



## New England Fishery Management Council

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## **DRAFT MEETING SUMMARY**

### **Habitat Plan Development Team**

February 15, 2022

1:00 – 3:00 p.m.

#### ***Agenda***

The PDT (1) provided feedback on a progress report describing the results of an Exempted Fishing Permit-based research project and (2) worked on the framework to designate a Habitat Area of Particular Concern (HAPC) in Southern New England.

#### ***Meeting attendance***

PDT members included Michelle Bachman (Chair), Peter Auster, Sharon Benjamin, Jessica Coakley, Jenny Couture, Geret DePiper, Rachel Feeney, Julia Livermore, Dave Packer, David Stevenson, Alison Verkade, and Carl Wilson. Other attendees included Eric Reid, Jay Hermsen, Ryan Munnelly, Douglas Potts, Ronald Smolowitz, Mike Costa, Natalie Jennings, Liese Siemann, Drew Minkiewicz, Laura Hansen, Scott Lang, Howard Rome, Thomas Dameron, Sherman Butler, and an additional phone-only listener.

#### ***EFP Research Project Progress Report***

In May 2020, NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO) granted Coonamessett Farm Foundation (CFF) an Exempted Fishing Permit (EFP) to work in the Rose and Crown section of the Great South Channel Habitat Management Area (GSC HMA). The permit was initially granted for one year and was renewed in August 2021 for an additional six months through February 4, 2022. From CFF's 2019 EFP request and research proposal, the goal, objectives, and research questions for the project are as follows:

*The overall goal of this project is to develop an ecological survey that assesses habitat types in high and low dredge impact areas and determine spatiotemporal occurrence of Atlantic cod and other species in these habitats that are subjected or adjacent to commercial fishing activities. This goal will be met through specific objectives:*

- 1) Develop juvenile cod habitat associations in this area and identify areas where juvenile cod do not occur at certain times of year.*
- 2) Use BUVs for assessing occurrence of juvenile cod and other species.*

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- 3) *Characterize habitat types in which dredging does and does not occur.*
- 4) *Establish areas of high clam CPUE and low habitat complexity.*

*This goal and concurrent objectives are driven by these research questions:*

- 1) *How much does cod occurrence overlap with high and low dredge impact areas over time in a variety of habitat types?*
- 2) *How do high and low dredge impact area habitat types and species occurrence compare?*
- 3) *How much structure do dredges remove relative to contact?*
- 4) *How frequently do sandy habitat types shift in the HMA?*
- 5) *How can dredge mounted cameras optimize fishing decisions to reduce habitat impact?*

Note, the PDT's understanding is that only some of these objectives and research questions will be addressed in the final report.

In December 2020, CFF submitted a first progress report to the Council, and the PDT provided feedback on this initial work in January 2021. In February 2022, CFF submitted a second progress report to the Council, which was the focus of discussion at this meeting. The February 2022 progress report includes analysis of additional video data and dredge catches and demonstrates the use of revised interpolation methods for developing seasonal substrate maps, as compared to the prior report. A final report is planned for later this spring. The PDT is reviewing this work at the Council's request, in response to a February 1 motion. The PDT will provide an update to the Habitat Committee at its March 17 meeting.

More generally and beyond the scope of this EFP project, the surfclam industry has expressed concerns about their ability to successfully prosecute a fishery in the three exemption areas within the GSC HMA and has asked the Secretary of Commerce for an emergency action to obtain additional access to fishing grounds. During fall 2021, the Council did not consider revision of the exemption areas as a possible 2022 work priority, so the Council is not currently planning to revise these areas. Absent emergency action or Council action, exempted fishing, either under this or another EFP, would be the only way to fish in additional areas of the HMA. This includes the portion of the Rose and Crown area that was fished during this study, the remainder of the Rose and Crown area, or the Davis Bank area.

To begin the discussion, Natalie Jennings reviewed the contents of the February 2022 progress report for the PDT. Dredge-mounted video data collection has occurred during 3,000+ tows during 104 trips, over a total area of 0.91 nm<sup>2</sup>; a subset of the data from two, 3-month periods, summer 2020 and fall 2020 were analyzed in this report (Table 1). Products in the report include a list of species caught (Table 2); monthly mean catch of surfclams, mussels, shells, and cobble from June - November (Table 3); maps of percent pebble-cobble coverage for summer and fall (Figure 4); and various overlays of other data layers onto these percent pebble-cobble maps

(Figures 5-12). The overlays included sand dunes, rocks and boulders, macroalgae/bryozoan/hydrozoan coverage, shell hash, clam catch in bushels, mussel beds, mussel clumps, and peat. Nineteen grids (labeled 0-18) were overlaid on the study area, and percent pebble-cobble information was summarized by grid square and summer and fall (pages 21-24 of report). Fishery independent information, i.e., from camera stands or baited underwater video, was not included in the report. As the PDT understands the issues, this is generally an issue of funding; funds generated from a per-bushel set aside were not sufficient to cover the analysis of dredge-mounted camera data, let alone fishery independent data, and collecting fishery independent samples would not generate additional funds. Some design work related to the camera stand and sled is underway.

Ms. Jennings noted a few shortcomings: (1) spatial distribution of tows is non-uniform, and some areas are not sampled during one or both seasons, (2) there is no ability with these sampling methods to document persistence of epibiota, (3) there is no ability with these sampling methods to assess the vulnerability of habitat to clam dredges. It could be possible to address these issues with a different spatial sampling strategy or sampling method, but further work would require renewal of the EFP, or issuance of a new EFP. Dredge-mounted video data and dredge catch data already collected for other seasons (or at least a subset of these data) will be analyzed in the final report.

The PDT had several questions for Ms. Jennings and suggested for ways to adjust the analysis.

