New England Fishery Management Council
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MEETING SUMMARY

Habitat Advisory Panel

Wakefield, MA
January 30, 2017

ATTENDANCE

- AP members: Chris McGuire (chair), Gib Brogan, Beth Casoni, Jeff Kaelin, Meghan Lapp, Ben Martens, Drew Minkiewicz, Maggie Raymond, Ron Smolowitz, John Williamson
- Staff: Michelle Bachman, Rachel Feeney
- Others: John Quinn (Council and Habitat Committee chair), Travis Ford (GARFO sustainable fisheries division), Katharine Deuel (Pew), Allison Lorenc (CLF), Greg Wells (Pew)

WELCOME AND INTRODUCTIONS

In early January, the Habitat Committee and Council Chairman, Dr. Quinn, appointed Chris McGuire as chair of the panel.

Mr. McGuire reminded the group that in September 2012, the Council separated corals out of Omnibus Habitat Amendment 2. The Mid-Atlantic Council's coral measures were very recently implemented as part of the Mackerel/Squid/Butterfish plan.

Meeting goals: provide suggestions to the Habitat Committee about how to improve or clarify the management alternatives under consideration, inform the Habitat Plan Development Team's (PDT) ongoing analyses, and set the Council up for a successful stakeholder process. Staff noted that there will likely be another advisory panel meeting before final Council action on the amendment.

CORAL AMENDMENT ALTERNATIVES

Ms. Bachman presented the management alternatives and amendment timeline to the panel. Questions were fielded throughout. She noted that the alternatives are structured as a list of potential management areas, followed by a list of fishing gear restriction options. Thus, when identifying preliminary or final preferred alternatives, the Council will selected a set of management areas, and identify the fishing restrictions associated with each area selected.

The AP discussed both the problem statement for the amendment and the memorandum of understanding between the three Atlantic coast councils. The problem statement indicates a

desire to balance conservation of corals with operational requirements of commercial fisheries. The MOU references various potential management approaches, two of which include freezing the footprint of current fishing activity, and developing enhanced protections in known or likely coral habitats. Thus, embedded in the MOU is the idea of balancing tradeoffs between coral protection and fishing access. Ms. Bachman noted that the South Atlantic Council is party to the MOU as well, but uses slightly different management approaches from those under consideration here, or adopted in the Mid-Atlantic.

Ms. Raymond commented that the problem statement is ambiguous in terms of how much coral protection is desired by the Council. She suggested that once coral areas and fishing restrictions are selected, that there should be a process to evaluate the effects of the amendment. I.e. do restrictions have the benefits intended, and do any gears exempted from the restrictions have impacts on corals? Ms. Bachman noted that an outcome of the amendment could be a list of research questions.

Mr. Kaelin commented that the problem statement was based on the MAFMC problem statement, which held up over the roughly three year amendment development period as a basis for their amendment's development. He noted that in the Mid-Atlantic, the details of how to balance competing objectives were worked out during a series of two workshops. He felt that a solution in the canyons was fairly straightforward to negotiate, given that many hard corals occur in very deep water.

Mr. Smolowitz noted that the Gulf of Maine areas are shallower, and contain mostly soft corals. He asked how long sea pens live, and whether adult sea pens are susceptible to gear. Ms. Bachman responded that sea pen longevity was not well known, but is likely in the tens vs. hundreds or thousands of years. Mr. Smolowitz felt it was important to not be overly general about corals being 'slow growing' if the life histories of some species are not well understood.

Ms. Casoni asked about corals as habitat, particularly whether sea pens serve as redfish habitat. Ms. Bachman responded that the research into larval redfish associations with sea pens has been suggestive of an association, but that questions remain about the relationship. Mr. Kaelin commented that sea pens were not a focus of the MAFMC's amendment.

Mr. Brogan commented that the language in the problem statement about conservation "to the extent practicable" does not reflect section 303(b) of the Magnuson Stevens Act that outlines the Council's discretionary authority. Ms. Bachman reminded the group that the amendment has been complicated by a change over time in the Council's understanding about what gears/fisheries can be restricted via the discretionary authority. Specifically, more recent guidance indicates that the Council can use the 303(b) authority to restrict lobster trap gear, but earlier drafts of the amendment based on prior NMFS guidance assumed the Council did not have this authority.

