



New England Fishery Management Council

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Eric Reid, *Chair* | Thomas A. Nies, *Executive Director*

MEETING SUMMARY

Habitat Plan Development Team

June 1, 2022

1:00 – 3:00 p.m.

Agenda

The PDT continued to refine the range of alternatives for the framework to designate a Habitat Area of Particular Concern (HAPC) in Southern New England. This included a discussion of Advisory Panel input from their May 24 meeting. The chair also directed the team towards materials prepared for an SSC sub-panel review of the Northeast Regional Habitat Assessment, but there was no discussion of these items. She also noted that GARFO aquaculture staff provided an update to the Advisory Panel and will update the Committee on June 10. Any work on a framework related to salmon aquaculture authorization will occur later in the year.

Meeting attendance

PDT members included Michelle Bachman (Chair), Peter Auster, Sharon Benjamin, Jessica Coakley, Jenny Couture, Geret DePiper, Rachel Feeney, Julia Livermore, David Stevenson, and Alison Verkade. Eric Reid also attended.

Discussion

Comparing Alternatives 2 and 3, Alternative 2 is focused on an area where a survey was done to evaluate the occurrence of spawning. Alternative 3 includes additional areas where such activities might be detected, if these areas were surveyed in a similar manner. The PDT agreed it was important to accurately frame what we know and what sampling has occurred; observations are presences but absence of observations of cod doesn't necessarily mean that the fish aren't spawning there.

Related to these cod spawning alternatives, the PDT asked if we are focused on spawning in Southern New England generally, or, only within the wind energy area. This could influence how we define an HAPC alternative, spatially. (Previously the Committee did not recommend moving forward with wind lease area only alternatives.) Conceptually, the PDT agreed that the focus is on protecting the SNE sub-population, and thus the boundary of the HAPC should include locations inside and outside lease areas, but that the impacts of near-term concern are associated with offshore wind. The team recommended limiting the Alternative 3 boundary to include only the statistical areas identified as corresponding to the SNE cod stock.

This change to a stock area-based boundary removes the Nantucket Shoals portion of the alternative. The team briefly discussed the differences in supporting information between the Cox Ledge and Nantucket Shoals grounds.

The group also noted that the adult cod EFH map, of which the HAPC designations are a subset, is discontinuous (i.e., some of the ten-minute squares in SNE are not included and there are ‘holes’ in the map). Including egg and larval maps as part of the foundation for the Alternative 3 HAPC area fills in some of these squares and seems reasonable as these stages are the direct by-products of spawning. The PDT agreed to base the Alternative 3 HAPC boundary on the combined egg, larvae, and adult EFH maps.

Staff have worked to add language to Alternative 3 about what would trigger the HAPC designation in the potential HAPC area. The team discussed buffering (spatially) new observations. There are multiple different mechanisms of impact to habitat, and conservation measures might be appropriate at further distances from an area of spawning activity, depending on the source of the impact. Acoustic impacts can result from both construction and operational noise. Modeling has been used to estimate impact distances associated with pile driving; this distance could be used to buffer an area around cod spawning observations to create the boundary for implementation of the HAPC. The team also discussed operational noise, wondering about synergistic interactions between turbines.

The following sources could be used to determine an appropriate distance buffer:

- Amaral, J., K. Vigness-Raposa, J. H. Miller, B. R. Potty, A. Newhall and Y.-T. Lin (2020). "The underwater sound from wind farms." Acoustics Today **16**(2): 9.
- Amaral, J. L., J. H. Miller, G. R. Potty, K. J. Vigness-Raposa, A. S. Frankel, Y. T. Lin, A. E. Newhall, D. R. Wilkes and A. N. Gavrilov (2020). "Characterization of impact pile driving signals during installation of offshore wind turbine foundations." Journal of the Acoustical Society of America **147**(4): 2323-2333.
- Denes, S. L., D. G. Zeddies and M. M. Weirathmueller (2018). Turbine Foundation and Cable Installation at South Fork Wind Farm: Underwater Acoustic Modeling of Construction Noise, JASCO Applied Sciences for Stantec Consulting Services: 130. Available at: https://www.boem.gov/sites/default/files/documents/oil-gas-energy/J1_UnderwaterAcousticModelingOfConstructionNoise.pdf.
- Han, D.-G. (2020). The Measurement and Prediction of Underwater Noise from Impact Pile Driving during the Construction of Offshore Wind Farm. Doctor of Philosophy, Hanyang University.

Other studies can be used to describe potential effects of sound on fishes:

- Hammar, L., A. Wikström and S. Molander (2014). "Assessing ecological risks of offshore wind power on Kattegat cod." Renewable Energy **66**: 414-424.
- Herbert-Read, J. E., L. Kremer, R. Brintjes, A. N. Radford and C. C. Ioannou (2017). "Anthropogenic noise pollution from pile-driving disrupts the structure and dynamics of fish shoals." Proc Biol Sci **284**(1863).

- Juretzek, C., B. Schmidt and M. Boethling (2021). "Turning Scientific Knowledge into Regulation: Effective Measures for Noise Mitigation of Pile Driving." Journal of Marine Science and Engineering **9**(8).
- Koschinski, S. and L. Karin (2020). Noise mitigation for the construction of increasingly large offshore wind turbines: Technical options for complying with noise limits.
- Mooney, T. A., M. H. Andersson and J. Stanley (2020). "Acoustic impacts of offshore wind energy on fishery resources." Oceanography **33**(4): 83-95.
- Rossington, K., T. Benson, P. Lepper and D. Jones (2013). "Eco-hydro-acoustic modeling and its use as an EIA tool." Marine Pollution Bulletin **75**(1): 235-243.
- Stöber, U. and F. Thomsen (2021). "How could operational underwater sound from future offshore wind turbines impact marine life?" The Journal of the Acoustical Society of America **149**(3): 1791-1795.

In terms of Alternative 4, complex habitat HAPC for multiple species, the team recommended keeping the area broad, relying on a definition of complex habitats to identify whether an area is HAPC at a project level. While keeping a broad overall footprint, the team agreed it would be helpful to limit that alternative to SNE stock areas for the focal species, eliminating some of the eastern portions of the polygon. This is analogous to the recommendation to eliminate the eastern area from Alternative 3, focusing more closely on what is understood as SNE in a stock assessment context. The team also recommended listing data sources that indicate the distribution of complex habitat, including:

- MA sediment data,
- CRMC glacial moraine,
- LIS Blue Plan hard bottom,
- Possible benthic data from New York,
- Submerged aquatic vegetation (SAV) data from various states.

Additional datasets were investigated following the meeting and added to the draft framework document.

While the polygon describing the Alternative 4 HAPC boundary will remain large/broad, the document/HAPC designation will clearly define complex habitats, where the HAPC will apply. The document will also list existing data sources that depict the general extent of known complex habitats within the HAPC boundary. Combined, this should be sufficient to indicate where consultation should occur relative to this HAPC.

The meeting adjourned at approximately 3:05 p.m.