MA Habitat Working Group on Offshore Wind

Convened virtually

February 26, 2025, 9:00 AM – 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:

- CZM is reviewing recent federal executive orders on offshore wind. The Commonwealth of Massachusetts remains committed to responsible offshore wind development, which is essential for local jobs and renewable energy and climate goals.
- The Habitat Working Group (HWG) and Fisheries Working Group (FWG) foster open dialogue, identify emerging issues, and address concerns. Input in these groups has led to leasing process improvements, and CZM is confident in their continued collaboration and progress.

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

- In response to FWG feedback on fisheries and habitat impacts of boulder relocation, CZM and DMF developed the Boulder Relocation Framework to guide best practices and policies for activities related to offshore wind development.
- Feedback from fishermen and developers included concepts such as: prioritizing early engagement with fishermen before relocations, updated mariner notices, using a boulder picking methodology over boulder plowing when possible, developing more prescriptive guidance, prioritizing boulder relocation to hard and complex bottoms rather than soft bottom, concern about boulder size, and concern about cable-laying berms affecting gear and survey vessels.
- In January, the Bureau of Ocean & Energy Management's (BOEM) SouthCoast Wind COP approval Terms and Conditions introduced a Boulder Relocation Decision Protocol (Section 5.3.8), providing more prescriptive guidance for developers.

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

Q: Can you explain the different perspectives on boulder relocation?
A: Fishermen favored relocating boulders to already precluded hard-bottom habitats. BOEM guidance suggests placing them at the hard-soft interface. The National Marine Fisheries Service (NMFS), working with other agencies, balanced the tension between what is best for habitat and for fishing gear by recommending boulders be placed near precluded areas.

Q: Most developers prefer not to bring boulders onboard vessels. So, if they need to move boulders, the location is limited to what is within their crane's reach. The framework should include goal statements that support both fishery and habitat interests while allowing for real-world flexibility.
A: CZM is working with NMFS to develop a more detailed yet flexible map to guide developers over specific project segments. The goal is to add clarity through prescription while allowing necessary flexibility.

Q: How will the state agencies monitor compliance with this guidance?

A: State agencies do not oversee compliance of this. Developers' boulder relocation plans and ensuing reports will be shared with Bureau of Safety and Environment Enforcement (BSEE) and NMFS to be disseminated to ocean users. The plan acknowledges challenges in boulder placement related to fishing gear and activities, and BOEM is having ongoing discussions with developers and NMFS to resolve potential spatial conflicts.

Q: What boulder size does the framework apply to and does it differentiate guidance based on boulder size?
A: The framework recommends a threshold diameter of about half a meter for boulders. The state guidance document uses this lower reporting threshold since boulders less than two meters currently reported, including down to half a meter, could impact fishing gear. Other boulder characteristics are worth considering but not included in this version, e.g., smooth vs. textured boulders support different habitats.

Q: Knowing which methods are used to move boulders would inform policy and help us better understand habitat impacts. Could this be included in developer reports?
A: CZM compiles relocation data from developers for the Regional Wildlife Science Collaborative (RWSC) portal, but it only includes final coordinates, not origin, size, or other habitat-related details. Some projects collect methodology data but it's neither public nor standardized. Anecdotally most boulders are moved via boulder picking rather than boulder plowing, but no tracking system has been established across developers.

Q: What data do developers record when moving boulders?
A: Avangrid maps boulders to identify hazards and tracks their relocation, so this information does exist. Most of the offshore wind areas near Massachusetts do not require boulder plowing for relocation efforts. The Boulder Study within South Fork's benthic monitoring plan does not track relocation distance; it only records the starting and ending latitude and longitude. All selected boulders were moved using the controlled method of boulder picking. This data may still be available on the South Fork website.

Q: Are there plans for a next iteration of the guidance document?
A: There is no concrete plan for a next iteration.

Q: What is the ratio of boulders used as scour protection vs. those placed on the seafloor?
A: Boulders used for scour protection need to meet specific engineering criteria, which boulders from the seafloor often do not. Collecting and repurposing boulders is challenging, expensive, and not feasible.

Q: What is the scale differential between the cubic meters of boulders used for scour protection and of boulders relocated?
A: We have not but could quantify this using boulder relocation report information, which often includes a dimension of the moved boulder. Some plans document the movement of hundreds of boulders.

Q: What are the project-specific monitoring plans for habitat on relocated boulders, specifically concerning non-native invasive species and their potential spread?
A: The benthic habitat monitoring plans for some projects identify specific areas, such as a set distance along an export cable corridor, for repeated observations. Avangrid is not required to monitor moved boulders, as they are not included in the benthic monitoring plan. Boulders are moved within the same habitat per state and federal permits. For Vineyard Wind 1, we exceeded permit requirements by documenting habitat recovery one year post-construction. Vineyard Wind 1's adaptive monitoring approach allows flexible sampling while focusing on impact areas, enabling gradient analysis of recovery at both relocation and original sites.