Ms. Bachman continued her presentation describing the range of alternatives. Mr. Kaelin wondered whether the boundaries of the discrete areas in Veatch, Lydonia, and Oceanographer Canyons match the existing monkfish/squid and tilefish boundaries. Ms. Bachman responded that all three (discrete coral zones, tilefish, monkfish/squid) are different. Ms. Lapp commented

that it was important to recognize that some types of fishing are allowed in the existing monkfish/squid and tilefish areas, such that caution would be warranted if the Council were to adopt them as more comprehensive coral closures.

Mr. Kaelin also commented that he agreed with the Council's decision not to draft the management plan and implementing regulations for the Marine National Monument. He noted that the monument was unnecessarily shallow, and that there would be efforts to change it. The group agreed that it would be important to assess cumulative effects of the monument plus any coral zones as part of the amendment.

Mr. Smolowitz asked what we know about effort in various areas (monument and coral areas). Ms. Bachman responded that we have estimates of effort and revenue by gear type and species. These data are included in the draft amendment document. Mr. McGuire suggested that the AP give their input on how to best characterize fishing effort.

Mr. Minkiewicz felt it was important to comment as a group on the Council's decision to continue analyzing its own coral measures that overlap the Marine National Monument.

Motion 1 (Minkiewicz/Kaelin): The Habitat Advisory Panel supports the Council moving forward with its own analysis and fishery management regulations to protect corals within the monument area.

The rationale for the motion was that given uncertainty about whether the monument might change under a new administration, it was important for the Council to continue developing their own approaches to coral management, independent of the monument process.

The motion was adopted by consensus.

Various AP members agreed that coral areas should be overlaid individually on large scale nautical charts to best convey their locations to industry members. The draft coral management alternative layers will be publicly viewable on the Northeast Data Portal, http://www.northeastoceandata.org with a NOAA chart baselayer. The Portal also has data layers showing existing management areas, aggregate VMS tracks by fishery, the NCCOS coral model layers, and lots of other fish and habitat information.

Ms. Bachman summarized the Gulf of Maine coral zone alternatives. Ms. Raymond commented that the areas may look small, but that they encompass important fishing grounds. She asked if recommended changes should be discussed today, or held for a workshop. Ms. Bachman suggested that feedback at this point would be worthwhile. The group agreed to take up any motions at the conclusion of the presentation.

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The group briefly discussed options in the document for special access, research, and exploratory fishing. Ms. Bachman noted that the Mid-Atlantic Council did not explicitly adopt any such programs in their amendment, but decided they could do so at a later time via a framework adjustment to the mackerel/squid/butterfish FMP. Mr. Smolowitz suggested that some of these

measures might not be necessary since provisions to apply for special types of permits already exist. He suggested that the amendment should not remove any opportunities that already exist.

The AP then had a general discussion about the alternatives. In terms of the broad zones in particular, the group discussed how the various options relate to a freeze the footprint approach. When the Committee first began work on these alternatives a few years ago, early discussions were framed more as, 'what depth would freeze the footprint', or 'what depth includes only a small percentage (1%? 5%?) of fishing activity'. The challenge is that it is very difficult given the spatial resolution of data available to determine what the footprint of fishing actually is, across all bottom-tending gear types.

The group explored differences between the New England and Mid-Atlantic Amendments. Ms. Lapp suggested that while there are many similarities, this process will be different. Assuming the goal is to prohibit expansion, there are already more spatial restrictions in New England (existing tilefish gear restricted areas, monkfish/squid closures, plus the recently designated monument). In this region, we should be careful to not generate more gear conflicts, because that could lead to the need for further regulation. She noted that it was good that there are deeper depth alternatives in the New England vs. Mid-Atlantic amendment, which she viewed as a positive, since that could facilitate the development of a broad zone that would be relatively easy for the industry to agree to. She commented that it would be helpful to simplify the boundary along the shelf break.

