

MA Habitat Working Group on Offshore Wind

Convened Virtually and In-person | 100 Cambridge Street, Boston, MA

June 18th, 2025, 9:00 – 12:00 PM

MEETING SUMMARY

The following is a summary of the meeting. Presentations shared can be accessed on the [Habitat Working Group website](#).

State Updates

The Massachusetts Office of Coastal Zone Management (CZM) shared the following updates on offshore wind project status, the MA Ocean Management Plan, and the New England Shelf Hydrogeology Project.

Offshore Wind Project Status:

- CZM shared status updates for the five offshore wind projects currently under operation or construction: South Fork, Vineyard 1, Revolution, Sunrise, and Empire. More information can be found in the slides, this [map](#) of existing projects, and on the [NROC Data Portal](#).

New England Shelf Hydrogeology Project:

- A 2-month study is underway to assess water chemistry, sedimentology, microbiology, and micropaleontology adjacent to the MA OSW lease sites. This study began on May 19th, 2025 and is being conducted by the European Consortium for Ocean Research Drilling (ECORD). They are currently at MV03 (SouthCoast), and have drilled to 393 m below sea floor. Further updates will be provided once the study is completed.

Ocean Management Plan:

- The MA ocean management plan is a framework for deconflicting new development in state ocean waters with existing resources and uses. The ocean management plan covers renewable energy, cables and pipelines, and sand for beach nourishment. It sets siting and performance standards to protect special sensitive or unique resources and areas of concentrated water dependent uses. It is reviewed every 5 years. [The Ocean Management Plan](#) is undergoing formal review in 2025, with a public comment period anticipated in Q4 of 2025.

The Division of Marine Fisheries (DMF) shared the following updates on the Fisheries Innovation Fund:

- The Fisheries Innovation Fund (FIF) is a \$1.75 million mitigation fund created by Vineyard Wind to “support programs and projects that ensure safe and profitable fishing continues” as current and future offshore wind projects are developed. It is hoped that this fund will increase as other developers add mitigation funds.
- The RFP for Solicitation 1 is currently being finalized with EEA to fund projects up to 3 years in duration that are focused on fishing innovation, community, and/or safety. The proposals are due August 15, 2025, with projects starting January 1st, 2026.

Nature Inclusive Design

This section of the meeting included an overview of nature inclusive design (NID), followed by three presentations on NID initiatives.

Todd Callaghan, MA CZM, provided an introduction to NID and how it connects to offshore wind.

- NID aims to create spaces/structures that are beneficial for both people and wildlife, often by integrating features that enhance biodiversity, improve habitat connectivity, and promote ecological function. NID can be seen as a subset of Nature-based design that specifically emphasizes the needs of non-human stakeholders.
- In OSW development, NID refers to changes to hard structures to increase habitat, and may include monopiles, converter stations, scour protection, and/or cable protection.

Mark Rousseau, MA Division of Marine Fisheries (DMF), presented on DMF's work on artificial reefs within the marine waters of Massachusetts.

- Artificial reefs are defined as human-made, underwater structures, typically built for the purpose of promoting marine life in areas of generally featureless bottom.
- MA artificial reefs are designed to enhance marine structured habitat and to provide recreational fishing opportunities. Scour protection is not the primary goal of this work.
- DMF's approach to artificial reefs utilizes three marine habitat components: benthic relief, edge, and interstitial space.
- There are currently 5 permitted artificial reefs in MA waters. Two sites (Yarmouth and Harwich) have open permits and are available for collaborative research opportunities, including for assessing material types and monitoring techniques.
- DMF is also looking for sites to store material before building artificial reefs.

Participants shared the following questions (Q) and answers (A):

Q: What do permits require in regard to dispersion of habitat?

A: Permit conditions require the dispersal of material on the bottom at a ratio of 2:1 (2 units of open space to 1 unit of material). This is intended to facilitate edge and open space.