- The overarching question is whether the maps, graphics, and quantitative analyses provide information useful for future habitat management of the area.
  - The PDT suggests using the data to describe the habitat characteristics of areas being fished. Put another way, where was clam dredging successful and what are the habitats that occur in those locations?
  - CFF should focus data analysis and discussion/conclusions on the areas that are best sampled (i.e., locations with more tows) to better understand habitat characteristics in locations where fishing took place.
- The spatial unevenness of sampling affects the resulting data products.
  - Only a subset of the video data collected has been annotated thus far (7.8% of summer tows, 5.7% of fall tows), and it is not clear to the PDT what percentage of tows can be annotated and analyzed given available funds.
  - For visually representing the data the PDT recommends annotating all videos, or as many of the videos as possible, especially in grids with lower sampling rates.
  - CFF should depict data density spatially, for example by comparing the total number of tows per grid with the number of annotated tows per grid in a table. CFF should produce a map of all tracklines to compare with a map showing annotated tracklines only.
  - It would be helpful to overlay the sampling grid on all maps (e.g., Figure 1).
  - Areas that were not sampled, or had limited sampling, should be clearly identified in all figures, tables, and maps.

## FINAL

- The PDT found the percent pebble-cobble maps confusing, since they were based on an interpolation of unevenly distributed data, with low or no sampling in some grids, and recommends avoiding interpolation of data due to this unevenness.
  - The data collected represent fished areas only, and thus there is no data where tows were not completed which has implications for any map generated.
  - It would be helpful to include a discussion around how areas to tow are selected by fishing captains, and conversely, how areas to avoid are identified.
  - The PDT recommends a more direct summary of the data gathered, for example the figure that summarizes percent of substrate type per grid square (Figure 14).
  - Comparisons across seasons are not recommended unless total percentages of fished habitat types are pooled by season to evaluate if there are seasonal changes in the distribution of fishing effort based on habitat type..
  - Data from this study might be analyzed using the transect approaches employed here: Yoklavich, M. M., H. G. Greene, G. M. Cailliet, D. E. Sullivan, R. N. Lea and M. S. Love (2000). "Habitat associations of deep-water rockfishes in a submarine canyon: An example of a natural refuge." *Fish. Bull.* 98(3): 625-641. This study quantified the spatial extent of and transitions between benthic habitat types from trackline video data without relying on spatial interpolation.
  - The PDT could discuss and recommend additional methods at a future meeting.
- The PDT does not think that the interpolated percent pebble-cobble maps could be used to support decision making in their present form, given low or no sampling in some areas. However, the PDT generally agrees that habitat maps are useful for management given suitable underlying data and appropriate characterization of uncertainty. If CFF continues to develop the Inverse Distance Weighting (IDW)-based percent substrate maps, the following recommendations could improve these products:
  - The methods description should more explicitly document the steps used to generate the percent pebble-cobble maps using the IDW method and evaluate the uncertainty in the interpolation approach. It is difficult to visualize areas of uncertainty in the interpolated maps.
  - To improve spatial coverage, the PDT suggested pooling data from all tows regardless of season.
  - Once data are pooled, maps should clearly identify and exclude areas that remain data poor from the interpolation.
  - Caveats related to the fact that data are gathered during fishing operations should be clearly stated. In this study, habitat information is collected during dredging operations, meaning that higher data density and more intensive fishing disturbance co-occur in the dataset, and the reverse is also true. These factors complicate interpretation of the results.
- CFF should ensure that the narrative conclusions in the report reflect the results. Currently, the preliminary conclusion in the report, that “the survey area can be described as highly productive and consisting of a patchy distribution of sand, pebbles and cobbles that are in constant flux due to strong tides and currents that characterize Nantucket

Shoals” is unsupported by the available evidence. There are uncertainties in boundaries between sediment types due to variation in sample location (as discussed earlier), and there is evidence that long lived structure-forming species persist despite any changes due to tidal and storm related flows.

Follow up items:

- The PDT chair will follow up with CFF staff to clarify comments and provide additional feedback on their analysis if it would be productive to do so.

### ***Habitat Area of Particular Concern Framework***

Next, the PDT discussed the HAPC framework. Ms. Bachman presented a draft action plan and the PDT agreed with their assigned roles and with the scope of the action. Next, the PDT reviewed the draft framework document.

The group discussed how to approach defining the HAPC, agreeing that it made sense to consider a broad geographic area and then narrow down locations and features of interest. The team generally agreed with the spatial extent of a draft analysis region drawn up by staff, but thought it made sense to include inshore (=state waters) locations as well. This draft boundary encompassed areas to approximately 100 meters depth, but the PDT felt that these deeper areas might be less important than inshore sites, especially given transmission cable routing is inshore of wind lease areas. Cox Ledge, a location where management areas were proposed via Omnibus Essential Fish Habitat (EFH) Amendment 2, is part of this analysis area but isn’t necessarily more important or vulnerable to impacts than other locations in Southern New England.

The team reviewed a list of Council-managed species with EFH in the area; a PDT member suggested that we might be able to narrow down this list a bit. The chair noted that she had asked Northeast Regional Habitat Assessment contractor Tori Kentner to provide fishery independent survey data and data summaries for the analysis area using tools already developed to support the regional habitat assessment.

Follow up items:

- Alison Verkade will contact NEFSC scientists about ongoing wind-related acoustic study.
- Dave Stevenson will provide a shorter list of focus-species for consideration.
- Staff will provide an analysis area to Tori Kentner and will circulate the results of her analysis to the team.
- Staff will continue to fill in other sections of the framework document, including determining what content is needed for a Magnuson Stevens Act document, assuming the action will receive a categorical exclusion under NEPA.
- Staff will review benthic data available for Southern New England.

No other business was discussed, and the meeting adjourned at approximately 3:00 p.m.