DRAFT MEETING SUMMARY

Habitat Plan Development Team (PDT)
August 18, 2023
9:00 a.m. – 12:00 p.m.

Agenda

The PDT met to review an updated outline for the range of Alternatives for the Northern Edge Habitat/Scallop Management Framework, including a detailed discussion of Action 1, which includes the habitat conservation alternatives. The PDT also discussed principles and decision points for essential fish habitat (EFH) designation revisions, and reviewed model outputs for selected species that will serve as the basis for the EFH maps.

Meeting attendance

PDT members included Michelle Bachman (Chair), Peter Auster, Jessica Coakley, Jenny Couture, Fiona Hogan, Julia Livermore, Sabrina Pereira, and Doug Potts. Additional Council staff attending included Connor Buckley, Jamie Cournane, Angela Forristall, and Jonathon Peros. Invited participants included Tori Kentner (MAFMC) and Chris Haak (Monmouth University). Other attendees included Eric Reid (Council/Habitat Committee Chair), and Council members Eric Hansen, Mark Alexander, and Melissa Smith, as well as Lou Chiarella (GARFO, NEFMC Habitat Committee). Other attendees included Drew Minkiewicz, Natalie Jennings, Will Shoup, Adam Delargy, Justin Potter, Sefatia A Romeo Theken, and Tasha O’Hara.

Northern Edge Habitat-Scallop Framework

Ms. Bachman reviewed an updated outline for the range of alternatives, which includes six actions with multiple alternatives under each.

A member of the Scallop Committee provided a brief overview of the drop camera survey results, noting that the Northern Edge region saw a 35% increase in scallop biomass and no increase in abundance (likely meaning that scallops observed in 2022 are growing well, but that there are not many new recruits in the region). More broadly, Georges Bank overall had a ~46% increase in abundance with a 30% increase in biomass. These survey results will be the focus of the upcoming Scallop PDT meeting on August 30-31. The PDT will also discuss shell height meat weight relationship, spawning conditions, etc., with a couple of hours dedicated to the Northern Edge action. Outcomes from this Scallop PDT meeting will be brought to the Scallop
Committee for further discussion in September. Any habitat-related information or draft alternatives, especially any defined Habitat Protection Zones that would not be considered as areas for rotational access, would be helpful to the scallop-focused discussions.

The Habitat PDT discussed the interplay between the different habitat and scallop-related actions in the framework. The timed-entry system alternative and seasonal restriction alternatives, while intended to minimize operational and bycatch concerns, respectively, may have similar impacts as both will constrain the amount of fishing that occurs at specific times. A couple of Habitat PDT members suggested considering the timed-entry system and seasonality restriction alternatives as part of a broader discussion encompassing issues such as habitat protection, bycatch of other species, and interactions with other fisheries (groundfish, lobster, etc.). A Habitat PDT member noted that there are tradeoffs between scallop access to the region and the functional impact on habitat for certain species and life history stages and that timed entry is an important consideration that should not be treated separately from minimum rotational interval for habitat recovery. Juvenile groundfish move through the area seasonally and impacts to these fish will vary depending on when scallop dredging occurs. One PDT member wondered whether additional effort controls in terms of timed entry would even been necessary if seasonal restrictions are put in place; the fishery may be able to operate effectively without such deliberate engineering. They cautioned that fishing under the access program could become quite complicated with the various constraints under consideration. Ms. Bachman reiterated that the overall goal of this action is to minimize impacts to habitat.

One Habitat Committee member asked about the contribution of the scallops in the Northern Edge region to the rest of Georges Bank, noting the goal and objectives indicated that this was a consideration of the Council’s. The source – sink dynamics of scallops has been mentioned as a possible concern by the Scallop PDT and has been discussed internally amongst Council staff; more information on this issue will be brought forward to both PDTs soon.

Regarding habitat protection zones, one member suggested further evaluating the spatial habitat data generated from the Gallager, et al. work to determine if there is a gradient of habitat complexity and recovery that could be used to inform any buffer around high complexity areas. While it may be tempting to think of complex vs. not complex habitat, in reality the distribution of habitat features is more nuanced. The PDT discussed that the high complexity area has a higher concentration of certain species, but species with slower recovery occur in parts of the habitat closure outside the complex area. Data from the SMAST drop camera surveys including an ongoing project led by Adam Delargy is another source of information on habitat distributions. Literature can also be used to evaluate which species are moving into and out of complex habitat and any post-settlement patterns to understand the connectivity between high and low complex/density habitats. This type of information could be used to inform other important areas within CAII for juvenile cod and spawning cod, for example. Ms. Bachman noted that she is compiling a bibliography that she can share with the group to make sure she has all the necessary sources.

