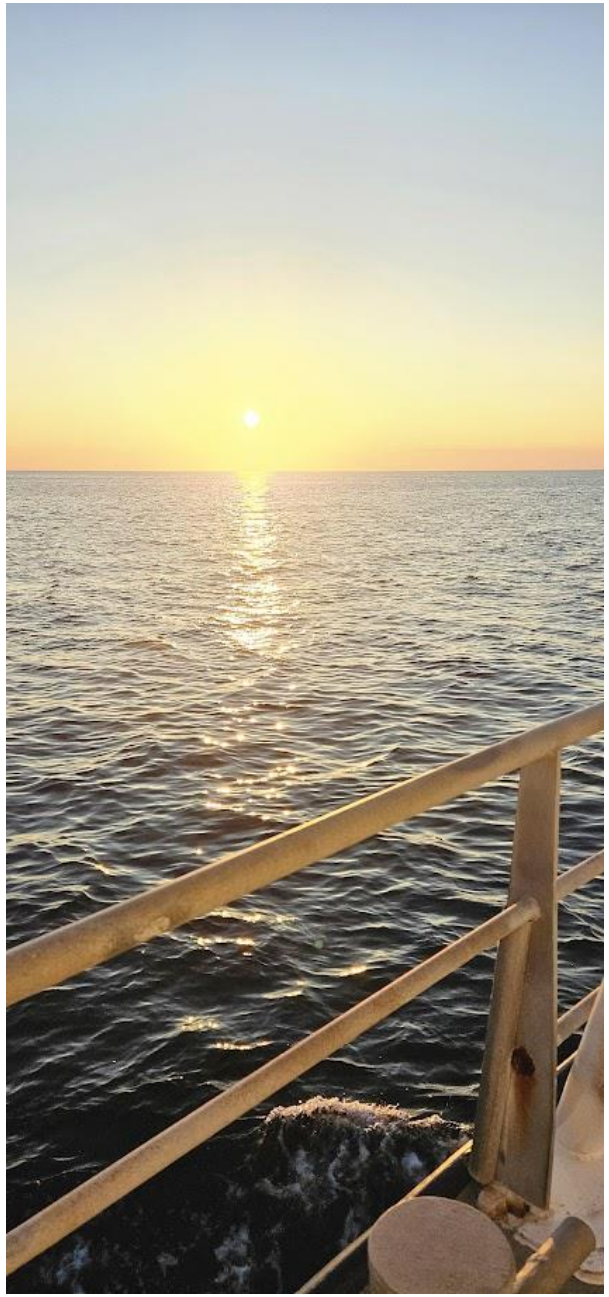
Welcome

New Jersey's Offshore Wind Environmental Resources Working Group

November 14, 2024



Agenda and Guide to Slides

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Let's work together

- Stay on topic.
- Comments are limited to 3 minutes.
- Members or alternates will be given the first opportunity for clarification questions and comments.
- One speaker per organization.

Comments or Questions:
https://dep.nj.gov/offshorewind/

Open Public Comment Periods:
https://dep.nj.gov/offshorewind/outreach/

Photo by Greg Hinks

Atlantic Shores Updates

Stephanie Wilson

- Projects 1 & 2, ASOW S, ASOW 541.
- Fisheries and Environmental monitoring.

Atlantic Shores Portfolio Update

November 14, 2024

ATLANTIC SHORES offshore wind

Agenda

- Project Overviews
  - Atlantic Shores South/Project 1
  - Atlantic Shores South/Project 2
  - Atlantic Shores North/Project 3
  - Atlantic Shores Bight
- Fisheries & Environmental Monitoring

Atlantic Shores – Values and Vision

- **BE SAFE:** Healthy, safe and reliable approach to Project development and delivery, targeting Goal Zero and putting health and safety at the forefront of all our activities
- **BE A GOOD NEIGHBOR:** Collaboration, coordination and respect for our neighbors, stakeholders – in particular other ocean users, and team members
- **BE A GOOD STEWARD OF OUR ENVIRONMENT:** Long term and balanced approach to a shared use of our ocean, seeking to understand and mitigate any potential affects our Project may have on the environment, wildlife and industries that fuel our local economies
- **LEAD WITH SCIENCE:** Scientific, rational approach to Project design, leveraging on-site surveys, expert studies and assessments led by reputable third parties

Our vision is to be the offshore wind developer of choice by delivering on our promises

ATLANTIC SHORES offshore wind

Atlantic Shores – Portfolio

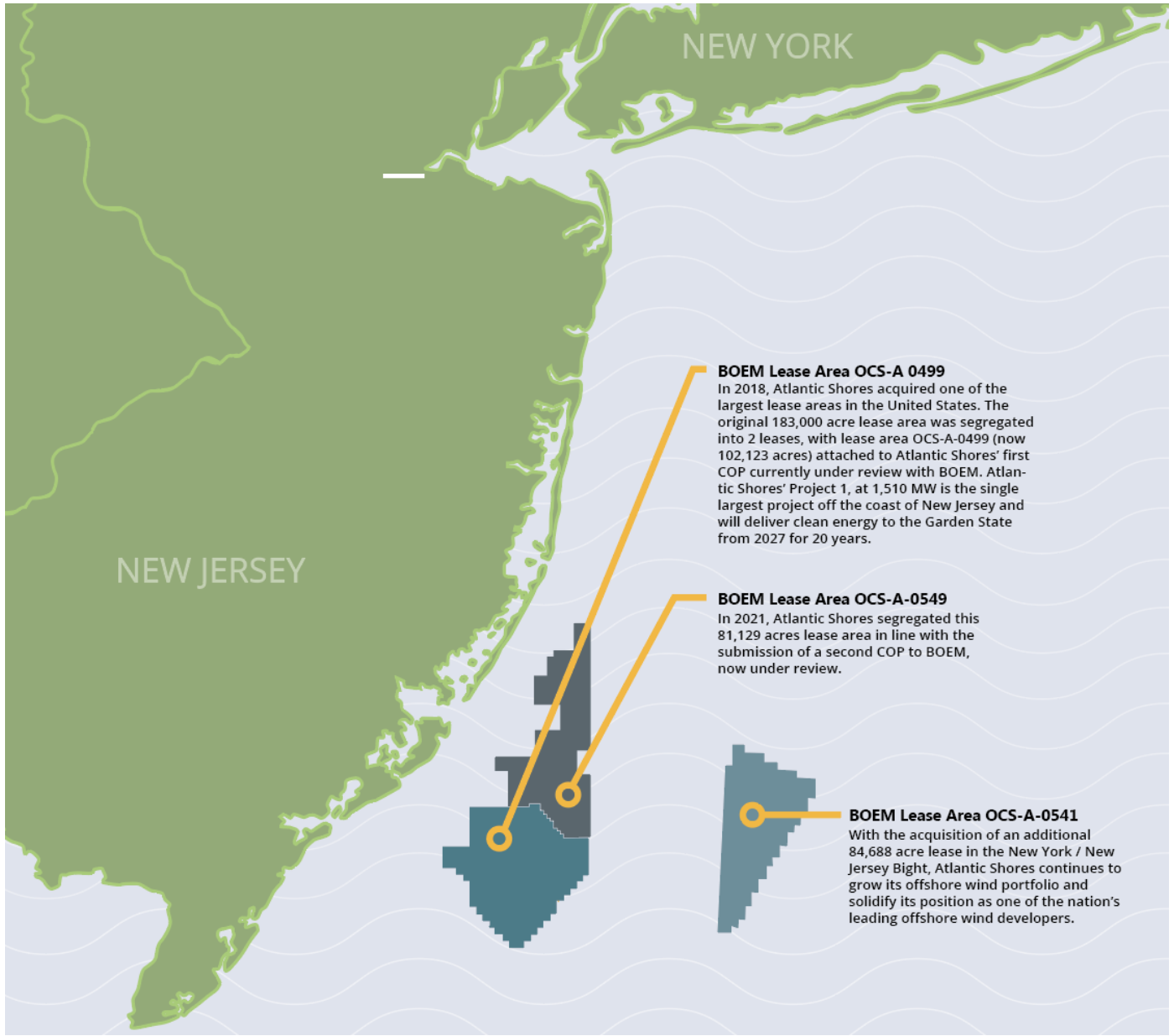
5+ GW

strategically positioned to meet the growing demands of renewable energy targets in multiple east coast markets

Lease Area OCS-A 0499/0570[1]
Project 1 - 1.5 GW awarded OREC contract with New Jersey Round 2; rebid in Round 4
Project 2 – 1.2 GW bid in New Jersey Round 4

Lease Area OCS-A 0549
Project 3 – Up to 2.4 GW

Lease Area OCS-A-0541[2]
79,351 acres ~ up to 2 GW



(1) Lease Area 0499 was segregated on October 1, 2024, to OCS-A 0499 and OCS-A 0570.
(2) Awarded in the Bureau of Energy Management (BOEM)'s 2022 New York Bight auction

Atlantic Shores South Projects 1 & 2

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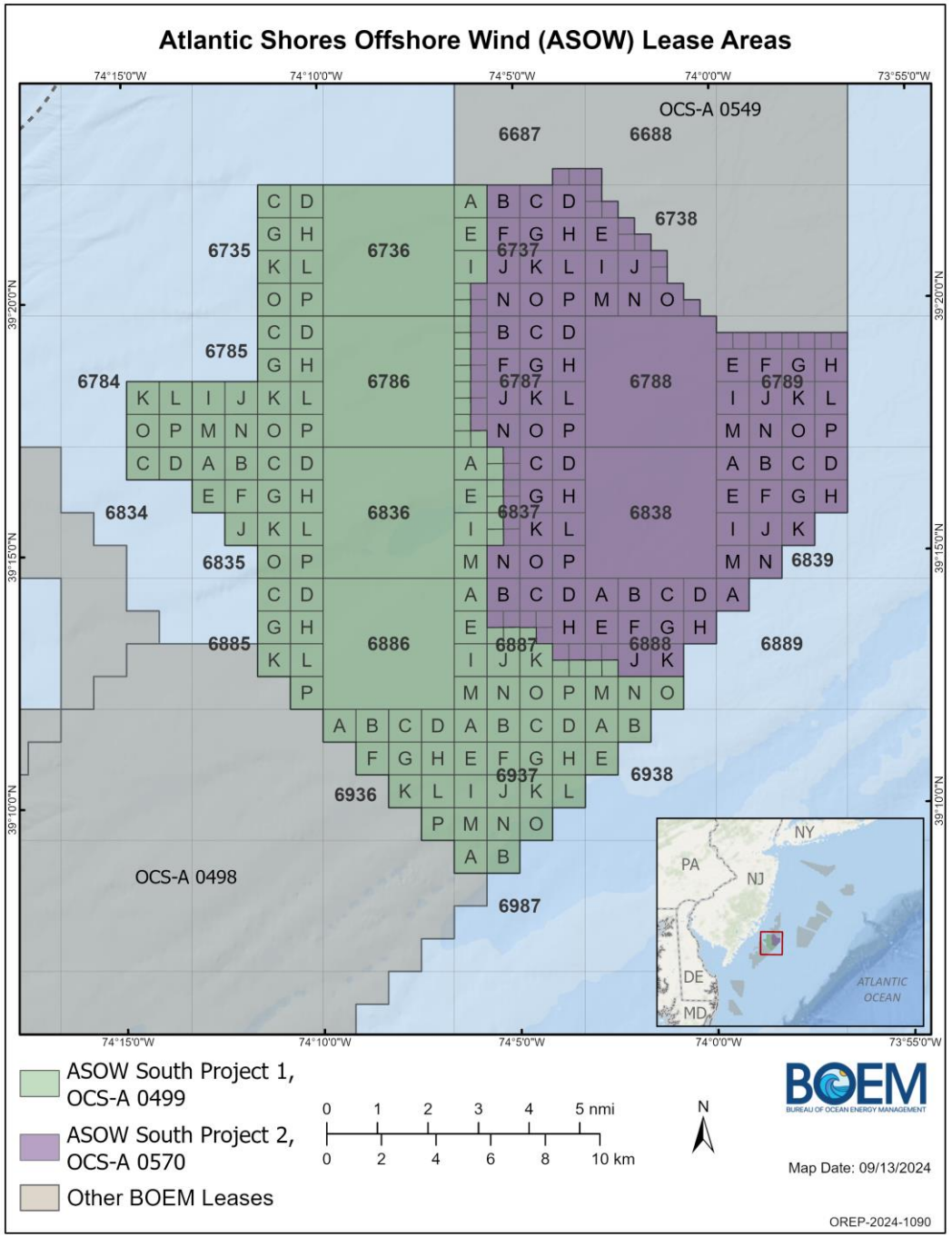
The Atlantic Shores South – Projects 1 & 2

Federal Permitting Milestones:

NEPA Process covers **both Projects 1 and 2.**

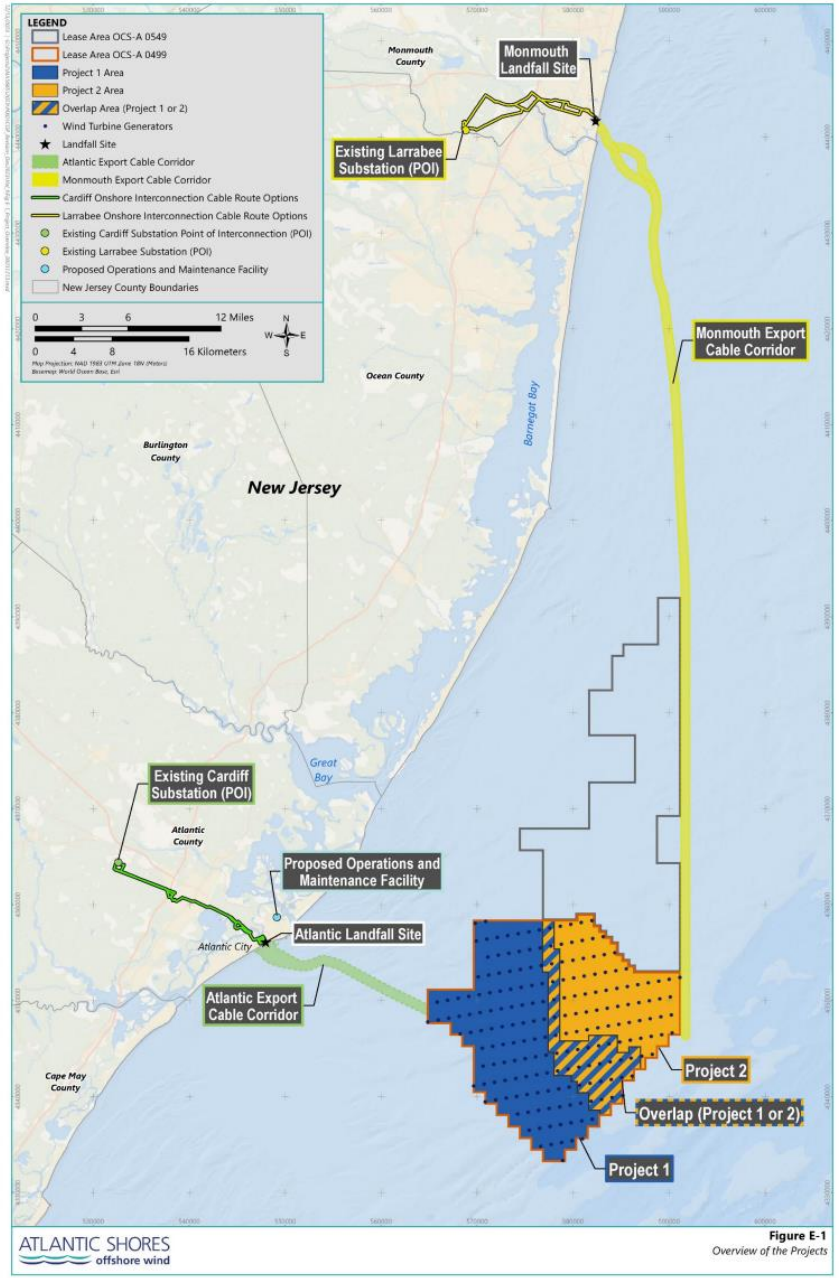
- Final Environmental Impact Statement (FEIS) published May 31
- Joint Record of Decision (ROD) on the FEIS published by lead agency BOEM on July 1.
  - USACE and NOAA-NMFS additional signatories.
- Memorandum of Agreement (MOA) signed by all consulting parties and Tribal Nations July 1.

- Construction and Operations Plan (COP) Approved for Project 1 and Project 2 occurred on October 1.
  - Project 1 Terms and Conditions of Approval
  - Project 2 Terms and Conditions of Approval
- EPA OCS air permit obtained October 1 **covers both projects.**
- NMFS Letter of Authorization for Incidental Take obtained Oct 24 **covers both projects.**
- FAA Determination of No Hazard **covers both projects.**
- Outstanding Federal permits:
  - USACE 404/10 and 408 permits and approvals will be **separate for each project**.
  - Expected before end of 2024



NJ State/Local Permit Updates

- Atlantic Shores submitted applications to NJ DEP for Project 1, Project 2 and O&M on February 1, 2024.
- On August 26, 2024, Atlantic Shores received the following permits for the Project 1 export cable route from landfall at California Ave to the Cardiff Substation, as well as the cable route within NJ state waters:
  - Coastal wetlands permit;
  - Special activity linear development permit;
  - Waterfront development individual permit;
  - CAFRA individual permit; and
  - Water quality certificate.
- Additionally, Atlantic Shores and Atlantic City received State House Commission Approval for the request for the diversion of parklands in Atlantic City on October 21, 2024.
- Atlantic Shores received the Pinelands Certificate of Filing in April 2024 and is working through the local permitting process.
- Atlantic Shores aims to obtain a license from the Tidelands Commission in Q1 2025.
- On June 24, 2024, Atlantic Shores received NJ DEP state permits for Project , which covers the export cable route in NJ state waters



Atlantic Shores North Project 3

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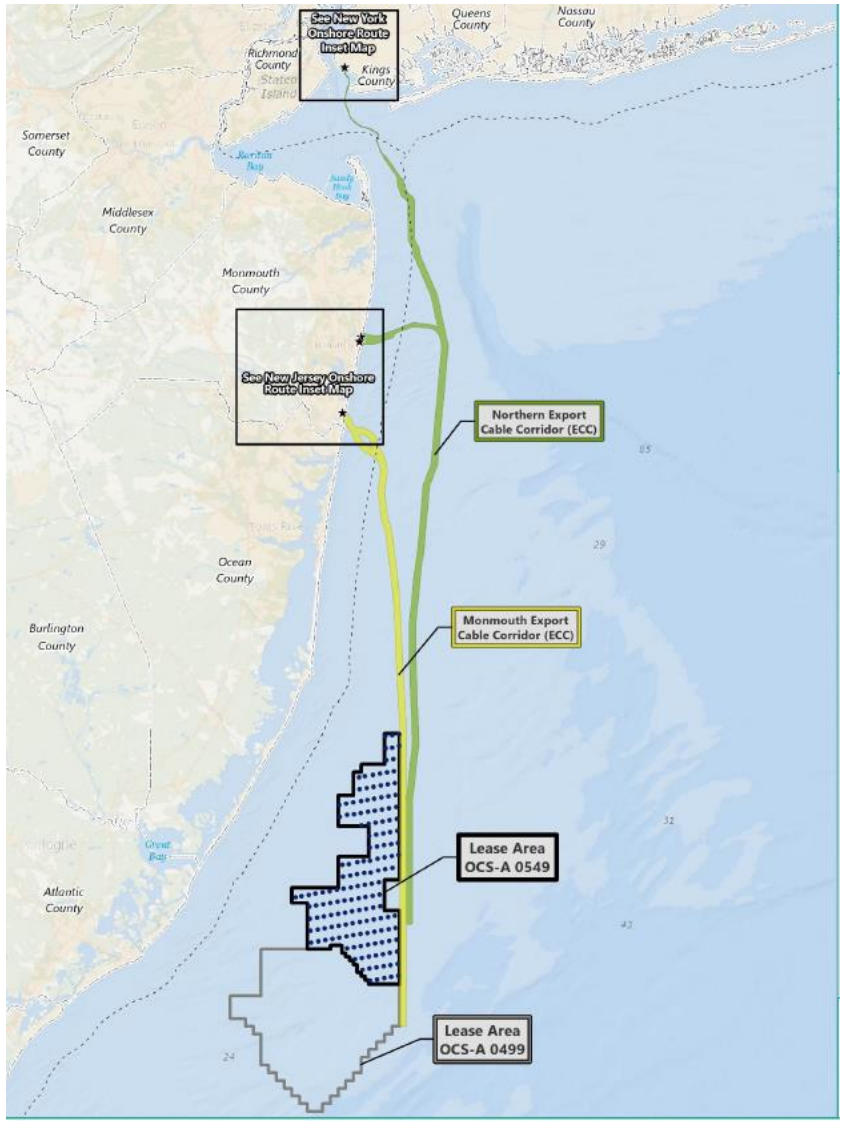
Atlantic Shores North - Project 3

Name	Atlantic Shores North Offshore Wind Project (the "Project"); interchangeably referred to as "COP North" or "Project 3"
Lease Area	Lease Area OCS-A 0549 (7.8 miles from the New Jersey coast and approximately 60 miles from the New York State coast.
Project Capacity	Up to 2,400 MW
Wind Turbine Generators (WTG)	Up to 157 WTGs
Export Cables	Monmouth (66.9 mi (107.6 km), Northern ECC (86.3 mi (138.9 km)), and Asbury branch (8.96 mi (14.4 km))
Landfall Sites / Proposed Points of Interconnection (POI)	New Jersey – Monmouth / Larrabee POI New Jersey – Kingsley or Asbury / Atlantic POI New York – Fort Hamilton / Gowanus POI
Onshore Facilities	New Jersey (all route segments) – 7.0mi (11.26 km) to 17.0 mi (27.35 km) • Larrabee Interconnection Cable Route – 12.0 mi (19.5 km) • Atlantic Interconnection Cable Route – 7.0 mi (12.0 km) New York • Gowanus Interconnection Cable Route – 5.65 mi (9.09 km) to 14.76 mi (23.75 km)



