NROC Meeting
November 12 -13, 2024

The Venue
22 Portwalk Place, Portsmouth, NH 03801

Briefing Book

Virtual Access Details, p. 11

Table of Contents

Table of Contents

Participant Agenda

Northeast Regional Ocean Council (NROC) – DAY 1
Meeting Agenda | Tuesday, November 12, 2024
The Venue at Portwalk, Portsmouth, NH

- *The first day of the NROC meeting on November 12 will feature a series of meetings and workshops based on ongoing Committee work as noted below.*
- *Light refreshments and coffee for arrival.*
- *Lunch during Day 1 will be on your own. (Lunch provided for NROC staff, co-chairs, CBI, and Tribal Youth field trip participants)*

Room 1
Zoom Link

Advancing Equitable Climate Resilience through Proactive Coastal Relocation (10:00 AM - 12:00 PM)

OBJECTIVES
Learn about regional initiatives to advance climate resilience with a focus on equitable approaches for proactive coastal relocation. Identify opportunities for NROC and partners to advance regional knowledge and collaboration.

AGENDA
10:00 - Welcome and Introductions, *Joan LeBlanc, NROC*

Dani Boudreau, NOAA Office for Coastal Management
- Context for discussing proactive coastal relocation in the Northeast

***10:15** - Jessica Brunacini, Wells National Estuarine Research Reserve*
- Social dimensions of coastal relocation
- Highlights from various Maine initiatives

***10:40** - Kim Starbuck, Urban Harbors Institute*
- Municipal Perspectives on Managed Retreat
- Proactive Planning for Collaborative, Equitable Retreat and Relocation in Massachusetts (UHI/TNC collaboration)

***11:05** - Tim Clark, The Nature Conservancy*
- Challenges of managed retreat, and the importance of proactive planning
- Need for new tools and resources for coastal communities to proactively plan
- Addressing equity in managed retreat

11:30 - Discussion
- How can NROC help advance knowledge and collaboration for equitable proactive coastal relocation?

	Coastal Hazards Resilience Committee Meeting (1:30 PM -3:30 PM) **OBJECTIVES** Coastal managers and regional partners share information about efforts to advance coastal resilience in New England. Participants learn about NOAA's Sea Level Calculator. NROC and partners provide project updates and discuss next steps for establishing a water level sensor network in New England (NERACOOS), advancing living shorelines in the Northeast (NROC/TNC/CBI), and hosting a coastal resilience exchange. Discussion regarding Coastal Hazards Resilience Committee priorities for existing projects and future funding requests. **AGENDA** **1:30** - Welcome and Introductions ● *Dani Boudreau, NOAA/CHRC Co-Chair and Joan LeBlanc, NROC* **1:40** - Introducing NOAA's Sea Level Calculator (BETA) ● *Jamie Carter, NOAA Office for Coastal Management* **2:05** - Roundtable Highlights ● State coastal managers, federal partners, and other participants share coastal resilience updates **2:30** - NROC CHRC Project Updates ● Living Shorelines, *Joan LeBlanc, NROC* ● Water Level Sensors, *Anna Simpson, NERACOOS* ● Coastal Resilience Exchange, *Dani Boudreau, NOAA or Joan LeBlanc, NROC* **3:15** - Discussion ● Identifying CHRC priorities for existing projects and future funding requests
Room 2 **Zoom Link**	**Habitat and Classification and Ocean Mapping Subcommittee Meeting (HCOM) (10:00 AM - 12:00 PM)** **OBJECTIVES** Define ocean mapping priorities for 2025 building off the regional prioritization report finalized in 2024. Identify additional state, federal, Tribal, NGO, and industry representatives to engage in future seafloor mapping prioritization exercises. Determine funding priorities for NROC BIL funding Years 4 and 5. **AGENDA** **10:00 -** Welcome and introductions, *Amy Trice, NROC* **10:05** - Overview: Committee goals, GIS prioritization process and HCOM Priority Synthesis Report, *Todd Callaghan, Massachusetts Coastal Zone Management Office*

10:15 - Status of what has changed in the ocean since last mapping prioritization, *Todd Callaghan, Massachusetts Office of Coastal Zone Management leading discussion among attendees*

- Ocean uses
- Mapping by NOAA, USGS, BOEM, states

10:35 - Define current priority focus areas, *Dan Simpson, Massachusetts Office of Coastal Zone Management*

11:10 - Identify a workflow to add broader regional representation in future seafloor mapping prioritization, *Amy Trice, NROC*

11:30 - Year 4 and 5 funding opportunities for HCOM and workplan, *Amy Trice, NROC*

11:45 - Next steps, *Amy Trice, NROC*

Refining Blue Carbon Modeling (1:30 PM - 3:00 PM)

OBJECTIVES

Hear the results of field studies conducted by the University of Massachusetts to understand the depth of potential carbon deposits in salt marshes. Inform methods for modeling blue carbon stock assessments considering recent studies and field work. Determine funding priorities for NROC BIL funding Years 4 and 5.

AGENDA

1:30 - Welcome and introductions, *Emily Shumchenia, NROC*

1:40 - Overview and background of Blue Carbon Workgroup, *Emily Shumchenia, NROC*

1:50 - Status of the Zamir Libohova et al. paper on modeling uncertainty, *Emily Shumchenia, NROC*

2:00 - Update on summer field work and data, *Brian Yellen, University of Massachusetts*

- Q&A
- Outline of next steps, potential model of marsh soil depth for the region
- Discussion of research priorities

2:40 - Eelgrass Northeast Ocean Data Portal update, *Emily Shumchenia, NROC*

	Ocean Acidification Monitoring Plan and Implementation (3:15 PM - 4:30 PM) **OBJECTIVES** Provide feedback on the draft Ocean Acidification Monitoring Plan for the Northeast (to be released in November). Provide input on a plan to engage managers and biologists to inform ocean acidification thresholds and related data and information needs for important managed resources. **AGENDA** **3:15** - Overview and opportunity to provide feedback on the draft Ocean Acidification Monitoring Plan, *Austin Pugh, NERACOOS* ● Q&A on Ocean Acidification Monitoring Plan ● Identify specific in-person feedback and digital options for Monitoring Plan feedback and comments **3:50** - Update on ocean acidification data sharing work, *Tom Shyka, NERACOOS* **4:05 -** Feedback on upcoming ocean acidification outreach to decision makers, *Nikelene Mclean, NROC/RWSC* ● Outline of outreach concept ● Next steps and feedback options for the group
Room 3 **Zoom Link**	**Transmission Workgroup (1:30 PM - 4:30 PM)** **OBJECTIVES** Understand the offshore wind (OSW) transmission planning landscape in New England. Explore ongoing work in the region and potential lessons learned related to transmission planning. Define timelines for Transmission Workgroup priority actions. Inform future Transmission workgroup action on data needs. **AGENDA** **Part 1 - Information Sharing and Coordination (1:30 PM - 2:45 PM)** *Priority Action One, defined by the Transmission Workgroup is to provide a venue for collaboration, information sharing, and lessons learned given the various studies, assessments, and planning activities that have or will occur in the region.* *GOAL: Understand potential timing of OSW transmission in the Gulf of Maine.* *Better understand how federal and state processes may influence when transmission siting decisions will be made, and when data and information inputs as well as coordination will be most productive.*

	1:30 - Overview of the federal commercial leasing process in the Gulf of Maine and state renewable energy requirements **2:00** - Discussion about coordination and data needs as it relates to potential timelines *GOAL: Understanding current and future grid related transmission planning activities* *A lot of work is happening around grid transmission planning in New England that can inform OSW transmission planning in the Gulf of Maine. We should increase our knowledge about the responsibilities, activities, and potential outputs of ISO New England and the Northeast States Collaborative on Interregional Transmission to inform NROC's activities related to collaboration and data information needs.* **2:15** - ISO New England (invited) ● Overview of recent transmissions studies and follow up activities ● Other considerations for Transmission Workgroup **2:30** - Overview of the work plan of the Northeast States Collaborative, *Abe Silverman, Ralph O'Connor Sustainable Energy Institute, Johns Hopkins and Suzanne Glatz, Glatz Energy Consulting* **2:45** - Questions and discussions about how grid related planning activities inform NROC's timeline and activities **3:00 - 3:15 - coffee break** **Part 2: Suitability Assessments, Planning and Data in the Region (3:15 PM - 4:20 PM)** *Priority Action Three, defined by the Transmission Workgroup is to understand transmission planning, assessments, and models that are being advanced by any of the member participants. This will inform Priority Action Two, defined by the Transmission Workgroup, to identify data needs that hinder transmission planning and related assessments and advancing data development or data collection for those needs that could be pursued in enough time to better inform planning.* *GOAL: Identify transmission planning constraints and data needs* *Transmission modeling and planning is already underway in Southern New England and parts of the Gulf of Maine. These efforts can provide information about the different planning constraints and data and information needs that NROC and NROC members could potentially address given the timelines discussed previously during the meeting.* **3:15** - Suitability Assessment in Stellwagen Bank, *Alice Stratton, Stellwagen Bank National Marine Sanctuary and Alyssa Randall Taylor, National Center for Coastal Ocean Science* ○ Presentation of current planning and suitability model outputs ○ Outline of data needs and constraints

	3:30 - Lessons learned from offshore wind planning in Southern New England, *Todd Callaghan, Massachusetts Coastal Zone Management* **(3:30 - 3:45 pm)** ○ Lessons learned from planning, permitting and construction ○ Outline of data needs and constraints **3:45** - Identification of specific transmission planning constraints and specific data needs considering the timelines previously summarized **4:20 -** Next steps for this group
Offsite	**Field Trip for Tribal Members and Tribal Youth to Great Bay National Estuarine Research Reserve (9:00 AM - 1:00 PM)** **OBJECTIVES** Provide an opportunity for Tribal youth and Tribal members to learn about the Great Bay Estuarine Research Reserve programs. A bus will leave Portwalk Place (Portsmouth, NH), at 9am and return in advance of the afternoon sessions. Lunch will be provided for participants.