She described some of the operational considerations for the squid fishery (which probably apply to whiting trawling as well), that should influence how a boundary is drawn. In general, it is difficult to maneuver near the edge of the continental shelf. Given water depths, vessels could have ½ a mile of wire out, which takes a while to haul back. Often the conditions, particularly in the eastern canyons, can be challenging, so while hauling back the captains try to stay facing the waves, which may be 20 feet high. Given these conditions, lines need to be drawn so vessels have some ability to manoeuver. Because the contours are so steep, and the edge of the shelf is so irregular, the vessel may need to be over very deep water, even though the gear itself is not as deep. She felt that a simpler boundary would be faster to review during the workshop.

Ms. Casoni reminded the group that during monument development, ASFMC recommended a very simple 900 meter boundary, and that she appreciated that alternative being available for the Council to consider. Staff noted that the ASMFC line was drawn to be 900 meters at minimum, but that deeper areas inside the canyons are not encompassed within the ASMFC proposal. While the existing 900 meter coral zone alternative is extremely complex, to keep the line between 850-950 meters depth, the ASMFC recommendation is perhaps overly simple and would miss coral habitats in the canyons.

Mr. Kaelin agreed the 900 meter zone was worth considering, and noted that in the Mid-Atlantic a shallower depth (400-500 meters) worked for the squid fishery, especially given relaxed transit provisions (gear on deck, but not fully stowed). Ms. Lapp noted that her understanding was that some whiting fishing does occur in deep water (beyond 450 meters). (Note that the same transit provisions adopted in the Mid-Atlantic coral areas are written into the alternatives in this

amendment.) He also recommended adopting the exemptions for trap gears (sub-options A and B), to be reconsidered in two years. He observed that he did not personally encounter corals when fishing offshore with traps, approximately 40 years ago.

There was some discussion of how the broad zones were developed. In short, the five broad zone boundaries are simplified versions of the 300-600 and 900 meter depth contours. To develop the coral zone, most of the points making up the contour line were removed. The adjacent 50 meter contours were used as a maximum/minimum depth tolerance (so 250 and 350 for the 300 meter zone, for example). Staff emphasized that in many areas, there are fractions of kilometers between two adjacent zone boundaries, in terms of the distance over ground. Increasing this tolerance would allow for simpler broad zone boundaries.

Responding to a question about why the discrete zones were shallower than some of the broad zones, staff commented that the inshore boundaries of the discrete canyon zones are roughly based on the 3 degree slope contour, which is an approximation for the edge of the continental shelf. In the larger canyons, this translates to a depth of approximately 300 meters. The smaller slope-confined canyon zones begin deeper, around 400 meters. Mr. Kaelin suggested that this is not sufficient justification in the heads of the canyons, which are more highly sedimented and therefore less suitable for corals.

Mr. Kaelin also wondered about the revenues inferred to the deeper broad zones, 600 meters and 900 meters. Staff emphasized that the fishing effort data are not sufficiently spatially resolved to discriminate between the different depth zones.

Mr. Smolowitz wondered about the areas between the canyons, commenting that in the 1990s, he had suggested a large rectangle along the edge of the shelf in deep water to protect the canyon and inter canyon areas. He noted that some of these inter canyon sites are identified as smaller canyons in the current amendment. Ms. Bachman emphasized that the broad zones are intended to accomplish this. Later in the day, he suggested that the areas beyond 900 meters are relatively simple to consider, because they are beyond where fishing occurs, but between 500-900 meters is more challenging to consider. One option could be to require observers at these depths for a few years to see what the effects actually are, before making any decisions about coral-related closures.