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Project Development Activities & Anticipated Project Schedule

2019	SAP Submission and Environmental Surveys and Assessments began
April 2022	Construction & Operations Plan submitted April 2022
March 2024	BOEM Notice of Intent (NOI) to prepare Environmental Impact Statement (EIS)
2024	Submit Federal applications for NPDES, NMFS LOA and OCS Air permit
2025	Submit state permit applications
2026	Anticipated Record of Decision

Atlantic Shores Bight Projects 4 and 5

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OCS-A 0541 – Lease Development Activities Update

2022

- Lease OCS-A 0541 executed
- Coordinating with BOEM regarding Native American Tribes Communication Plan (NATCP) requirements
- Pre-Survey G&G Meeting & Agency Coordination Kick-off Meeting
- Fisheries Communication Plan (FCP) and Agency Communication Plan (ACP) posted to Atlantic Shores Website (***atlanticshoreswind.com***)
- Technical feasibility studies to support project design
- Commenced marine site characterization (G&G) surveys in OCS-A 0541
- Initiated the development of a Site Assessment Plan (SAP)

Q1 2023

- Submitted G&G Survey Plan for August 2023-2024
- Provided RPDE input for BOEM PEIS
- Tribal Pre-G&G Survey Meeting

Q2 2023

- Submitted SAP to BOEM
- NATCP Development in Progress (Jointly with Bight Developers)
- Submitted IHA for Planned G&G Survey Work

Q3 2023

- Issuance of IHA Authorization by NOAA Fisheries
- Geophysical and geotechnical survey activities for lease area and export cable corridors

Q4 2023

- Completion of planned geophysical surveys within the lease area and initiation of data processing
- Submission of portfolio wide IHA to NOAA Fisheries

2024

- Pre-COP engagement

2025

- Target COP submittal

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2024 Geoscience Survey Data Collection Activities

- Single-channel seismic system (penetration depth of 15m+ below mudline)
- Multibeam bathymetry echo-sounder (MBES)
- Side scan sonar (SSS)
- Sub-bottom profiler (SBP)
- Gradiometer (MAG)
- Sediment grab and SPI/PV imagery
- Towed Video Benthic Survey
- Boreholes
- Downhole CPT
- Seabed CPT
- Vibracores

Line Spacing:

- 30m primary line spacing
- 500m tie-line spacing

Approximate Total Line km surveyed: 15,000+

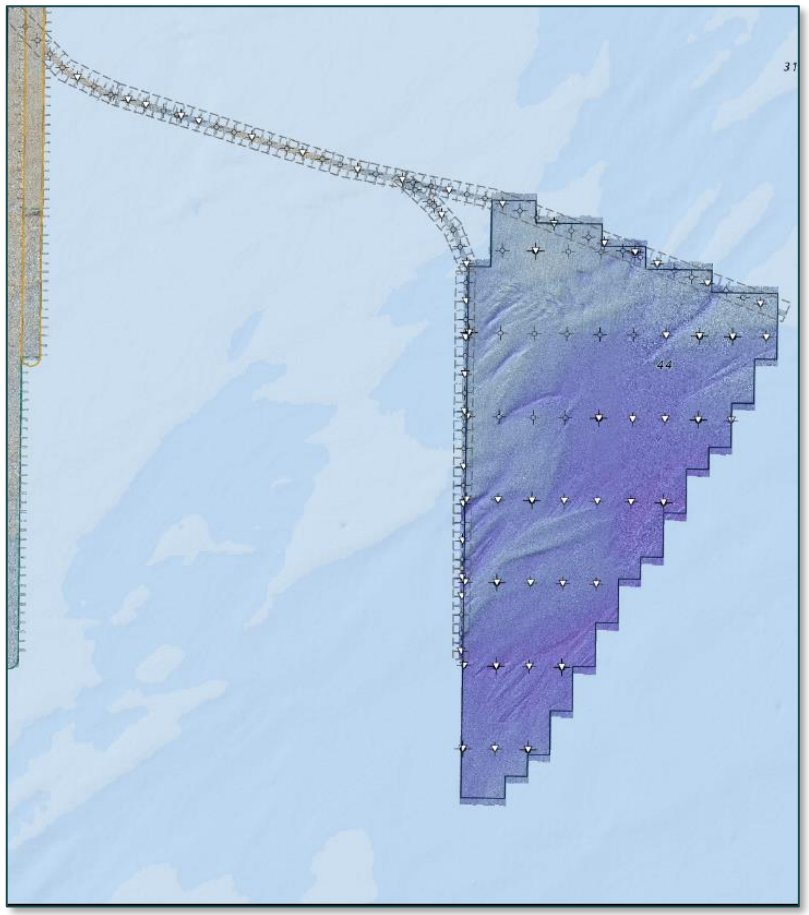
2 years of Benthic: 101 Grabs, 192 SPI/PV Stations, and 24 Towed Video for EFH Mapping

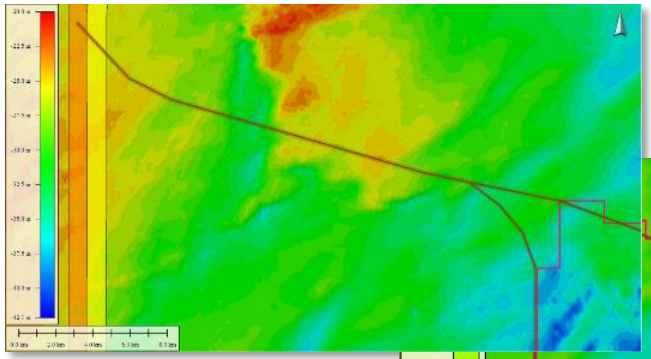
Boreholes: 15

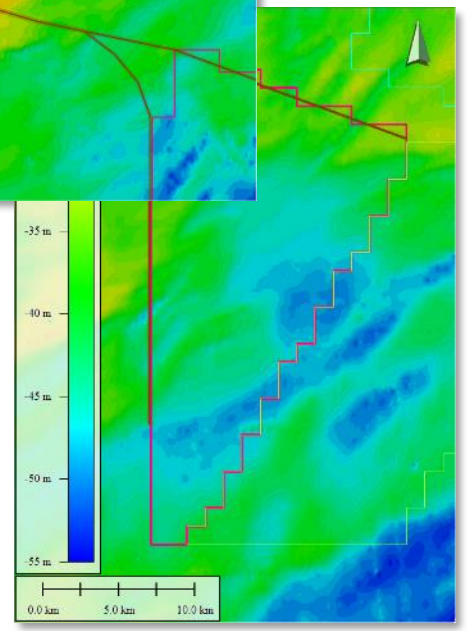
Deep CPTs: 15

Seabed CPTs: 75

Vibracores: 124







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Fisheries Monitoring Program

Atlantic Shores Philosophy

- **Lead with Science**
  - Atlantic Shores strives to be a responsible developer. This includes understanding the effects of our project on the immediate and regional environments where we operate.
  - Given our lease areas in the Mid-Atlantic, we believe a portfolio approach to monitoring is necessary.

- **Research & Applied Monitoring Work Hand-in-Hand**
  - Monitoring survey types are familiar and consistent techniques across offshore wind developments.
  - Survey types target types of species found across all Atlantic Shores project areas.
  - Research efforts are underway and broaden understanding of species, their movements, and potential effects due to our projects.
  - Research efforts will help to inform and adjust survey methods (adaptive management).

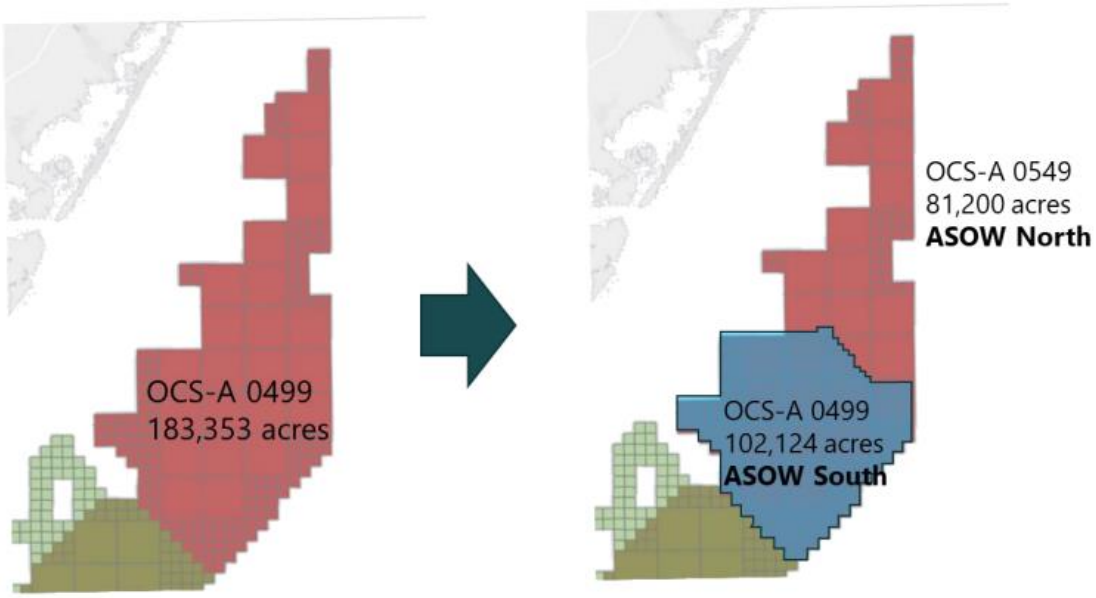
- **Regional Coordination is Important**
  - Atlantic Shores recognizes that species move beyond political boundaries & there are many impacts and pressures affecting species and their habitats.
  - Atlantic Shores recognizes that impacts and pressures may affect how species are fished in our areas.
  - Atlantic Shores has been on leading front of regional efforts in the Mid-Atlantic, i.e. ROSA.

Atlantic Shores Portfolio Approach to FMP

- Atlantic Shores Lease Area was originally one OCS Lease Area (OCS-A-0499). Atlantic Shores initiated survey planning and agency/stakeholder consultation on the entire Lease Area.

- The Lease Area was segregated (April 2022) into two Lease Areas: the Atlantic Shores North (OCS-A-0549) and Atlantic Shores South (OCS-A-0499) Lease Areas.

- A Fisheries Monitoring Plan (FMP) and Benthic Monitoring Plan (BMP) were drafted for both Atlantic Shores North and South. Consultation on the FMP and BMP occurred with numerous agencies and agency comments were incorporated into both plans:
  - September 9, 2020 – NMFS and NJDEP
  - January 22, 2021 – NMFS, NJDEP, NYSERDA, and Rutgers University
  - October 12, 2021 – NMFS, NJDEP, and BOEM



- Assigned to EDF-R in 2018
- Assigned to Atlantic Shores in 2019

- ASOW South COP filed March 2021
- Segmentation official in April 2022

ATLANTIC SHORES offshore wind

Overview of the FMP

Methods	Objective	Resolution	Anticipated Outcome
Bottom Trawls	Quantify relative biomass, distribution, & demographics within portfolio and at control sites	• Seasonal surveys (winter, spring, summer & fall) • Follows long-term fishery-independent surveys in region	Evaluation of changes in species biomass, size frequency, condition, and community assemblage
Structured Habitat	Quantify the relative abundance, distribution, and demographics of structure-associated species within portfolio and at control sites	• Seasonal sampling in portfolio and nearby control sand & shipwreck sites (Project tier-specific) • Simultaneous surveying with **Chevron traps**, benthic & pelagic videos, rod-and-reel	Evaluation of changes in species biomass, size frequency, condition, and community assemblage
Surfclam Dredge	Quantify the dynamic abundance, distribution, and age	• BACI design • Samples collected with modified commercial hydraulic dredge • 10 tows in lease areas, 10 in control sites	Document commercial clam resource within the portfolio Evaluate changes to stock over time
Pelagic Fish	Quantify distribution of species not well surveyed by trawl, traps, or hook	• BAG design relative to installations on large (lease) and small (inter-turbine) scales • Tow cameras behind vessels at 4 knots • Glider-mounted sonar to detect forage fish aggregations	Document distribution on large and small scales as effects of structure attraction or avoidance

Overview of the FMP

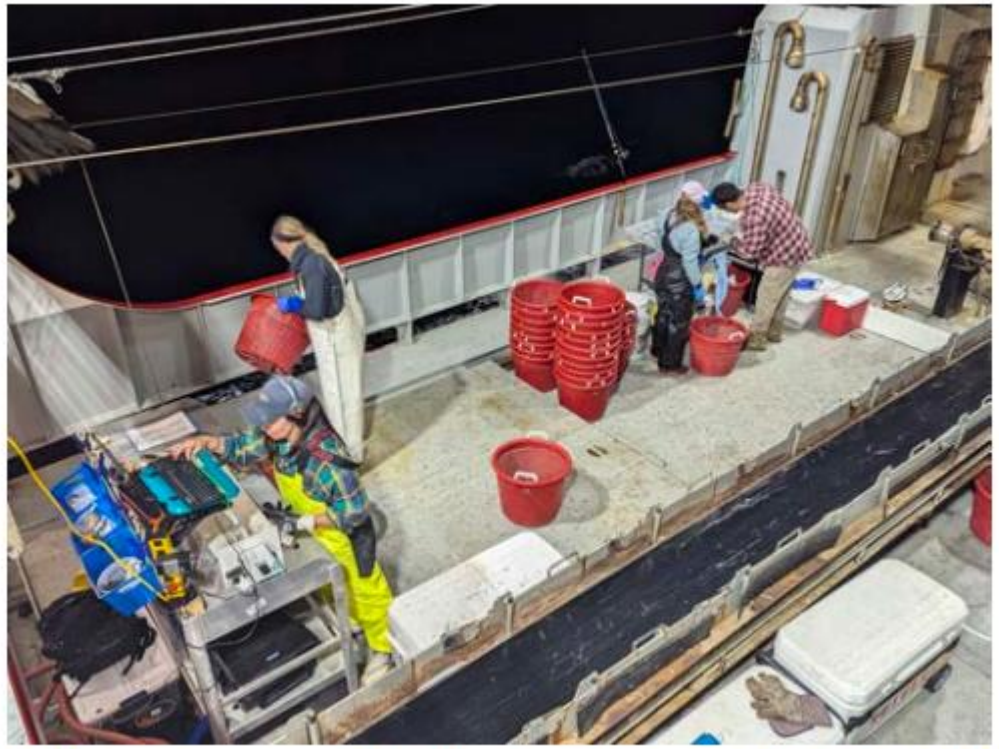
Methods	Objective	Resolution	Anticipated Outcome
Telemetry	Quantify shelf-estuary and long shore migratory connections, residency, and ranging	• BACI design • Tag species as guild representatives of species that cross cables • Tag migratory species • Monitor all NJ inlets and shelf in portfolio	Document movement into estuaries, along coast & shelf, evaluate change relative to cable disturbance and placement
eDNA	Quantify seasonal fish community composition to detect potential impacts	• BACI design • Sampling during seasons in turbine project areas and control sites	Document the relationship of fish community composition to spatial and temporal environmental variability & wind development

ASOW 2024 Survey

- 3 days
- CTD ~ every 3 stations
  - Exo3 primary, castaway backup
- Benthic Grab (2mm screen only)
  - Genetics for some, whole animals, measure first
- Standardized dredge tow
  - 5 min, 0.25 nautical mile
  - Catch volume
  - Count per volume
  - Subsample – lengths, weights
  - Genetics, some stations 15, others 5

Surf Clam Survey – October 2024

Pre-trip safety briefing.



Shell measuring at left, genetic sampling at right.

ATLANTIC SHORES offshore wind

Research Initiatives

ATLANTIC SHORES offshore wind

Research Initiatives Update

What Purpose Do Our Research Efforts Serve?

- Further Our Commitment to Our Core Values
  - *Be a Good Neighbor, Being a Good Steward of the Environment, Lead with Science*
- Establish relationships with the scientific community and broader environmental stakeholders
- Address Stakeholder Concerns and Existing/Future Regulatory Risk
  - e.g. Commercial/Recreational Fisheries concerns, Incidental Take, Compensatory Mitigation, NARW Rule, etc.
- Improved Understanding and Reduction of Environmental Impacts
  - Filling key data gaps to acquire improved understanding of potential effects (ie marine sound, collision risk, etc). Priority to align with regional priorities and efforts
  - Supporting the progression of new technology for improved mitigation or reduced impacts (ie. Non-extractive data collection, detection technology).

ATLANTIC SHORES offshore wind

RMI Research Portfolio Synergies

Applicants will be required **to commit financial and technical support to research initiatives and the regional monitoring of wildlife and fisheries** related to the introduction of offshore wind projects with **$10,000 per megawatt of project nameplate capacity fee**


Regional Wildlife Science Collaborative Support


Archival Passive Acoustic Monitoring (PAM) for baleen whales


Gliders for ecological & oceanographic monitoring


Socioeconomics of recreational fisheries


Responsible Offshore Science Alliance Support


Visualization tool for research & monitoring efforts


New Jersey Ocean Trawl Mitigation

Existing Efforts
Future Efforts


Using OSW structures as monitoring platforms


Novel Surfclam Survey Dredge & Carbonate Chemistry


Harbor seal tracking & health assessment


Near real-time passive acoustic monitoring for whales


Impacts of turbine foundations on the Cold Pool


Surfclam fishery enhancement


Acoustic telemetry for commercial & recreational fish


Environmental DNA as an assessment tool for fish


Whale satellite tagging


Benthic habitat mapping


Expansion of the Motus network for birds & bats


Sea turtle tagging & biological health

ATLANTIC SHORES offshore wind

Thank You

Questions?

ATLANTIC SHORES offshore wind

www.atlanticshoreswind.com

info@AtlanticShoresWind.com

@altshoreswind

/atlantic-shores-wind

Board of Public Utilities Updates

Bailey Wild

- Offshore Wind Strategic Plan 2
- Solicitation 4
- Solicitation 5

BPU Offshore Wind Update

November 14, 2024

Agenda

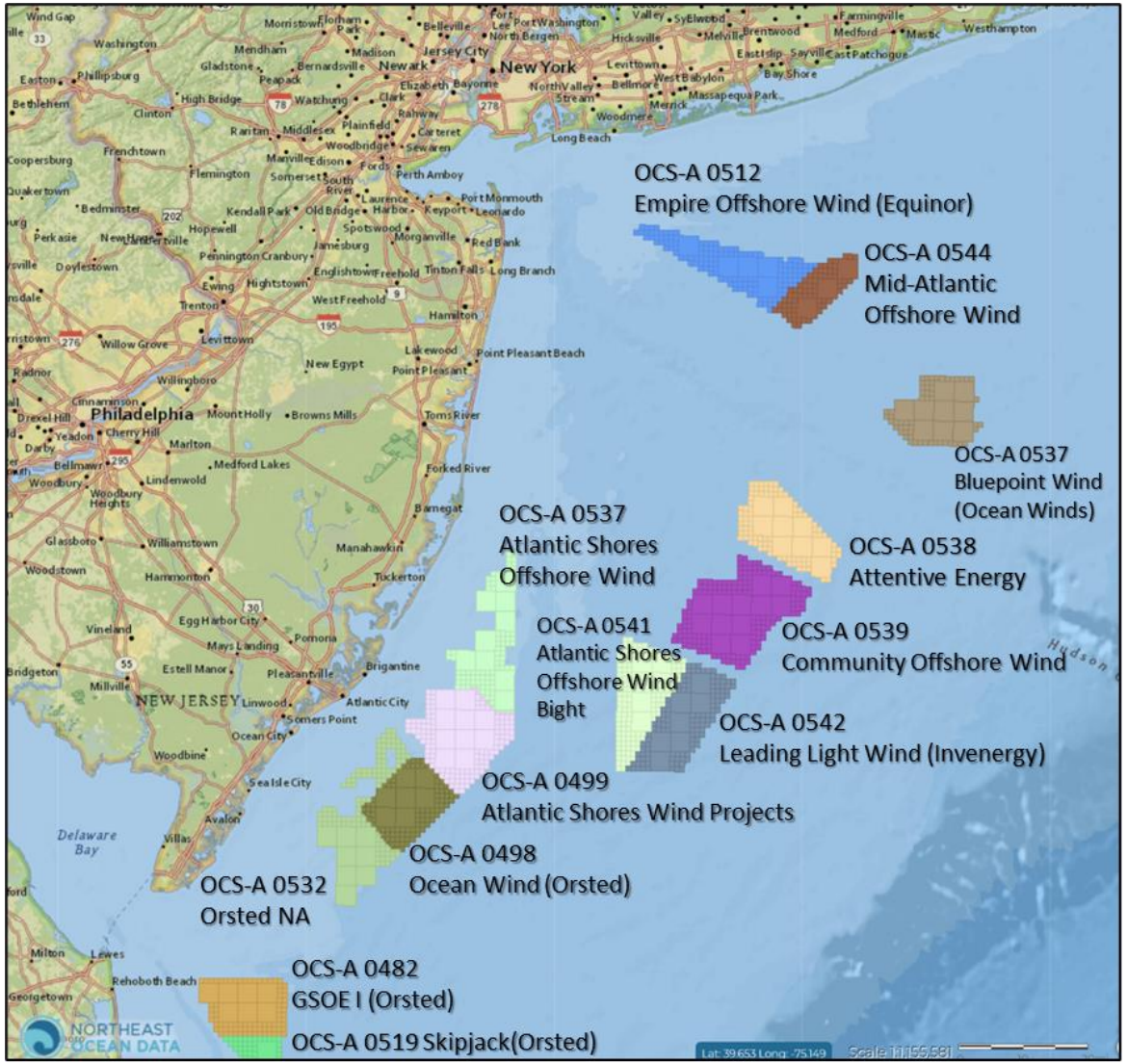
- Offshore Wind Strategic Plan 2.0
- Fourth Offshore Wind Solicitation
- Future Solicitations

Second OSW Strategic Plan

- In September 2023, the BPU in collaboration with DEP and EDA commenced an effort to update the Offshore Wind Strategic Plan
- Focus areas:
  - environmental resources
  - commercial and recreational fisheries
  - supply chain and workforce development
  - ports and harbors
  - energy markets and transmission
- Information gathering sessions for environmental resources held in Q3 2024
- Final version anticipated in summer 2025