Northeast Regional Ocean Council (NROC) – DAY 2
Meeting Agenda | Wednesday, November 13, 2024
The Venue at Portwalk, Portsmouth, NH

Day 2: **Zoom Link**

- *Breakfast will be served at 8:00 AM and the meeting runs from 8:30 AM until 4:00 PM.*
- *Lunch will be provided.*
- *The meeting will include updates from the NROC Executive Committee, federal partners, and state partners, as well as other partner updates and opportunities for collaboration. Committees will report on progress and seek feedback.*
- *There will be a Tribal Youth Panel.*

AGENDA ITEM	
8:00 AM	**Breakfast** (provided on-site)
8:30 AM	**Welcome and Overview of Meeting Agenda** *NROC Co-Chairs: Jeff Willis, RI Coastal Resources Management Council (RI CRMC); and Chris Meaney on behalf of Rick Bennett, U.S. Fish and Wildlife Service (US FWS)*
8:35 AM	**Updates from NROC Executive Committee, Federal Partners, and State Partners** ● NROC Co-Chairs and Executive Committee Updates (25 min) ● Key highlights from NROC federal partners (20 min) ● Key highlights from NROC state partners (20 min) ● Key highlights from the Tribal Caucus (20 min)

10:00 AM	**NROC Partner Updates and Opportunities for Collaboration** ● Gulf of Maine Council, *(5 min)* ● Northeast Sea Grant Consortium, *(5 min)* ● Northeast Regional Association of Coastal and Ocean Observing Systems (NERACOOS), *(10 min)*
10:20 AM	**Break**
10:30 AM	**Ocean Planning Committee** *NROC Co-Chairs: Ted Diers, NH Department of Environmental Services; and Lou Chiarella, NOAA Fisheries* *NROC Staff: Amy Trice, Senior Program Director for Ocean Planning and Coastal and Ocean Ecosystem Health; and Emily Shumchenia, Science and NE Ocean Data Portal Director* ● **Transmission Workgroup Outcomes and Next Steps** *(15 minutes - Amy)* ● **Ocean Planning Committee Project Updates and Implementation in 2025: Submerged Archaeological and Cultural Resources Work Group, mCDR, and recreational boating and maritime outreach** (*10 minutes - Amy)* ● **RWSC Offshore Wind and Wildlife Data Management** (*25 minutes - Emily)* ● **Northeast Ocean Data Portal Redesign** - **User requirements, design approach, and brief demo** *(Emily, Jenna Ducharme - Tetra Tech - 15 minutes)*
12:00 PM	**Lunch Break** (provided on-site)
1:15 PM	**Tribal Youth Interests and Priorities for Ocean and Coastal Management** Panel discussion with Penobscot Indian Nation youth and Native Environmental Ambassadors from the Mashpee Wampanoag Tribe, facilitated by *Asha Ajmani, NROC Tribal Engagement Coordinator*
2:00 PM	**Coastal Hazards Resilience Committee** *NROC Co-Chairs: Julia Knisel, MA Office of Coastal Zone Management; Gavin Jackson, CT Department of Energy and Environmental Protection; and Dani Boudreau, NOAA Office of Coastal Management* *Staff: Joan LeBlanc, Coastal Hazards Resilience Program Director* **CHRC Projects and Next Steps** ● Outcomes from NROC discussion about advancing resilience through proactive coastal relocation on Day 1 ● Outcomes from project discussions on day 1 (water level sensors, living shorelines, coastal resilience exchange) **Questions, Discussion, and Feedback**

2:30 PM	**Break**
2:45 PM	**Ocean and Coastal Ecosystem Health Committee** *NROC Co-Chairs: Steve Couture, NH Department of Environmental Services; and Regina Lyons, Environmental Protection Agency; and Jake Kritzer, Northeastern Regional Association of Coastal Ocean Observing Systems* *Staff: Amy Trice, Senior Program Director for Ocean Planning and Coastal and Ocean Ecosystem Health* **Summary of OCEH Projects and Implementation** *(15 minutes - Amy)* ● Outcomes from Blue Carbon, Ocean Acidification, and HCOM discussions on Day 1 ● Blue Carbon, Ocean Acidification, and HCOM implementation in 2025: Manager, industry, and science input on priorities and data needs ● New OCEH project for 2025: Review of nearshore hydrodynamic modeling needs **Questions, Discussions and Feedback** (15 minutes)
3:15 PM	**NROC Meeting Wrap Up and Next Steps** *NROC Co-Chairs: Jeff Willis, RI CRMC; and Chris Meaney on behalf of Rick Bennett, US FWS* ● Proposal development for Year 4 funding from BIL ● NROC Co-Chair transition: Brian Thompson, CT, and Regina Lyons, EPA
3:30 PM	**Adjourn**

Virtual Access Information

Day 1: November 12, 2024

Room 1:

Advancing Equitable Climate Resilience through Proactive Coastal Relocation
Coastal Hazards Resilience Committee Meeting

Join Zoom Meeting:

https://cbi-org.zoom.us/j/85326112016
Meeting ID: 853 2611 2016
+1 646 558 8656 US

Room 2:

Habitat and Classification and Ocean Mapping Subcommittee Meeting
Refining Blue Carbon Modeling
Ocean Acidification Monitoring Plan and Implementation

Join Zoom Meeting:

https://cbi-org.zoom.us/j/83513473358
Meeting ID: 835 1347 3358
+1 646 558 8656 US

Room 3:

Transmission Work Group

Join Zoom Meeting

https://cbi-org.zoom.us/j/89629067259
Meeting ID: 896 2906 7259
+1 646 558 8656 US

Day 2: November 13, 2024

Join Zoom Meeting:

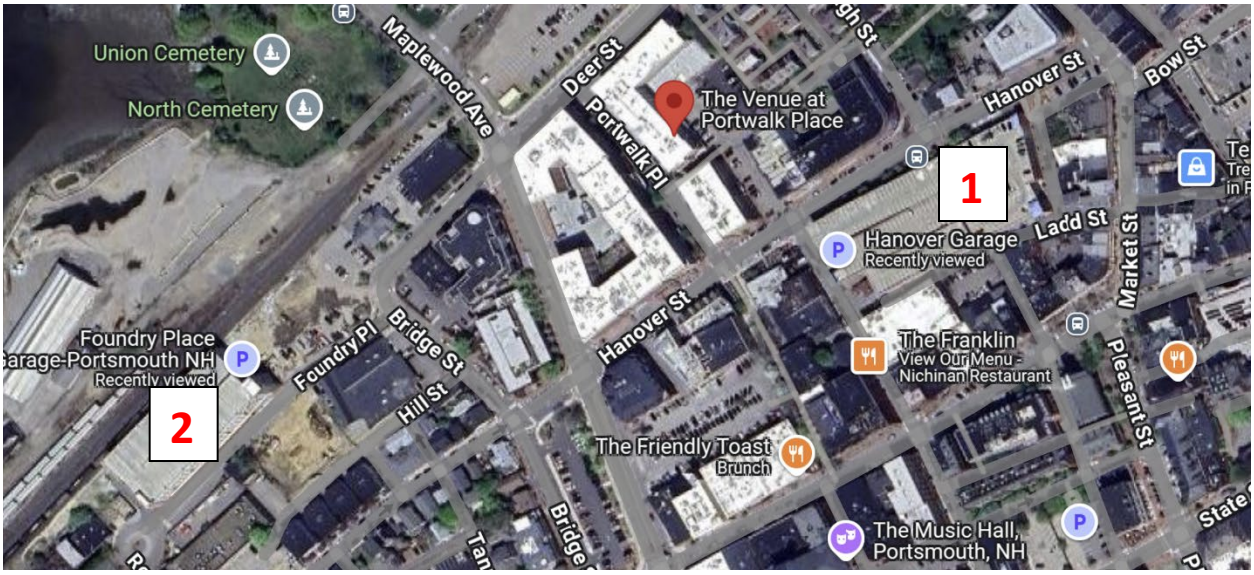
https://cbi-org.zoom.us/j/83832090578
Meeting ID: 838 3209 0578
+1 646 558 8656 US

Parking Information

RECOMMENDED

The following municipally-operated parking garages are a 3-4 minute walk from The Venue.

1. **High Hanover Parking Garage, 34 Hanover St, Portsmouth, NH ($2 hr. - 3 min walk).** Entrances on Hanover St., Fleet St., and High St.
2. **Foundry Place Garage. 100 Foundry Pl, Portsmouth, NH ($1 hr. - 4 min walk)**



NOT RECOMMENDED

- Portwalk Place Garage, 195 Hanover St., Portsmouth, **$40+ per day**
- There are numerous small privately-owned parking lots in downtown Portsmouth that look similar to the municipal lots. Avoid as charges range from **$10 to $15 per hour**.

Briefing Materials

NROC Executive Committee

Funding Status Update – November 2024

NROC Funding from Infrastructure Investment and Jobs Act (IIJA)

1. NOAA-NOS-OCM-2022-2007464
   - Project*: Implementation and Coordination of Coastal and Ocean Management Priorities for the Northeastern United States via the Northeast Regional Ocean Council*
   - Total Award: $3,924,563
     - December 1, 2022 – November 30, 2023: $1,962,144
     - December 1, 2023 – November 30, 2024: $1,962,419
   - Leads: NROC (via Coastal States Stewardship Foundation as fiscal sponsor). Projects are led by the NROC Executive Committee, Coastal Hazards Resilience Committee (CHRC), Ocean and Coastal Ecosystem Health Committee (OCEH), and Ocean Planning Committee (OPC)
   - Funding Period: December 2022 - November 2024 (No cost extension request pending)

2. NOAA-NOS-OCM-2024-2008310
   - Project*: Implementation and Coordination of Coastal and Ocean Management Priorities for the Northeastern United States via the Northeast Regional Ocean Council*
   - Total Award: $1,963,233
   - Leads: NROC (via Coastal States Stewardship Foundation as fiscal sponsor). Projects are led by the NROC Executive Committee, Coastal Hazards Resilience Committee (CHRC), Ocean and Coastal Ecosystem Health Committee (OCEH), and Ocean Planning Committee (OPC)
   - Funding Period: December 2024 - November 2025

Ocean Planning Committee

3. Bureau of Ocean and Energy Management
   - Project: *Operations and maintenance of the Northeast Ocean Data Portal*
   - Award: $225,000
   - Lead: NROC (via Coastal States Stewardship Foundation as fiscal sponsor)
   - Funding Period: September 2024 – September 2025 (with two additional option years)

4. FY2023 NOAA Regional Ocean Data Sharing/Regional Ocean Partnership Funding
   - Project: *Update fishing, marine life and habitat, recreation, maritime, seafloor, and other data on the Northeast Ocean Data Portal*
   - Award: $205,000
   - Lead: NROC (via Coastal States Stewardship Foundation as fiscal sponsor)
   - Funding Period: July 2023 – December 2024

5. FY2024 NOAA Regional Ocean Data Sharing/Regional Ocean Partnership Funding
   - Project: *Update fishing, marine life and habitat, recreation, maritime, seafloor, and other data on the Northeast Ocean Data Portal*
   - Award: $205,000
   - Lead: NROC (via Coastal States Stewardship Foundation as fiscal sponsor)
   - Funding Period: August 2024 – October 2025

Regional Wildlife Science Collaborative for Offshore Wind
(Co-hosted with the Mid-Atlantic Regional Council on the Ocean)

The Regional Wildlife Science Collaborative for Offshore Wind (RWSC) is funded through a mix of member dues, in-kind contributions, projects, and research funding.

Current Funding

As of November 1, 2024, in RWSC's FY 2025 (July 1 2024 – June 30 2025), RWSC received $265,000 in membership dues from 14 individual entities (states, eNGOs, offshore wind companies). RWSC also receives in-kind staff time from NROC, MARCO, and NOAA Fisheries, and funding for the following projects and research:

1. *Regional Wildlife Science Collaborative Support to provide resources for offshore wind research planning and coordination (development of RWSC Research Planning Map)*
   a. Funder: Bureau of Ocean Energy Management
   b. Award: $450,000
   c. Funding Period: August 2023 – July 2025

2. *Support for whale detection technology evaluation workshop series*
   a. Funder: Turn Forward
   b. Award: $18,736
   c. Funding Period: March 15 – December 31, 2024

3. *Developing a Prototype Offshore Wind & Wildlife Data Catalog*
   a. Funder: NOAA National Centers for Coastal & Ocean Science (NCCOS)
   b. Award: $150,000
   c. Funding Period: July 1 – September 14, 2024

Project Notes: The RWSC Science Plan identified a need for simple and centralized public discovery of and access to offshore wind and wildlife, habitat, and oceanographic datasets and research outputs. NROC, MARCO, and NCCOS have a similar need for simplified discovery and access to data that could improve existing data products or result in the development of new data products for ocean planning and management. To address this need, NCCOS, RWSC, NROC, and MARCO are working together to develop a Prototype Offshore Wind Data Catalog that would display metadata about datasets that are stored across a range of other repositories, produce links to the original data sources as results of a user's search, and link to a map interface to display the spatial location of data collection and research activities in the Data Catalog.

