



New England Fishery Management Council

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DRAFT MEETING SUMMARY

HERRING PLAN DEVELOPMENT TEAM (PDT)

Thursday, July 28, 2016

The Herring Plan Development Team (PDT) met at the Greater Atlantic Regional Fisheries Office (GARFO) in Gloucester, Massachusetts, primarily to review initial work on MSE control rule simulations for Amendment 8, discuss tasking related to localized depletion for Amendment 8, discuss analyses planned for Framework 5 to address GB haddock AMs, and recommendations for potential work priorities for 2017.

MEETING ATTENDANCE:

- *PDT members:* Ms. Deirdre Boelke (Herring PDT Chairman); Dr. Rachel Feeney (Council staff); Mr. Daniel Luers, Mr. Brant McAfee, Mr. Timothy Cardiasmenos; and Ms. Carrie Nordeen (NMFS GARFO staff); Dr. Jonathon Deroba, Dr. Min-Yang Lee, Ms. Sara Weeks (NEFSC staff); Ms. Renee Zobel (NHFG); Dr. Matthew Cieri (MEDMR); Mr. Micah Dean, (MADMF).
- *Others:* Mr. Dean Szumylo and Mr. Brad McHale (GARFO staff).
- *Audience:* Three people attended in person and four more via conference call.

OPENING REMARKS AND AGENDA REVIEW

The PDT was asked to update their contact info and staff alerted the PDT that the Council is seeking advisors for all NEFMC panels. Applications are due at the end of August for the next three year term, 2017-2019. Staff also reviewed a timeline of herring actions for the remainder of 2016.

AMENDMENT 8 - ACCEPTABLE BIOLOGICAL CATCH CONTROL RULES

Dr. Jon Deroba gave a presentation highlighting progress to date on the simulation analysis being completed for the ABC control rules recommended at the MSE stakeholder workshop. Dr. Deroba reviewed the objectives and metrics, uncertainties, and control rules identified at the workshop. There were five main uncertainties that were identified at the workshop that will be incorporated in the analysis: herring recruitment, natural mortality, growth, assessment error/bias, and relationship to predators.

Many variants of biomass-based and constant catch control rules were identified and will be run through eight or more separate herring operating models. Some control rule variants include: biomass based, biomass based with 3 year ABC block, biomass based with 5 year ABC block, biomass based with 3 year ABC block and a 15% restriction on how much the ABC can change

(every 4th year), constant catch, and conditional constant catch with $\max F = 0.5F_{msy}$. Eight or more herring operating models will be constructed to evaluate different assumptions about various uncertainties in herring dynamics such as high recruitment, low natural mortality, low growth, etc. Operating models for some predators of herring are in the early phases of development. A member of the audience asked whether marine mammals as a predator will be incorporated into the simulation, and Dr. Deroba confirmed with Dr. Sarah Gaichas after the meeting that they will. Other predators will include a generic groundfish, a tuna-like predator, and a seabird. A PDT member asked if there is any evidence of density dependent growth. It was explained that density-dependent growth is still an open question so operating models should be completed under good and poor growth situations, but with no explicit density dependence. Some prioritization of combinations of control rules and operating models may be necessary due to the volume and time needed to complete the analyses within the timeframe of A8.

During the meeting it was stated that there are control rules used on the west coast that do not require a rebuilding requirement because the control rules reduce F as biomass declines and close the fishery at some biomass threshold, making the rebuilding implicit. It was also stated that this lack of a rebuilding requirement was upheld in court. However, following the PDT meeting it was confirmed that this is not the case and there are no west coast control rules exempt from rebuilding. Specifically, Amendment 8 to the Pacific Coastal Pelagics FMP defines the control rule used for that fishery which has a biomass cutoff below which no fishing is allowed, but the control rule is still subject to the 10-year rebuilding requirements. The confusion about rebuilding requirements arose because the biomass cutoff (e.g., for Pacific sardine) is greater than the overfished threshold, which makes the rebuilding requirement moot because the fishery is closed before it reaches overfished status, but that is not the same as exempt from the requirement.

Dr. Deroba also reviewed a few examples of MSE output runs and tradeoff plots among various metrics and the PDT discussed that it will be challenging to translate all of these analyses to the Council and public. In addition, a member of the public recommended that some of the outputs include catch in units of weight, as opposed to relative to MSY , so the industry can understand the tradeoffs in terms of the bottom line. One PDT member commented that it may be useful to track when a stock becomes overfished and how often a rebuilding plan is triggered.