Solicitation Four Update

- Solicitation was opened in April 2024
- Seeks 1.2 to 4 gigawatts of offshore wind capacity
- Detailed Environmental and Fisheries Protection Plans are required of applicants
- $10,000/ MW RMI fee required
- Applications were due July 10, 2024
- The Board is currently evaluating applications



Future Solicitations

Solicitation Five

- S5 is scheduled to open Q2 2025
  - Will keep NJ on pace for 11 gigawatt goal by 2040

Solicitation	Maximum Capacity Target (MW)*	Capacity Awarded (MW)	Issue Date	Submittal Date	Award Date	Estimated COD
1	1,100	1,100	Q3 2018	Q4 2018	Q2 2019	2024-25
2	1,200 - 2,400	2,658	Q3 2020	Q4 2020	Q2 2021	2027-29
3	1,200 - 4,000	3,742	Q1 2023	Q3 2023	Q1 2024	2031-32
4	1,200 - 4,000*		Q2 2024	Q3 2024	Q4 2024	2032
5	1,200 - 4,000**		Q2 2025	Q3 2025	Q4 2025	2034
6	1,200 - 4,000**		Q2 2027	Q3 2027	Q1 2028	2035
7	1,200 - 4,000**		Q2 2029	Q3 2029	Q1 2030	2037
Total Awarded + Target	11,000		* The Board may award projects above or below the target ** To be adjusted based on previous solicitation results			

Stay Connected

- Join the Board's email list to receive updates about public meetings and events. To do so, please visit:
  - https://nj.gov/bpu/about/contact/subscribe.html
- Board public notices are available on our website at:
  - https://www.nj.gov/bpu/newsroom/public/
- Offshore Wind Stakeholder Email
  - Osw.stakeholder@bpu.nj.gov

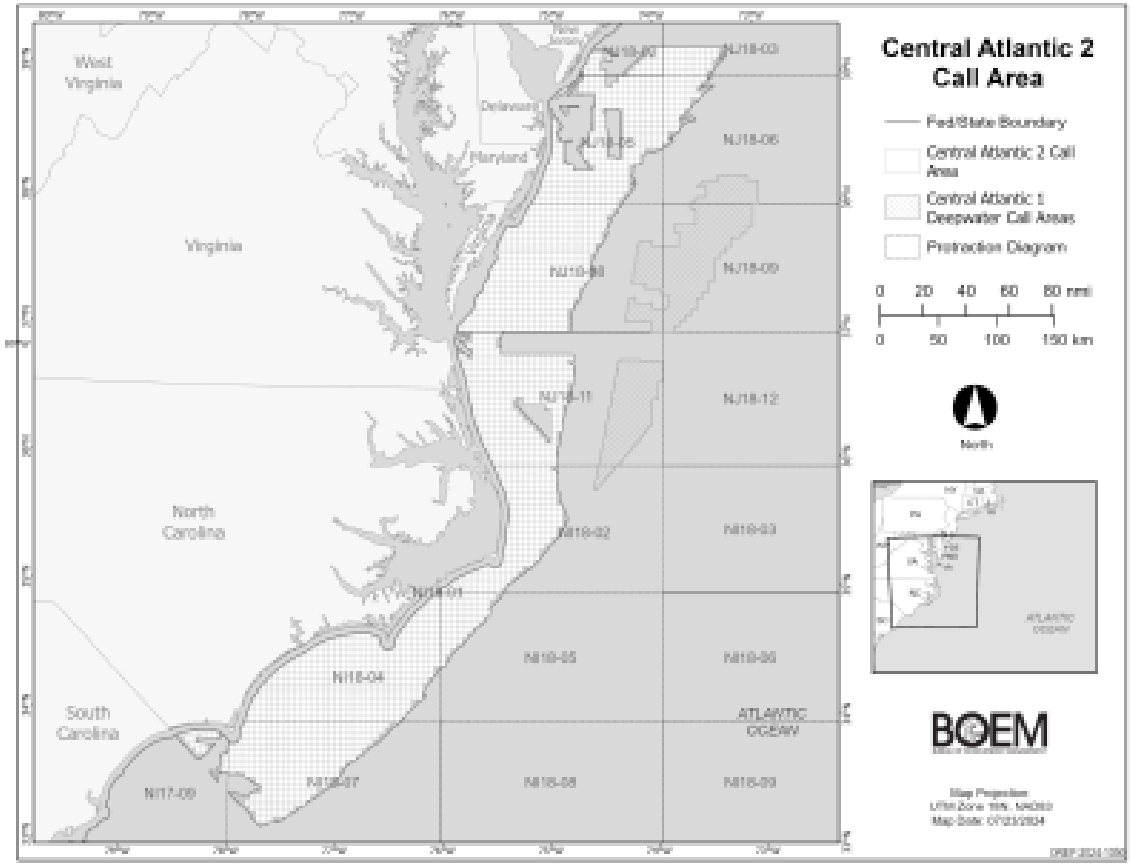
Subscribe to the Clean Energy mailing list

General OSW Updates

- **Central Atlantic 2, *Katie Nolan***
- Regional Administrator, *Joe Cimino*

Central Atlantic 2

- A Call for Information and Nominations was published on August 22nd
  - BOEM held a series of public meetings
  - Public comment period was open until October 21st – BOEM received over 500 comments
  - BOEM received 2 Nominations from developers for the northern portion of the Call Area – more information will be added to BOEM's website later this month
- Draft Wind Energy Areas are expected to be announced Q1 2025
- Lease sale is expected Q2 2026



https://www.boem.gov/renewable-energy/state-activities/central-atlantic

General OSW Updates

- Central Atlantic 2, *Katie Nolan*
- **Regional Administrator, *Joe Cimino***

- Maine
- New Hampshire
- Massachusetts
- Rhode Island
- Connecticut
- New York
- New Jersey
- Delaware
- Maryland
- Virginia
- North Carolina

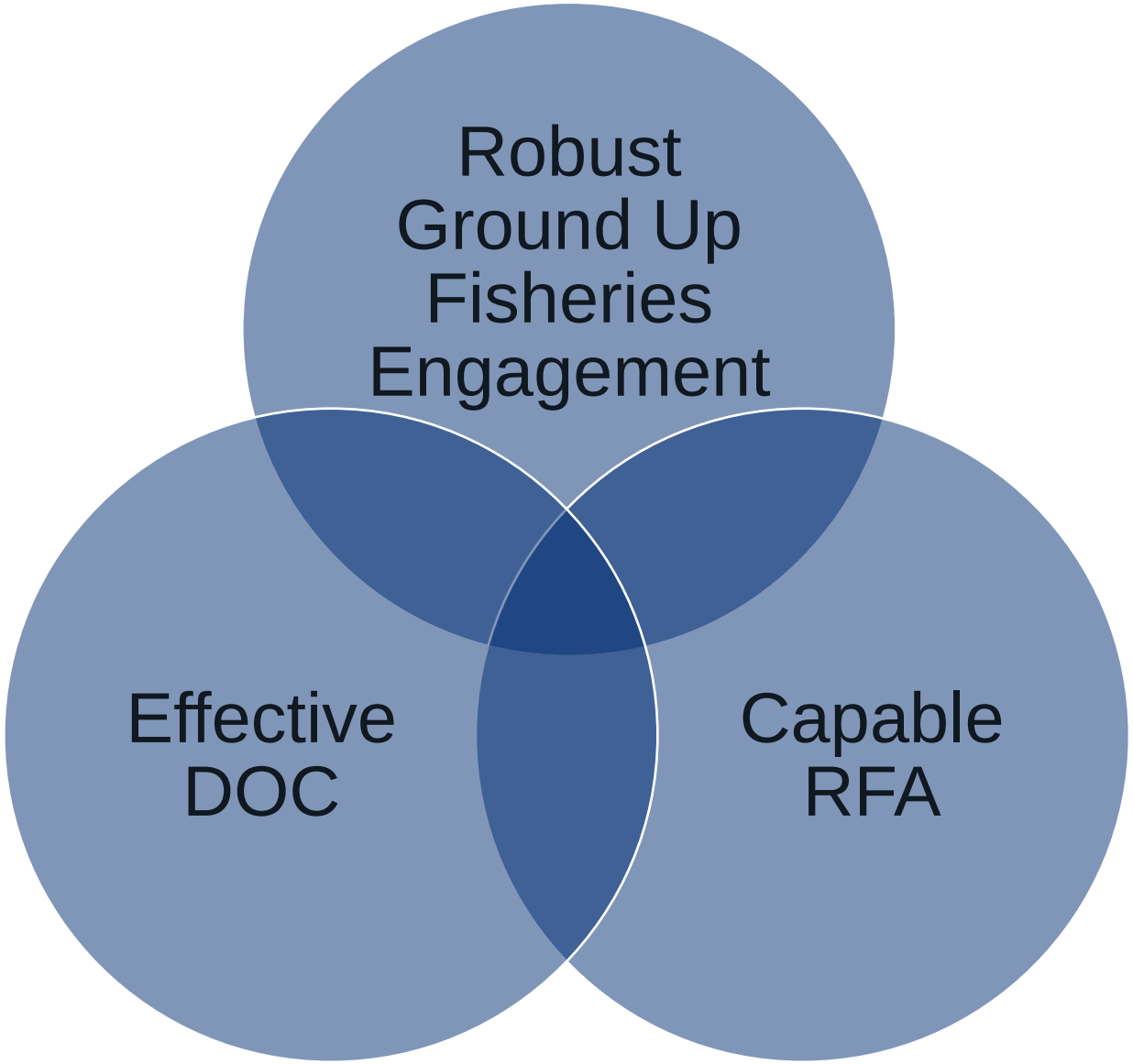
Fisheries Compensatory Mitigation

Objective: to establish a credible regional administrator for managing and distributing fisheries compensatory mitigation funds for impacts from offshore wind for the US eastern seaboard

- Consistency across projects and developers
- Fairness for fisheries across home and landing port
- Administrator with the same processes and procedures so that fishermen fishing in or near many projects can have a “one stop shop”
- Scale large enough for building expertise and efficiencies of scale
- Gain efficiencies of scale, avoid duplication and re-creation, and ensure fishermen have access to compensation regardless of the homeport, where they fish, or which state has contracted with the OSW developer

Avoid → Minimize → Mitigate

The Three-Legged Stool for Design Success



BrownGreer in partnership with the Carbon Trust are proud to announce our selection as the team to design and develop a regional fisheries mitigation program, which will provide fair and equitable financial compensation to the commercial and recreational for-hire fishing community from impacts from offshore wind on the East Coast.

BrownGreer, a Virginia-based claims resolution firm, has designed and managed many of the most significant complex claims administration programs in U.S. history. This work included operational roles resolving nearly 400,000 claims in the $12 billion Deepwater Horizon settlement, including economic loss claims related to impacted commercial fishing, for-hire recreational fishing, and shoreside businesses.

The Carbon Trust is a global expert in constructing and orchestrating stakeholder engagement plans across multi-sector and diverse actions, including building consensus on the interface between offshore wind and environment and wildlife matters. The Carbon Trust's experience in this area includes supporting work specifically related to offshore wind projects within the United States.

What is the Design Oversight Committee (DOC)?

- The Design Oversight Committee will be comprised of commercial fishermen, state, and OSW developer representatives
- The DOC's purpose is to guide and advise the Regional Fund Administrator on the design and development of the claims process to maximize its effectiveness and comprehensiveness for ensuring individual claims by commercial fishermen are paid fairly, consistently and in a timely manner
- NO claims process design decisions have been made!

DOC Composition as Concurred with by States, OSW Developers, and Fish Advisors

DOC Commercial Fishermen Members will be compensated for time and travel similar to the FM Councils

A. 6 Commercial Fishermen (6 alternates)

- By region and gear type of fishery (scallops, clams, lobster/fixed gear, groundfish/mixed trawl, HMS & other, trade association, shore side) – type of operator, diversity of industry, not just gear (processers)?

B. 3 States (3 alternates)

- By region (NE, Mid, Southern Mid)
- Across CZM, fisheries, energy offices

C. 3 Developers with One or More Leases (3 alternates)

- By region (NE, Mid, Southern Mid)
- Some other criteria?

D. Ex-Officio Members(non-voting)

- NMFS
- ASFMC
- BOEM

E. Liaison

- RFA Procurement State (role in RFA performance only, not an ex-officio, and if state is in this role, cannot also be a DOC member above)

Regional Science Updates

RWSC
Regional Wildlife Science Collaborative for Offshore Wind

Director Emily Shumchenia

ROSA
Responsible Offshore Science Alliance

Executive Director Renée Reilly

RWSC

Regional Wildlife Science Collaborative for Offshore Wind

New Jersey Offshore Wind Environmental Resources Working Group

November 14, 2024

Emily Shumchenia, PhD
RWSC Director

RWSC

Regional Wildlife Science Collaborative for Offshore Wind

Cooperatively established (July 2021), led, and funded

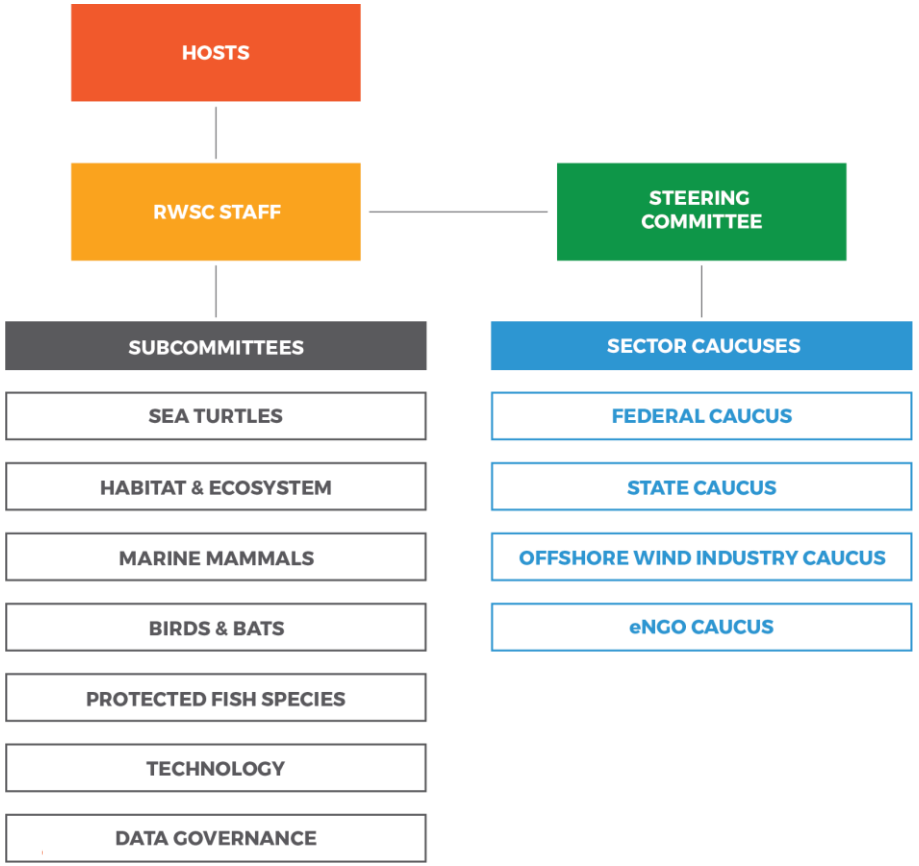
by federal agencies, states, offshore wind companies, eNGOs

BOEM, NOAA, DOE, USFWS, Navy, USGS, EPA, Marine Mammal Commission; Atlantic coast states from ME to SC; Atlantic coast offshore wind lease holders and developers; eNGOs (national, regional, and local)

RWSC is a coordination hub for offshore wind research to increase collaboration, limit redundancy, suggest common data standards, and increase data sharing and transparency.

Coordinating offshore wind & wildlife research

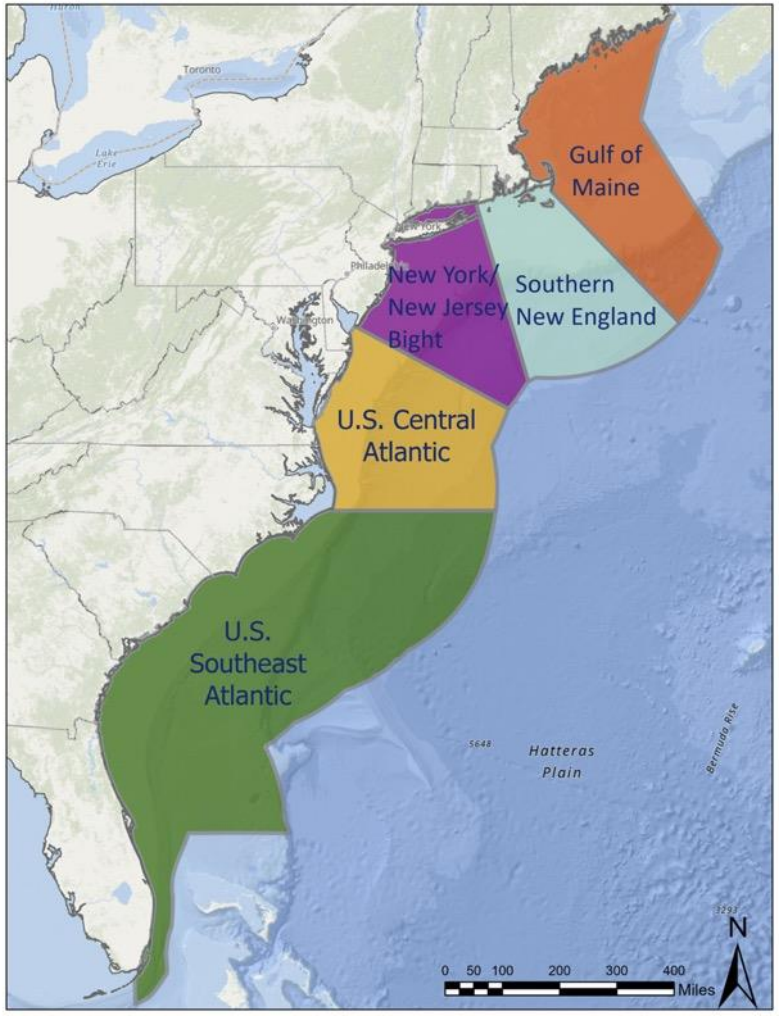
rwsc.org/science-plan



- RWSC Science Plan released in January 2024 after ~2 years of development by expert Subcommittees
- Expert Subcommittees:
  - Forums for coordination (each ~5 meetings/year)
  - Identify research priorities specific to each taxon/topic
  - Develop and recommend data standards and appropriate repositories

Coordinating offshore wind & wildlife research

rwsc.org/science-plan

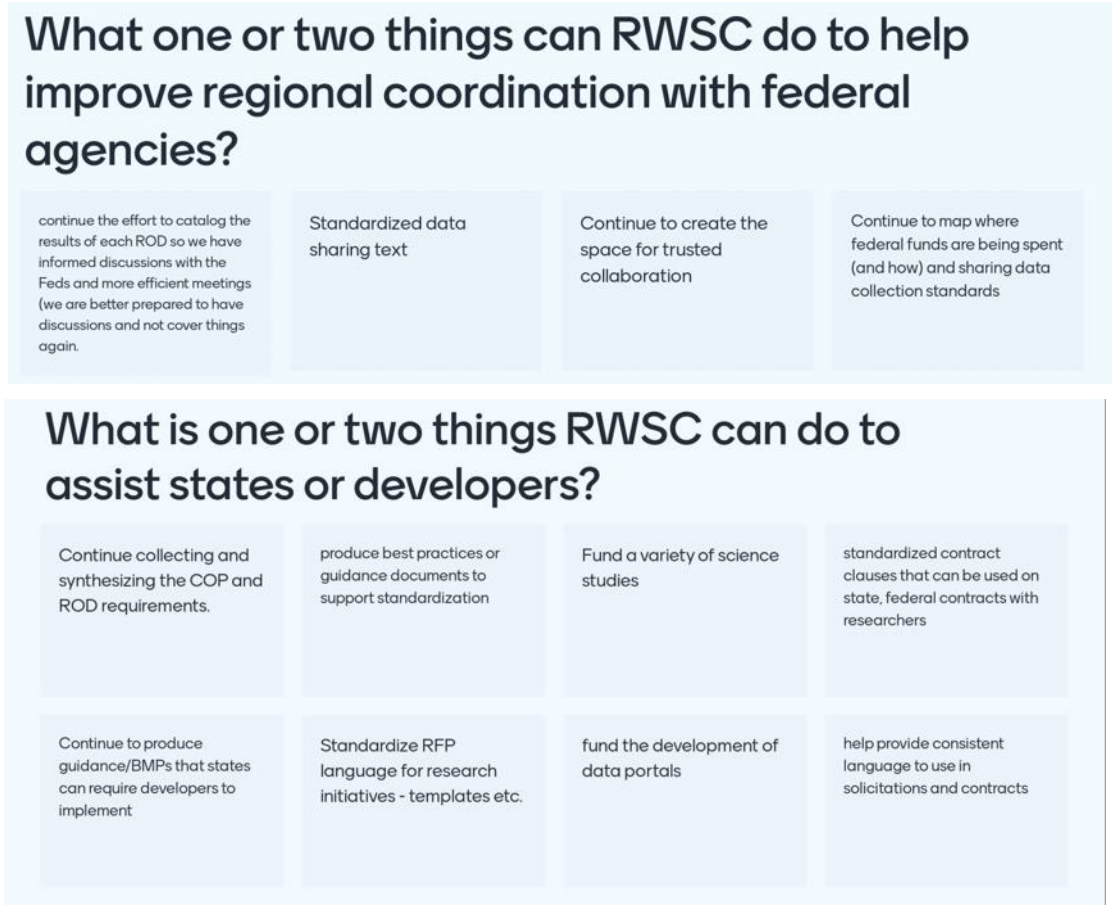


States, federal agencies, offshore wind companies expressed common goals of funding and implementing research and data collection that is:

- Collaborative
- Aligned with current data needs
- Results in data that are **Findable, Accessible, Interoperable, Reusable** (FAIR)
- Made available to support decision-making and future research as soon as possible
- Enable future regional-scale analyses

Coordinating offshore wind & wildlife research

rwsc.org/science-plan



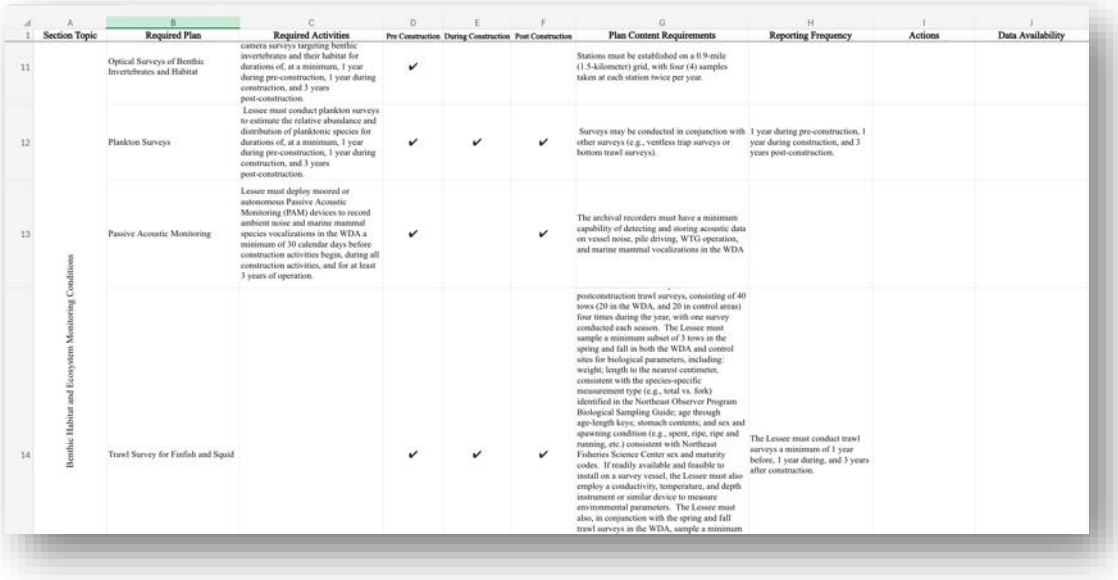
We asked, they said:

- Aggregate information about what everyone is funding/doing
- Provide data standardization, data management, and coordination recommendations
- Coordinate funding goals and pool funding to achieve bigger results
- Facilitate collaboration among Caucuses

RWSC

Regional Wildlife Science Collaborative for Offshore Wind

Wildlife monitoring and mitigation requirements in RODs and COP approvals



	A	B	C	D	E	F	G	H	I	J
1	Section Topic	Required Plan	Required Activities	Pre Construction	During Construction	Post Construction	Plan Content Requirements	Reporting Frequency	Actions	Data Availability
11	Benthic Habitat and Ecosystem Monitoring Conditions	Optical Surveys of Benthic Invertebrates and Habitat	camera surveys targeting benthic invertebrates and their habitat for durations of, at a minimum, 1 year during pre-construction, 1 year during construction, and 3 years post-construction.	✔			Stations must be established on a 0.9-mile (1.5-kilometer) grid, with four (4) samples taken at each station twice per year.			
12		Plankton Surveys	Lessee must conduct plankton surveys to estimate the relative abundance and distribution of planktonic species for durations of, at a minimum, 1 year during pre-construction, 1 year during construction, and 3 years post-construction.	✔	✔	✔	Surveys may be conducted in conjunction with other surveys (e.g., ventless trap surveys or bottom trawl surveys).	1 year during pre-construction, 1 year during construction, and 3 years post-construction.		
13		Passive Acoustic Monitoring	Lessee must deploy moored or autonomous Passive Acoustic Monitoring (PAM) devices to record ambient noise and marine mammal species vocalizations in the WDA a minimum of 30 calendar days before construction activities begin, during all construction activities, and for at least 3 years of operation.	✔		✔	The archival recorders must have a minimum capability of detecting and storing acoustic data on vessel noise, pile driving, WTG operation, and marine mammal vocalizations in the WDA			
14		Trawl Survey for Finfish and Squid		✔	✔	✔	postconstruction trawl surveys, consisting of 40 tows (20 in the WDA, and 20 in control areas) four times during the year, with one survey conducted each season. The Lessee must sample a minimum subset of 3 tows in the spring and fall in both the WDA and control sites for biological parameters, including: weight; length to the nearest centimeter, consistent with the species-specific measurement type (e.g., total vs. fork) identified in the Northeast Observer Program Biological Sampling Guide; age through age-length keys; stomach contents; and sex and spawning condition (e.g., spent, ripe, ripe and running, etc.) consistent with Northeast Fisheries Science Center sex and maturity codes. If readily available and feasible to install on a survey vessel, the Lessee must also employ a conductivity, temperature, and depth instrument or similar device to measure environmental parameters. The Lessee must also, in conjunction with the spring and fall trawl surveys in the WDA, sample a minimum	The Lessee must conduct trawl surveys a minimum of 1 year before, 1 year during, and 3 years after construction.		

Developers are sharing final monitoring plans with RWSC for awareness of data being collected

Tracking the data collection activities described in required monitoring plans in project COP approval letters:

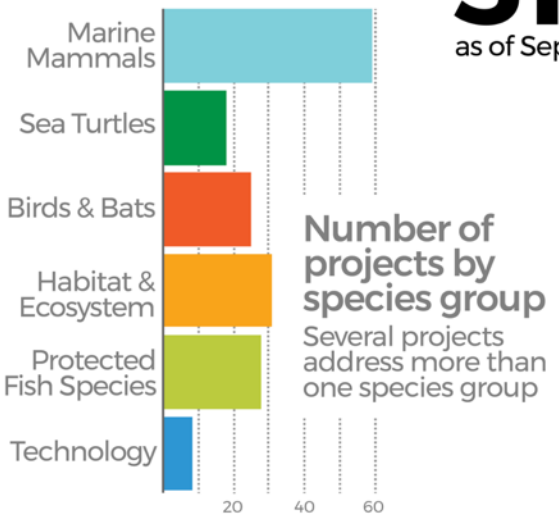
- Avian and bat post-construction monitoring plans
- Fisheries and benthic monitoring plans (RWSC focus on benthic portion only)
- Long-term/archival PAM plans
- Plankton surveys
- Compensatory mitigation plans
- Federal survey mitigation activities
- Other required surveys
- Observations of any ESA-listed species

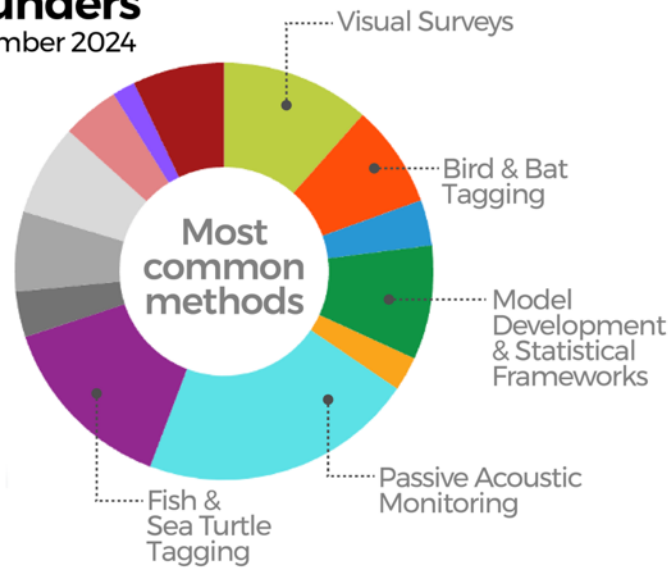
RWSC
Regional Wildlife Science Collaborative for Offshore Wind

Fragmented research/data landscape

>100 active offshore wind & wildlife data collection and research projects

31 individual funders as of September 2024





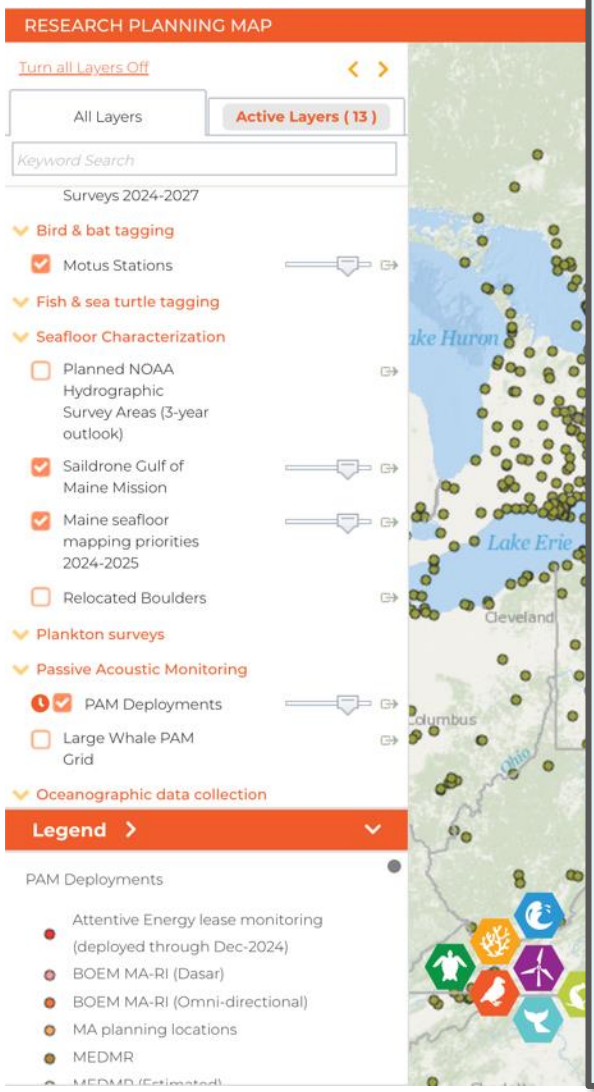
Source: https://database.rwsc.org

Lack of consistency in requirements for data collection, data management, and data sharing in research agreements

RWSC
Regional Wildlife Science Collaborative for Offshore Wind

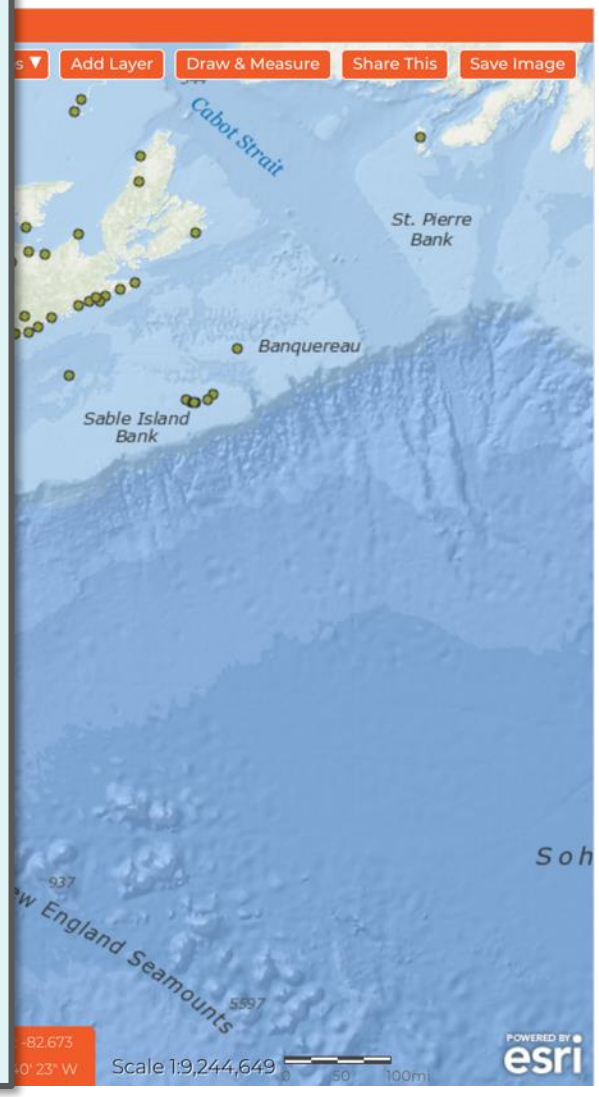
Research Planning Map

rwsc.org/map



Pending additional projects/funding to be allocated in 2025:

- BOEM POWERON
- Projects to be selected by MassCEC
- Voluntary and/or required research funding associated with Tri-State RFP
- New Jersey RMI $4.75M
- Empire Wind 1 ($4.05M) and Sunrise Wind regional monitoring
- NOAA/NFWF Vessel Strike Avoidance Fund
- Maine Offshore Wind Research Consortium
- DOE Research & Development Fund- $48.6 million
- NOWRDC Solicitation 4.0: Innovations in Floating Offshore Wind - $10.6 million



Where are offshore wind and wildlife data stored?

Existing repositories are not commonly used

Costs to upload and store data in federal repositories not well understood or routinely included in project budgets

Data users and decision makers cannot easily find data and funders cannot easily verify that the data they funded exists and is being used by the research and ocean management communities

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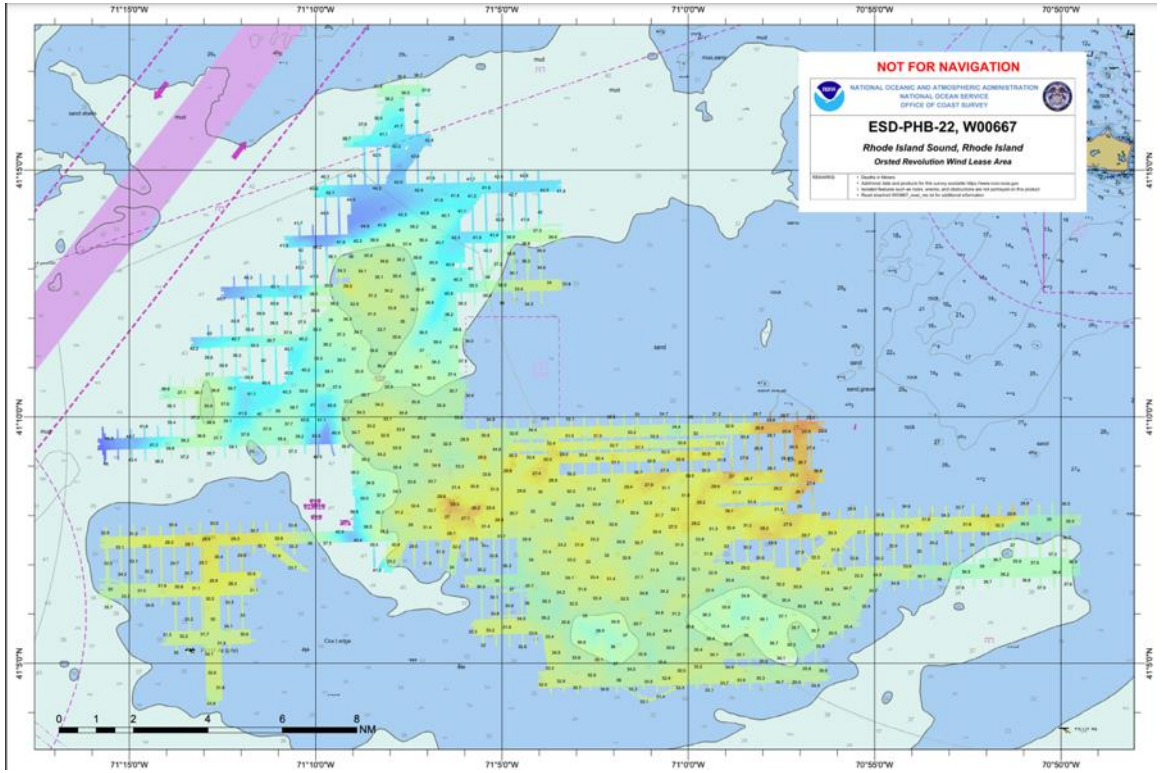

Exception: Orsted's Revolution Wind multibeam data available for public download on NCEI!

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Solutions – centralized funding

Partnership for an Offshore Wind Energy Regional Observation Network (POWERON)

- BOEM IRA funds + developers' annual (opt-in) payments for PAM
- 36 months of funding ($4M) from BOEM to RWSC, overseen by Marine Mammal Subcommittee:
  - Coordinate among funders and partners, maintain maps of PAM
  - Develop and implement a PAM Field Plan and Data Management Plan
- Results in rolling uploads of **standardized consistent data** to public repositories (NOAA NCEI and PACM) every 6 months

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https://rwsc.org/pam

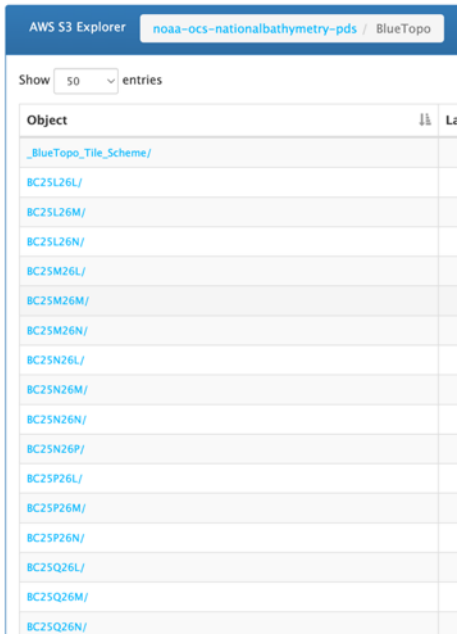
Solutions – centralized funding

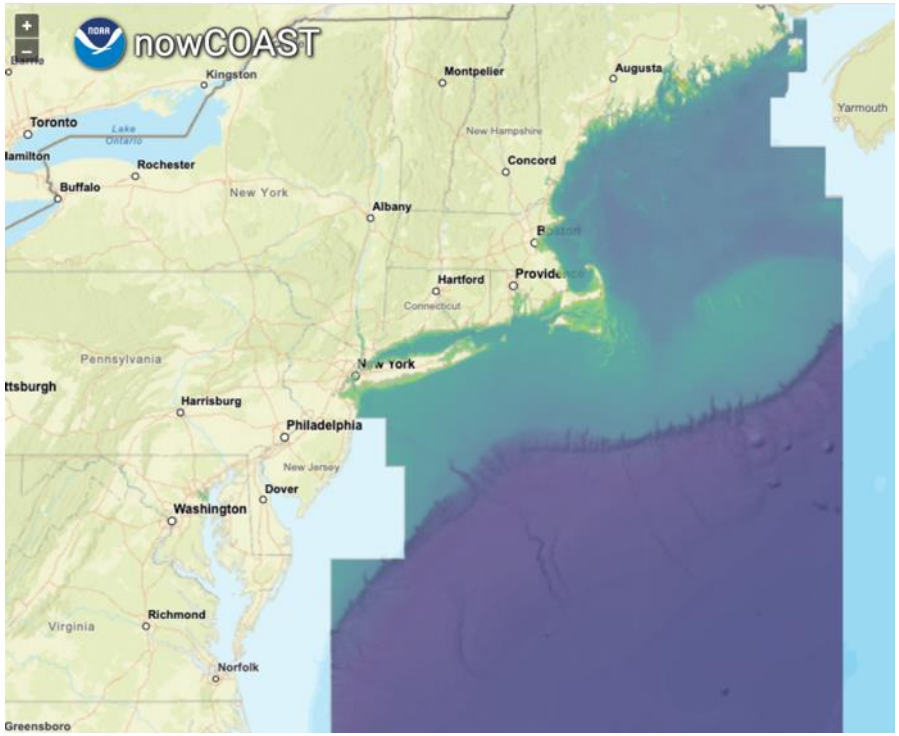
Required regional-scale research in state PPAs

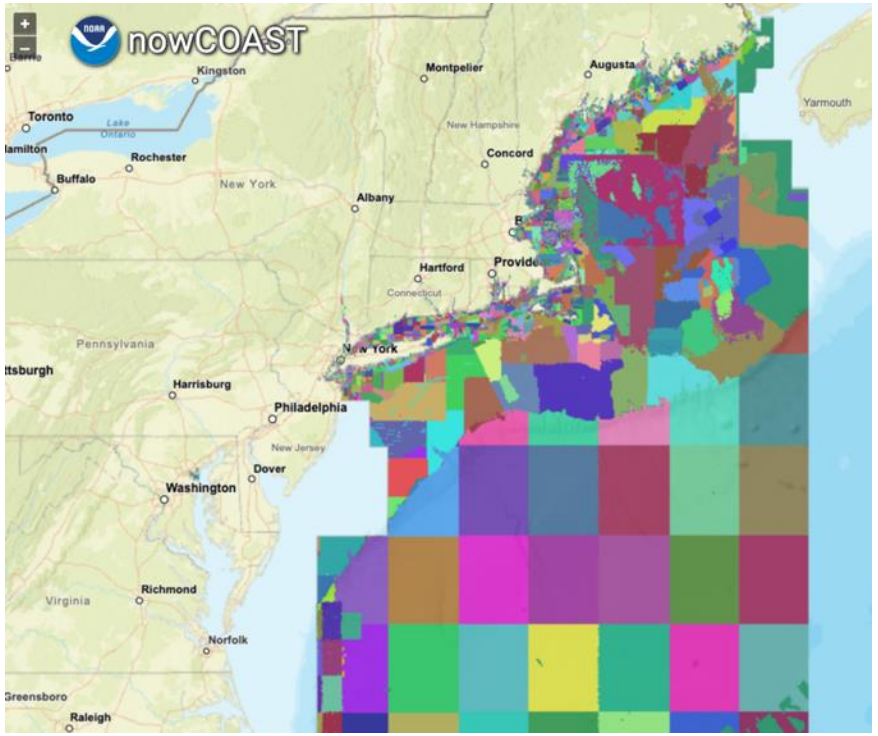
- Empire Wind and Sunrise Wind (NY)
- $4.05M starting in 2025 and $1.7M starting in 2026 or 2027
- RWSC to select research focus and issue RFPs
- Selected projects will be **required** to adhere to Subcommittee recommendations on data management, coordination, make data available