4. *Implementing the POWERON (Partnership for an Offshore Wind Energy Regional Observation Network) Program*
    a. Funder: Bureau of Ocean Energy Management
    b. Award: $3,999,835.77
    c. Funding Period: October 1, 2024 – September 30, 2028

    Project Notes: RWSC is administering and managing funds to support the long-term deployment of passive acoustic monitoring (PAM) sensors and data management for baleen whales up and down the Atlantic coast, as informed by the RWSC Marine Mammal Subcommittee (https://rwsc.org/pam). Funds are derived from BOEM's IRA funds and from offshore wind developers that select the option to use POWERON to manage their required PAM Plan deployments and data.

Pending Funding

5. *Membership dues:* Another $160,000 in membership dues for FY 2025 is pending payment. RWSC expects a similar level of operational funding for FY 2026 and an increase in projects/research funding (see 6-8 below).

6. *Offshore Wind and Wildlife Research Funding*: RWSC held its first annual funding strategy meeting in September 2024 (see RWSC news item and Funding Strategy Action Plan). The four Sectors (federal agencies, states, offshore wind industry, eNGOs) discussed the existing fragmented funding landscape which consists of over 100 individual offshore wind and wildlife research projects funded by 31 different entities. The Sectors have stated the goal to increase collaboration around funding in 2025 and beyond, which should result in high quality data and research outputs. RWSC will support this goal by assisting funders with decisions related to project selection and funding allocation, and by providing input on funding agreements to ensure robust data management and data availability. RWSC also expects to directly support research in FY 2025 and beyond with funds provided by Empire Wind and Sunrise Wind, who are each required by the state of New York through their power purchase agreement to fund regional wildlife research. The total available in 2025 will be $4.05M, with an additional $1.7M expected in 2026 or 2027.

Committee Updates

The following Committee updates describe previous progress on each project, current activities, and plans for 2025. These updates will be relevant to multiple agenda topics throughout both days.

Ocean Planning Committee

Submitted by Amy Trice, NROC Senior Program Director and Emily Shumchenia, NROC Science Director and RWSC Director

Offshore Wind Transmission Workgroup

NROC recently established an Offshore Wind Transmission Workgroup under the Ocean Planning Committee with Tribal, state, and federal partners. As a voluntary forum, NROC will inform transmission planning outside of the formal regulatory process. The focus of NROC coordination on transmission planning will be in coastal and ocean waters of the Northeast, with a particular focus on the Gulf of Maine.

Through initial discussions with many NROC members, the Workgroup will focus on the following priorities:

1. Providing a venue for collaboration, information sharing, and lessons learned given the various studies, assessments, and planning activities that have or will occur in the region.
2. Identifying data gaps that hinder transmission planning and related assessments and advancing data development or data collection for those gaps that could be pursued in enough time to better inform planning.
    - NROC can provide funding or coordinate funding and project management for data gaps identified by the Workgroup.
3. Understanding transmission planning, assessments, and models that are being advanced by any of the member participants.
4. Others as identified by the Workgroup via consensus.

During the November 12 meeting, the Transmission Workgroup will gain a better understanding of state and federal timelines for offshore wind transmission planning and lessons learned from recent siting and planning in the region with the intent of informing how the workgroup can inform interjurisdictional coordination and address data needs. See the Transmission Workgroup agenda for more details.

Submerged Archeological and Cultural Resources Workgroup

At the request of Tribes, states, and federal agency Ocean Planning Committee members, NROC created the Submerged Archaeological and Cultural Resources Workgroup to focus on answering questions in the Northeast related to this topic. The geographic focus of this work is coastal areas and state and federal waters from Maine through Connecticut and potentially including New York. NROC considers the questions and information needs raised by the Workgroup to be a long-term project, and the tasks proposed within the Request for Qualifications (RFQ) will be used to inform the Workgroup's composition and future projects. Individuals, independent contractors, consulting firms, research institutions, and other non-governmental organizations were invited to respond to one, several, or all task categories outlined in the RFQ.

Tasks include:

- Literature review and synthesis,
- Summary of ongoing submerged and coastal archeological and cultural resources work, and

- Identifying data and developing submerged archeological and cultural resources data products.

Detailed RFQ: [NROC RFQ to Support Submerged Archeological and Cultural Resources Workgroup]

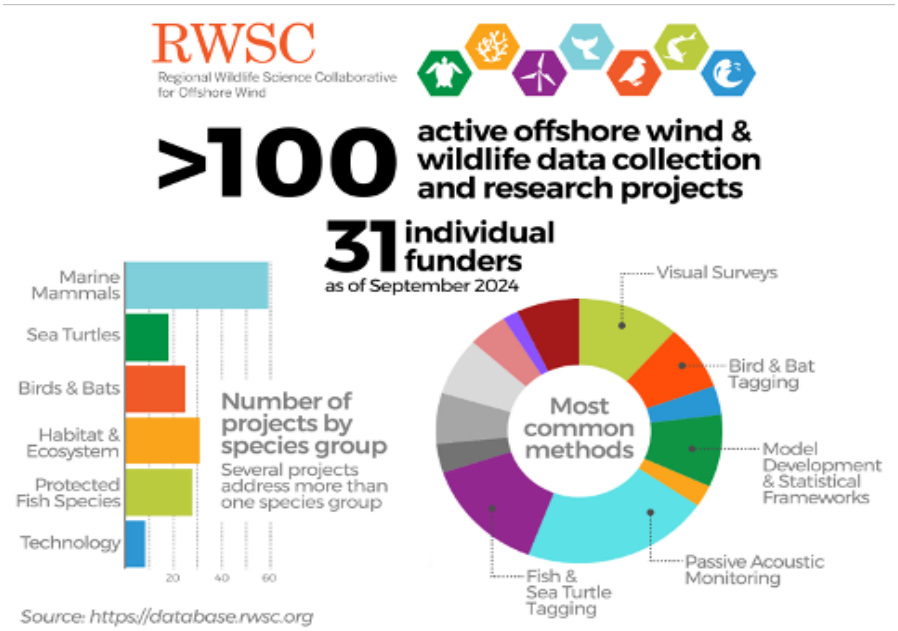
RWSC Offshore Wind and Wildlife Data Management (co-hosted with the Mid-Atlantic Regional Council on the Ocean)

In January 2024, RWSC released the [Integrated Science Plan for Offshore Wind, Wildlife, and Habitat in U.S. Atlantic Waters] to inform future data collection and research ("Science Plan"). The Science Plan expresses all RWSC participants' common goals of funding and implementing research that is collaborative, aligned with current data needs, and that results in data that are Findable, Accessible, Interoperable, Reusable (FAIR), and made available to support decision-making and future research as soon as possible. RWSC's Data Governance Subcommittee has been working with the other taxa- and habitat-focused RWSC Subcommittees to evaluate the current ocean data management infrastructure as described in the Science Plan to determine if it can provide the services and functions needed to meet these goals.

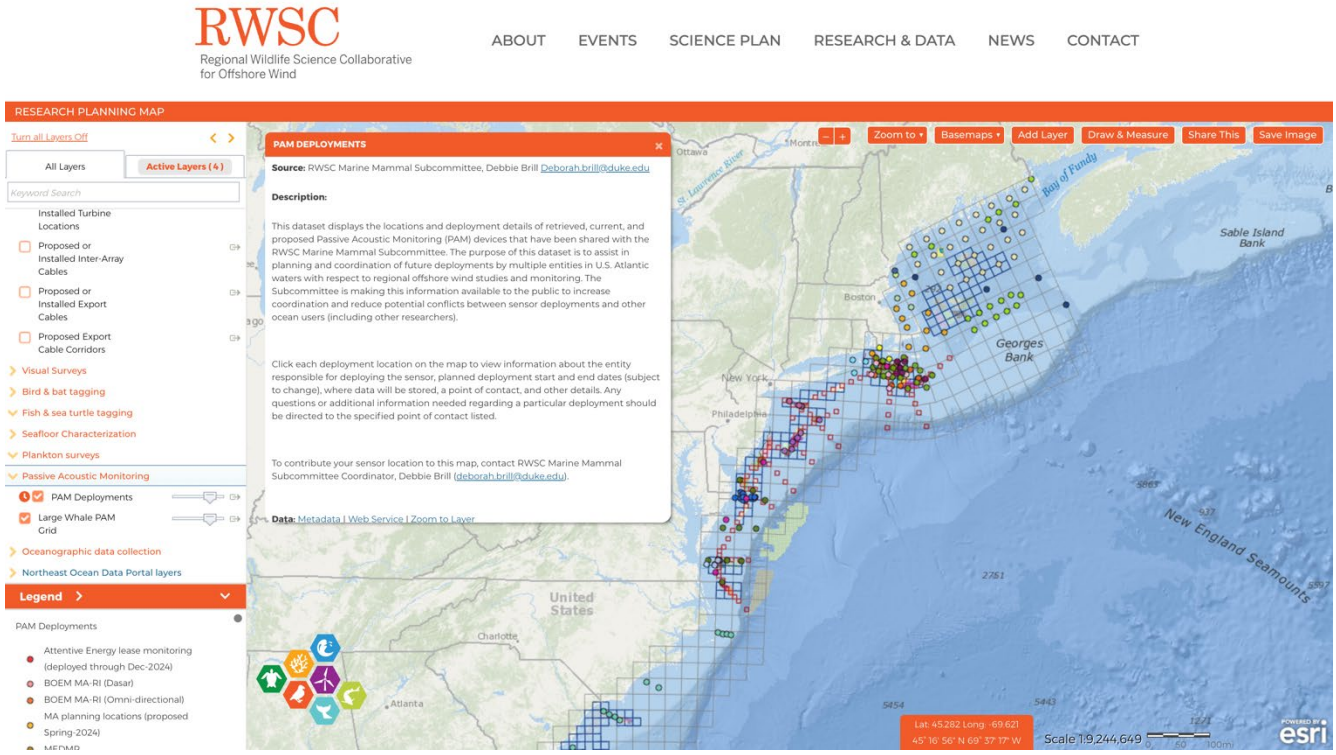
It is clear from the RWSC Subcommittees' work that some foundational data management infrastructure exists, often customized by each data community (e.g., bird tagging, marine mammal acoustics), which should be leveraged. But their assessment also found many researchers and consultants are not using the existing repositories; those that are, find that the repositories need significant additional resources and capacity to accommodate the volume of data being collected. This puts the risk for data loss, especially for newly collected data, uncomfortably high.

The workflows and pipelines for discovering and obtaining wildlife, habitat, and oceanography data across 30+ repositories or endpoints are currently too complicated and time-consuming. This results in slower analyses and poorer quality data products, models, and maps that may unknowingly omit new and relevant data. Furthermore, the complicated data storage landscape also means that data users and decision makers cannot easily find data, and that funders cannot easily verify that the data they funded exists and is being used by the research and ocean management communities.

Reasons for fragmented ocean data management include 1) a fragmented funding landscape and 2) outdated and unsupported data management infrastructure.



1. Fragmented offshore wind and wildlife research funding. RWSC's Offshore Wind & Wildlife Research Database and Research Planning Map show that there are over 100 active data collection and research projects being funded by more than 30 individual funders (left), with little attention to overlap and redundancy. For some data types, the Research Planning Map (below) provided the first single map for funders and researchers to see where colleagues were collecting data and conducting studies.



2. Outdated data management infrastructure. Most of the existing ocean data repositories were designed and built 10 or more years ago when ocean data collection, synthesis, and modeling was significantly less sophisticated. Furthermore, most of the repositories that RWSC interviewed are staffed by two or fewer full time equivalent employees. Data collection is increasingly easier, cheaper, and voluminous due to new technologies. The existing data management systems and personnel cannot support these volumes thus risking data loss.