Enforceability of boundaries is another consideration. This will inform the shape and size of habitat protection zone(s) and scallop rotational areas, as well as the distance between open areas and habitat to be protected from impact. Safety will also be a consideration in access area design. Increasing VMS ping rates could be a helpful tool for monitoring where vessels are located.
relative to any defined habitat zone(s). The areas of the habitat closure to the north and west of
the high complexity area contain high scallop biomass along with areas to the west of the CAII
Habitat Closed Area. The distance between these high scallop biomass areas and the high
complexity area has not been fully evaluated yet but is likely short. There are also scallops in
other parts of CAII, but at lower densities.

The GARFO Habitat Committee member expressed concern that the PDTs are only considering
the northernmost part of the CAII Habitat Closed Area as a habitat protection zone despite the
rest of the area being a habitat area of particular concern (HAPC). He emphasized that the
Habitat PDT should evaluate other areas of the HAPC as habitat protection zones given it will be
a high bar to allow scallop fishing within this HAPC and that habitat protections must be
maintained. A couple of Scallop PDT members reiterated the location of the high scallop
biomass and that any access is likely focused on the northern-most part of the HAPC and west of
the HAPC. Council staff discussed the outcomes from the Gallager BACI study noting habitat
recovery data. There was a brief discussion by the meeting attendees whether the BACI study
was representative of commercial dredge fishing and the extent to which the results can be
applied to this action. Staff noted that the impact phases of the BACI study involved dredging
until the seafloor was bare. The authors suggested that locally, this was likely a greater impact
than any commercial dredge fishing would cause. However, the overall footprint of fishing in the
BACI study was less than would be anticipated for a commercial access program and could
influence recruitment of epifauna and recovery of habitat.

Regarding minimum rotational time intervals, a Council member asked whether the shape of the
habitat recovery curve based on dredge impact is known. Epifaunal settlement likely changes
based on timing of scallop dredge fishing, which could influence the time interval for when
fishing could be permitted. A Habitat PDT member explained that this varies by species given
some species are short-lived and highly productive or vice versa. Ten years was suggested as an
alternative that should be considered for the minimum time interval to allow habitat to fully
recover and have an extended period to contribute to habitat function and quality to other species
and sediment. The GARFO Committee member was concerned that without a longer time
interval, habitats would be in constant flux, thereby reducing overall function and value to other
species. This concern has been discussed by the PDTs and will be under consideration as this
action develops. Staff agreed to add ten years as an option, to expand the current intervals to 3-4
years and 5-6 years (to be refined later), and to make the text clear that this time interval is based
on the time of last dredge impact.

Under Action 3, the PDT discussed that the objective might really be to limit fishing intensity,
and that capping fishing mortality rates might not be the best mechanism to do this. Habitat
impacts could vary depending on the size, location, etc. of the scallop biomass. One Scallop PDT
member suggested that total swept area may be a better indicator to minimize habitat impacts
given fishing mortality rates will likely vary over time, thus, habitat impacts will also vary. For
example, if there is a high concentration of scallop abundance in a small area, then there is less
impact to habitat than if the scallops were more spread out. Another idea is to potentially allow
for access in two subsequent years but at a reduced rate if scallops are highly concentrated in a
small area to help minimize impacts to habitat and also to potentially account for the size of the
access area and enforcement concerns.
Essential Fish Habitat Review

Ms. Bachman reviewed the general principles that were being considered throughout the review, and shared the draft workflow that has been developed by staff at both Councils working with Chris Haak. The methods and results for pilot species will be presented to a subpanel of the SSC on September 29th.

A Scallop Committee member asked whether the future effects of wind energy developments have been incorporated into the species distribution models, noting that once installed, the wind farms will influence habitat suitability. The models are based on past data, and estimate which areas are currently most likely to contain a given species; they do not forecast distributions under future conditions. Species responses to wind development are also uncertain. We could expand on the models at a later time to incorporate predicted environmental conditions and evaluate how this may affect species distributions. A good way to ensure that EFH designations remain current may be to revise them frequently, given new data collected once wind farms are installed.