Q: Was the orange encrusting taxa ever identified? Did you use a picker to look at the boulders?
A: No. Water samples were taken to try to identify it, and samples tested positive (via eDNA analysis) for *Didemnum* at low levels, indicating widespread presence. However, we confirmed that it was not spreading; boulder images showed no change in percent cover in the two years of sampling. We are exploring improved methodology as we resample the South Fork boulders and conduct a Revolution Wind boulder study. As for the picker, we did not develop one. The taxon is on both control and relocated boulders. Identifying it is more of a research question than a compliance monitoring one.

MassCEC Research Announcements & Research Advisory Boards

Nils Bolgen, Massachusetts Clean Energy Center (MassCEC) announced new funding for offshore wind research on habitat, wildlife, and fisheries to fill scientific gaps and foster partnerships.

MassCEC will coordinate with awardees to form advisory boards that leverage existing groups, like the HWG. Interested participants should contact MassCEC or project PIs. Results will be published as full reports and summarized in accessible "summary sheets" online. Awardee principal investigators gave an overview of their studies.

Participants shared the following questions (Q) and answers (A):
Q: We're working on a similar effort to the benthic colonization project in Australia to seed sponges on rocks in an artificial reef. It is an interesting approach to prevent colonization of an invasive species by promoting the colonization of species of interest.

Q: Can you share more about WindSense?
A: It's a tape-like device that wirelessly transmits data from wind turbine blades during testing. It can also be used to monitor other structural elements like the foundation and tower.

RWSC Current Work & Focus Areas

Emily Shumchenia reviewed RWSC's recent work, including the year-in-review document, final meetings of the Collaborative Technology Series workshop, the work of the subcommittees, including the new seafloor data repository, and research coordination efforts. She also highlighted RWSC's launch of two new RFPs. All resources can be found on the RWSC website, with details about the RFPs here.

Participants shared the following questions (Q) and answers (A):
Q: Is there a link for that bird spreadsheet?
A: Yes**,** the spreadsheet can be found in the Bird List folder inside the Bird and Bat Subcommittee Sharepoint on RWSC's website.

Transit Corridor Acoustic Monitoring

Elizabeth Marsjanik of Vineyard Wind and Doug Grimes of ThayerMahan shared an overview of the test conducted with the SeaPicket system. This work was funded through the Vineyard Wind 1 Accelerator Fund Wind and Whales initiative and managed by Vineyard Wind 1 and MassCEC.

The SeaPicket pilot deployed a 32-hydrophone array to monitor a transit corridor, improving whale detection and potentially enabling faster vessel transit. Three systems were deployed: one near Buzzards Bay, one south of Noman's Land Island, and one between the island and the lease area. The system recorded roughly 11,385 detections with a 0.1% false detection rate. Beyond detection, it also confirms where marine mammals are not, enhancing monitoring and protection.

Participants shared the following questions (Q) and answers (A):
Q: Why were there so few localizations? Was it due to insufficient overlapping coverage between buoys?
A: Exactly. In this pilot, the system setup had minimal overlap, limiting localizations. We see more localizations during construction monitoring, where the network is tighter. Additional SeaPicket buoys were not deployed during the pilot because from a compliance and cost-benefit perspective, it was more practical to use fewer buoys and take a more conservative approach to assessment/ action after a detection.

Q: What effective range size does NMFS currently recognize?
A: 10 km.

Q: How often do the arrays need cleaning due to biofouling?
A: They typically remain deployed for 4-6 months before requiring cleaning, so roughly 2-3 times a year.

Q: How many arrays are needed for effective detection? For example, if there were a 20-kilometer transit corridor in one direction, how many arrays would be needed for effective detection?
A: It depends on the coverage area required. For a 20-kilometer transit corridor in one direction, deploying two or three systems would likely be sufficient. It also depends on the application. Our pilot aimed to "localize" right whales within an acoustically monitored corridor but funding constraints led us to prioritize compliance. A ThayerMahan model estimated optimal localization would require six to seven systems - over twice our initial deployment. Many factors are at play here.

Q: What are the next steps for this research?
A: Developing automated classifiers to support operators, enhancing communication technology, and strengthening the system to withstand harsh weather conditions.

Q: There were thousands of non-whale detections. Can you share what other animals were identified?
A: Most detections were whales, some were shrimp, and others were likely fish.