Solutions

New ways to manage and rapidly synthesize data, like NOAA's Blue Topo initiative, are needed across all ocean data types. RWSC is working with individual repository owners and stewards to estimate the levels of effort needed to ensure basic data management system function to support the backlog of existing data and the future data collected for offshore wind-related studies. All relevant repositories should produce standardized metadata that can be automatically read into an Offshore Wind Data Catalog which would aggregate, index, and make discoverable all offshore wind-related data on a single landing page, with appropriate links back to source repositories for download/access. A prototype of the Data Catalog was built with support from NOAA's National Centers for Coastal and Ocean Science (NCCOS) and DataONE. Although only a few existing repositories were able to be connected to the prototype Catalog, it is providing a blueprint for how existing repositories should be enhanced and made compatible with the Catalog. The RWSC Data Governance Subcommittee will be leading this work and is developing metadata standards and an overarching Data

Policy that partners will be encouraged and supported to use to ensure that all offshore wind-related data are aligned with the principles in the Science Plan and compatible with the various data management tools that are part of the overall landscape. The Data Governance Subcommittee relies on participants to help describe the needed use cases to build relationships with entities responsible for data management, and develop recommendations. The Subcommittee's meetings are open to anyone to participate – the next meeting is November 20 at 1pm ET (get Zoom link here).

RWSC, NROC, and MARCO are also identifying potential sources of funds to support data management infrastructure and are making recommendations for how funding can be effectively deployed for each data/repository type. RWSC, NROC, and MARCO have informed the White House Ocean Policy Committee's Ocean Research Advisory Panel's (ORAP) September 2024 recommendation Toward a National Ocean Data Strategy by providing their findings for an offshore wind case study.

Additionally, members from all four RWSC Sector Caucuses held their first Annual Research Funding Strategy Meeting in September 2024 and developed a Research Funding Strategy Action Plan that includes actions to communicate with each other and RWSC as they develop new RFPs, and to include each other and RWSC on funding selection panels to ensure that opportunities for alignment and leveraging aren't missed. Several RWSC participants have committed to using and requiring the data management recommendations that RWSC Subcommittees have developed as a way to ensure that data are interoperable and can eventually be pooled for regional scale analyses.

Coastal Hazards Resilience Committee

Submitted by Joan LeBlanc, NROC Coastal Hazards Resilience Program Director

Advancement of Living Shorelines in New England

NROC is working in partnership with The Nature Conservancy (TNC) and other partners to advance implementation of successful living shorelines projects in New England by increasing understanding of regulatory issues, monitoring techniques, and application of living shorelines approaches. TNC enlisted the Consensus Building Institute (CBI) to engage regional stakeholders in efforts to increase understanding of regulatory issues, monitoring techniques, and implementation challenges.

During 2023, the project team hosted a webinar, convened an in-person day-long workshop, and conducted a series of interviews with stakeholders to enhance knowledge about the permitting of living shorelines in New England. The team prepared a draft report, *Living Shorelines Permitting in New England*, to summarize the process, share findings regarding permitting challenges and opportunities, and highlight recommendations for improving the permitting of living shorelines in New England. The draft report is undergoing internal review and will be circulated and posted to the NROC website once finalized.

During 2024, NROC and partners worked together to assess living shorelines installations and pilot projects to understand what monitoring requirements and permit conditions are being placed on projects, what monitoring is being conducted, how effective monitoring has been, and identify lessons learned about the effectiveness of constructed living shorelines in New England. During the summer of 2024, the team conducted a series of interviews with engineers, academic experts, state and local coastal managers, and other professionals involved in design, installation, and monitoring of living shorelines in New England. The project team hosted a workshop in September 2024 to share findings from the interviews and gather further insights about challenges and opportunities associated with monitoring, design, construction, and performance of living shorelines. Workshop participants also identified priority needs and

opportunities for education, training, and community engagement to help advance the implementation of successful living shorelines. During September 2024, the project team also hosted an on-site learning opportunity to share best practices and lessons learned about the design, monitoring, and performance of the Wagon Hill Farm living shorelines project in Durham, NH.

Next Steps

- Finalize and share reports from the living shorelines workshops.
- Host additional learning opportunities to share knowledge about living shorelines approaches and lessons learned regarding project design, monitoring, and performance.
- Collect, develop, and share resources, tools, and case studies via the NROC website to expand knowledge exchange and learning about living shorelines across the Northeast.
- During NROC's November 2024 meeting, the project team will provide an update regarding the status of project activities and seek input about future priorities.
- During 2025, NROC will continue to work with TNC and CBI to engage practitioners, permitting agencies, and landowners to share knowledge, increase understanding, and promote opportunities and best practices to improve the permitting of living shorelines.
- NROC will also develop a new living shorelines theme on the Northeast Ocean Data Portal providing access to maps of current projects, locations where potential or planned projects could be implemented, and resources for practitioners, such as state-based tools for siting projects.

For Reference

NROC's current project builds on previous multi-year efforts to work with The Nature Conservancy and regional partners to advance living shorelines in the region. Links to reports associated with this effort are provided below:

- Living Shorelines in New England: Site Characterization and Performance Monitoring Guidance (2022) https://www.northeastoceancouncil.org/wp-content/uploads/2022/04/Living-Shorelines-Site-Characterization-and-Performance-Monitoring-Guidance-2022.pdf
- Regulatory Challenges and Opportunities for Living Shorelines in New England (2022) https://www.northeastoceancouncil.org/wp-content/uploads/2022/04/Regulatory-Challenges-and-Opportunities-for-Living-Shorelines-in-New-England_2022.03.04-1.pdf
- Case Studies: Living Shorelines in New England (2022) https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/northeast-living-shorelines-case-studies/
- Piloting Living Shorelines in New England (2021) https://www.nature.org/en-us/what-we-do/our-priorities/protect-water-and-land/land-and-water-stories/northeast-living-shorelines/
- Living Shorelines in New England: State of the Practice (2017) http://www.northeastoceancouncil.org/wp-content/uploads/2018/12/Final_StateofthePractice_7.2017.pdf

For more information about NROC's efforts to advance living shorelines, please contact:

- *Joan LeBlanc, NROC, jleblanc@northeastoceancouncil.org*
- *Steve Kirk, The Nature Conservancy, stephen.kirk@TNC.ORG*

Establishing a Water Level Sensor Network in New England

NROC and NERACOOS are working together to develop a network of water level sensors in the Northeast region. The project team has conducted significant outreach and workshops to identify potential locations for installing water level sensors across the Northeast coastal region. In addition to workshops and meetings, the team created a story map to

help visualize locations for planned and potential sites and provide a user-friendly tool to collect recommendations. The story map and invitation to recommend new water level monitoring sites were circulated to more than 2,000 people to ensure broad involvement in the selection of potential new water level monitoring sites. The list of potential sites was informed through a workshop where representatives from government agencies, communities, non-governmental organizations, academia, and other partners were asked to identify potential sites for consideration. The project team has also been working in collaboration with NROC's Tribal Engagement Coordinator to provide an opportunity for Tribal members to learn about the water level sensor project and recommend priority sites for new water level sensors.

The latest list of 100+ potential new sites is available here: List of Potential Sites. The 15 sites highlighted in green have been identified as preliminary locations for NROC-funded initial sensor deployments. Following NOAA approval of special award conditions in May 2024, the NERACOOS project team began moving forward with the installation of water level sensors and continued site work to further develop the list of sites for water level sensors.

Project partner, Gulf of Maine Research Institute, has developed a new water level data viewer so that coastal managers can view results from the water level sensor network.

Next Steps

- Continue installing water level sensors and working with local points of contact to further develop specific installation locations and procedures.
- NROC will continue to provide a regional forum for site selection, knowledge sharing, and opportunities to further develop a regional network of water level sensors in New England.
- During NROC's November 2024 meeting, the project team will provide an update about the status of the project and request input regarding future priorities.
- NROC and NERACOOS will host a workshop in Spring 2025 to review sensor deployment in 2024, demonstrate the data visualization tool, and obtain feedback on additional products and tools that are necessary for management needs.
- NROC and NERACOOS will engage sensor operators, communities, and managers to train them on sensor maintenance and to obtain feedback on data and tools required for management needs.
- NROC and NERACOOS will develop data products and fund enhancement of the water level data visualization tool in response to feedback from coastal and community managers.

For more information about NROC's water level sensor project, please contact:

- *Joan LeBlanc, NROC, jleblanc@northeastoceancouncil.org*
- *Anna Simpson, NERACOOS, anna@neracoos.org*

Hosting a Coastal Resilience Exchange

During 2024, NROC began working with TNC and CBI to expand Coastal Hazard Resilience Committee activities by providing a regional forum for sharing tools, guidance, approaches, resources, and case studies to advance community coastal resilience across the Northeast states, including consideration of sea level rise projections and scenarios. This effort involves convening a 'resilience exchange' among coastal managers to share coastal resilience policies, action plans, strategies, tools, and lessons learned as managers plan and respond to increasing challenges associated with sea level rise, storm surge, and other climate impacts. During NROC's November 2024 meeting, CHRC will host the following coastal resilience exchange opportunities:

- ***Advancing Equitable Climate Resilience through Proactive Coastal Relocation***. During this session, participants will learn about regional initiatives to advance climate resilience with a focus on equitable approaches for proactive coastal relocation. Discussion sessions will inform future opportunities for NROC and partners to advance regional knowledge and collaboration.
- ***Introducing NOAA's Sea Level Calculator (BETA)***. NOAA staff will provide coastal managers with an introduction to this new tool which can be used to view how water levels have changed over time, and how sea level rise will impact them in the future.
- During roundtable discussions, state coastal managers and other NROC partners will share updates about coastal resilience projects, planning, and funding opportunities.

Next Steps

- NROC will collect and share coastal resilience-related tools and resources via the NROC website to promote knowledge exchange across New England.
- NROC will continue working with TNC and CBI in 2025 to provide a 'resilience exchange' and related convenings for information sharing, understanding of emerging issues, and linking NROC's coastal resilience-related projects (e.g. water level sensors, living shorelines, blue carbon, Portal) to Tribal, state, and federal activities.

For more information about NROC's coastal resilience exchange, please contact:

- *Joan LeBlanc, NROC, jleblanc@northeastoceancouncil.org*

Ocean and Coastal Ecosystem Health Committee

Submitted by Amy Trice, NROC Senior Program Director

Habitat Classification and Ocean Mapping Subcommittee

The Habitat Classification and Ocean Mapping Subcommittee (HCOM) has been advancing habitat classification approaches and identifying seafloor mapping priorities for over a decade. A recent increase in aquaculture, offshore wind, submarine cable, and mCDR projects has led to a need for better understanding of the areas that may be affected or should be avoided.

Partially supported by IIJA funding, HCOM released the latest Gulf of Maine Seascapes data via the Northeast Ocean Data Portal, Maine DMR has been mapping an area of the seafloor that is critical to informing offshore wind planning, and HCOM produced a report of seafloor mapping priorities for the region. The prioritization has been instrumental in guiding state and federal investments in seafloor mapping and characterization.

Since the seafloor mapping priorities report was initiated, HCOM has been advocating for and tracking seafloor mapping activities and updating the Gulf of Maine Seascapes maps and data products. HCOM will continue to update seafloor mapping priorities given ongoing mapping activities and the advancement of offshore wind planning and siting and other projects in the region. With 2025 IIJA funding, NROC, via HCOM, will conduct outreach to additional sectors and regional partners to identify seafloor mapping needs. HCOM will coordinate with the RWSC Habitat & Ecosystem Subcommittee's efforts to identify marine life and habitat priorities and to advance the use of a prototype seafloor mapping data archive. HCOM's priorities will also be informed by the Ocean Planning Committee's Submerged

Archeological and Cultural Resources Workgroup that is advancing the identification of potentially submerged paleocultural landscapes and other potential cultural resources in the region.