AMENDMENT 8 – LOCALIZED DEPLETION

Dr. Rachel Feeney summarized a draft memo for the Herring Committee with analyses for additional tasking for localized depletion. The PDT further developed the memo.

Task #3 Mapping Herring Effort. Dean Szumylo (GARFO) explained that the herring fishery website is live and can be shared with the public. He walked the PDT through the website and the PDT provided some feedback about ways to potentially improve the site. Highlights from the conversation include: users should review the information button carefully before using the site; a suggestion to add the river herring avoidance areas for reference; suggestion to add text to explain that management can influence herring fishing behavior both spatially and temporally; recommendation to include monthly catch data; suggestion to develop separate tables to summarize major changes in management; and a suggestion to add a print or export map function. Staff is going to circulate the link and encourage Herring PDT, AP and Committee members to use the tool and provide feedback. GARFO staff is planning to update the site with these suggestions, depending on time constraints.

Task #6 Tuna Fishery Catch per Unit Effort (CPUE). The PDT has worked with several NMFS Highly Migratory Species staff to determine what CPUE information may be available for both the commercial and recreational bluefin tuna fisheries. For the commercial fishery, there is no requirement to report zero trips, and most fishermen with HMS permits are not required to report VTRs. Therefore, HMS staff at GARFO confirmed what the Herring PDT has stated in the past, it is not currently possible to estimate CPUE for the commercial tuna fishery. For the recreational tuna fishery, there is a Large Pelagics Survey that includes charter, party, and private anglers, and these data do include zero landings trips. The Southeast Fisheries Science Center does estimate CPUE for three size classes of tuna, but these estimates are on an annual basis only and the areas are relatively large. Mr. Brad McHale explained that there are many hypotheses about why U.S. bluefin tuna CPUE may be lower in recent years, but the data available are not signaling one factor over the others. The PDT concluded, again, that the resolution of these data is not sufficient to describe whether or not herring fishing is having negative impacts on tuna abundance. The PDT asked whether additional reporting of the tuna fishery could improve this situation, but it was explained that there is hesitation to require another logbook.

Task #2, herring fishing within specific 30 minute squares. The PDT discussed that area 114 is the most important block to consider, the others specified in the task have very low landings compared to that area. The PDT had several suggestions for ways to simplify the results for the final memo and several new ideas, including a summary of mackerel landings and annual landings to evaluate if there is interannual variation in Area 114.

Task #1, evaluate herring effort inshore. Overall the PDT discussed that CPUE is not a good measure of herring abundance because it is a migratory, schooling fish. This question has been asked many times over the years and the PDT still does not believe that CPUE can or should be used as a potential indicator of herring density. For example, evaluating tow time as an indicator of localized depletion is not supported, and it would be challenging to compare purse seine and midwater trawl hours fished. Finally, even if CPUE was estimated and used as an indicator or abundance, there is still the challenge of determining if reduced CPUE is caused by fishing pressure or fish moving to a different area. The PDT also discussed the theory of hyperstability, when catch rates stay stable while actual populations are declining, and how that can complicate using CPUE as an index of density.

Task #5, striped bass data. Mr. Micah Dean reviewed the methods of the MRIP angler intercept data explaining that catch location is not collected. In an effort to infer striped bass fishing locations from MRIP interview data, relevant trips were assumed to occur on the “back side” or east of Cape Cod if: 1) the intercept occurred in one of the outer Cape Cod towns (Provincetown, Truro, Eastham, Wellfleet, Orleans, Chatham); 2) fishing did not occur in a river, bay or sound; and 3) striped bass was the target fishery. In order to assess whether striped bass fishing is impacted by herring fishing activity, the number of trips one week before and after were evaluated. There are an insufficient number of trips to make any conclusions about potential correlations. The periodic/migratory nature of the herring fishery in this area, combined with the lack of spatial information for the striped bass fishery, makes it difficult to draw conclusions about the effects of localized depletion in this case.

Task #4 – Study Fleet suitability model. At the May PDT meeting Mr. Chris Sarro and Dr. John Manderson gave presentations on whether or not Study Fleet data could be used as a potential data source to assess localized depletion. Some promising work has been done for mackerel to describe the probability that fish will occupy a particular space and time, but those models have

not been developed for herring yet, and there are no plans to do so during the timeframe for Amendment 8. A habitat suitability model would not inform localized depletion questions, as it is unable to measure a response in a population to removals; it only predicts where fish are likely to occur given a habitat model (temperature). The Study Fleet data could be used to estimate catch rates, but only a subset of the herring fleet is involved in the program, mostly in Area 2.

