

MA Fisheries Working Group on Offshore Wind

*October 18, 2024 | Gloucester, MA
NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO)*

MEETING SUMMARY

Meeting slides are available on the Fisheries Working Group on Offshore Wind [website](#).

Welcome and State Updates

Massachusetts Fisheries Working Group on Offshore Wind Co-chairs Dan McKiernan, Director of MA Division of Marine Fisheries (DMF), Alison Brizius, Director of MA Coastal Zone Management (CZM), and Nils Bolgen (MassCEC) welcomed attendees. The Co-chairs shared the following State updates:

- The Interagency Offshore Wind Council released the final Offshore Wind Strategic Plan.
- MassCEC is soliciting proposals for research funding.
- The Final Gulf of Maine sale notices have been released.

Pat Field, CBI facilitator, shared an overview of the process for the Regional Fund Administrator (RFA). **The following questions (Q) and comments (C) were shared by the working group:**

Q: How long do advisory members serve on the RFA board?

A: Board members will likely serve between 18 and 24 months. Commercial fishing members and alternates will be compensated for their time and have their travel costs covered.

Q: The Gulf of Maine floating arrays will have very different displacement effects than stationary arrays. Will this motivate the Bureau of Ocean and Energy Management (BOEM) to make their draft mitigation final? It would be useful for the RFA.

A from BOEM: The guidance, which is currently going through review, will not change significantly to reflect the floating arrays. We are working with the Pacific Office to develop a future update or appendix that would address floating platforms.

A from Pat: The RFA is focused on distribution of funds, not on determining the compensation amounts. Developers off California are exploring joint methodology to calculate project impacts and compensation. There may be helpful information for the East Coast from that effort.

Fishing Industry Updates

Eric Hanson, Hansen Scalloping Inc., shared that the scallop industry is concerned about the future of the industry given the effects of climate change and ocean industrialization. With others, Eric is conducting a workshop on topics such as enhancing historic fishing grounds, hatcheries, assessing disease, climate change, ocean turbidity and acidification, and regulation. The industry is self-funding this work.

The following questions (Q) and comments (C) were shared by the working group:

Q: Are you looking for start-up funds for this concept?

A: We are in the information gathering phase and not quite ready for funding.

C: The scallop fishery is highly cyclic and currently in a low productivity part of the cycle given low recruitment. The industry is working on enhancements; for example, recent efforts of moving scallops have been successful, and hatchery-raised scallops have been successful when there is predator protection. There is an opportunity for the Commonwealth to support these efforts, like state of New Jersey has.

A from Pat: There will be a workshop on the regulation and permitting of seeding clam at the New York State Energy Research & Development Authority (NYSERDA) State of the Science.

Angela Sanfilippo, Gloucester Fishermen's Wives Association, shared that they are looking for a boat buy-back program for those who want to leave the industry due to many challenges.

Boulders

The session on boulders included five presentations: (1) ROSA and RWSC efforts on a boulder map, (2) CZM on boulder relocation: developing management, (3) NMFS on boulders, (4) BOEM on boulders, and (5) Ørsted on boulders and habitat recovery analysis post-boulder movement.

ROSA and RWSC Efforts on Boulder Map

Reneé Reilly, Responsible Offshore Science Alliance (ROSA), shared that ROSA and the Regional Wildlife Science Collaborative (RWSC) are jointly developing a [research planning map](#) that includes fishery and wildlife data from the Ocean Data Portal as well as wind energy areas and active leases, and passive acoustic monitoring data.

CZM on Boulder Relocation: Developing Management

Hollie Emery, CZM, explained the geological context and glacial moraines that overlap with the Revolution Wind and South Fork lease areas. To lay cable or foundation, developers move boulders with a claw arm or boulder plow. The Fisheries and Habitat Working Groups have raised three concerns about this practice: safety due to new hangs, fishing industry impacts from gear damage and loss of access to fishing grounds, and habitat and stock impacts due to direct physical damage, habitat conversion, and ecological changes. In response to these concerns, CZM developed a guidance document that lists potential boulder relocation impacts, and recommends avoidance, minimization, and mitigation strategies.