During the NROC meeting, HCOM will begin defining ocean mapping priorities for 2025 and determining how to expand participation by additional federal, state, Tribal, NGO, and industry representatives.

Blue Carbon Workgroup

There is growing federal, state, and Tribal interest in developing the science and policy to bolster the role of blue carbon ecosystems (seagrasses and tidal marsh) in regional and global carbon mitigation efforts. Consistent with state, federal, and Tribal goals, in 2015 NROC convened an expert workgroup to inform updates to coastal vegetation data products on the Northeast Ocean Data Portal, and, in 2020, NROC expanded the role of the workgroup to also assess the carbon storage potential of those habitats. This workgroup is being implemented and managed in close coordination with EPA's Phil Colarusso who has led efforts to map these resources in the region for thirty years. In March 2023, NROC began using IIJA funding to work with EPA, University of Massachusetts-Amherst, and the Blue Carbon Workgroup to advance this work including updating maps of marsh and submerged aquatic vegetation, reviewing and improving methods to assess carbon storage, and conducting field sampling to inform methods and ground truth estimates.

NROC will use 2025 IIJA funding to continue supporting University of Massachusetts-Amherst, convening the workgroup, conducting outreach to coastal managers and planners, updating salt marsh and seagrass maps, and continuing to improve carbon storage estimates based on additional field sampling.

The Blue Carbon Workgroup is currently working to ensure all salt marsh and submerged aquatic vegetation maps are updated as data from new surveys are finalized, providing input on methods for modeling carbon storage. Next steps will be to advance outreach and engagement of other experts and coastal managers to understand the use of blue carbon tools in planning and restoration. To date, Ocean and Coastal Ecosystem Health Committee and Blue Carbon Workgroup efforts have been focused on developing the data, maps, and blue carbon estimation methods. Now that the first blue carbon assessment has been completed and the workgroup is developing an updated assessment with new data and improved modeling techniques, the workgroup and the Ocean and Coastal Ecosystem Health Committee will seek to engage coastal managers and planners to provide technical assistance for using assessments in planning, restoration, conservation, and habitat enhancement projects, and to obtain feedback on additional products that may inform management needs. NROC will conduct outreach to Tribes, states, municipalities, land managers, planners, and restoration professionals including the NEPs and NERRs. Feedback from managers and planners will inform additional data, maps, and assessments.

During the NROC meeting, the Blue Carbon Workgroup will hear the results of field studies conducted this past summer to improve our understanding of the depth of potential carbon deposits in salt marshes and consider recent studies that will inform updated blue carbon modeling approaches from salt marsh and submerged aquatic vegetation.

Ocean Acidification

The Northeast Coastal Acidification Network (NECAN) – established by regional partners including NROC and NERACOOS – goal is to improve the understanding of ocean acidification and its potential impacts in the region. Using IIJA funding in 2023-2024, NROC, NERACOOS, and NECAN convened a workshop to identify priorities for better understanding ocean acidification and related impacts in the region. A summary of workshop outcomes identified ocean acidification monitoring and data priorities in the region that was used as the basis for the development of a draft Ocean Acidification Monitoring Plan in 2024. NECAN recently released a draft Ocean Acidification Monitoring Plan with a series of recommendations. The draft plan is now available for public comment.

NROC is specifically interested in identifying monitoring and data needs from a broader group of state, federal, Tribal, industry, and NGO partners. We will discuss these topics during the November 12 workshop. NROC will open a formal comment period after the meeting, specifically requesting feedback that will inform broader outreach to managers, industry, and biologists about ocean acidification data needs.

NROC is currently developing an ocean acidification theme on the Northeast Ocean Data Portal with maps of current and historical monitoring activities, which have previously not been developed or made available. Ocean acidification experts and NROC also identified the need to expand outreach to additional managers, planners, scientists, and industry representatives to better understand data requirements for permitting, siting, and monitoring.

Through 2025, NROC plans to expand outreach to managers, industry, and researchers to develop spatial representations of ocean acidification concentrations (potential regional and subregional characterizations of ocean acidification parameters) and to understand ocean acidification thresholds for potential impacts to ecological resources, including commercial aquaculture and fishery species.

NROC will continue these activities in coordination with NECAN and as identified in the Ocean Acidification Monitoring Plan to inform the development of ocean acidification data products used in decision making and make them available via the Ocean Acidification theme on the Northeast Ocean Data Portal. Outreach will also identify data products responsive to management and business needs. Outreach will include managers, planners, and representatives of the aquaculture and fishing industries to understand data products, data gaps, and needs required to inform management, siting, permitting, and business decisions. It will also include engaging biologists and other experts to inform the identification of OA thresholds for key species, particularly commercially valued species (such as oyster and lobster) and threatened and endangered species. These activities will be coordinated with RWSC research and biological monitoring activities. NROC is also funding 3 pCO_2 sensors to be deployed in MassBays using IIJA funds.

The NROC meeting will help to inform NROC's outreach to additional decision makers and to understand the outputs and next steps for the draft Ocean Acidification Monitoring Plan.

Hydrodynamic Modeling

Evaluating use and additional needs for existing hydrodynamic models New England states, National Estuary Programs, and National Estuarine Research Reserves are working to address water quality and nutrient challenges in coastal areas and have identified the need for better hydrodynamic modeling in those areas to inform their efforts. Hydrodynamic models throughout the region are primarily focused on understanding meteorological and sea conditions and they are too coarse in coastal areas to inform nearshore processes and management needs. NROC will work to synthesize the landscape of existing and developing hydrodynamic models and make recommendations on improvements to those models with a focus on water quality and nutrients in nearshore areas, such as Massachusetts Bay, Casco Bay, Buzzards Bay, and Long Island Sound.

Using 2025 IIJA funds, NROC will hire a contractor, managed by the Ocean and Coastal Ecosystem Health Committee, to identify areas of focus, conduct research on hydrodynamic modeling in those areas, and to interview coastal managers and industry representatives, resulting in an interim report on nearshore hydrodynamic modeling needs. The contractor will evaluate existing hydrodynamic models according to the needs identified by coastal managers and industry. A final report will recommend improvements to existing models or the development of new models that will assist coastal managers and industry representatives to better inform regulatory, management, and business needs.

Updates from NROC Partners

NOAA Office for Coastal Management

Submitted by NOAA Office for Coastal Management

Funding Announcements and Opportunities

POC: Betsy Nicholson

- Climate Resilience Regional Challenge awards were announced in August. There were two successful awards in New England: *POC: Ben Sweeney*
    - Maine Governor's Office of Policy Innovation and the Future (GOPIF): $69M
        - This project will support the goals outlined in the state's climate action plan, focusing on nature-based solutions, strengthening the resilience of Maine's working waterfronts, and building enduring capacity to prepare for, and respond to, climate change impacts. Specific activities include supporting underserved, rural, and tribal communities in the development and implementation of climate adaptation strategies; expanding the availability and use of technical assistance tools and training focused on flood risk, saltwater intrusion, bluff stability, and living shorelines; updating the state's regulatory framework to support climate resilience; conducting demonstration projects that incentivize regional collaboration and nature-based solutions; and strengthening the climate resilience of vulnerable public infrastructure and working waterfronts. More detail is available in this project summary.

    - Aquidneck Land Trust (RI): $2M
        - This project, led by the Aquidneck Land Trust in partnership with the municipalities of Newport, Middletown, and Portsmouth, as well as Naval Station Newport, seeks to capitalize on the momentum of resilience initiatives already underway. Aquidneck Land Trust aims to shift grant administration and project management tasks associated with essential resilience and sustainability efforts to a central organization, alleviating the burden of these duties from understaffed municipalities. By scaling ongoing efforts to address the area's most pressing climate challenges, they will work with their network of partners to help Aquidneck Island embrace a collaborative, regional approach to tackling these issues, with a strong emphasis on risk reduction, equity and inclusion, and enduring capacity.

- Projects of Special Merit competition, administered by NOAA's Office for Coastal Management. Funding is available to Coastal Zone Management Programs to develop innovative projects that further

their approved Section 309 enhancement strategies. This competition is open to Coastal Zone Management Programs until January 17, 2025.

- **Bipartisan Infrastructure Law Funding**
  - Regional Ocean Partnership Funding: The next round of BIL funding for NROC will begin December 1, 2024, with a final FY25/26 Request for Applications posted in February 2025.

  - ROP tribal capacity funding opportunity closed October 31st and will be awarded in April 2025. A couple of tribes from the Northeast submitted proposals. Awards are up to $200k/yr for 2 years and are intended to provide capacity for tribes to directly engage with NROC activities or pursue actions that are aligned with NROC's goals. There will be a final tribal NOFO posted in Summer 2025.

  - Habitat Protection and Restoration Grant competition administered by NOAA's Office for Coastal Management, supports natural infrastructure projects that conserve, restore, and acquire coastal lands. Applicants must partner directly with a state Coastal Zone Management Program or National Estuarine Research Reserve in order to be eligible for these funds and the CZM program or NERR must submit the application, though the Letter of Intent can identify another organization to serve as the lead applicant. The next competition is planned for June 2025.

  - National Coastal Resilience Fund, administered by the National Fish and Wildlife Foundation and NOAA's OCM, supports nature-based solutions that enhance the resilience of coastal communities and habitats. The next competition is expected to open in February 2025.

  - Transformational Habitat Restoration and Coastal Resilience Grants administered by NOAA Fisheries, supports projects that restore habitat, reduce pollution, and increase habitat resiliency for fish habitats. The next and last round of competitive funding will be announced in fall/early winter 2024.

  - Coastal Habitat and Restoration Resilience Grants for Tribes and Underserved Communities, funded by BIL and administered by NOAA Fisheries, supports projects that will advance the coastal habitat restoration and climate resilience priorities of tribes and underserved communities. The next and last round of competitive funding will be announced in fall/early winter 2024.

Product and Data updates

- **Sea Level Calculator was released** to provide useful and actionable information on how sea level and flood frequency are changing over time and on the ground. The product integrates numerous water level data sets to provide streamlined access to NOAA's water level data. Primary Audiences are stormwater, floodplain, and emergency managers; land use planners; public works; and engineers.

- Employment in Coastal Inundation Zones dataset

  Habitat Coastal and Ocean Mapping prioritization study has been completed and results incorporated into regional and national (IOCM) planning processes. The results are also posted on the Northeast Ocean Data Portal

  - Marine Cadastre new or updated - Data Registry
    - Submarine Cables
    - Munitions and Explosives of Concern
    - AIS Vessel Transit Counts - CY 2023
    - AIS Base Stations
    - Tropical Cyclone Wind Exposure (1988-2022)
    - Aids to Navigation
  - Marine Cadastre - planned new or updates
    - Vessel Routing Measures
    - Submarine Cables
    - 2024 Q3 and Q4 Broadcast Points
    - Wastewater Outfalls
    - Pipelines
    - Artificial Reefs
    - Danger Zones and Restricted Areas
  - Digital Coast new or updated
    - C-CAP High-Resolution Land Cover Canopy and Impervious data available for all New England states
    - New Federal Flood Standard Support Tool
    - Upcoming Trainings: Virtual - Economic Guidance for Coastal Management Professionals
      - November 14 - Pathways to Valuing Ecosystem Services
      - November 21 & 22 - Introduction to Benefit-Cost Analysis

Learning Opportunities and Resources

- ***NEW guide!!*** **Reducing Hazard Impacts through Plan Alignment** is a new guide that features best practices to help users integrate local plans and reduce coastal hazard impacts. Resources featured here include a plan alignment toolkit, plan integration for resilience scorecard, linking local planning efforts, and comprehensive economic development strategy and hazard mitigation plan alignment guide.