FRAMEWORK 5

Ms. Deirdre Boelke reviewed actions taken by the Council in June related to haddock sub-ACL and AMs in the herring fishery. The range of alternatives is relatively narrow and the PDT will mostly need to focus on developing analyses to support the development and analysis of alternative AM areas, and potentially seasons. Mr. Brant McAfee explained that GARFO is currently evaluating the potential use of state portside sampling data, and depending on how that effort goes, Framework 5 alternatives may need to be adjusted.

Ms. Boelke briefly summarized observer and fishery data available in the herring fishery that could be used to develop new season or area alternatives. The PDT discussed that it may be useful to look at where the directed haddock fishery is fishing in more recent years to inform areas of potential haddock bycatch that may be outside of haddock AM areas developed. For example, if there is an area where the herring fishery does not usually fish we will not have observer data to know if haddock bycatch rates are lower or higher in those areas. One PDT member pointed out that was the case with river herring (RH); there were places where the trawl survey caught more RH than the commercial fishery. The PDT plans to see if the bycatch rate is correlated to the groundfish catch rate. A member of the audience cautioned that the directed haddock fishery will be targeting larger haddock than the bycatch in the herring fishery. The PDT discussed that the haddock fishery can be compared to the observed haddock catch in the herring fishery to see how correlated they are. A subset of PDT members will explore these ideas further between now and the next meeting.

The PDT did have a discussion about what the new alternatives were supposed to achieve. One PDT member asked whether this is a biological concern for haddock, or primarily a resource sharing issue. Are these measures supposed to identify the most optimal AM, one that provides the least disruption while minimizing bycatch. There was some discussion that because the utilization of haddock has decreased in recent years, the need for the herring fishery AM area to cover most of the GB haddock resource area may not be as great. One PDT member again urged that any new boundaries keep statistical area boundaries to facilitate monitoring and implementation of the AM. Another PDT member asked if monitoring could change in-season if an AM is triggered.

There was some discussion of splitting up the sub-ACL (80/20 idea). Some concern was expressed about that increasing the monitoring needs and increasing the likelihood that AMs would be triggered. But it was also pointed out that bycatch rates are usually lower in Jan – March, so reserving some haddock for that time period would help enable a winter herring fishery when bycatch of haddock is generally low. A member of the audience commented that this issue should not be as much of a problem with increased observer coverage. But it was also suggested that this system should be designed to work well with low and high sampling since these issues cannot always be anticipated. Another PDT member commented that larger sample sizes can help, but it could still be a problem if they are not properly stratified by season or area. If coverage levels are reasonable,

AFFECTED ENVIRONMENT FOR AMENDMENT 8 AND FRAMEWORK 5

Dr. Rachel Feeney summarized the outline of the Affected Environment (AE) section. Amendment 8 is much larger in scope and will include more info than the AE needed for FW5. A subset of PDT members are going to look at updating the description of human communities. A member of the audience requested that a subsection on sea birds be added for A8 AE.

CONSIDER POTENTIAL WORK PRIORITIES FOR THE HERRING FMP FOR 2017

Ms. Deirdre Boelke summarized the list of potential work priorities for 2017. The Herring PDT did not have any specific additions to recommend. The PDT commented that Amendment 8 and the items listed under “other work items” are more than enough to keep the PDT and Committee busy in 2017. The PDT identified a few additions for the list of other items: coordination with ASMFC and MAFMC; and preparation for the benchmark assessment, and removal of Herring RSA since that is a 3 year process that occurred last year. A member of the audience suggested the PDT consider adding the potential consideration of offshore spawning closures.

The PDT followed with a discussion about what the objectives would be and the lack of data available to evaluate the benefits of spawning closures. Several PDT members voiced general concern that there are a handful of issues that come up in herring management but the ability to address them is hampered by a lack of data. Ultimately the PDT drafted a consensus statement to urge support for research that would support herring management. In addition to the general five year research priorities, the PDT recommends that if funds are available, the Council could support herring research to support issues that have come up time and time again.

By consensus, the Herring PDT recommends that the Herring Committee consider developing a priority in 2017 for Council sponsored research to support longstanding herring management issues. For example, directed studies that would look at the potential biological impacts of localized depletion, what is in a slipped net, and research to evaluate the benefits of spawning closures. These issues have been raised for years and the ability to address them is hampered by not having direct scientific research that would provide the data needed to adequately address and evaluate these issues.