Ms. Casoni asked where the fishing effort data come from. Ms. Bachman responded that the core data are from vessel trip reports (VTRs) but that other information was used as well. In particular, lobster landings/revenue were scaled to account for vessels that do not submit VTRs. ASMFC develops estimates of landings for all statistical areas that overlap lobster conservation and management area 3 for use in the stock assessment. This estimate serves as an upper bound, to which the total VTR-based landings in Area 3 can be compared. Using this approach, VTR-based lobster landings in the canyons, broad zones, and offshore Gulf of Maine zones were increased by around 16%. Inshore, the PDT used Maine DMR dealer data and harvester reports to scale up VTR-based lobster landings at the Mt. Desert Rock and Outer Schoodic Ridge sites. (Note that the ASMFC Lobster Technical Committee is working on a very similar analysis; see

ASMFC Lobster Board materials from February 2.) Only around 5% of vessels in the inshore Gulf of Maine (LCMA 1) submit VTRs so the scaling percentage for these areas is much higher.

Ms. Casoni emphasized that lobster effort is shifting spatially with warmer ocean temperature. Ms. Bachman noted that between 2010-2015 there has been a noticeable increase in lobster revenues over time at the Outer Schoodic Ridge coral area, which is in lobster zone A.

The chair commented that the lobster spatial data are not good, but the AP could brainstorm how to get better information. Ideally we would want to understand where fishing effort occurs near sites where corals are known to occur. Ms. Casoni suggested that a Gloucester workshop would capture Massachusetts lobstermen working in Jordan Basin.

Ms. Raymond asked about the coral observations in Jordan Basin, whether abundance at the dive sites was low or high. Ms. Bachman referred her to the section of the amendment where coral distribution is summarized by location (section 6.2.3.3 on page 111). Some additional details could be added to the species and densities encountered during specific dives.

Mr. Minkiewicz recommended that when advertising for the workshop that the Council clearly indicate that the alternatives are draft and can be modified through public input. The coral areas in their current configuration should be presented as a starting point, rather than a yes/no decision. Communicating this well help bring people to the table because they will feel their input can influence the process. Mr. Williamson agreed with this, and asked if informational meetings would be held before the workshops. Ms. Bachman indicated that data would be distributed ahead of time, and that she was available to meet with industry members individually or in small groups to go through the amendment and discuss their observations before the workshops.

Lobster zone (A-G) councils were suggested as a way to reach out to the Area 1 fishery. Ms. Casoni indicated that the lobster fishery operates in a number of canyons, particularly between Oceanographer Canyon and the EEZ, in the heads of the canyons. Monkfish was also noted as a possible target species in the canyon/broad zones. Mr. Smolowitz wondered if the monkfish fishery would shift to using gillnets if only mobile bottom-tending gears were regulated.

Mr. Smolowitz asked where the red crab fishery operates. Ms. Bachman responded that her understanding was along the entire shelf/slope region, at around 640 meters depth. Recent ROV work to explore coral habitats indicate that the crabs are broadly distributed. The fishery targets areas where they can catch larger percentages of male crabs, since landing females in prohibited. Ms. Lapp commented that all of the alternatives in the Mid-Atlantic amendment were all shallow enough that red crab fishing fell entirely within the coral zones, so exemption was really the only option. (The MAMFC amendment indicates that the red crab exemption decision will be revisited no sooner than two years after implementation. This is different, i.e. more discretionary, from the way our habitat omnibus amendment was written, which defines an automatic sunset on the hydraulic dredge exemption, one year after implementation.) Mr. Kaelin suggested that the size and impact of the red crab fishery is important to consider – the fishery's impact on corals is not likely significant given the small number of vessels and traps fished. Ms. Raymond asked what the rationale was for red crab fishery exemption from the Mid-Atlantic coral zones. Ms.

Bachman indicated that her understanding was that it was related to both the small size of the fishery and the fact that the Mid-Atlantic part of the fishery was entirely encompassed by the coral zone adopted by the Council.

The AP discussed the offshore Gulf of Maine areas in detail. Ms. Raymond asked if the Jordan Basin areas are to be taken as one alternative, or as a menu of closures. Ms. Bachman responded that they are presented an analyzed as a single alternative, but that obviously each of the areas could be modified in response to comments.