- ***NEW community of practice!!*** A national **Coastal Inundation Community of Practice** was recently launched. NOAA's Office for Coastal Management is working collaboratively with the National Sea Grant Office and the American Society of Adaptation Professionals on this effort. The aim of the Coastal Inundation Community of Practice is to be a national network of practitioners that facilitates peer-to-peer learning, information exchange, and collaborative engagement to advance coastal flooding science, knowledge and solutions.

Technical Assistance

- OCM is providing technical assistance and contract support to MADEP on the 2023-2024 eelgrass mapping efforts. 2023 mapping (Marshfield to NH) is in review. 2024 flights for south Cape Cod, and Nantucket expected week of May 20th.
- OCM is providing technical assistance to Seabrook-Hamptons Estuary Alliance in New Hampshire to map businesses, employees, property values and tax revenue at risk from future sea level rise using ESRI Business Analyst.
- Click here for a link to Report "The Economy and Flood Vulnerability for Hampton, Hampton Falls, and Seabrook, New Hampshire." *POC: Polina Dineva*
- OCM provided technical assistance to Dartmouth harbor to help plan for future economic analysis.
- OCM recently conducted a benthic workshop at Waquoit Bay to further develop the benthic mapping approach for the NERRs. The workshop served as a pilot case for identifying management needs for benthic data to inform gap analysis and potential collection of new data, as resources permit..

Welcome to Connecticut's new Coastal Management Fellow - Mallory Lentz!

Mallory Lentz, from the University of Rhode Island and nominated by Rhode Island Sea Grant, was matched with the Connecticut Department of Energy and Environmental Protection to spearhead a multipronged approach for addressing coastal public access needs in Connecticut through an equity and environmental justice lens.

Coming soon…

- The review process for the Seascape 2 geoform data is nearing completion by partners. Interpreted layers (paleo deltas, moraines, etc.) are planned to be completed fall 2024.

Newsletters and your stories

- October Newsletters from OCM
    - Coastal Communicators: writing effective headlines (browse past topics in the archive)
    - Digital Coast Connections: includes Hurricane Helene aerial imagery (read past issues in the archive)

- State impact stories - Most recent stories are listed at the top. Filter by state or program to find relevant stories.

Bureau of Ocean Energy Management (BOEM)

Submitted by Wright Frank and Zach Jylkka, Bureau of Ocean Energy Management (BOEM)

Leasing Updates:
The Central Atlantic lease sale that was held on August 14, 2024 resulted in two provisional winners (Equinor Wind US LLC and Virginia Electric and Power Co) and $92.65 million in winning bids.

On October 29, 2024, BOEM held the Gulf of Maine auction which resulted in two provisional winners (Avangrid Renewables, LLC and Invenergy NE Offshore Wind, LLC) on four lease areas and over $21.9 million in winning bids.

Other Updates:
On October 29, 2024, BOEM announced establishment of the Partnership for an Offshore Wind Energy Regional Observation Network (POWERON), an innovative public-private partnership between BOEM and offshore wind lessees designed to maximize the quality and consistency of scientific data collected in lease areas while conserving and optimizing resources. BOEM has an interagency agreement with the National Oceanic and Atmospheric Administration's Northeast Fisheries Science Center to conduct PAM in the Atlantic Ocean off southern New England. In addition, BOEM recently signed a contract with the Regional Wildlife Science Collaborative (RWSC) to conduct other POWERON monitoring along the eastern seaboard. **RWSC** will receive $4 million over 3 years to lead the program.

BOEM published the **Renewable Energy Modernization Final Rule** for renewable energy development on the U.S. Outer Continental Shelf (OCS) in May 2024. The final rule increases certainty and reduces the costs associated with the deployment of offshore wind projects by modernizing regulations, streamlining overly complex processes and removing unnecessary ones, clarifying ambiguous regulatory provisions, and enhancing compliance requirements. The final rule also includes a process to regularly update a five-year offshore wind leasing schedule. The **Five-Year Offshore Wind Leasing Schedule** announced on April 24, 2024 includes a proposed schedule for up to twelve potential offshore wind energy lease sales through 2028. The schedule anticipates another Central Atlantic sale in 2026 and another Gulf of Maine sale in 2028. The timing and scope of a second Gulf of Maine sale, however, will be directly informed by an analysis of the 2024 sale results as well as ongoing engagements with potentially affected Tribes, Gulf of Maine states, and stakeholders; and by relevant market conditions and regional energy goals.

BOEM announced the approval of the **tenth** offshore wind project on the OCS in September 2024 which represents 15 GW of renewable energy. Of particular note, The White House released a statement noting the important milestone for offshore wind.

For more information about BOEM's offshore wind activities, please visit BOEM's renewable energy website. Information about leases and grants that BOEM executed from the inception of its renewable energy program, links to the necessary administrative forms and studies that informed BOEM's wind energy lease sales, and access instructions for the most up-to-date lease information are found in Lease and Grant Information table**.** Lastly, BOEM disseminates information through its Newsroom by publishing Press Releases and Notes to Stakeholders.

USACE New England District

Submitted by Larry Oliver, USACE

Connecticut

BRIDGEPORT AND BLACK ROCK HARBORS DREDGE MATERIAL MANAGEMENT PLAN – The New England District is preparing a 20-year Dredge Material Management Plan (DMMP) to identify dredged material disposal and beneficial use options for the Bridgeport Harbor and Black Rock Harbor Federal Navigation Projects (FNP). The draft DMMP and environmental assessment (EA) are scheduled to be released for public review in the summer of 2024.

NEW HAVEN HARBOR, NEW HAVEN AND WEST HAVEN – USACE is designing a project to deepen New Haven Harbor FNP channel from 35-feet-deep to 40-feet-deep. The project includes several beneficial use projects. Construction is anticipated in the fall of 2026. Maintenance dredging of the FNP is anticipated in 2025.

LONG WHARF FLOOD RISK REDUCTION PROJECT (FAIRFIELD AND NEW HAVEN COUNTIES COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY) – The New England District, in partnership with the Connecticut Department of Energy and Environmental Protection (DEEP), completed a study to analyze the feasibility of a federal project to reduce the risk of coastal storm damage in Fairfield and New Haven Counties, Connecticut. The study was completed in January 2021. The authorized plan includes construction of a 5,800-foot-long floodwall system parallel to the I-95 embankment and including deployable road closure gates and a large stormwater pump station. The project is currently in the final design phase.

STRATFORD COASTAL STORM RISK MANAGEMENT STUDY – The New England District is beginning a study to address coastal storm risk in Stratford, CT. The town of Stratford is the non-federal sponsor.

PLANNING ASSISTANCE TO STATES PROGRAM, DREDGED MATERIAL PLACEMENT PLANNING STUDY -- The Connecticut Port Authority and USACE are partnering, in a Planning Assistance to States study of dredged material placement sites. The goal of the study is to provide information to support long-term safe and efficient commercial and recreational navigation for ports and harbors in Connecticut. The study will build on the recommendations made in the December 2015 Regional DMMP for Long Island Sound. The schedule is to complete the study by December 2025.

Rhode Island

PROVIDENCE RIVER – The District is developing a Dredged Material Management Plan (DMMP) to evaluate plans to manage the sediment from dredging the federal navigation project in the Providence River. The plan will most likely include the development of additional Confined Aquatic Disposal (CAD) cells in the Providence River. The DMMP will address anticipated dredging needs over the next 20 years, to include federal, state, and private dredging needs in the Providence River. The draft DMMP is scheduled for release in the winter of 2025.

RHODE ISLAND COASTLINE COASTAL STORM RISK MANAGEMENT STUDY – Hurricane Sandy and other recent coastal storms, as well as an increased concern with climate change and sea level rise, have resulted in an increased desire to address coastal storm risk across in Rhode Island from Point Judith to the Massachusetts border in Little Compton. The study also resulted in a recommendation to raise the elevation or floodproof about 300 properties spread across the coastal flood plain of Westerly, Charlestown, South Kingstown and Narragansett. The final report was approved by the Chief of Engineers on Dec. 19, 2018. The District and RI CRMC, the project sponsor, executed a design agreement in October 2019 to begin the design phase of the work.

Massachusetts

CITY OF BOSTON COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY – The New England District and the city of Boston are investigating coastal storm risk along the city of Boston shoreline. The investigation will assess direct coastal impacts as well as impacts along the Mystic River, Neponset River and to a lesser extent the Charles River. Climate Change and sea level change impacts will be included. The study builds upon the efforts of the city's Climate Ready Boston multi-year investigation. The study is estimated to take six years to complete. The city is leading a public involvement campaign to ensure the community, including those identified as Environmental Justice communities are involved in the planning process throughout the project lifecycle. We're working toward release of a draft report in 2027.

BOSTON AREA METRO STUDY – The New England District and the Massachusetts Executive Office of Environmental Affairs are conducting a three-year planning study to create a regional assessment of long-term coastal flood risk to populations, property, ecosystems, and infrastructure. The study will not result in implementation of a USACE project but develops a plan and guiding framework for the region to advance coastal flood risk management strategies. The study is bringing together stakeholders to provide essential input on regional coastal issues and potential flood risk management strategies for a cohesive plan. The study overlaps the Massachusetts Coastal Resilience Initiative and we are waiting for additional information from the Commonwealth that could lead to rescoping of the study.

LONG POINT DIKE ECOSYSTEM RESTORATION – USACE and the town of Provincetown are studying alternatives to restore ecological resources in the West End Marsh under Section 1135 – Project Modifications to Improve the Environment Program. The study is considering creating openings in Long Point Dike to restore the connection between Cape Cod Bay and West End Marsh for fish and invertebrates and to improve salt marsh and estuarine habitats. A draft report was completed and reviewed in 2015; however, concerns raised

during the public comment period have resulted in the need to conduct additional hydrodynamic modeling of the system relative to potential dune breaching. The study resumed this spring with renewed support from the Town.

NEW CHARLES RIVER DAM, SCOPING STUDY, BOSTON – The New England District is conducting an assessment of the adequacy of the New Charles River Dam to meet changing climate conditions for the Massachusetts Department of Conservation & Recreation (DCR) which operates the dam. The New Charles River Dam is located on the Charles River, between the Charlestown and North End sections of Boston. The. This technical assistance is in support of the Commonwealth's water resources management planning associated with changing hydrologic conditions, climate change, long-term sustainability, and resilience.

New Hampshire

ISLES OF SHOALS HARBOR OF REFUGE – The New England District is performing repairs to three breakwaters at the Isles of Shoals, Rye, N.H., and Kittery, Maine. Construction will be complete in November of 2024.

Maine

JOSIAS RIVER AT PERKINS COVE, OGUNQUIT, MAINE – This maintenance dredging project to remove 10,000 cubic yards of sediment from the FNP is scheduled for construction this fall.

SEARSPORT HARBOR – The District is working on a maintenance dredging project for Searsport that would involve removal of about 40,000 cubic yards of material. The Corps is considering confined aquatic disposal (CAD) cell alternatives to manage dredged material that is unsuitable for disposal at an open water disposal site.

ROYAL RIVER, YARMOUTH – The District released a draft Detailed Project Report and Environmental Assessment (https://www.nae.usace.army.mil/missions/projects-topics/royal-river-aquatic-ecosystem-restoration-study/) recommending the removal of the Bridge Street Dam and the East Elm Street Dam and channel improvements on the Royal River. Comments are due on November 15th. The town of Yarmouth is the non-federal project sponsor.