Solutions

Store data in ways that allow rapid and repeated synthesis of data products –
NOAA's BlueTopo / National Bathymetry Source







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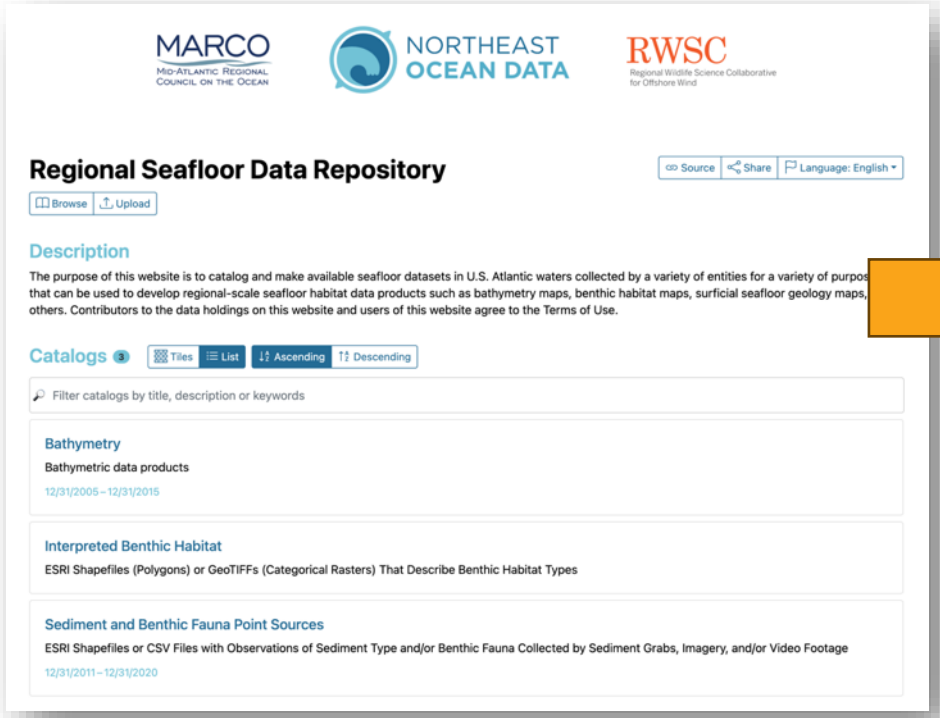
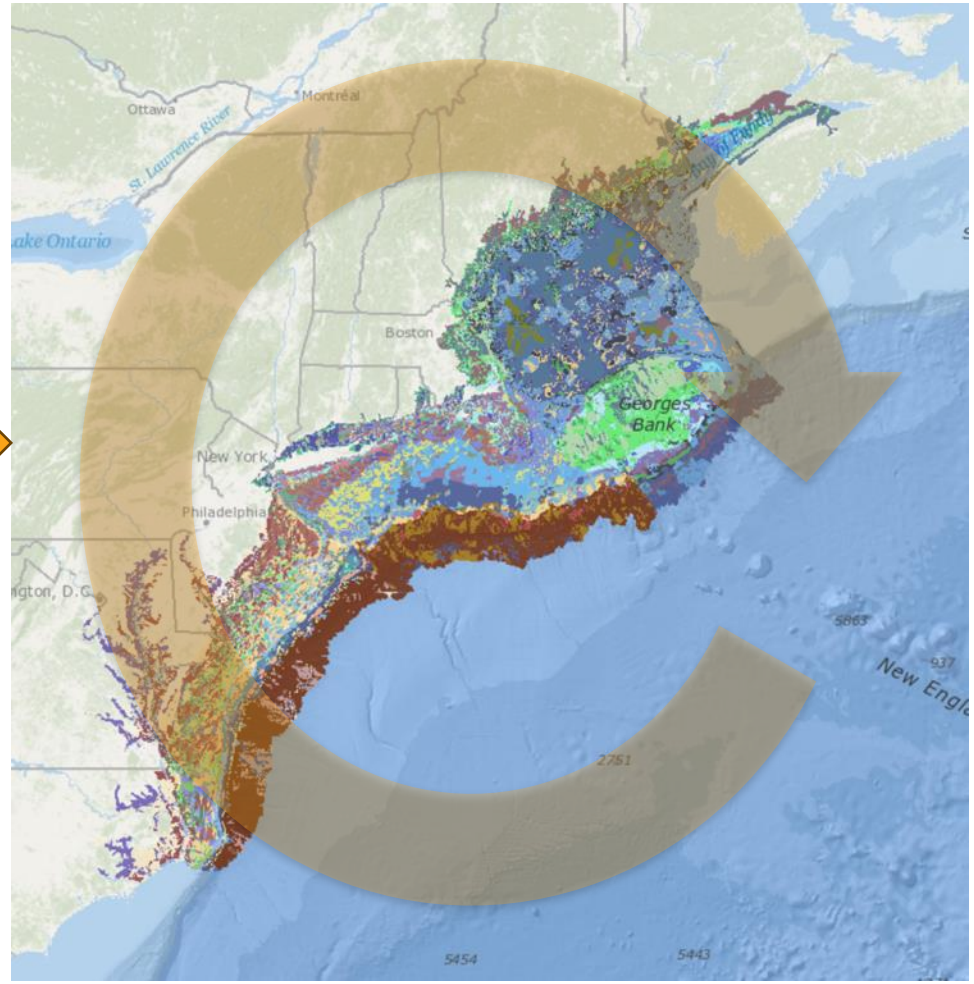
for Offshore Wind

Solutions

RWSC, NROC, MARCO hosting a regional seafloor data repository, which is free to use and collects standard metadata

Store data in ways that allow rapid and repeated synthesis of data products





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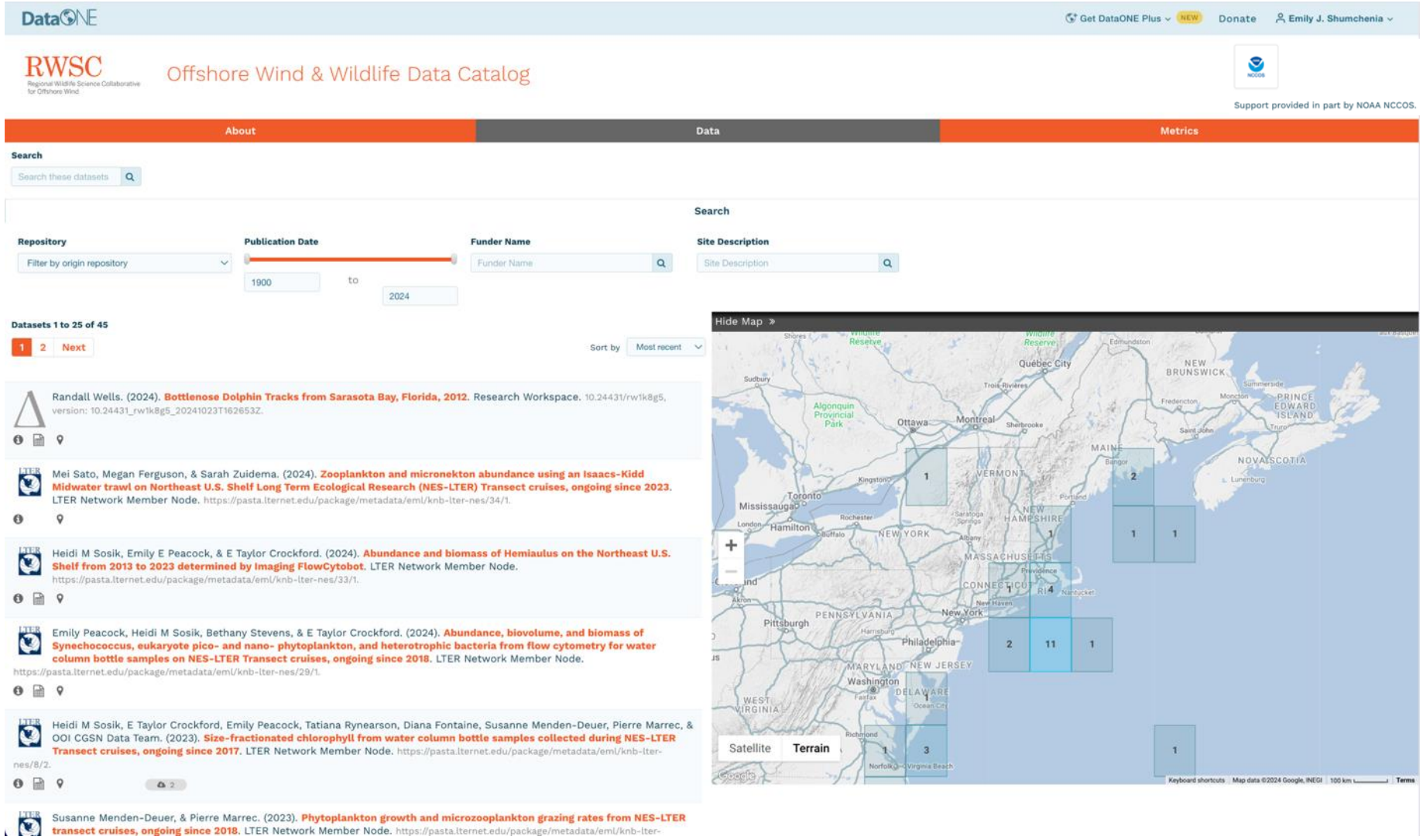
Solutions: Coordination around data standards and practices (RWSC Data Governance Subcommittee)

RWSC
Regional Wildlife Science Collaborative for Offshore Wind

(next meeting November 20, 1pm ET, Zoom)

- Detailed assessments of existing repositories with recommendations for enhancements
- Prototype Offshore Wind Data Catalog that aggregates and indexes the distributed network of repositories into a single landing page
- Minimum metadata standards for inclusion in the Catalog
- RWSC Data Policy to ensure data are FAIR and discoverable via Catalog – RWSC wants to review this with NJ ERWG and RMI
- DMSP template
- Includes BOEM OREP Data Management Program
- **Recommendations will continue to be posted at https://rwsc.org/research-data**

Proof of Concept: Offshore Wind Data Catalog



Next steps

- Need NJ ERWG and RMI to start using the RWSC recommendations on data standards, repositories, contract language **and report back**
- Case studies will help us **target** improvements to the work flow

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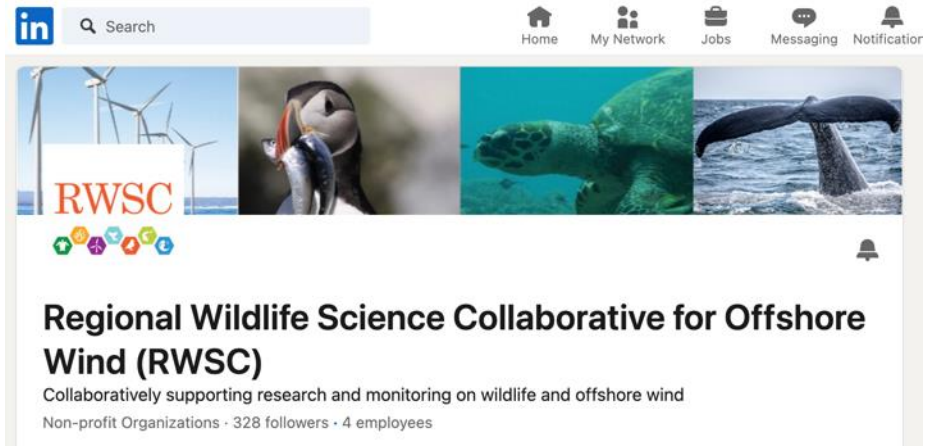
How to receive updates



RWSC
Regional Wildlife Science Collaborative for Offshore Wind

All RWSC Subcommittee meetings are open to the public: visit https://rwsc.org/events

Monthly e-newsletter: meeting invites and other news

Contact information

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emily.shumchenia@rwsc.org

Avalon Bristow, MARCO Executive Director
abristow@midatlanticocean.org

Nick Napoli, NROC Executive Director, MARCO Senior Advisor
nnapoli@northeastoceancouncil.org

ROSA
Responsible Offshore Science Alliance

New Jersey Environmental Resources Working Group

November 14, 2024

Reneé Reilly, Mike Pol, Tricia Perez

Informing decision-making at the intersection of offshore wind & fisheries

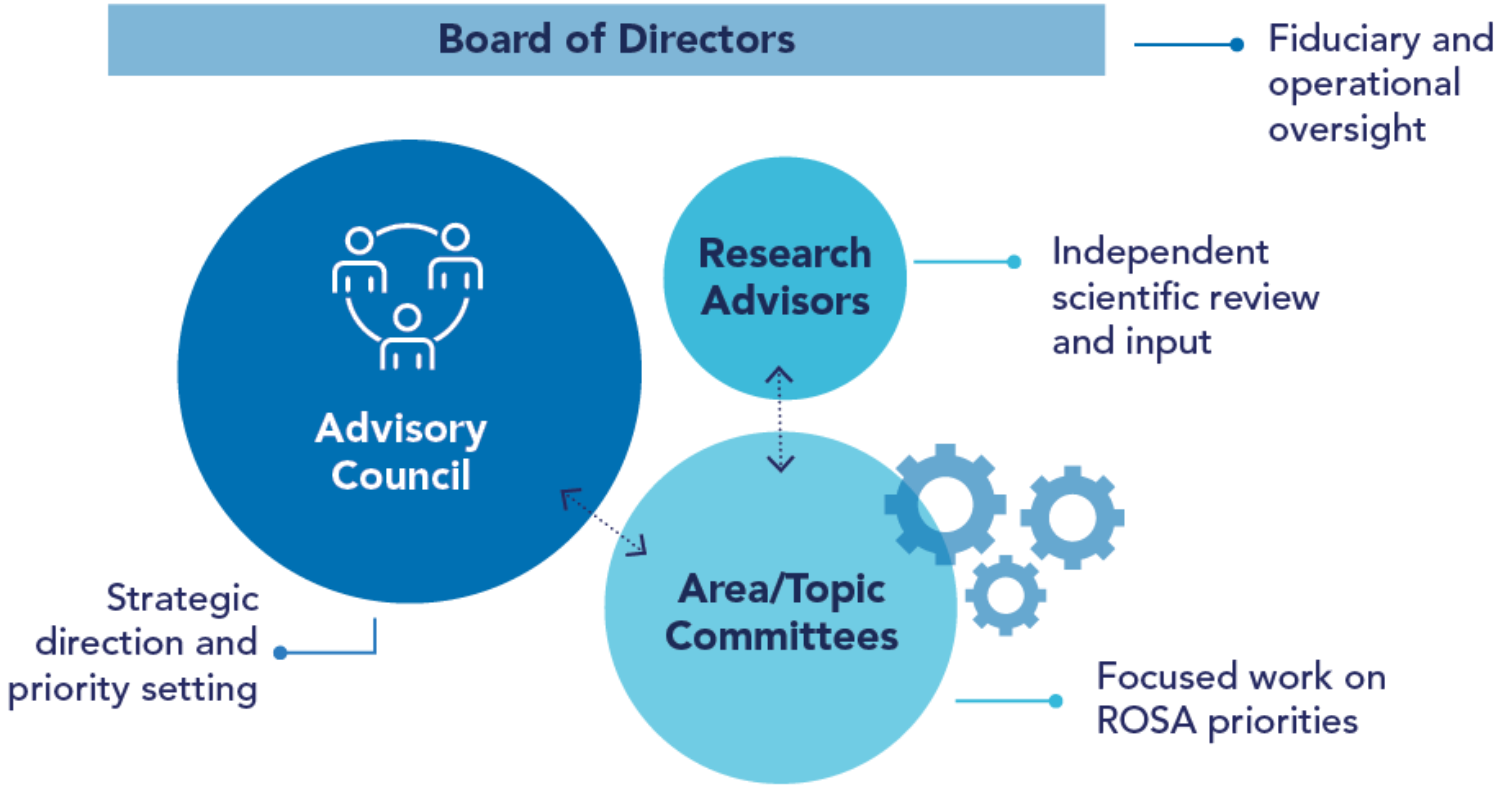
Mission:

The Responsible Offshore Science Alliance (ROSA) is a nonprofit organization that **advances research, monitoring, and methods** on the effects of **offshore wind energy development on fisheries** across US federal and state waters.

We serve as an objective resource for all sectors and facilitate the coordination of regional scientific research to collaboratively and efficiently deepen understanding.

ROSA

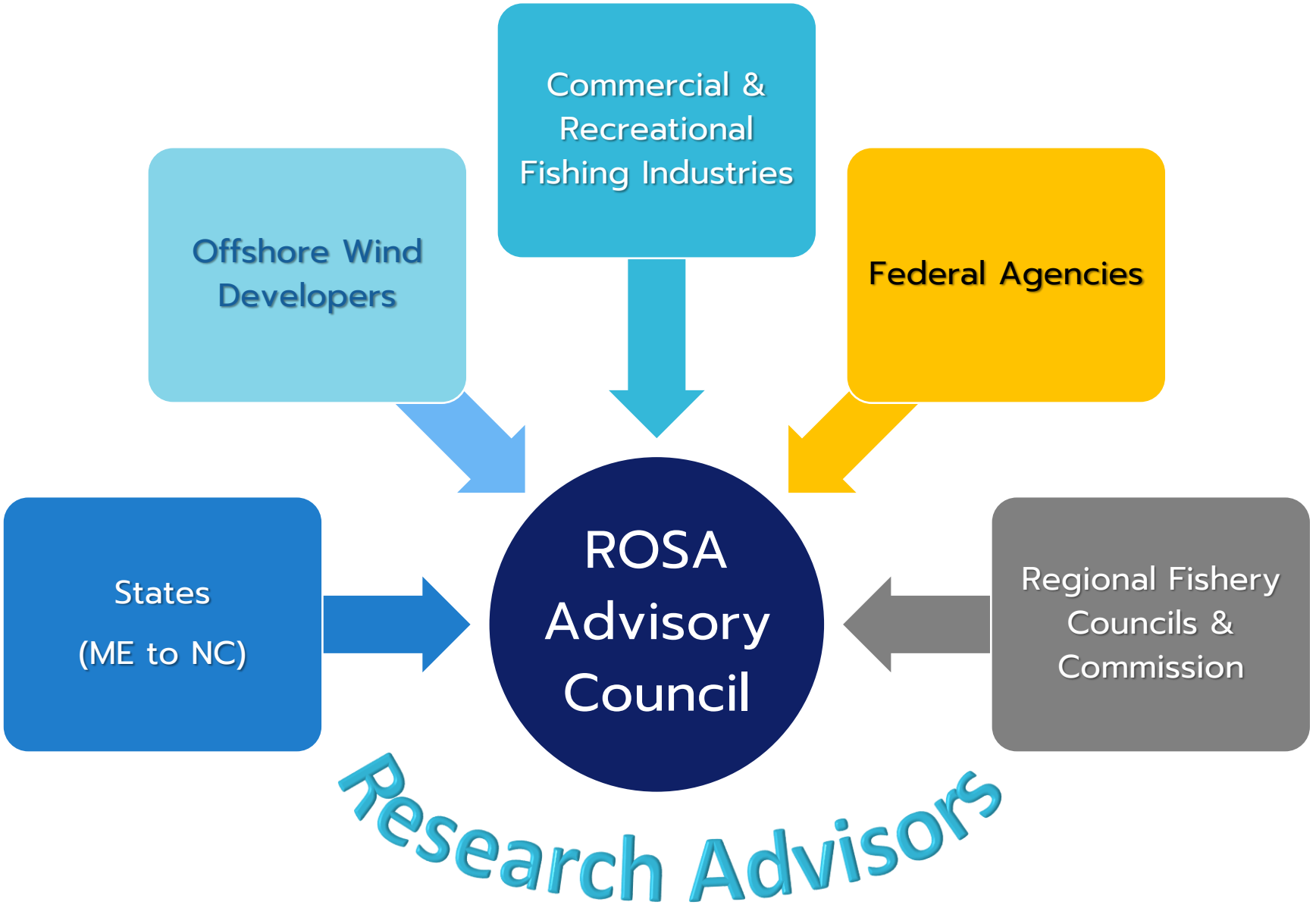
ROSA's History & Organizational Structure



- Formed in early 2019 as a 501(c)3
- Partnership between RODA & OSW developers

ROSA

ROSA Advisory Council



ROSA

Strategic Plan – 3 Key Objectives

Administer Regional OSW Fisheries Research & Monitoring

Facilitate Assessment of Regional & Cumulative Impacts

Build Coordination Through Engagement

ROSA

Administer Regional OSW Fisheries Research: Current State

ROSA

1) Administer Regional OSW Fisheries Research & Monitoring

Administer Regional OSW Fisheries Research & Monitoring

Facilitate Assessment of Regional & Cumulative Impacts

Build Coordination Through Engagement

- **FishFORWRD Maintenance**
- **OSW Fisheries Research Funder Coordination**
- **Gaps Analysis**
- **Topic Area Ranking**
- **Regional RFP Process**
- **Project Awarding & Management**

ROSA

Fish & Fisheries Offshore Wind Research Database (FishFORWRD)

ROSA Responsible Offshore Science Alliance

Leadership | Programs | Resources | News | Support Us | About

FishFORWRD Database | Welcome Page | Current Projects | Database Center | Submit Project

Welcome to the **FishFORWRD Database**
Developed in Partnership by **ROSA**, **Attentive Energy**, and **WSP**

Purpose of this Database
FishFORWRD is a catalog of all East Coast research, monitoring efforts, and stated research needs for offshore wind, fish, and fisheries. This database differentiates ongoing projects funded to examine offshore wind interactions from other programs that provide valuable data, but which haven't necessarily been designed to assess offshore wind impacts. The objective of FishFORWRD is to increase awareness of ongoing work, avoid duplication of efforts, and create a common understanding of research needs. This tool is meant for research funders, fisheries and offshore wind researchers, offshore wind developers, and the public.