Motion 2 (Raymond/Minkiewicz): For the GOM – Jordan Basin discrete areas, add two alternatives:

1) **Remove 118 Fathom, 96 Fathom, and Central JB areas (result would be 114 Fathom area only)**
2) **Modify boundaries of 118 Fathom, 96 Fathom, and Central JB areas to surround the dive sites (Map 33, page 68)**

Part 1 would leave just the 114 Fathom area. Ms. Raymond commented that the areas encompass important fishing grounds, and that they encompass lower density coral habitats. She noted further that the 2010 REDNET research fishery, which Associated Fisheries of Maine participated in, included observer coverage based on concerns about potential impacts to corals, but these negative impacts were not shown. Ms. Bachman clarified that the single dive sites at each of the 96 and 118 fathom bump sites were classified as low density vs. coral garden habitats. Of the two central Jordan Basin dives, one was low density and one was high density (coral garden). She stated that the boundaries of the 96 and 118 fathom areas were based on relatively low resolution bathymetry data. The PDT's intention was to encompass the dive site as well as any adjacent high relief areas likely to contain hard bottom and corals. This was done by drawing a boundary around a depth contour. She indicated that fishermen may have more detailed information about seafloor terrain at these sites.

Ms. Bachman asked about what the minimum coral zone size might be, from a fisheries operation perspective. She expressed concern about ending up with a large number of similar alternatives to analyze. Ms. Raymond suggested in would be better to eliminate the Jordan Basin sites that have limited information about corals, in order to balance conservation goals with impacts to fisheries. In regards to part 2 of the motion, she suggested specific coordinates, which were provided to the staff. Dr. Quinn suggested that the motion would be taken as a recommendation to the Committee, but that the PDT should evaluate these ideas in the short term if possible. Ms. Bachman suggested that the impacts analysis can be written in such a way that the effects of individual areas can be explored.

Ms. Casoni suggested that the Council should consider the economic impacts of closing each of the zones, vs. the potential positive effects on corals of closing them. Mr. Smolowitz asked if it might be possible to indicate what percentage of corals would be protected with different management approaches in Jordan Basin. Ms. Bachman responded that some quantitative metrics could be developed, e.g. what percentage of dives had corals vs. no corals, but given the sampling strategy, these results might not be very meaningful. Overall, the Gulf of Maine dives were located in areas where researchers thought they would be likely to find corals. The purpose

of doing multiple dives wasn't to identify the edges of coral patches, or to map the extent of coral habitats. Ideally, we would have additional high resolution bathymetry data that could be used to make inferences about coral habitat extent. Presently, the best data are at 114 Bump, and some data are available for the Central Jordan Basin site. It's hard to say if additional work throughout the Gulf of Maine would identify other substantial concentrations of corals, such as those found at 114 Bump, or at Outer Schoodic Ridge. One the one hand, the Gulf of Maine has been studied for years, and there are many areas where corals have not been found.

Mr. Brogan suggested providing more details about individual dives, and mapping dive tracks. Absence information is important. He asked what the mechanism would be to consider new coral zones if additional coral habitats were identified, either during development of this amendment or in the future. Ms. Bachman noted that there are framework provisions in the amendment that would allow for the adoption of new zones should additional coral habitats be found. While some scattered coral records are not encompassed with the range of coral zone alternatives, all of the recent (2002 and later) sites visited with ROV, AUV, or towed cameras are included in the draft zones.

Motion 2a (Martens/Brogan) to split motion 2, parts 1 and 2.

Mr. Martens commented that the two approaches are different, and he would prefer to consider parts 1 and 2 separately.

Ms. Casoni asked when the dives at these sites occurred, and if there was an evaluation of fishing effort and coral impacts over time. Ms. Bachman responded that dive sites were not revisited between years to develop a longitudinal assessment, rather, additional, later dives were used to explore new locations.

Mr. Williamson worried that the motion implies that the Council has set some threshold about the minimum density or number of corals that are required for a site to be worthy of protection. He asked rhetorically whether soft corals (i.e. the type common at the Gulf of Maine sites) are not as important as other types of corals (stony or black corals, found in deeper parts of the canyons). Mr. Minkiewicz argued that the motion puts more alternatives in the document for consideration.