HALF MOON COVE PLEASANT POINT - PLANNING ASSISTANCE TO STATES - The District is working with the Passamaquoddy Tribe of Pleasant Point to conduct a Planning Assistance to States study to assess alternatives to restore the aquatic ecosystem in Half Moon Cove in Addison, Maine. The cove was bisected by earthen dams as part of a failed Quoddy tidal energy project in the 1930s, and the dams were never removed. The dams now function as a causeway and a state road was built on top in the 1950s. The study is investigating the environmental benefits of creating various size openings in the causeway. Altered fish passages into the cove, benthic community alterations, and sediment accumulation are primary factors being investigated.

SILVER JACKETS FY2021 DYNAMIC COASTAL FLOOD INUNDATION PROJECT - This project will produce a regional dynamic coastal flood inundation model providing future dynamic inundation maps for communities to help them adapt to sea level rise (SLR). To support municipal resiliency efforts, Maine has created a sea level rise viewer which incorporates most of the recent potential sea level rise scenarios from NOAA et al. (2017). However, this viewer is a bathtub model for “static” sea level rise and doesn’t account for waves, wave

run-up, or how mapped floodplains might change as a result of higher water levels. The project would provide Maine coastal communities with future dynamic floodplain maps that include sea level rise. By building from regional modeling by USACE and incorporating a range of SLR and storm surge conditions, detailed coastal flood models of Portland and South Portland (located on Casco Bay) and Damariscotta (on the Damariscotta River) will be developed. The models will be utilized to produce future floodplain maps to be overlain with building and infrastructure footprints to facilitate climate-resilient planning. These model mapping efforts will be in accordance with IWRSS standards for mapping. The project will include community engagement, education, and outreach, and implementation of municipal mechanisms to incorporate model results (e.g., ordinance or zoning changes, etc.). The models have been completed and provided to the communities.

SILVER JACKETS FY2022 FLOODPROOFING STUDY IN KENNEBUNK AND KENNEBUNKPORT -- The towns of Kennebunk and Kennebunkport have approached the Maine Silver Jackets team for technical services to address appropriate nonstructural flood-proofing measures to support the floodplain management and resiliency of the Dock Square and Lower Village area with the understanding these measures can be adopted in other flood prone areas around the state. The USACE National Nonstructural Committee, along with support from the Historical Structures CoP, with collaboration with FEMA, NOAA OCM and NWS, Maine DACF, DEP, GS, EMA and SMPDC, will provide nonstructural measures that can mitigate the tidal flooding and make the community more resilient to the high tides and SLR. This project will provide enhanced floodplain management performance standards for development and redevelopment in the area that the Towns could put before the voters to include in the floodplain management ordinance. The towns would also like to use the assessment results to provide recommendations and guidance about what building owners in the square can do to reduce flood risk and protect their structures. These recommendations will be provided to "Maine Won't Wait" initiative to be implemented state-wide.

Disposal Area Monitoring System (DAMOS)

In the last year the DAMOS Program performed monitoring surveys at five sites across the New England District including sites in Long Island Sound, Cape Cod Bay, and Massachusetts Bay. The surveys included monitoring the first disposals at the Eastern Long Island Sound Disposal Site (ELDS) since its formal site designation by EPA in 2016. In the coming year the DAMOS Program expects to continue monitoring new disposal activity at the ELDS, recent disposals at the Central Long Island Sound Disposal Site and conduct baseline surveys of new potential disposal sites in Maine. In addition, the district plans to conduct surveys of multiple proposed beneficial use sites that would create beach nourishment feeder berms or restore degraded aquatic habitats.

Gulf of Maine Council on the Marine Environment

UPCOMING MEETINGS/EVENTS

GOMC Virtual Meeting – December 4, 2024, 9-12 ET / 10-1 AT
GOMC will host a half-day virtual meeting on December 4, 2024. The meeting agenda will include roundtable updates and discussion about priorities for the coming year among Nova Scotia, New Brunswick, Maine, New

Hampshire, Massachusetts, and Connecticut state, provincial, federal, First Nations, Tribal, and non-governmental partners. Meeting details and agenda will be posted here.

GOMC 2025 Awards Program

GOMC will issue a call for 2025 awards nominations in December 2024. Nomination forms will be posted here: https://gulfofmaine.org/public/gulf-of-maine-council-on-the-marine-environment/awards/

GOMC In-Person Meeting and Awards Ceremony – May 28-29, 2025, Saint Andrews, New Brunswick

- Awards Ceremony and Dinner. Evening of May 28, 2025. The Algonquin Hotel.
- Daytime meetings and field activities. May 28-29, 2025.
- Meeting details will be posted here.

RECENT ACTIVITIES

From July 1, 2024, through June 30, 2026, GOMC is being led by the New Hampshire Secretariat in partnership with USGS.

GOMC June 2024 Meeting

The Gulf of Maine Council hosted a two-day in-person meeting at the Massachusetts Maritime Academy in Buzzards Bay, Massachusetts on June 11 and 12, 2024. The following key issues were covered during the meeting:

- Highlights from the Bay of Fundy Ecosystem Partnership Science meeting.
- Uncovering and Capitalizing on the Resilience Potential of the Gulf of Maine
- US Tribal and Canadian First Nations priorities for the Gulf of Maine
- US/Canada Offshore Wind Updates
- Accomplishments for the *Regional Collaboration to Address Marine Debris in the Gulf of Maine*
- Agency and jurisdictional roundtable highlights from GOMC members.
- During field excursions hosted by GOMC/USGS, members visited the Waquoit Bay National Estuarine Research Reserve and Ashumet Pond to learn about USGS coastal and water-resource conservation and research projects, as well as efforts to address and monitor PFAS.
- Materials and presentations from the meeting are available here.

GOMC 2024 Awards

GOMC hosted a ceremony on June 11 to recognize 2024 GOMC award winners. The following awards were presented.

Gulfwide Awards

Two individuals and one organization received gulfwide awards for the far-reaching impact of their contributions to the health of the Gulf of Maine.

- Lisa Berry Engler of Massachusetts received the Susan Snow-Cotter Leadership Award for outstanding leadership as a coastal management professional within the Gulf of Maine.

- Fundy North Fishermen's Association of New Brunswick received the Sustainable Industry Award for outstanding innovation and leadership in achieving sustainable business practices and conserving natural resources within the Gulf of Maine.
- Kevin Powers of Massachusetts received the Longard Volunteer Award for outstanding volunteer efforts to protect and conserve natural resources within the Gulf of Maine.

Visionary Awards

The Gulf of Maine Council honored the work of eight individuals and one organization with Visionary Awards in recognition of their outstanding innovation, creativity, and commitment to protecting natural resources within the Gulf of Maine.

- Huntsman Marine Science Centre, New Brunswick
- Karen Jenner, Nova Scotia
- Kim Bernard, Maine
- Daniel Devereaux, Maine
- Doug Welch, Maine
- John A. Mullen, Jr., New Hampshire
- Sean Tumblety, New Hampshire
- Pam DiBona, Massachusetts
- Laura Ludwig, Massachusetts

Distinguished Service Awards

The Gulf of Maine Council presented the following three Distinguished Service Awards for exceptional service and contributions to the Gulf of Maine Council over the past several years.

- Ivy Mlsna, Massachusetts
- Dr. Robert Stephenson, New Brunswick
- Prassede Vella, Massachusetts

Additional information about the Gulf of Maine Council 2024 awards including recipient highlights is available at: https://gulfofmaine.org/public/gulf-of-maine-council-on-the-marine-environment/awards/

Regional Collaboration to Address Marine Debris in the Gulf of Maine

With funding from the NOAA Marine Debris Program's North America Marine Debris Prevention and Removal Program, the Gulf of Maine Council worked with partners - Urban Harbors Institute, Surfrider Foundation, Center for Coastal Studies, Blue Ocean Society, and Huntsman Marine Science Centre - to implement gulf-wide and targeted actions to reduce and prevent the introduction of marine debris into the Gulf of Maine in support of NOAA's Gulf of Maine Marine Debris Action Plan. The project wrapped up in the spring of 2024 and a final report was completed during July 2024. Links to project reports and resources are provided below.

- Final project report: https://www.gulfofmaine.org/public/wp-content/uploads/2024/10/GOMA-Marine-Debris-Final-Report-03.31.2024.pdf
- Gulf of Maine Council / Center for Coastal Studies. 2024. Field Guide to Marine Debris in the Gulf of Maine. https://www.gulfofmaine.org/public/wp-content/uploads/2024/01/Field-Guide-to-Marine-Debris-in-the-Gulf-of-Maine.pdf
- Additional details and links to webinar recordings and publications are available via the project webpage: https://www.gulfofmaine.org/public/marine-debris/

Funding for this project was awarded by NOAA's North America Marine Debris Prevention and Removal Grant program which funds projects that prevent and remove debris in Mexico and the US-Mexico and US-Canada border areas. This two-year project is expected to leverage an additional $448,153 in non-federal matching support to expand the scope of regional efforts to reduce marine debris in the Gulf of Maine.

Gulfwatch Sample Archive Now Available for Research

Thanks to funding from Fisheries and Oceans Canada's (DFO) Marine Environmental Quality Program, the Huntsman Marine Science Centre is providing archival support for the Gulf of Maine Council's collected Gulfwatch mussel samples.

Gulfwatch's transboundary chemical contaminants monitoring program involved the collection of blue mussels (Mytilus edulis) at rotating sites in all jurisdictions around the Gulf of Maine (i.e., Nova Scotia, New Brunswick, Maine, New Hampshire, and Massachusetts). Samples were collected between 1993 through 2012. The existence and preservation of these samples present an invaluable opportunity to:

- gain a regional perspective on the distribution and concentrations of toxic contaminants,
- establish a baseline reference for future monitoring efforts, and
- improve our understanding of issues that threaten the overall environmental quality of coastal waters within the Gulf of Maine and Bay of Fundy region.

Researchers interested in accessing archived samples must submit a research proposal to the Gulfwatch Archive Steering Committee. Proposal submission guidelines must be followed as outlined within the Gulfwatch Management Plan.

Northeast Sea Grant Consortium

Submitted by New York Sea Grant Director, Rebecca Shuford, Chair of NE SG Consortium

NESGC Updates:

- State Sea Grant Programs will be hosting Federal Site Reviews between October 2024 and July, 2025.
- Ongoing local, need-driven, collaborative core programming that integrates research, extension, education, workforce development and communications continues across four focus areas:

- Resilient Communities and Economies (RCE)
- Healthy Coastal Ecosystems (HCE)
- Sustainable Fisheries and Aquaculture (SFA)
- Environmental Literacy and Workforce Development (ELWD)

- The NESGC is looking to enhance engagement with relevant NROC committees and programming in coming years

Ongoing regional research and extension

- Ocean Renewable Energy - https://www.northeastseagrant.com/initiatives
  - A Principal Investigator Meeting for both the 2021 (6 projects) and 2024 RFP (selected projects to be announced soon) research team cohorts will be held in January, 2025
  - Ocean Renewable Energy extension projects - state and regional extension, facilitating engagement, supporting topical literacy, supporting research prioritization efforts.
- American Lobster Initiative - https://www.northeastseagrant.com/initiatives/american-lobster-initiative
- Regional Aquaculture Hubs - https://www.northeastseagrant.com/initiatives/regional-aquaculture-hubs
  - ● Sea Grant Hard Clam Selective Breeding Collaborative (https://storymaps.arcgis.com/stories/3425623358164278bbe1ed7f7311a605)

Other Ongoing Projects

- Sea Grant Liaisons - https://seagrant.noaa.gov/liaisons/
  - National Sea Grant Offshore Wind Liaison - jmccann@uri.edu
  - Aquaculture Liaison, Milford Lab - zachary.gordon@uconn.edu until 11/5/24, TBD after that date
- Contaminants of Emerging Concern (https://seagrant.uconn.edu/research/contaminants-emerging-concern/)

Upcoming Events

All programs will be announcing funding opportunities through their bi-ennial research programs later this year (RFPs). While RFP topics will vary by state program and current coastal priorities, they will be informed by their respective 2024-2027 strategic plans. These can be reviewed to get a jumpstart on planning for potential project ideas and research teams.