The document includes guidance for boulder relocation monitoring, the regulatory framework, and reporting. For example, CZM requests that developers send shapefiles of boulder locations.

Potential next steps for the guidance document include to studying the impacts of boulder relocation on habitat and fisheries, improving communication on boulder location, and exploring opportunities for beneficial reuse. CZM is seeking input from the Working Groups on this guidance document.

The following questions (Q) and comments (C) were shared by the working group:

C: Thank you for finally addressing this. You should create working groups so that the fishing industry has input on the locations to which boulders are moved. When listing safety concerns arising from relocation, include that a scalloper off Nantucket capsized as a result and lost five crewmembers.

Q: Is there a policy for handling other objects that are dredged up in the process? There are other types of obstacles that tear nets that are exposed before or after storms and tides.

A: Obstacles like munitions and unexploded ordnances (UXOs) are handled separately. Potential UXOs get reported immediately on the mariner notices and to the U.S. Coast Guard. There is national guidance on UXO procedures that is close to being finalized; this will help standardize procedures. Other obstacles are relocated in similar manners to boulders.

Q: What is the policy for dealing with boulders that are too large to relocate?

A: This varies by developers since they have different tools and constraints around micro-siting.

C: The presentation mentioned a 30-day notification requirement of movement but that is 29-days too long.

A from Vineyard Wind: As soon as we the relocated location as a shapefile, we send it to Quinham to convert to vessel-usable data. The U.S. Coast Guard gets notified first of boulder locations. The timeline for that data being posted to the website or mariners update is unclear.

A: Ørsted provided flash drives with boulder locations to vessels and is moving to a Waterfront app.

Q: Can fishermen share fishable bottom data with developers so the State can ask developers where to not place boulders?

A: Fishermen have been providing VMS data and can continue to do so. They have this data but it is not being respected. Some of this data is available in the RWSC and ROSA map.

Q: What is the current location of boulders post relocation?

A: The scour protection at the bottom of the monopiles is roughly 50 meters in diameter. Then, there is an area of soft bottom where the seabed was cleared for construction vessels. Relocated boulders are placed 200-300 meters away from the monopile of that area, creating a ring around the monopile with a 400-500+ meter diameter. This varies a bit by project.

NMFS on Boulders

Thomas Heimann, National Marine Fisheries Service (NMFS), shared that NMFS engages on boulder relocation during essential fish habitat consultation and makes recommendations to BOEM about how developers can avoid and mitigate impacts. These recommendations are not necessarily adopted by BOEM.

NMFS recommendations on boulder relocation include avoiding complex habitat areas; avoiding use of the imprecise boulder plow; minimizing impacts by relocating boulders in immediately adjacent existing complex habitats, outside of existing complex or sensitive habitats, and in a manner that does not affect navigation or commercial fishing; developing boulder relocation plans; and developing boulder relocation reports. Boulder relocation plans are a decision tree of what should be considered and done when faced with boulders. Ideally, boulders would be

placed adjacent to complex boulder habitat so that area is being marginally increased and new hangs and boulder fields are not being created. Boulders dropped on existing boulders could squash existing and potentially endangered animals or corals.

Thomas shared lessons learned and challenges faced in this effort. For example, more projects are requiring boulder relocation than expected; Gulf of Maine leases have a large amount of boulders; and NMFS recommendations are very broad because they lack a lot of information about movement methods and boulder locations.

The following questions (Q) and comments (C) were shared by the working group.

Q: Where in the regulatory and construction process do the NMFS recommendations come into play?

A: The essential fish habitat consultation occurs pre-Record of Decision. NMFS does not have a lot of information about boulders at that point, nor do they know what is feasible for the developer or for BOEM. BOEM is working to provide more information from developers to us during the consultation phase.