How to use this Dashboard
This dashboard is comprised of a number of tabs, each with their own purpose and functionality with features to help you explore page content or visuals. All tables and plots are interactive and can be manipulated via the mouse. Use this dashboard to explore completed and ongoing research and monitoring efforts, explore research needs expressed by our community, understand which research needs have been funded and are under exploration (under development), and which research gaps still remain (under development). Filter projects and research needs by location, research category, methodology used, funder and more.

Explanation of Tabs

Current Projects: : View completed and ongoing projects with high level attributes. This includes funded research and implemented offshore wind

Total Project Count
170

Implemented Developer Fisheries Monitoring Surveys
73

Total Unique Research Categories
11

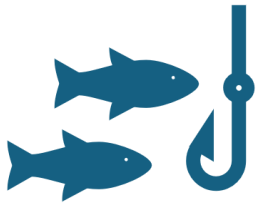
Active East Coast Funding Entities
25

Total Identified Needs
324

Types of Methodologies Employed
18

For support, issue reporting, or for features you'd like to see - contact: info@rosascience.org
This dashboard was last published: 2024-07-15 Version 2.1.0

FishFORWRD v2.1.0: Rebuild & Relaunch



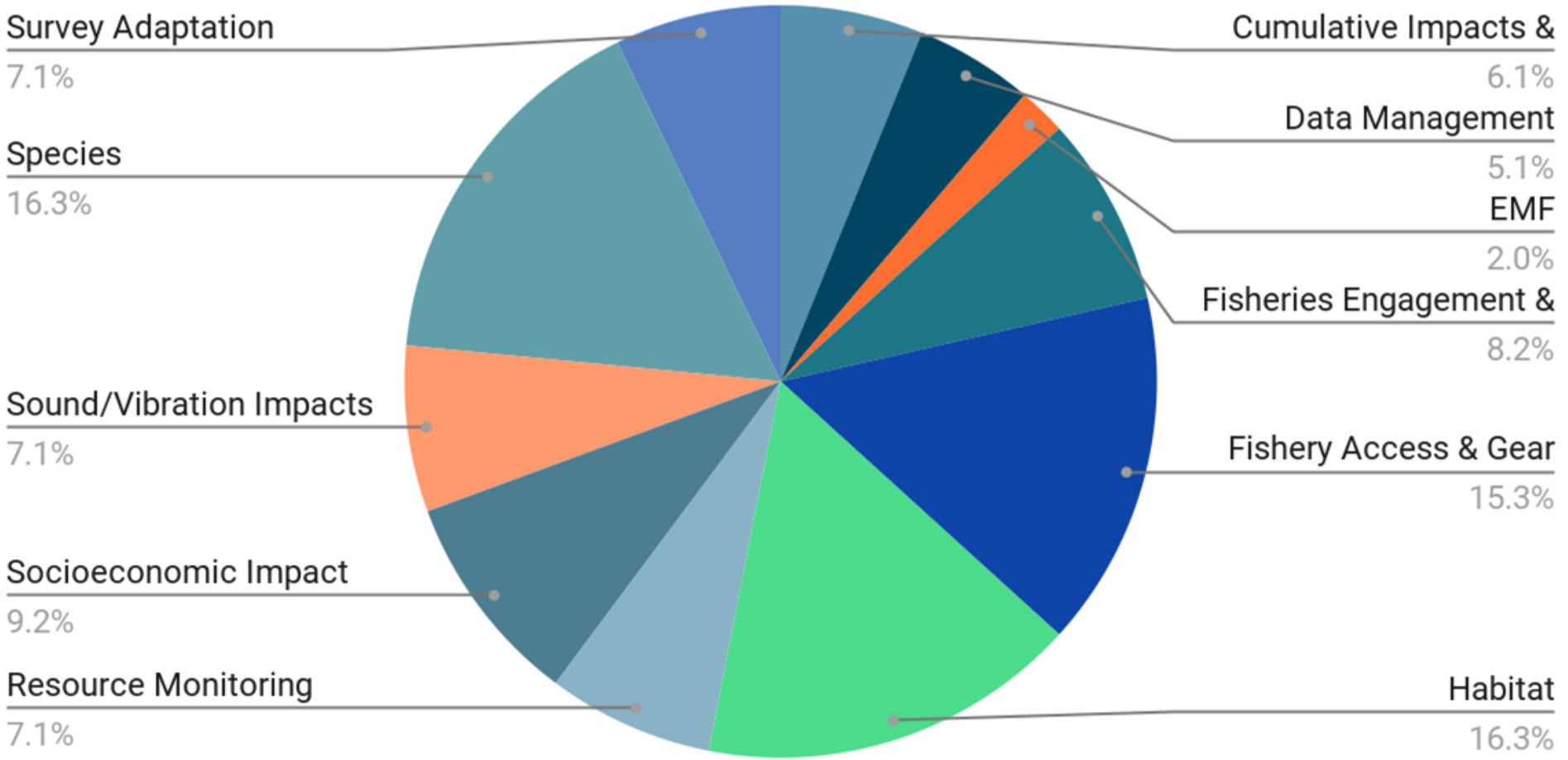
New Research Projects & Developer Fisheries Monitoring Plan Surveys

New Research Needs

New Webtool

FishFORWRD Insights

Research Projects (less OSW Developer Fisheries Monitoring Plans)

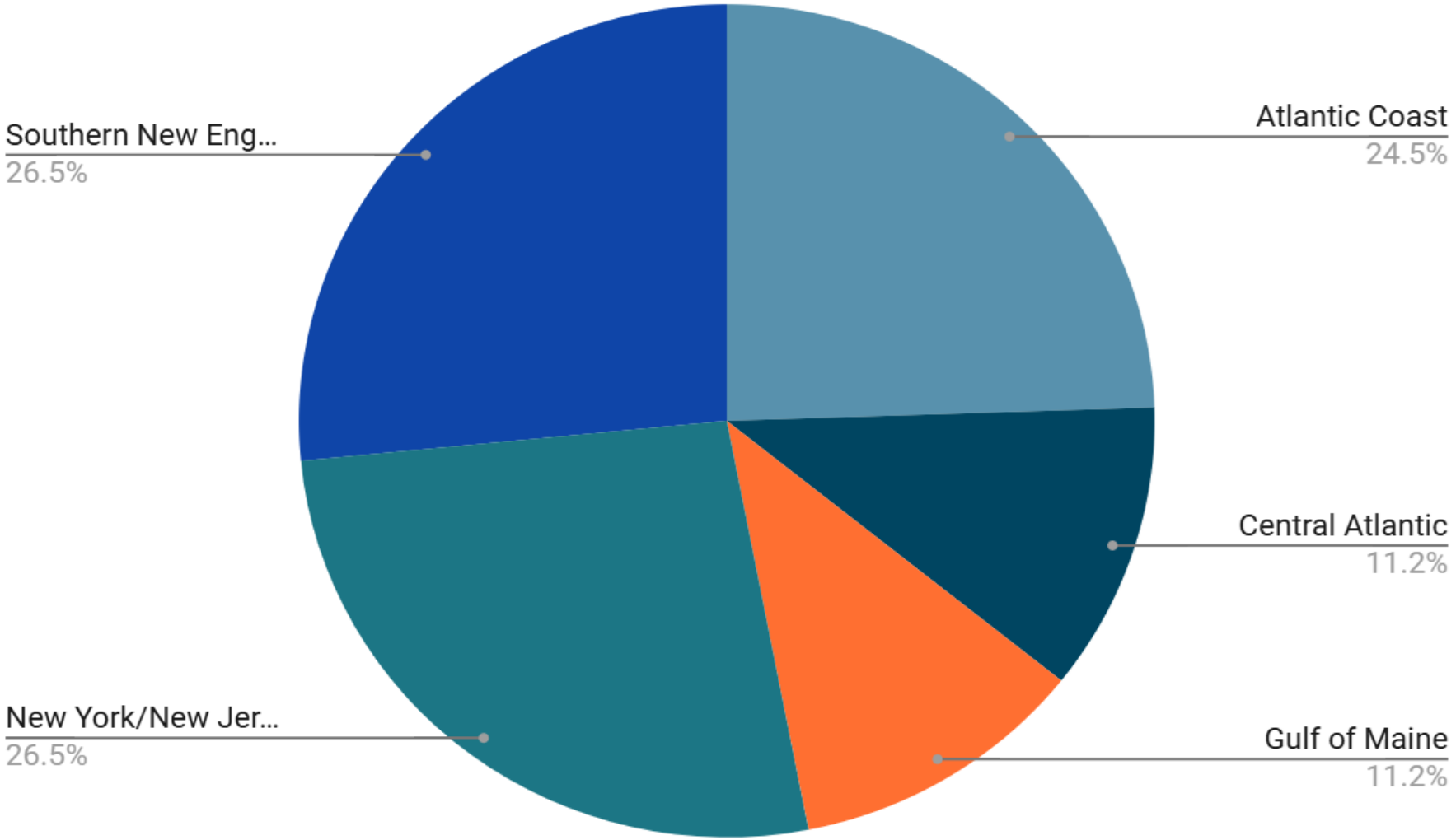


98
projects

ROSA

FishFORWRD Insights

Research Projects (less OSW Developer Fisheries Monitoring Plans)



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projects

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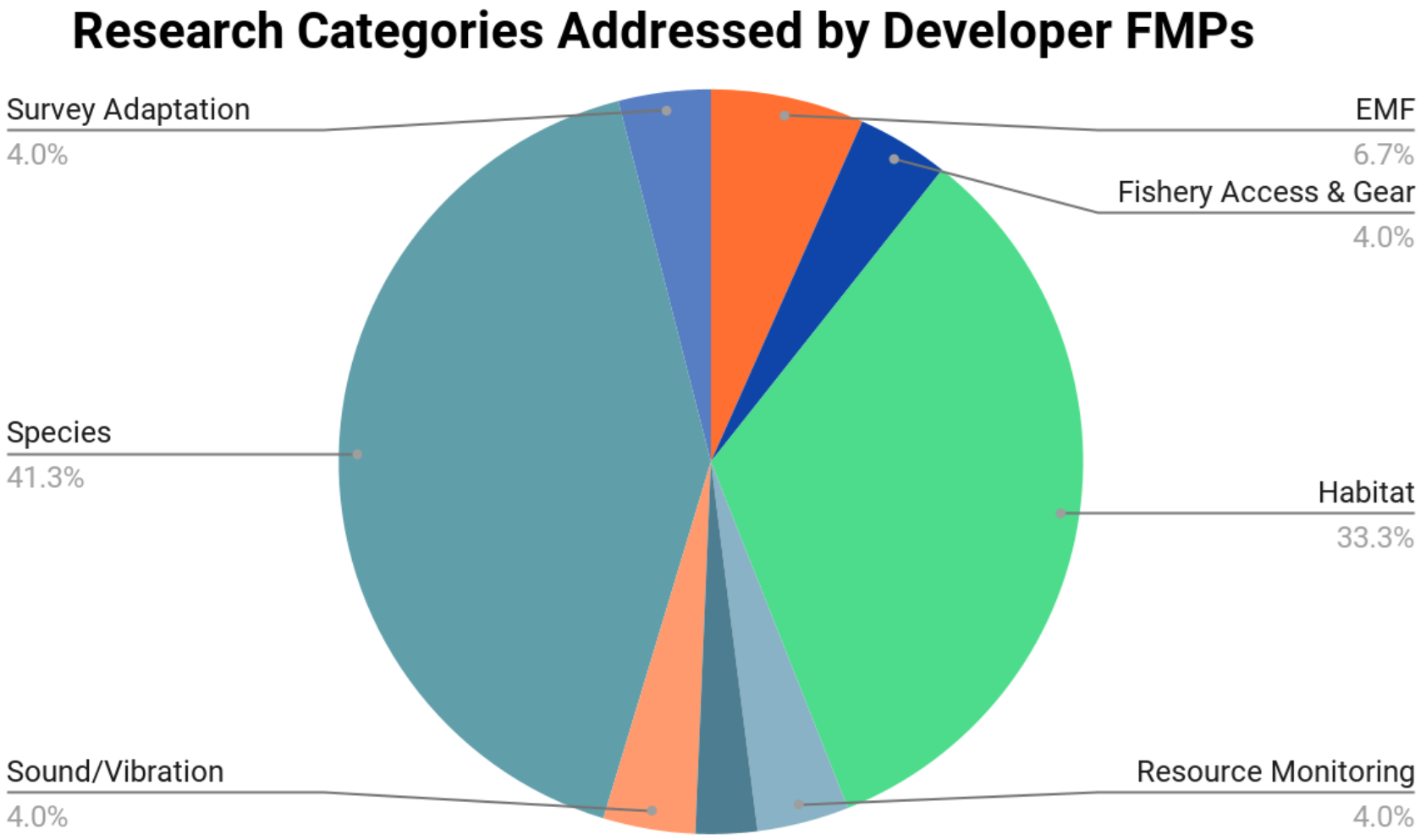
FishFORWRD Insights: Developer Monitoring

Dominion Energy
Equinor
Orsted
US Wind
Vineyard Wind



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1) Administer Regional OSW Fisheries Research & Monitoring

Administer Regional OSW Fisheries Research & Monitoring

Facilitate Assessment of Regional & Cumulative Impacts

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ROSA

Offshore Wind & Fisheries Funder Coordination

Next Meeting: November 26, 2024

Objective: Gather funding entities (federal, state, & non-profit) on the East Coast to coordinate research & monitoring funds for fisheries & OSW.

1) Administer Regional OSW Fisheries Research & Monitoring

Administer Regional OSW Fisheries Research & Monitoring

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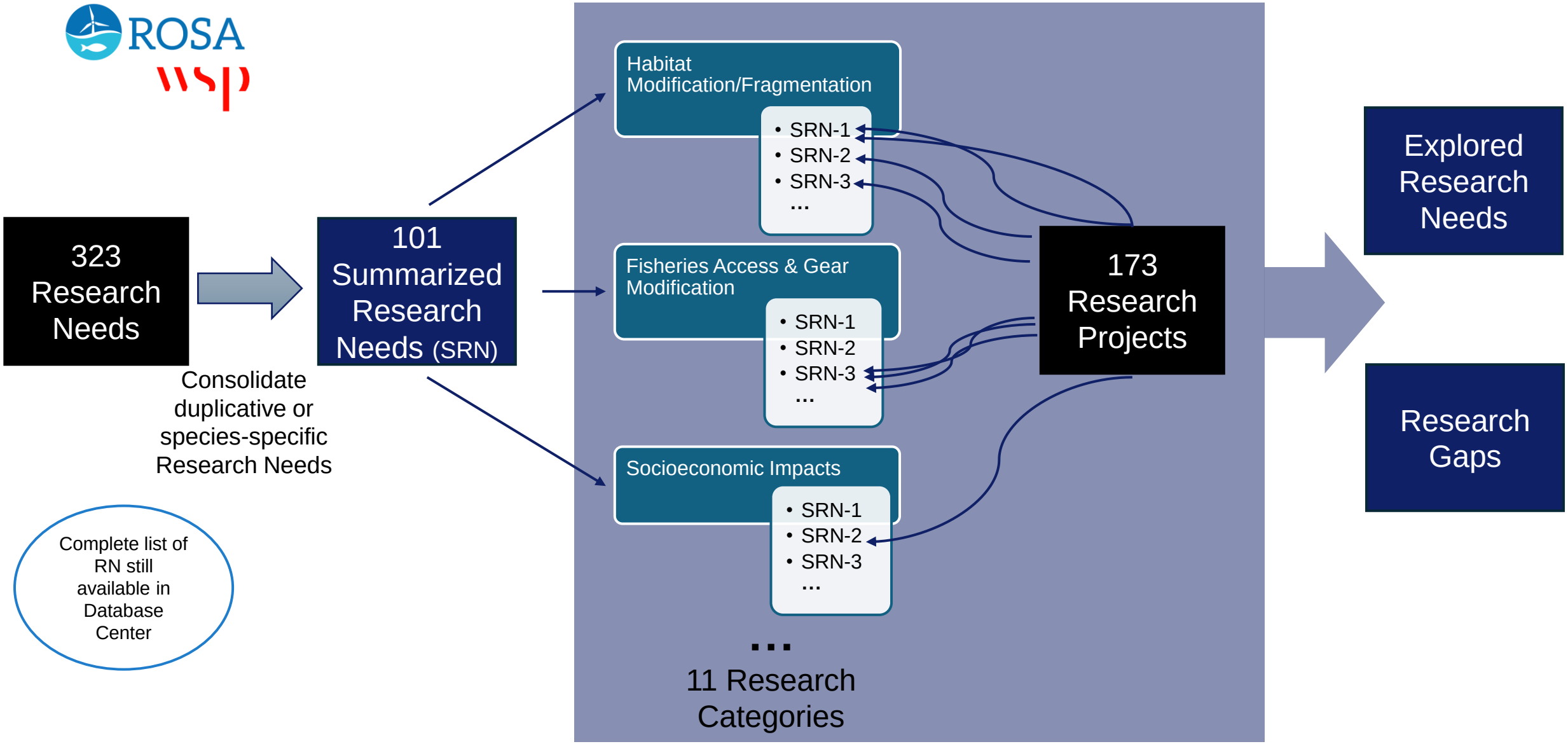
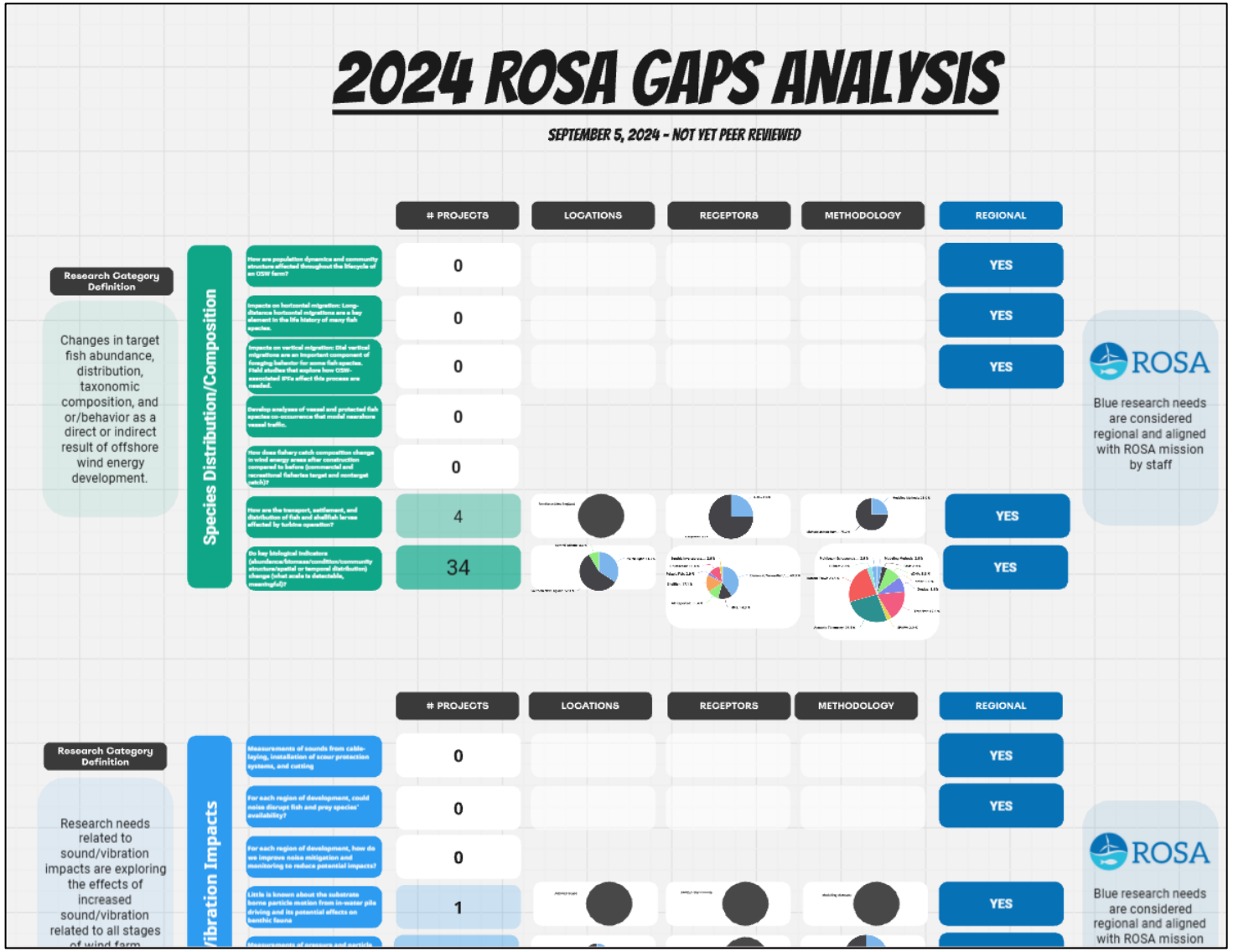
Research Gaps Analysis



Research Gaps Analysis



Research Categories

- Habitat Fragmentation/Modification
- Socioeconomic Impact
- Cumulative Impacts
- Sound/Vibration Impacts
- Species/Distribution/Composition
- EMF
- Fisheries Access & Gear Modification
- Fisheries Engagement & Capacity Building
- Survey Adaptation
- Data Management
- Resource Monitoring

more information at
rosascience.org/resources/fishforwrd

1) Administer Regional OSW Fisheries Research & Monitoring

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ROSA

2024 Gaps
ROSA Reg
Topic Area

Provide rankings and opini

OPPORTUNITY TO PROVIDE FEEBAC
1. Section 1 - High Level Ranking of
2. Section 2 - Ranking within Resear

Start now

1

Rank High Level Topic Areas - FISH BIO

drag a topic or use the arrows to order

- Species Distribution/Composition
- Sound/Vibration Impacts
- EMF
- Habitat Fragmentation/Modification
- Resource Monitoring
- Survey Adaptation
- Cumulative Impacts & Fisheries Management In
- Data Management

2

Rank High Level Topic Areas - FISHERI

drag a topic or use the arrows to order

- Socioeconomic Impacts
- Fisheries Engagement & Capacity Building
- Fisheries Access & Gear Modification
- Cumulative Impacts & Fisheries Management In
- Data Management