Audience member Greg Wells commented that the motions appeared to be removing alternatives, not adding them.

Motion 2a to split failed 2/7/0. The main motion 2 carried 8/0/1.

Motion 3 (Raymond/Smolowitz): For the GOM Lindenkohl Knoll discrete area, add one alternative that modifies boundaries to surround the coral sites noted on Map 35, page 71.

Ms. Raymond made a second, similar motion, aimed at refining the boundaries of the Lindenkohl Knoll zone. Suggested coordinates were sent to staff but were not reviewed during the meeting.

Motion 3 carried 9/0/0.

Motion 4 (Lapp/Casoni): Recommend an alternative that explores using the ASMFC monument boundary as the 900 meter broad zone boundary, and develop an additional contour alternative using a similar method (straight lines, generally following a contour) that is between 600 and 900 meters.

The language of the motion was modified slightly during the discussion for clarification, to read as shown above. The intent of the motion was to encourage development of a simpler, deep water zone. Ms. Bachman asked whether the intent was that 900 meters be the target depth, with the boundary going shallower or deeper around that target, or if 900 meters was a minimum depth. Ms. Lapp indicated that her intention was to not be overly prescriptive.

Motion 4 carried 8/1/0.

CORAL AMENDMENT IMPACTS ANALYSIS

Ms. Bachman reviewed the PDT's approach thus far to evaluating the impacts of the coral zones. She noted that the document was laid out by alternative rather than by ecosystem component. As noted previously, the economic impacts are largely based on VTR data, with additional information used to understand lobster effort (see page 5 of this summary). VMS and observer data will be compared to VTR when available to explore the uncertainty in the VTR data. Ms. Bachman also described how the PDT will assess impacts to corals, managed species, and protected resources. Dr. Feeney explained briefly that revenue will be summarized by community to explore effects on specific locations. In terms of social impacts, Ms. Raymond commented that if some types of fishing are allowed and others excluded, there will be conflict and problems within communities.

Ms. Casoni asked about the inshore Gulf of Maine zones. How many fishermen use the areas? What are the ripple effects through the economy, and how will gear conflicts be assessed? Ms. Bachman commented that it is reasonable to assume that lobstermen are territorial, such that if an area closes, effort redistribution would likely be difficult. Also, it seems likely that impacts are not evenly distributed amongst individuals or fishing ports; i.e. a given coral zone may be a key fishing location for certain individuals, and not fished at all by others. Given the types of data available, it will be difficult to fully evaluate the distribution of impacts across individuals, or even the total revenue affected by a specific zone. Ms. Casoni commented that it will be helpful whenever possible to see revenue at the community level. This can be done provided that data confidentiality is maintained.

Mr. Kaelin asked about observed interactions between corals and fishing gear. These data are shown on Map 40 (page 127) in the draft amendment document dated January 26. Data on the map go through early October 2016, and therefore do include any observed lobster trips from 2015.

FURTHER AMENDMENT DEVELOPMENT/WORKSHOPS

Finally the AP discussed next steps, with a focus on outreach to the fishing industry. Ms. Raymond noted that Maine DMR will be hosting an informational session at the Maine Fishermen's Forum in early March. Ms. Bachman emphasized she was happy to talk with

individuals or small groups leading up to the workshop (or afterwards). Ms. Casoni indicated that there was interest on the part of the offshore lobster fishery.

The AP discussed the possible format, two separate meetings south and north of Boston, and agreed that New Bedford and Portsmouth would work as locations. Mr. Smolowitz and Mr. Minkiewicz encouraged straightforward, participatory sessions. Displaying areas on a plotter during the meeting was recommended. Also, Ms. Lapp encouraged the Council to be upfront about the data (e.g. uncertainty in coral habitat suitability model, and about seams in the high-resolution bathymetry data).

Other fisheries identified with potential overlap were tilefish and hagfish. Ms. Lapp suggested sending the data to the states to see if they could post the announcement to their email lists. Various AP members indicated that they would work on getting their colleagues to attend the workshops.

The meeting adjourned at 3:15 pm.