Northeast Sea Grant Consortium Research Projects: 2024-2025:

New York Sea Grant

1. HCE - Characterizing Vegetative Zones as Functional Refugia to Improve Ecosystem Resilience and Fish

Reproduction in Coastal Wetlands, Arsenault, Emily, R., SUNY-ESF

2. ELWD - Developing and Evaluating an Interdisciplinary Coastal Science Curriculum, Bernhardt, Jase E, Hofstra University

3. HCE - Developing an end-to-end ecosystem model to inform management of Hudson River and New York Bight ecosystem, Chen, Yong, Stony Brook University

4. SFA - The current and future impacts of warming and low oxygen on the sustainability of shellfisheries across New York, Doall, Michael, H., Stony Brook University

5. RCE - Improving risk communication for extreme rainfall events in vulnerable coastal communities: A case study for Jamaica Bay, Finn, Donovan Pl, Stony Brook University

6. HCE - AI-based forecast tool for prediction of hypoxia occurrence in Long Island Sound, Lwiza, Kamazima M, Stony Brook University

7. SFA - Examining the Effect of LEDs (light emitting diodes) in Pots of New York Crustacean Fisheries, Mercado, Alexander J., Cornell Cooperative Extension

8. SFA - Characterization and dynamics of bay scallop Marosporida (BSM), an emergent parasite of Argopecten irradians irradians, Pales Espinosa, Emmanuelle, Stony Brook University

9. HCE - Integrated biomonitoring of NY coastal waters: aquatic invasive species, fecal contamination source tracking markers, and toxic cyanobacteria, Richardson, Ruth, Cornell University

10. HCE - Navigating Lake Ontario coregonine restoration: Analysis of contemporary and future food web structures, Rudstam, Lars, Cornell University

New Hampshire Sea Grant

1. SFA - Biotoxin accumulation in a changing coastal ocean: determining how feeding behavior and food selection in commercially important bivalves is altered by warming and acidification, Jellison, B., Harvey, L., UNH

2. SFA - Understanding differential climatic and exploitative impacts on two Atlantic cod stocks in the western Gulf of Maine, Kovach, A., Kenter, L., UNH

3. SFA - Assessing and mitigating risks associated with small oyster importation, Whistler, C., UNH

4. RCE - Demographic representation and barriers to access in New Hampshire's blue economy, White, E., Bradt, G., Bigornia, S., Stoll, J., UNH

5. HCE - Evaluating the northern range expansion of blue crab in New Hampshire through community engagement, baseline monitoring, and trophic interactions, Peter, C., Watts, A., Bradt, G. NH Fish and Game.

6. HCE - Toward a bird-friendly blue economy: Integrating seabird data into marine development planning, Craig, E., Furey, N., Lyons, D., UNH

WHOI Sea Grant

1. HCE - Restoring Eelgrass: Identifying best practices for a seed-based approach, Jill Carr of the University of Massachusetts Boston, Forest Schenck of the Massachusetts Division of Marine Fisheries, and Alison Frye of Salem Sound Coastwatch

2. HCE - Reduce, Restore, Recover: Little Pond ecosystem's response to sewering,
   Ken Foreman and Ketil Koop-Jackobson of Marine Biological Laboratory, and Matt Long of the Woods Hole Oceanographic Institution

3. HCE - Waste to Watershed: How contaminants of emerging concern impact mussels, Jared Goldstone of Woods Hole Oceanographic Institution and Helen Poynton of University of Massachusetts Boston

4. SFA - Changing Currents: Collecting data with fishermen to build more sustainable fisheries, Caroline Ummenhofer, Svenja Ryan, and Glen Gawarkiewicz of Woods Hole Oceanographic Institution

5. RCE - To Insure or Not to Insure: How homeowners perceive flood risk,
   Di Jin and Michael Weir of Woods Hole Oceanographic Institution
   Maine Sea Grant

Maine Sea Grant

1. SFA - Co-design of virtual environments for commercial fishing and offshore wind interaction, Colby College

2. SFA - Supporting co-management of river herring: Collaborative research to understand river herring population dynamics, Manomet

3. SFA - Using ecology and hydroacoustics to support shad and river herring management, University of Southern Maine

4. SFA -Inviting conversation on a daunting topic: the role of microbial safety of marine foods, University of New England

5. HCE - Evaluating the northward range expansion of the blue crab through monitoring and research, Wells National Estuarine Research Reserve

MIT Sea Grant

1. SFA - Advancing an Underwater Video with Machine Learning system by integrating with PIT Tag Monitoring to Improve Fisheries Management and Population Assessments, Deegan, L., Woodwell Climate Center

2. SFA - Predicting new biofouling of oyster farms in Cape Cod Bay: reproduction, settlement, temperature dependency, and modeling of larval transport, Pineda, J., WHOI

3. SFA - Investigating the efficacy of alkalinity addition in mitigating the effects of ocean acidification on commercial shellfish, Ries, J., Northeastern University

4. SFA - Quantification of ocean acidification and flow properties in the US North East Coast with applications to aquaculture monitoring and marine debris mitigation, Sapsis, T., MIT

5. HCE - Ocean Acidification in Massachusetts and Cape Cod Bay, Woosley, R., MIT

6. SFA - Coupled Multi-Scale, Multi-Disciplinary Modeling of Fish Aquaculture Farms: From Fish Biomechanics to Cage Hydrodynamics, Yue, D., MIT

Rhode Island Sea Grant

1. SFA - The interaction of environment, genotype, and disease on juvenile oyster survival, Jonathan Puritz; University of Rhode Island.

2. SFA - Understanding Local Changes in Summer Flounder for Improved Sustainable Management, Conor McManus; RI Dept. of Environmental Management.

3. SFA - Quantifying the impacts of Coastal Acidification on Rhode Island Shellfish Aquaculture Nitrogen Removal Capacity, Robinson Fulweiler; Boston University.

4. RCE - Improving coastal subsidence monitoring with satellite images and GNSS data in Rhode Island, Meng Wei; University of Rhode Island.

5. RCE - Combining monitoring and numerical simulations of Natural and Nature based Solutions to coastal erosion: Block Island, a numerical test site, Annette Grilli; University of Rhode Island.

Connecticut Sea Grant

1. RCE - Leveraging sediment addition experiments across the Long Island Sound to examine medium-term ecosystem responses. Beth Lawrence; University of Connecticut.

2. SFA - Oyster aquaculture associated with eelgrass habitat – maybe we can get along after all. Craig

Tobias; University of Connecticut.

3. SFA - Quantifying Larval Connectivity Patterns and Variability among Natural Oyster Beds along the Connecticut Coast. Michael Whitney; University of Connecticut.

4. HCE - Understanding the Urban Plastic Litter Cycle to Optimize Management and Prevent Export of Marine Debris. Gabe Benoit; Mill River Watershed Association.

5. HCE - A first comprehensive evaluation of Black Sea Bass diets in Long Island Sound. Hannes Baumann; University of Connecticut.

6. RCE - Barriers to career pursuits of Black, Indigenous, and People of Color (BIPOC) in the environmental workforce. Anita Morzillo; University of Connecticut.

Lake Champlain Sea Grant

1. SFA - Benefits And Risks Of Consuming Lake Champlain Game Fish: Distribution And Drivers Of Omega 3 Fatty Acids And Contaminants Across Contrasting Regions Of The Lake

2. ELWD - Identifying And Describing Barriers That Prevent Black, Indigenous, And People Of Color (BIPOC) From Entering The Environmental Workforce

3. HCE - Integrating Microbial Ecology And Community Knowledge To Enhance Understanding Of Cyanobacterial Bloom Phenology

4. HCE - Lakeshore Biodiversity: Informing A Lake Wise Approach In The Adirondacks

Northeast Regional Association of Coastal Ocean Observing Systems (NERACOOS)

Submitted by Jake Kritzer, NERACOOS

With our implementation partners, NERACOOS continues to support operation of the regional network of oceanographic buoys and other sensors, forecast models, data management infrastructure, and data products, supported by regular end-user engagement. Over the past year, we have also begun a series of new projects and are beginning to support implementation of an ambitious national IOOS work plan enabled by the Inflation Reduction Act (IRA).

New Projects Underway

Plankton: Funding from the Marine Biodiversity Observation Network (MBON) is continuing zooplankton monitoring at the Coastal Maine and Wilkinson Basin time series stations, along with eDNA sampling, regional lipidscape mapping, and improved characterization of 'seascapes' (pelagic habitat classification). Additionally, new funding from NOAA Fisheries is supporting management of data from the trans-Atlantic Continuous

Plankton Recorder (CPR) program and development of new data products using MBON, CPR, and other plankton data streams.

Soundscapes: Funding from the Office of Naval Research and NOAA Office of National Marine Sanctuaries under the National Ocean Partnership Program, in collaboration with UNH, BOEM, and RWSC, is supporting a process to prioritize research applications of passive acoustic monitoring data under the newly formed Gulf of Maine Regional Acoustic Network (GoMRAN); conduct new analyses that integrate acoustic data with other measurements from the regional observing system; and develop novel visualizations of the Gulf of Maine soundscape.

Stellwagen Bank Buoy: Funding from the IOOS Ocean Technology Transition (OTT) program is supporting a collaboration with Stellwagen Bank National Marine Sanctuary (SBNMS), the National Data Buoy Center (NDBC), and Woods Hole Oceanographic Institution that will engineer a new mooring design that provides ecosystem observations needed by SBNMS (incl. passive acoustics) and weather forecasting observations needed by NDBC in a single unit that can be operated more cost-effectively and serve as a model for similar partnerships elsewhere.

Offshore Wind Metocean Data Management: A second OTT project with MARACOOS, the Gulf of Maine Research Institute, and RPS Tetra Tech will transition the data ingestion and management pipelines used by NERACOOS and MARACOOS, and the IOOS GliderDAC, into a common cyberinfrastructure that leverages a best-of-breed approach for acquisition, processing, integration, and dissemination of metocean data. Private and public data providers will benefit from documented, standards-based, and scalable cyberinfrastructure, and end-users will benefit from access to the growing volume of data through standard services and products.

IOOS Inflation Reduction Act Work Plan

NOAA's IOOS Office recently announced a series of new IRA investments for work by the 11 certified Regional Coastal Observing Systems (RCOSs), including NERACOOS, at regional and national scales focused on three priority themes: Coastal Resilience (water level sensors, webcams, wave buoys), Ecosystem Change (ocean acidification/biogeochemistry, ocean sound, eDNA, plankton/HABs), and Equitable Service Delivery (ESD; engagement with and support of underserved, marginalized, and frontline communities).

Many of the details of the IOOS IRA work plan will be determined and implemented over the next five years. Component activities will include national workshops and communities of practice to share lessons learned and develop best practices; a national IOOS ESD assessment that will highlight successes to date, capacity building needed within the IOOS enterprise, and new communities with which to engage; new sensor deployments and product development; and more. NERACOOS will provide our users and partners with regular updates on activities and opportunities that can support our work together in the Northeast.