16

EMF

You may provide a ranking of research needs below and/or provide written feedback on research needs in this topic area

drag a topic or use the arrows to order

- Laboratory measurements of energized HVCs are needed to generate spatiotemporal models of EMF emissions.
- A better understanding of the temporal variations in power levels and the resulting spatio-temporal variations in the emitted EMF are required.
- Expected and in-situ OSW EMF exposure intensities
- How do fisheries species respond to EMF-emitting cables? Responses include behavior, movement, navigation, physiology, foraging, egg development, hatching success, and larval fitness. Are EMF-sensitive species aggregating or avoiding energized cables?
- While research should continue to study how individuals respond to EMFs at different stages of their life cycle, the overarching concern is whether specific observed behavioral responses to EMFs are likely to result in population-level impacts

17

EMF

- Are the gaps in this research category: important, urgent, achievable today?
- Are there research needs missing from this list?
- What types of projects would produce the outcome to these research questions?
- What types of data and final products would advance our knowledge of these research questions?
- Provide any additional detail or feedback you'd like

Enter your answer

1) Administer Regional OSW Fisheries Research & Monitoring

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ROSA

Notice of Intent: Regional RFP

ROSA
Responsible Offshore Science Alliance

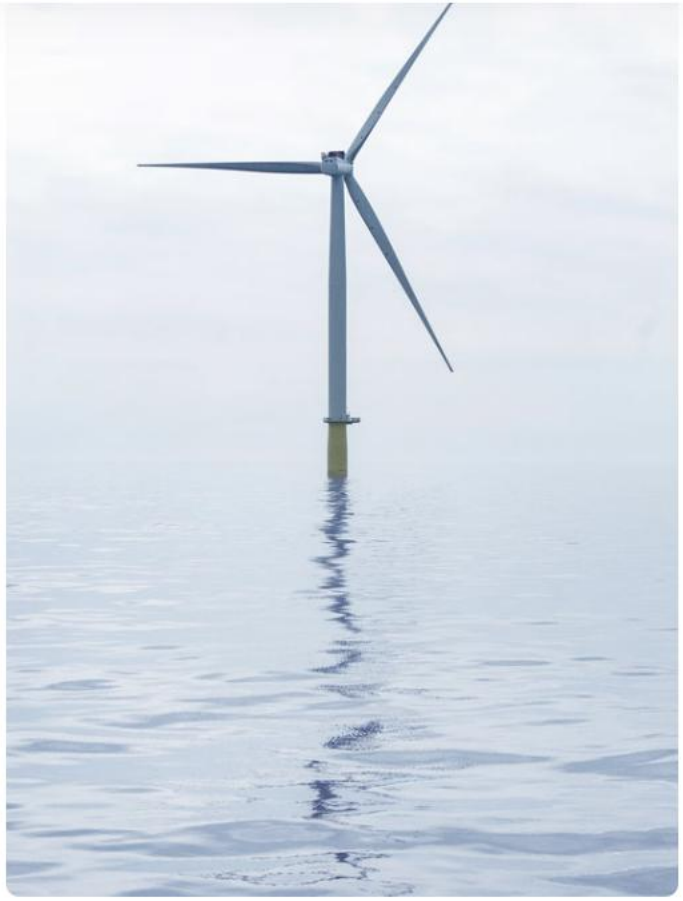
Leadership Programs Resources News Support Us About

Fisheries Offshore Wind Research through ROSA's Regional Research Program

OCTOBER 28, 2024

ROSA is excited to announce our Notice of Intent to issue an upcoming Request for Proposals (RFP) to launch our Regional Research Program. The upcoming RFP will make approximately $3,400,000 available to regional offshore wind fisheries research on the U.S. East Coast. Through this RFP and projects selected from it, ROSA seeks to advance the methods and understanding of regional and cumulative effects of offshore wind on fish and fisheries and support meaningful solutions to the challenges surrounding responsible ocean co-use.

Funding for projects awarded from the ROSA Regional Research Program for this RFP are being provided by the Empire Wind 1 project, which is being developed by Equinor, LLC, as included in the New York State Energy Research and Development Authority (NYSERDA) New York 4 solicitation for awarded Offshore Wind Renewable Energy Certificates. These regional research dollars are intended to identify and fund hypothesis-driven science that follows a research plan, leverage ongoing research and coordination activities, and deliver timely results to inform fisheries and offshore wind planning, management, and assessment.



ROSA engaged in a thorough, open prioritization process and a range of coordination activities to identify high-priority research topics. ROSA conducted a comprehensive Research Gaps Analysis using the ROSA Fish and Fisheries OffshoRe Wind Research Database (FishFORWRD) that includes research needs from all known relevant sources and ongoing offshore wind fisheries research and monitoring efforts. To ensure no research

Strategic Plan – 3 Key Objectives

Administer Regional OSW Fisheries Research & Monitoring

Facilitate Assessment of Regional & Cumulative Impacts

Build Coordination Through Engagement

ROSA

2) Facilitate Assessment of Regional & Cumulative Impacts

Administer Regional OSW Fisheries Research & Monitoring

Facilitate Assessment of Regional & Cumulative Impacts

Build Coordination Through Engagement

Data Standardization

OSW Fisheries Research Funder Coordination

Update & Maintain Project Monitoring Guidelines

Committees of Practitioners

Listening Sessions

ROSA

Data Governance Program

ROSA Data Governance Program

ROSA's Data Governance Programs will provide guidance for data on fisheries and offshore wind, in support of future regional or cumulative impact assessments and to complement and to support interoperability with other data efforts in the region.

Why a Data Governance Program?

For data to inform decision-making, it must be findable, accessible, interoperable, and reusable, also known as FAIR. This standard can be challenging to achieve when data are collected by multiple partners, for different purposes, across state and federal borders, and by both public and private entities. Data governance supports data sharing with consistent policies, processes, standards, and workflows that can be used by everyone in the data ecosystem. After reviewing the state of fisheries data production, storage, and accessibility in 2022, and participating in data governance discussions with RWSC, ROSA decided to launch a data governance program focused on offshore wind-related fisheries data.

Interested in Joining the Program?

ROSA is currently building its Data Governance Committee. On our projects, we bring together the fishing community, OSW developers, researchers, state and federal government, and others. Any organization that generates scientific data related to the impact of OSW on fish and fisheries is invited to collaborate with us. Please fill out the following form and we will contact you for our first meeting: https://forms.office.com/r/BzM3L3igQr

ROSA

3) Build Coordination through Engagement

Administer Regional OSW Fisheries Research and Monitoring

Facilitate Assessment of Regional and Cumulative Impacts

Build Coordination through Engagement

- **FishFORWRD Maintenance**
- **OSW Fisheries Research Funder Coordination**
- **Update & Maintain Project Monitoring Guidelines**
- **Committees of Practitioners**
- **Listening & Working Sessions**
- **Information Sharing & Distribution**
- **Provide Fora (Quarterly Advisory Council Meetings, Convene Fisheries Symposia)**
- **Capacity Development (Internship Program, Graduate Committees)**
- **Advisory Panels & Subcommittees (RWSC, ERWGs, FWGs)**

Thank you!

ROSA is committed to

- **producing a bridge** across sectors,
- **promoting science-based discourse around ocean co-use** &
- **supporting meaningful solutions** to realize the important, albeit challenging, goal of equity among ocean users.

ROSA

Research and Monitoring Initiative Updates

Caitlin McGarigal and Heather Genievich

- New projects
- RFP
- Research Needs
- Website tour

RMI Updates

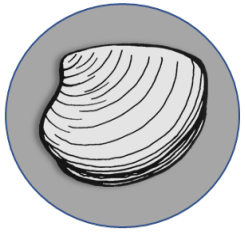
Caitlin McGarigal (DEP-DSR), Colleen Brust (DEP-MRA), Heather Genievich (DEP-DSR) & Team

New Logo!

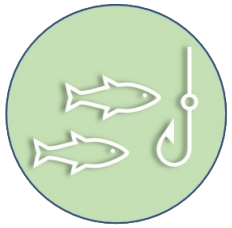
New Jersey Offshore Wind
Research & Monitoring Initiative

New Jersey's Offshore Wind Research and Monitoring Initiative

>$18 Million Awarded to Current Projects



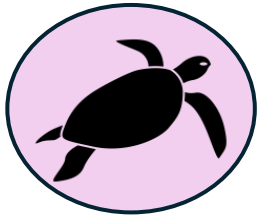
Novel Surfclam Dredge & Carbonate Chemistry



Socioeconomics of Rec. Fisheries

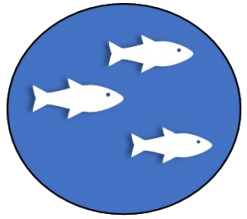
Fish Community Assessment Using eDNA

Motus Network Expansion



Turtle tagging & Biological Assessment

EcoGlider Environmental Monitoring (extended)



Acoustic Fish Telemetry

Harbor Seal Tracking & Health Assessment

Whale Satellite Tagging

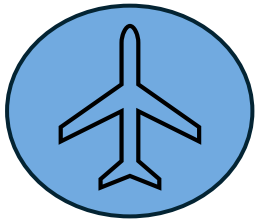
Surfclam Fishery Enhancement

Multi-focus RFP
$4.75 M
(in review)

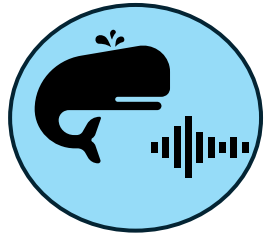
OSW Structures as Monitoring Platforms

Near Real-Time Passive Acoustic Monitoring

Turbine Foundations & Cold Pool



Cetacean Aerial Survey



Archival Passive Acoustic Monitoring

Institutional Support

RWSC
Regional Wildlife Science Collaborative for Offshore Wind

ROSA
Responsible Offshore Science Alliance

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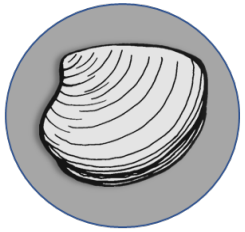

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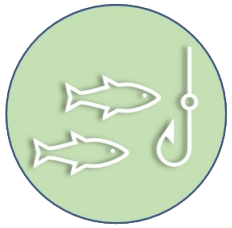

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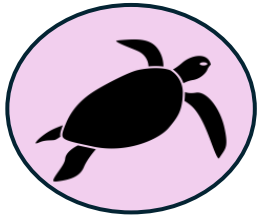

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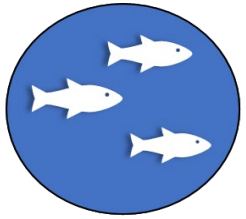

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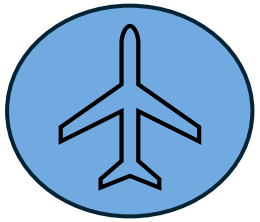


Cetacean Aerial Survey

Archival Passive Acoustic Monitoring

Institutional Support

RWSC

Regional Wildlife Science Collaborative for Offshore Wind

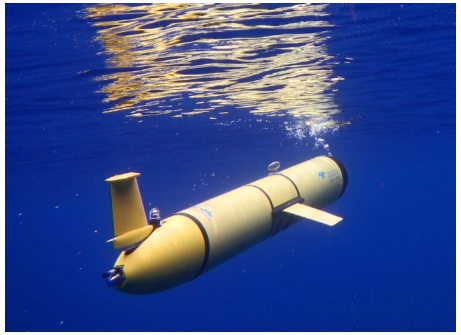
ROSA

Responsible Offshore Science Alliance

New Jersey Offshore Wind Research and Monitoring Initiative

Ocean Glider Environmental & Ecological Monitoring – Extended 3 years

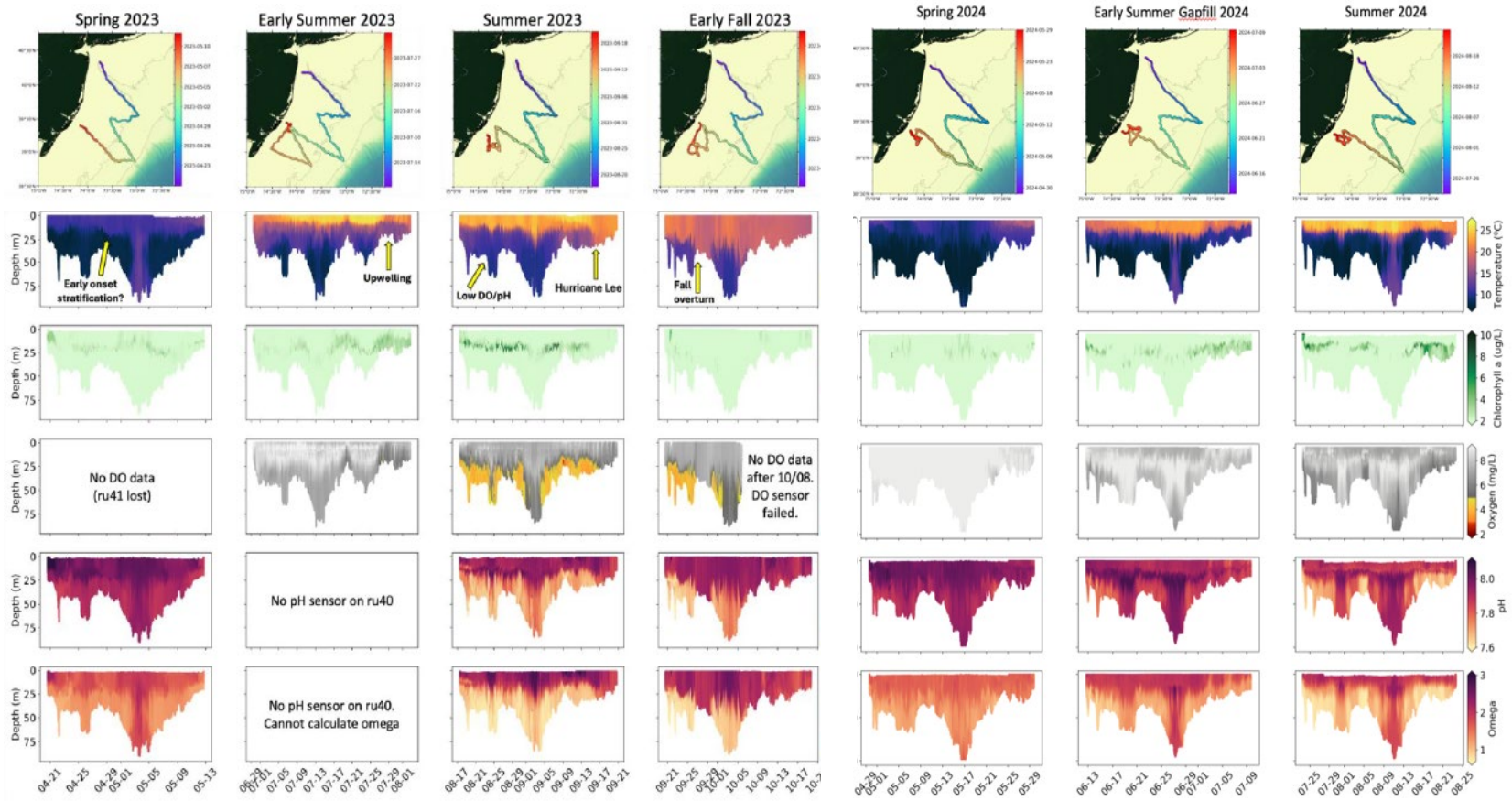
Josh Kohut & Grace Saba
(Rutgers University Center for Ocean Observing Leadership)



Oceanographic Data Collected

Depth
Temperature
Chlorophyll-a
Dissolved Oxygen
pH
CDOM
Salinity
Density

High resolution physical/chemical ocean data



(Preliminary Data)

New Jersey Offshore Wind Research and Monitoring Initiative

Ocean Glider Environmental & Ecological Monitoring – Extended 3 years

Josh Kohut & Grace Saba
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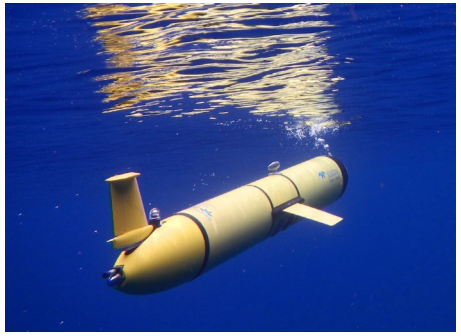
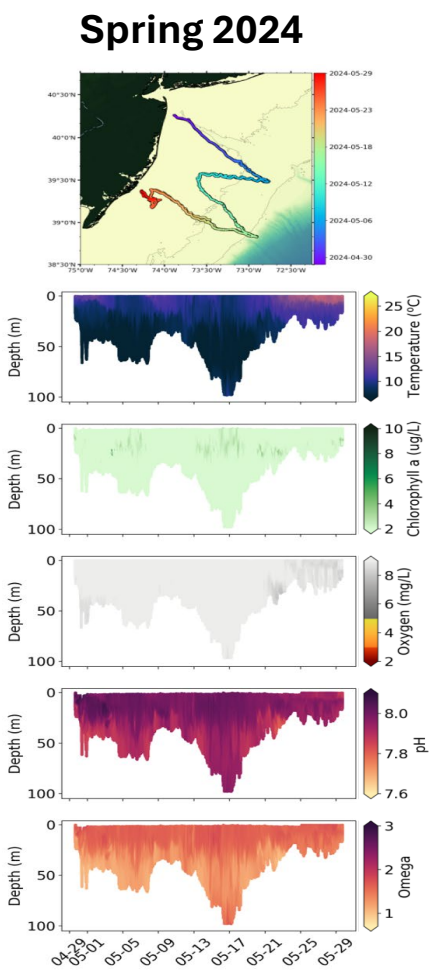
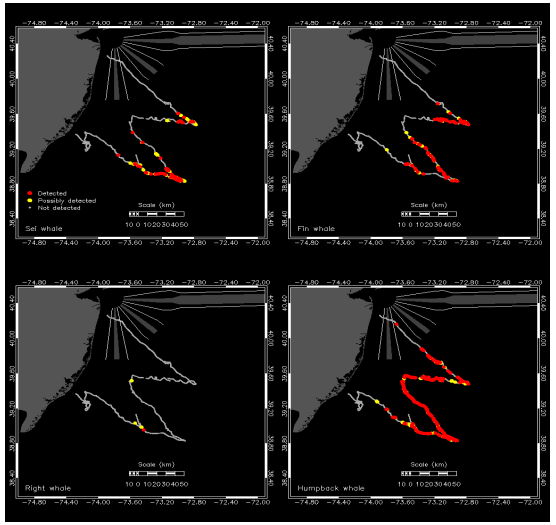
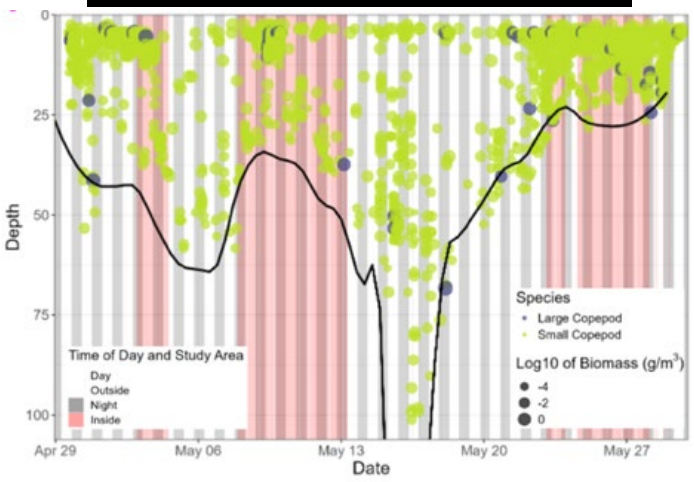


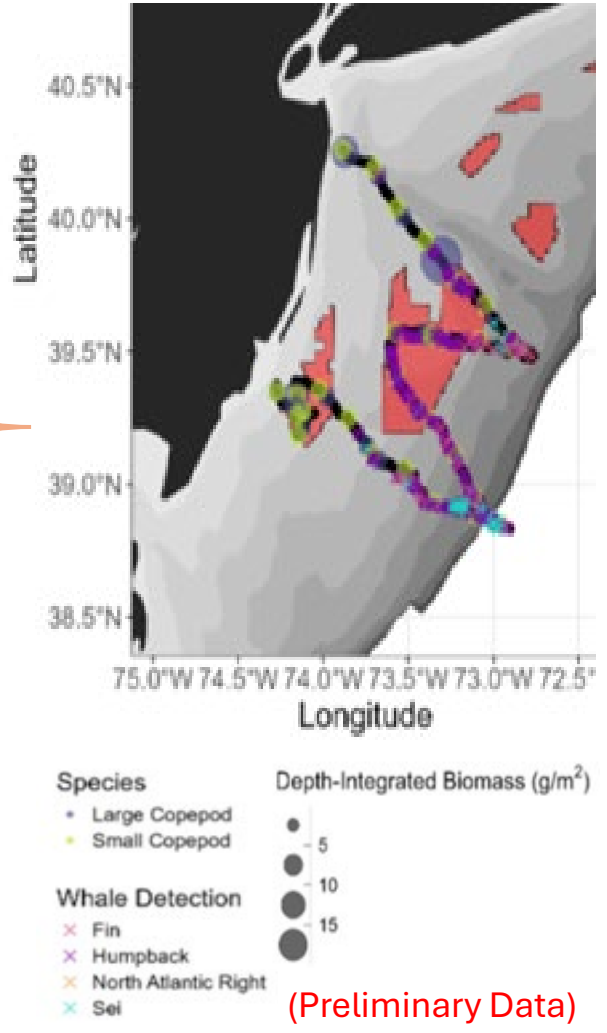
Biological Data Collected

DMON (whale acoustic sensor)
Vemco acoustic receiver
AZFP (zooplankton, pelagic fish)