Q: How are sites chosen for artificial reefs and how are the needs of animals and organisms factored in?

A: DMF has a site selection process that includes input from state and federal user groups, and factors such as proximity to ports. Site selection in MA is challenging because almost every square inch of bottom has activity. These activities are taken into account.

Loretta Roberson, The Bell Center, and Natalie Danek, WHOI, presented research focused on promoting beneficial colonization of offshore wind infrastructure.

- This project is being led by a team of 6 researchers and is funded by MassCEC. It investigates the effects of micronutrient paints and biological seeds on structures to encourage colonization by species that are beneficial to the environment.
- The goal is to develop criteria to determine optimal locations for implementation of these strategies, and to scale these strategies within the design of offshore wind infrastructure.
- Researchers are currently testing specific mineral/nutrient and biological seeding treatments in nurseries and test plots. They are monitoring for increased growth and species of interest such as scallops, star coral, and oysters.

Participants shared the following questions (Q) and answers (A):

Q: How are you defining successful colonization? Does it take into account species richness, biomass, trophic function, or some other ecological criteria?

A: We are currently testing paints on small tiles. These questions will become more important once we start using paints on larger structures. We will be monitoring for species richness, biomass, trophic function, etc.

Q: How are researchers distinguishing between beneficial colonization and ecologically harmful colonization?

A: This determination is relatively simple at small scales and is based on years of observation and data. The challenge is scale and depth. Beneficial and harmful colonization may be different in nearshore ecosystems and far offshore ecosystems.

Q: How deep is sugar kelp expected to grow and be viable?

A: Sugar kelp tends to live in shallower waters. In deeper water, we would select red seaweed or sponges.

Dan Kuchma, Tufts University, presented takeaways from the MOCEAN workshop held in May, 2025, which included conversations on Nature Inclusive Design.

High level takeaways are as follows:

- Underwater infrastructure can and should be designed to strengthen marine ecosystems
- Research and Pilot Projects related to NID are critical to advance best practices and to collect data to advance policies in support of NID
- Some countries, such as the Netherlands, have integrated NID as a condition of OSW development. In this model, biodiversity benefits are a core ‘non-price’ criteria for OSW siting. This incentivizes developers to create proposals that aim for net-positive biodiversity impact.
- More information can be found at [MOCEAN.us](https://mocean.us)

Participants shared the following questions (Q) and answers (A):

Q: What are the possibilities for moving forward policies on NID in Massachusetts?

A: The state could demonstrate the desire for NID by including NID criteria in procurements. The state could also support NID innovations by developing policy that more effectively vets new technologies (e.g. robotics, eDNA). These technologies are critical for expanding NID.

Q: Could NID be incorporated into the MA ocean management plan?

A: The management plan is limited because it is only for state waters. NID could be connected to the guidance for cables within the plan. Technology testing could also potentially be incorporated into the plan.

Q: Are there any examples of aquaculture being integrated with OSW infrastructure?

A: The European Horizons program has tried this with kelp and shellfish (not pen aquaculture). Some research suggests that the integration of aquaculture in OSW is not economically feasible, as the profit margin of aquaculture does not make up for the cost of transportation and fuel.

The presentations followed by a general discussion on NID, which included the following questions and conversation:

Q: How developed is the technology that supports NID? Is testing still needed before wind energy developers could implement NID? Is NID technology advanced enough that the state could make NID a requirement of new structures?

- There is still lots to learn about NID technologies and approaches. The opportunity right now is to test NID on infrastructure already going into the water, rather than requiring developers to implement NID.
- Some developers are already interested in NID. The question is how and whether NID offers a benefit to developers.