Q: Is your guidance about minimizing impacts hierarchical, i.e., is habitat prioritized over commercial fishing and navigation?

A: No, they are all equal.

Q: Does NMFS have observers on developers' boats for marine mammal purposes when cables are being laid or boulders moved? It would be beneficial to have an observer help make real time decisions.

A: NMFS does not have observers; we offer recommendations to BOEM but do not have the authority to require them or influence minimization of fishing impacts.

C: The Boulder Relocation Plans should be written in consultation with the commercial fishing industry. Ørsted moved over 2,000 boulders in the Revolution Wind array, which is a highly active mobile gear area. There should be a process for boulder relocation or cable laying committees where the commercial fishing industry can give guidance.

BOEM on Boulders

Brian Hooker, BOEM, reiterated that BOEM receives conservation recommendations as part of the essential fish habitat consultation from NMFS. Two components from these conservation recommendations are in the Construction & Operations Plan approval conditions: placing boulders adjacent to but to not disturb complex habitat, and to minimize the placement of boulders in areas of fishing operations.

We require Boulder Relocation plans from developers once they have a better sense of the array layout and boulder approach. NMFS reviews the plans and BOEM approves. We require developers to share where boulders are relocated to. Boulders primarily over two meters in diameter are not moved.

The following questions (Q) and comments (C) were shared by the working group:

Q: What is shared in the Boulder Relocation Plan?

A: It is a process document that includes where the developer has identified boulders that may need to be moved, and how and to where they intend to move them. BOEM provides feedback based on the criteria looking adjacent complex habitat and VMS data.

Q: Has BOEM looked at the problem of boulder plows leading to berm development?

A: Yes. We have a separate requirement that developers need to share information about berm creation if it is above a certain height. In some cases, we require berm remediation. For Revolution Wind, BOEM required a boulder survey and report.

C: There are over 2,500 relocated boulders in the Revolution Wind array! It is overwhelming and something needs to be done to avoid the danger and risk.

C: Fishermen are always involved in the conversation at the last minute, and only when other need something. We should be involved in boulder conversations because we know where they are and will need to fish around them.

C: There are models from elsewhere of committees working with fishermen on boulders. For example, California has a cable committee for telecom cables that address boulder issues. It might be helpful to learn from those models.

C: Fishermen want something to be done now to improve safety. This is a huge safety risk.

Q: Are developers increasing the number of boulders on the surface because they're digging up ones previously buried?

A: They are potentially exposing boulders just below the surface.

Q: Could a developer place boulders in an array to minimize fishing for insurance purposes? Could a fixed gear fisherman place boulders in an array to prevent mobile gear fishermen from fishing? Is that legal?

A: That would be unsanctioned and unauthorized. For this discussion, let's not assume sinister attempt but focus on what has been done to date and what can be changed.

C: As a developer, our goal for our next project is to meet with fishermen to talk with them about arrays, surveys, and seasonality. We will also start talking with them about potential areas for boulder relocation, if that is necessary. This is something we can do as a company.

A: NMFS hosted a few workshops specifically on transit lanes. Looking at VMS and survey data and preliminary cable plans. It would be great if developers would share information and participate in those conversations.

C: NMFS would like to have more information about boulders in specific arrays to better understand and provide recommendations.

Q: Could BOEM incorporate something about which parties need to talk to each other about boulder relocation plans and when in future permits?

A: We can consider that. We look for that but could be more affirmative. Newer leases have more affirmative requirements for consultation prior to COP submittal.

C: It is worthwhile to discuss purposeful boulder placement to improve habitat. USACE and NMFS would be central to those conversations. USACE runs the artificial reef program.

Ørsted and Inspire on boulders and habitat recovery analysis post-boulder movement

Claire Hodson, Ørsted, shared that results from South Fork Wind boulder relocation benthic monitoring are complete and will be presented by Annie Murphy, Inspire Environmental, the monitoring consultant.