Q: How long does it take between the SeaPicket detecting a whale sound for you to relay the information to vessels for a speed adjustment?
A: Once a detection was made, alerts were immediately sent via VHF radio and WhatsApp to the vessel fleet through our Marine Coordination Center in New Bedford. The system was largely successful. We made a lot of detection so over the six months of testing, vessels exceeded speed limits on only four days.

Q: Was every detection reported, or only those within range for a vessel to reach the whale?
A: We reduced speed any time a right whale vocalization was detected. This was in addition to already strict seasonal speed restrictions. The study took place during peak right whale migration, so we were not anticipating going fast regardless of our results.

Q: How long would a vessel speed restriction last and how do you decide to call it off?
A: It depends on the time of year, but speed restrictions usually last for a few days. Most detections were not one-off events – they came in a consecutive series.

Q: Now that the pilot is complete, is there an opportunity for data sharing? We have limited real-time data, so exploring how this technology could help reduce risks to right whales from industries like fishing and shipping is important.
A: Developers are required to share all acoustic data on the NCEI portal, with raw data from ThayerMahan being uploaded. While some protected data requires filtering due to Department of Defense concerns, the rest will be publicly available. Detection data is already on Whale Map and will also be on Passive Acoustic Cetacean Map (PACM).

Q: Is there a report on the pilot that you can share?
A: There are a few press releases, and ThayerMahan's website has a good write-up on the SeaPicket system. The mitigation monitoring plan isn't public but construction monitoring plans may be. These would provide insight into communication timing between SeaPicket systems and shoreside staff.

Developer Updates

Developer updates were shared via email prior to the meeting. The working group shared the following questions (Q) and answers (A):

Q: What survey work and activities is SouthCoast planning for this year?
A: There are no activities planned for this year due to federal uncertainty. Our benthic and fisheries surveys will start in 2026.

Q: For Ørsted, the Starboard Wind project team mentioned a low-noise pile installation method that involves fluidizing sediment to reduce sound impacts on whales. Is there more information on this?
A: I can connect you to an Ørsted colleague who can share more information.

Q: When will the automated detection lighting system be installed at Vineyard Wind? There are concerns about its potential impact on migrating birds.
A: The Aircraft Detection Lighting System (ADLS) will be tested and activated this week, with ADLS lights added at commissioning for the remaining turbines. Lights operate only when aircrafts enter the airspace. Models estimate that lights will be activated for less than four hours of use per year. While lights may attract birds, the impact is expected to be minimal, and studies suggest migratory birds typically fly below Vineyard Wind 1's hub height, which is where the lights will be placed. Vineyard Wind is also collaborating with Biodiversity Research Institute (BRI) and Project WOW to place bird and bat telemetry sensors on the nacelle of turbines. Turbines have ultra-high-frequency deterrents and these telemetry sensors will help study their efficacy.

Q: Vineyard Wind placed ECOncrete mattresses over a cable near Barnstable and continues to monitor it. When would be a good time to ask for the results? Can you include imagery in your update for the June meeting?
A: The first-year benthic habitat survey has been conducted but the data is still being processed. We will share the data with the state in the fall; perhaps we can review it with the group in the winter.

Participant Updates

Mike Pol, Responsible Offshore Science Alliance (ROSA): In collaboration with RWSC and the Marine Technology Society, ROSA is hosting a tech surge on habitat monitoring technology to introduce new tools to scientists. Save the date for the conference: October 8-9. Stay informed about ROSA updates through the newsletter.

HWG Business, Work Plan

Abby Fullem, Consensus Building Institute facilitation team, shared updates on the work plan and details about the next in-person meeting. The work plan for 2025 will be a living document to allow the HWG to be responsive to the changing landscape. We still plan to meet quarterly, with one to two in-person meetings per year. Our next in-person meeting is on June 18th in Boston. At this point, topics listed on the work plan include: nature-based solutions, forthcoming USGS and NCCOS Stellwagen research papers, bubble curtains, decommissioning, and further exploration of boulder relocation. We

may also combine the fisheries and habitat working groups for shared topics or developer updates, as our joint transmission planning meeting worked well last year.

Next Steps

Abby Fullem closed the meeting and reviewed the following next steps:

- Participants:
  - Reach out to Nils or the PIs if you want to be involved with the MassCEC research projects.
- Planning team:
  - Consider any additional work needed on boulder relocation.
  - Consider a presentation on low-noise technology methodology at a future meeting.
- Nils and Atma: Connect on SafePassage bird tagging project.
- Elizabeth: Follow up with Todd on the timeframe for vessel speed restrictions, and share links about writing/reports related to the SeaPicket system with Priscilla.
- Claire: Follow up with Todd on low-noise installation technology, and the planning team will decide if this fits into the working group's agenda later.
- Developers: Share seafloor data with RWSC.
- If you have anything to share with this group, please reach out to Abby Fullem (afullem@cbi.org).