- The quantifiable benefit and impact of different NID is still understudied. This is a place for more scientific research and testing. To encourage NID, the objectives and impact needs to be very clear.
- In Europe, developers are given additional points in the procurement process for including NID. These NID efforts become part of the data collection process, effectively becoming experimental sites.
 - Note: Building structures already increases habitat without additional NID efforts. NID efforts need to be clear on *additional* benefits beyond the structures themselves. These benefits become clear over time and through testing.
- **Action Item:** Consider opportunities for the Habitat Working Group to develop guidance and/or goals and objectives for NID in Massachusetts.

South Fork Wind Benthic Story Map

Annie Murphy, INSPIRE, presented work done to date on the South Fork Wind Benthic Story Map.

- South Fork Wind has invested in a comprehensive benthic (seafloor) monitoring program that includes targeted studies that span pre-construction, construction, and post-construction time periods.
- These SFW benthic surveys document the marine life living on and near OSW infrastructure. Preliminary results provide support for the hypothesis that these projects will have minimal environmental impact, based on the first surveys at SFW.
- These results have been developed into a [GIS story map](#).

Participants shared the following questions (Q) and answers (A):

Q: Is the written report on these findings publicly available?

A: The report is currently under review and should become available in the coming months.

Q: How long will data continue to be collected?

A: Data is collected 5 years from construction. We are currently in year 3.

Q: In areas where the enrichment of marine life is not being observed, do you anticipate that this will change?

A: The areas where we are not seeing enrichment may simply be a timing issue, or the area may still be absorbing the shift in habitat. We are gauging enrichment by assessing the overall function of the community, rather than the presence of a particular species.

Q: How will decommissioning be approached when the time comes?

A: This remains an open question. There's lots to learn from the decommissioning of oil and gas projects. In the NEPTUNE deep water decommissioning, for example, there were careful conversations about the costs and benefits of removing all structures. The State advocated removing all infrastructure to make space for new projects, but this also came at a high cost for habitats.

Participant Updates

Emily Shumchenia, RWSC: In 2025-2026, RWSC is competitively funding regional research projects with a focus on seabird displacement, effects of offshore structures on oceanographic processes and marine ecology, and changes in baleen whale distribution and correlations with OSW development. RWSC is also organizing sector caucuses on bird and bat tracking, acoustic telemetry, and glider deployments. RWSC recently participated in a U.S. Environmental Data Sharing Strategy Workshop,

hosted by Oceanic & NREL to develop a Data Sharing Action Plan, which is expected in September 2025. RWSC continues to advance data governance efforts in partnership with NROC, MARCO, and ROSA.

Laura Brothers, US Geological Survey (USGS): USGS continues to develop capabilities with Deep Water Sampling, enabled by the Seaboss and the new Super Seaboss. The Super Seaboss collects seafloor imagery and samples up to 500 meters water depth. This expanded capability enables sampling of the Gulf of Main basins and deeper shelf/shelf-edge environments. USGS is finalizing the GoME Data Inventory Report, which reviews the geologic framework of the Gulf of Maine and available hydrographic, geophysical, and sampling data within the Gulf, and identifies data gaps. This is meant to inform desktops studies and future data collection efforts. The geopackage is expected in July 2025, with the Report to follow in Fall 2025.

Chris McGuire, The Nature Conservancy (TNC): TNC has received NYSERDA funding to work with Stony Brook University to monitor fish and artificial reefs at depths used for OSW. This will be a comparative study and will likely be completed in Fall 2025.

Next Steps & Action Items

Abby Fullem, Consensus Building Institute facilitation team, closed the meeting and reviewed the following next steps:

- CBI and Planning team will consider opportunities for HWG to advance guidance or goals around Nature Inclusive design
- DMF has two permitted sites that are available as test sites for Nature Inclusive Design. If interested, contact Mark Rousseau (mark.rousseau@mass.gov)
- Zach Jylkka (MassCEC) and Alison Brizius (CZM) to keep an eye out for sites in New Bedford, Boston, and surrounding areas that could be used to store materials for habitat projects (artificial reefs, etc.)
- The next Habitat Working Group meeting will be scheduled in Fall 2025