Annie Murphy, INSPIRE, presented the South Fork Wind boulder relocation benthic monitoring study. This study aims to gather data on habitat changes on and around relocated boulders. The study hypothesizes that the relocation of existing natural hard bottom habitats (boulders) will alter the physical habitat characteristics with potential for rapid colonization of relocated boulders. The study found that relocated boulder communities resemble control boulders in terms of what and how many invertebrates are found on the boulder. Encrusting pink/orange taxa cover a small percentage of boulder surfaces. The study observed physical shifts and changes in complexity in boulder distributions.

The following questions (Q) and comments (C) were shared by the working group:

Q: How far out does the scour protection go? How large were the boulders you looked at?

A: The scour protection extends in an approximately 60-meter diameter. Boulders varied from 0.5 – 1.5 meters in diameter.

Q: What is the range of distance that boulders were moved? It would be helpful to have size and distance moved for each boulder.

A from Ørsted: We can follow-up on this question.

Q: Are moved boulders lifted out of the water at any point?

A: No, they are moved with a boulder pick.

Q: Are you tracking geological information about the rocks and cross correlating that with biological data?

A: To an extent, but we could go deeper.

Q: Why are boulders moving 200 meters out from the turbine?

A from Ørsted: That is the distance needed for the jack up machine used in pile driving.

Q: Why did Ørsted not move the top left turbine slightly to avoid the boulder problem?

A: This array has a one-by-one requirement. To solve for one challenge, we may create another.

Q: Did you pick these boulders to test after they were moved? Was there a control group or data gathered before the boulders were moved?

A: This is a post-study with a control group. For the Revolution Wind project, we are taking images beforehand as well.

Q: Does the study have sound statistical power?

A: We are looking at power now. My sense is that we have enough boulders relative to the potential impact.

Q: Are the boulder location data posted?

A from Ørsted: We are working with Quinham to post boulder data.

Q: Are there similar monitoring plans for other projects?

A from Vineyard Wind: For Vineyard Wind 1, we did not do a specific boulder analysis to this extent because there were far fewer boulders. We do have a habitat monitoring plan. For Vineyard Wind 2, the plan has not yet been developed and we could consider it.

A from bp: For Beacon, we are not specifically planning this but are open to it if there are a lot of boulders.

Q: How long will monitoring last?

A: Monitoring will occur during at least 2024, 2025, and 2026 in the late spring and early summer.

Q: Did you take any samples of the unknown orange substance?

A: It was challenging with this ROV so we have partnered with Aquatic Labs in Cambridge who uses a puffer fish mechanism to filter water near the organisms and capture their DNA in the water. We are going to target that invasive tunicate species because it has been fully sequenced and see if we can identify it in the water. Then, we'll do eDNA.

Developer Updates

The following questions (Q) and comments (C) about pre-recorded and shared developer updates were shared by the working group:

Q: Is there an update on the Vineyard Wind 1 turbine pieces since the incident?

A from Vineyard Wind: There are pieces of the turbine blade on the ocean floor. We deployed an ROV to identify where pieces were and are now working with BSEE and a contractor to pick them up. Those operations are starting this week and we sent mariner updates. There are standby vessels to help with any floaters.

Q: What gear are being used to pick up floaters?

A from Vineyard Wind: There are restrictions on the types of nets that can be used. Right now, using dip nets.

Q: There are a lot of places developers and fishermen can work together. We have heard that having fishing vessels help with research and sea floor mapping has gone well.

A from Vineyard Wind: Glad to hear fishing vessels supporting research has been working. We have a database of vessels that have been inspected and have appropriate licenses. We can share this with other developers and agencies. We want to make opportunities for fishing vessels while not taking away from their priority operation of fishing.

Q: Is there potential for nature-based solution for boulders, like those shared in Hollie's presentation being used in Europe?

A: There is potential but also some differences. For example, European arrays are more tightly packed and fishing is not allowed.