 2x August 16 tows in each area = 32 tows total	Summer (July-August); Annual
Baited Remote Underwater Video (BRUV)	Benthic BRUV with twin cameras	Before-After Gradient (BAG)	4 trips per year at 8 locations, 2 days each	Seasonally (Winter, Spring, Summer, Fall); Annual
eDNA	Water sampling	Paired with trawl and BRUV surveys	Accompany BRUV and trawl Survey	Summer; Seasonally; Annual
Acoustic Telemetry	Vemco VR2AR receivers and transmitters	Even distribution of receivers within lease area and along cable in federal waters to maximize detection range; state waters monitoring using evenly spaced receivers and gate arrays	Deploy 23 receivers in lease area, 9 receivers along cable in federal waters; 16 receivers in state waters, 10 in gate arrays around Empire 2 cable 325 Tags per year	Year-Round
Atlantic Sea Scallop Imagery	Plan View Imaging	Before-After, Control- Impact (BACI)	1 multiday trip per year at 120 stations (60 in leased area, 60 in reference area)	Late Summer/Early Fall; Annual
Epifaunal Growth on Novel Hard Bottom Structures	ROV video imagery, photogrammetry	Stratified random selection of structures (WTG foundations, protected cable segments), stratified by water depth	11 sampling days / 24-hour operations,	Late Summer/Early Fall (YO, Y1, Y2, Y3, Y5)
Benthic function on seafloor surrounding WTG foundations, cable centerline	SPI/PV	Before-After Gradient (BAG) (same turbines as above)	352 SPI/PV stations, 60 grab stations	Late Summer/Early Fall (YO, Y1, Y2, Y3, Y5)



- A Data Availability Plan for environmental data for Empire Wind 1's new OREC contract with NYSERDA is being developed
- Empire Wind Fisheries and Benthic Monitoring Plan data will be addressed in the Plan
- Plan is informed by NYSERDA data requirements, ROSA's Offshore Wind Project Monitoring Framework and Guidelines, RWSC Science Plan : <u>ROSA Fisheries Data Report Final-Recommendations FINAL.pdf</u> (rosascience.org)
- Your suggestions and recommendations on data repositories and portals are greatly appreciated!