The trawl survey data on which the species distribution models are based are collected over three spring and three fall months. In addition to annual predictions, results can be shown for each of these six months, which is useful for showing seasonal patterns of occurrence. We have been brainstorming how best to combine monthly outputs be combined into a single EFH map that represents all areas used by the species year-round. The monthly outputs could be averaged, or we could use the maximum predicted occurrence value across all months. The maximum approach might be best for species that show a disparity in occurrence across seasons due to seasonal migrations. Staff have discussed including monthly predictions as an attachment/appendix to the annual EFH designations and maps, and the PDT supported this idea. This could be helpful for EFH consultations, especially for cases where construction or other project activities are seasonal, and a species is more prevalent in a location during certain times of year, for example if the area is used as a spawning ground.

Rather than using the full model footprint as the basis for the EFH map, staff are recommending selecting a threshold encounter probability. This would mean that the areas with very low encounter probabilities are not designated as EFH. Staff have discussed using 5% as the cutoff across all species (i.e., a model grid with less than a 5% encounter probability for the species/lifestage would not be designated). This is the value used by the North Pacific for their model-based EFH maps.

The PDT discussed this 5% threshold, and wondered if it could be appropriate to include these low probability grids in the maps, to ensure that EFH consultation is triggered any time a project overlaps a species distribution, even if the species is likely to be lower abundance in those locations. One issue identified by the PDT was that under climate change, areas of the range that are currently low probability might become more important over time. The group discussed how to consider climate-related shifts in the threshold value. One option would be to use the 5% encounter probability threshold and then for the leading areas of the range, to add those areas back in to the EFH map to account for climate-related shifts in species and EFH and include a rationale in the EFH designation text. This would also account for selective pressures that have the most effect on the edge of the species range.
Chris Haak explained that in a climate context, the models are not currently configured to generate projections of species distributions under changing conditions, though this might be possible in the future depending on resources. Qualitative information about distribution shifts could be included in the EFH designation text.

During the meeting, the PDT viewed maps showing the entire predicted footprint for each of the six months. A PDT member suggested using a color ramp that accounts for color blindness. The next step is to remove areas below the 5% threshold to show more clearly which areas would and would not be part of the designation.

Staff have also discussed the idea of ‘core EFH’. An encounter probability of >50% could be used to identify core EFH areas. Similar to monthly model outputs, these core areas could be shared along with the designations to support EFH consultations. Core EFH might also be a good foundation for HAPC designations. There was general support for this idea, although maps based on this threshold have not been developed yet.

The model domain includes many inshore areas, however additional work is needed to evaluate whether the predictions are reliable for these locations, given that the environmental conditions can be quite different to offshore where survey data were collected. For example, parts of estuaries that are much lower salinity. The PDT discussed using existing nearshore datasets (trawl surveys and seine surveys) to confirm model predictions, or fill in locations beyond the model domain. Model results are being gridded into 1 km x 1 km rectangles, but a coarser scale may be better for representing inshore survey tows. The idea would be to use as fine scale a grid resolution as possible without having too small a sample size in each grid (≥ 3 tows at minimum).

Ms. Bachman noted that the Council might undertake this EFH review as an omnibus action, or in two (or more) smaller actions. She posed ideas for how to prioritize species for the review. Under a phased approach, the GARFO Committee representative asked whether each phase would have its own FMP amendments or if the updated designations would be implemented via a single FMP amendment. Ms. Bachman’s thought was that each phase would have its own framework action that applies to the subset of species/fishery management plans considered in that phase. The Committee member worried that there might be issues with revising designations separately from revising measures to minimize the adverse effects of fishing on EFH. Ms. Bachman noted that the Council through OHA2 had committed to reviewing adverse effects minimization measures including spatial approaches 10 years following OHA2 (i.e., in 2028).

Other business

Ms. Bachman reminded the group about the fishing effects database project that is currently underway. The PDT adjourned at noon.

Follow up items

Northern Edge:

- Send out bibliography on Northern Edge literature to evaluate if any resources are missing.
• Add a 10-year minimum interval option and expand current options to 3-4 years and 5-6 years.
• Add in consideration of maximum swept area as an alternative to maximum fishing mortality rate.
• Evaluate other sources of information (literature, other drop camera surveys, and SMAST ongoing studies) to inform other potential habitat protection zones.

**EFH**

• Continue staff collaboration with MAFMC to prepare for SSC review.
• Consider implications for phasing the review, in terms of revising designations and measures to minimize adverse effects.