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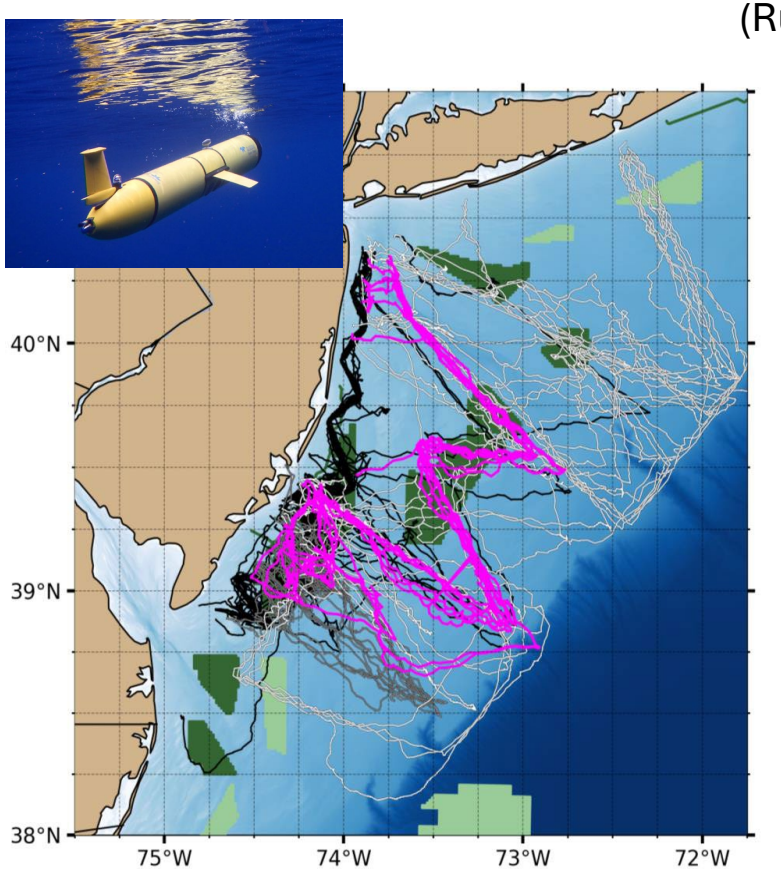


10 glider surveys per year (pink)
2023-2028

Extension Project Specs

- Additional three survey years ($2.8 M)
- Evaluate seasonal & interannual variability
- Develop climatologies; Correlate environmental conditions with wildlife distributions
- Compare preconstruction & construction periods

RMI projects

Regional Contribution

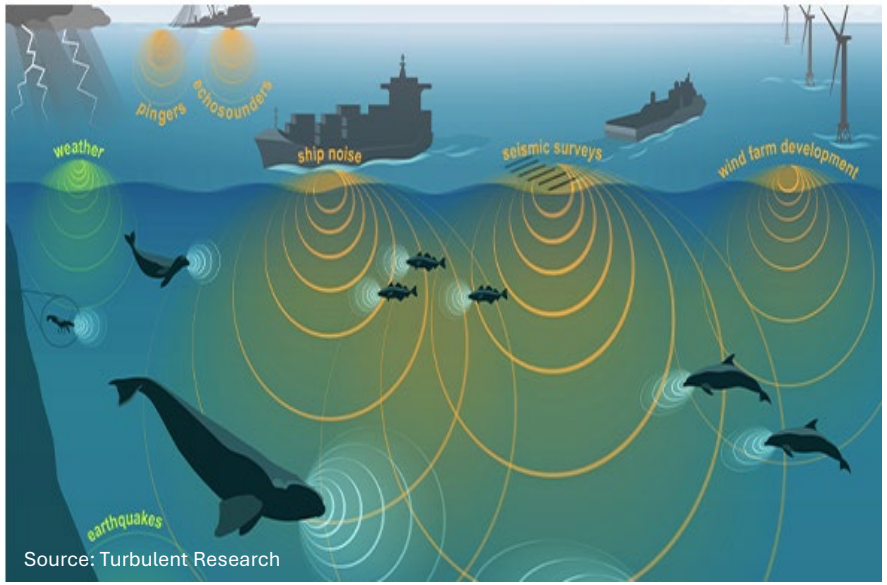
2024 State of the Ecosystem
Mid-Atlantic
NOAA
MARACOOS
Ocean Information for a Changing World
IOOS
Integrated Ocean Observing System
NATIONAL WEATHER SERVICE
U.S. DEPARTMENT OF COMMERCE-NOAA
MATOS
Robots4Whales
Passive Acoustic Cetacean Map

New Jersey Offshore Wind Research and Monitoring Initiative

Cetacean Baselines and Ambient Noise using Passive Acoustic Monitoring (PAM)

Howard Rosenbaum & Melinda Rekdahl (Wildlife Conservation Society)
Keith Dunton & Jason Adolf (Monmouth University)

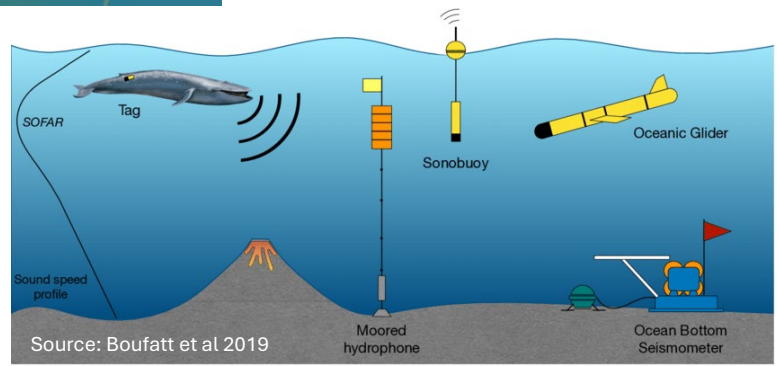
Sources of Noise



Source: Turbulent Research

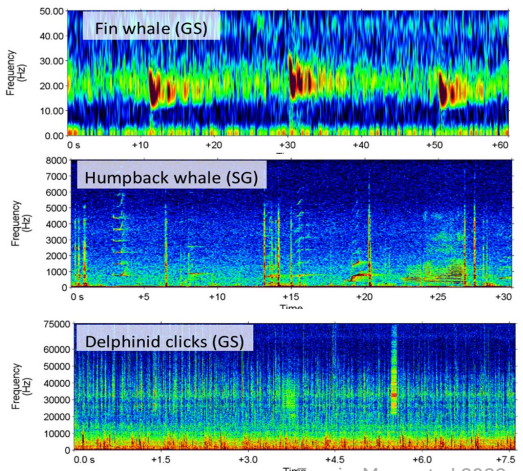
- $2 M for 2 years (12 stations)
- Monitor preconstruction/construction soundscape
- Monitor seasonal presence of whales/dolphins around WEAs

PAM-integrated Platforms



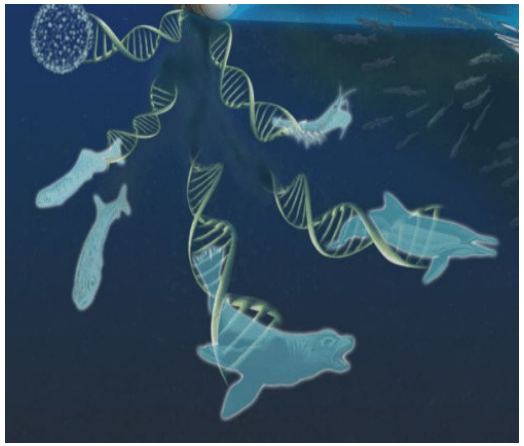
Source: Boufatt et al 2019

PAM



Trouin-Muoy et al 2022

eDNA


Source: MBARI

New Jersey Offshore Wind Research and Monitoring Initiative

Cetacean Baselines and Ambient Noise using Passive Acoustic Monitoring (PAM)

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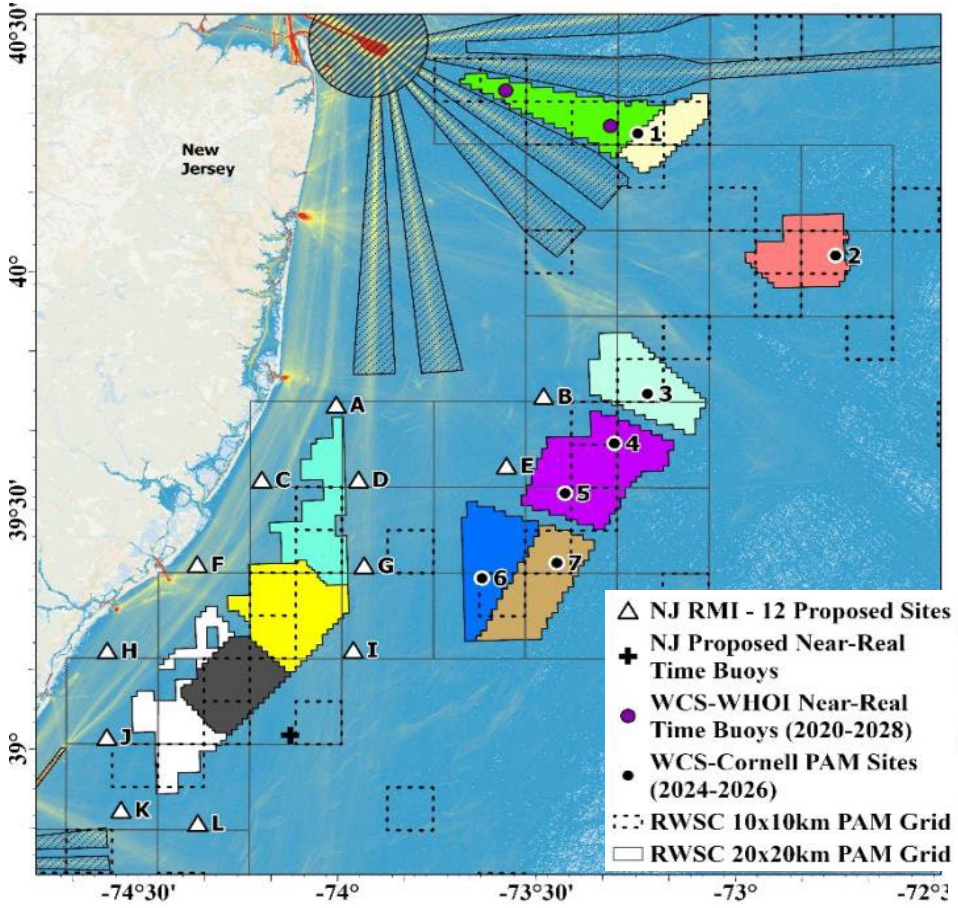
PAM Network / RMI Stations



New Project Specs

- $2 M for 2 years monitoring
- 12 SoundTrap ST600 HF stations w/ attached Temp sensor
- Monitor preconstruction soundscape
- Monitor seasonal presence
- Coordinate PAM coverage with other funders/RWSC
- Contribute to regional analyses

Data Sharing & Access

RWSC
Regional Wildlife Science Collaborative for Offshore Wind

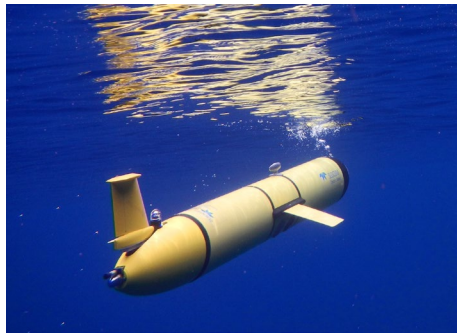
NOAA FISHERIES (PACM)

National Centers for Environmental Information
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

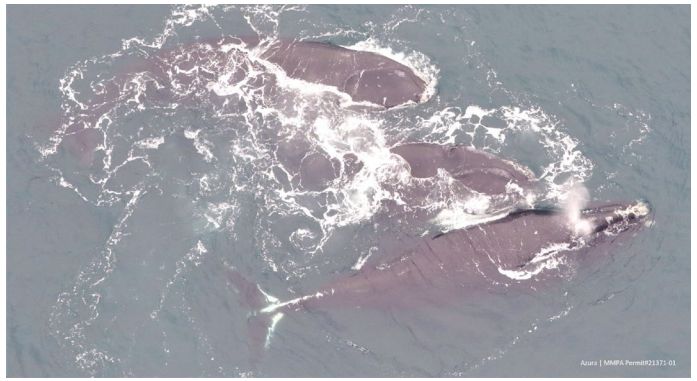
ERDDAP
Easier access to scientific data

New Jersey's Offshore Wind Research and Monitoring Initiative

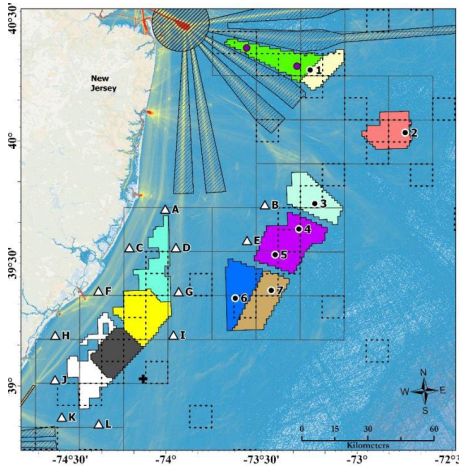
RMI Marine Mammal Research & Monitoring



Ocean Glider NRT-PAM
(Rutgers Univ., WHOI)



Aerial survey for cetaceans
(NOAA-NEFSC, Azura)



Archival PAM Network
(WCS, Monmouth Univ.)

Near Real-Time PAM Station
(WHOI)

Marine community eDNA
(Monmouth Univ, Saint Anselm College)

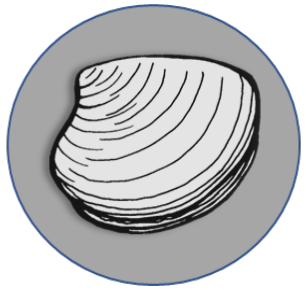
Sat. tracking harbor seals
(Stockton Univ, AMCS)

Sat. tracking whales
(Rutgers Univ/Univ. Wash.)

New Jersey's Offshore Wind Research and Monitoring Initiative

Project Final Reports

dep.nj.gov/offshorewind/rmi/#projects



Novel Surfclam Dredge & Carbonate Chemistry

Cetacean Aerial Survey

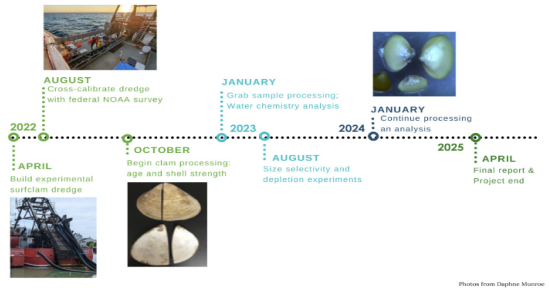
In review by RMI Staff and DEP Management

Surfclam Dredge Calibration and Carbonate Chemistry

OSW infrastructure in the region is anticipated to impact commercial clam fishing within developed lease areas and affect the federal survey vessel's ability to assess the health of clam populations. Given the importance of the surfclam industry to New Jersey, the RMI is funding the development and calibration of a novel clam dredge that can be employed within windfarms, which will enable the continuity of the survey and provide critical data for managing the population.

Interested in the surfclam sampling process? Take a look at this video showing how the Monroe lab does their collection and analysis.

Surfclam Proposal* | Key Personnel CVs | Project Fact Sheet | Technical Report



Explore more at the Haskin Shellfish Research Laboratory site.

Final Report and data/links will be available here

Aerial Whale Survey

The RMI has funded NOAA to expand its existing aerial surveys for north Atlantic Right Whales and other large cetaceans to fully survey waters off of New Jersey. This project conducted by the Northeast Fisheries Science Center will provide information to estimate seasonal habitat use, distribution, and abundance for whales. Through this project NOAA will collaborate with external partners, maintain communication and coordination between state and federal partners, and contribute to regional data needs by leveraging ongoing and existing research efforts throughout the Mid-Atlantic Bight (from NY to VA).

Aerial Whale Survey Proposal* | Project Fact Sheet

Final Report and data/links will be available here

New Jersey's Offshore Wind Research and Monitoring Initiative

Request for Proposals

for

Addressing New Jersey's Highest Priority Research and Monitoring Needs for Environment, Wildlife, and Fisheries Associated with Offshore Wind

Focus Areas ($4.75 M available):

- Non-extractive methods for surveying wildlife and habitat
- Technological innovations in data collection, analysis, and management
- Fishery sustainability and socioeconomic impacts of offshore wind activities
- Identifying and reducing offshore wind noise impacts on marine wildlife
- Characterization of benthic ecosystems and primary productivity
- Assessing bird and bat abundance, migration patterns, and risk exposure associated with offshore wind
- Current RMI Short-term, Highest-Priority Research & Monitoring Needs

63 Proposals received by October 22 Deadline!

New Jersey's Offshore Wind Research and Monitoring Initiative

Request for Proposals

for

Addressing New Jersey's Highest Priority Research and Monitoring Needs for Environment, Wildlife, and Fisheries Associated with Offshore Wind

NJSGC to administer RFP distribution and review process

Proposals received

1 Proposals reviewed and scored by (3) external Subject Matter Experts

2 Proposals reviewed & ranked by Review Panel

3 RMI Steering Committee review funding recommendations & makes final awards

Timeline

Fall 2024
RFP closes

Project Awards
Spring 2025

Projects Start
Early 2026

Updating RMI Research Needs

Category	Priority Area		2024 Draft Research & Monitoring Needs*
Coordination	Research Coordination	A	Advance regional and cross-sector (i.e., academia, state and federal government, wind developer, fishing industry, etc.) OSW research and monitoring coordination.
	Data Governance	B	Enhance consistency in governance of OSW research and monitoring data, including standardization of data collection methods, processing, analysis, housing, and QA/QC.
Technology	Technological Innovation	C	Develop, test, and/or refine new tools (e.g., sensors, systems, or methods) for OSW research and monitoring to improve efficiency, quantity, quality, and/or utility of data, data collection, or decision-making processes. Technological advances may include autonomous, remote sensing, and AI tools for detecting, deterring, and mitigating OSW impacts on wildlife, environments, and fisheries.
Mitigation	Mitigation Research & Development	D	Develop and evaluate potential strategies, technologies, tools, management policies, or other methods to mitigate the effects of OSW development on wildlife, environments, and fisheries. Investigate strategies to reduce or address OSW impacts to regional survey efforts. Mitigation research may include such topics as stock enhancement, avian collision curtailment, noise reduction, vessel collision with wildlife, etc.
Habitats & Ecosystems	Oceanographic & Atmospheric Change	E	Examine potential effects of OSW development on meteorological and oceanographic conditions, including physical, chemical, and other processes and features (e.g., light and sound conditions, hydrodynamics, water column stratification, wind wake effects, etc.). Develop forecasting models to project future dynamics and conditions.
	Habitat Impacts	F	Evaluate the effects of OSW development and oceanographic processes on sensitive coastal and marine habitats (e.g., artificial reef, prime fishing areas, surfclam beds, SAV, estuaries, etc.). Develop and/or test nature-based designs (i.e., green infrastructure that increases biodiversity and/or measurable benefits for ecosystem).
	Ecosystem Change	G	Examine the effects of OSW development at ecosystem/landscape scales, including the connection between the oceanographic or atmospheric processes, habitats, and wildlife. Examine spatial and temporal dynamics in biological productivity (e.g., zooplankton distribution, primary productivity), trophic interactions, biomass, or other measures of resilience and/or recovery from disturbance.
Wildlife	Birds & Bats	H	Assess seasonal distribution, abundance, migration, and behavior (e.g. flight altitudes) for species likely to use OSW energy areas in the NJ/NY Bight using best available technology (e.g., GPS, radio/Motus, and satellite tags; audio-visual surveys; collision sensing, etc.). Evaluate potential environmental (e.g., atmospheric conditions, light, etc.), biological (e.g., prey distribution), or other drivers of movement and behavior, including related fitness and/or bioenergentic consequences. Improve and inform OSW collision risk models (e.g., attraction vs displacement, macro vs micro-avoidance behavior, habituation, etc.).
	Fishes & Invertebrates	I	Synthesize existing information and assess (using non-extractive methods when possible) potential effects of OSW development on the distribution, connectivity, behavior, health, reproduction, or other vital metrics for fish and invertebrate communities and species of concern. Evaluate potential environmental (e.g., water chemistry, sound, Cold Pool, etc.), biological (e.g., prey distribution, spawning aggregations, etc.), or other drivers of movement, behavior, and changes in fitness.
	Sea Turtles	J	Evaluate baseline and potential effects of OSW development on environmental and biological drivers of seasonal distribution, abundance, movement, and habitat use for sea turtle species in the Mid-Atlantic Bight. Evaluate effects of OSW development (e.g., attraction vs avoidance) and other stressors (e.g., oceanographic conditions, sound, vessel traffic, etc.) on turtle movement, behavior, fitness, and vessel strike risks. Advance emerging methods for sea turtle assessment and survey, including eDNA, remote aerial surveys, tag technology, biochemical assays, modeling, etc.
	Marine Mammals	K	Evaluate baseline and potential effects of OSW development on seasonal distribution, abundance, movement, and habitat use for marine mammals in the NJ/NY Bight. Evaluate potential environmental (e.g. oceanographic conditions, sound, etc.), biological (e.g. prey distribution), and other drivers of movement and behavior using in situ data collection or modeling techniques. Assess potential attraction or displacement effects of OSW development (e.g. sound, vessel traffic, or other stressors).
Fisheries	Fisheries	L	Develop, implement, and assess methods for evaluating and addressing direct and/or indirect effects of OSW on commercial and recreational fisheries, including changes in socioeconomics, sustainability, access, and cumulative impacts. Projects should employ and collaborate with New Jersey fishermen when possible.

*These priorities are not listed in any ranked order.

...In Progress...

Thank You!

Contact Us

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Heather Genievich, Division of Science and Research, Heather.Genievich@dep.nj.gov

Colleen Brust, Marine Resources Administration, Colleen.Brust@dep.nj.gov

To learn more and sign up for updates:

https://dep.nj.gov/offshorewind/

Contact Us

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Heather Genievich, Division of Science and Research, Research and Monitoring Initiative, Heather.Genievich@dep.nj.gov

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Send Comments

- On offshore wind https://dep.nj.gov/offshorewind/