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MEMORANDUM

Date: May 31, 2013

To: Mackerel, Squid, and Butterfish (MSB) Committee/Council

From: Jason Didden

Subject: MSB specifications and other MSB agenda items

The following items are included in this Tab. Some items have their own page numbers but the page numbers below refer to the large, underlined page numbers in the bottom center.

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Introduction

This memo frames potential decisions for the Committee and Council, and incorporates the input of the MSB Monitoring Committee (met May 23 and May 28, 2013) as well as follow-up analysis and discussions among Council and National Marine Fisheries Service staff. Specific Monitoring Committee recommendations are noted as such. ITEMS where Council action may be appropriate and/or necessary are flagged as "DECISION POINTS" in this memo. Items on the agenda include:

- Review and develop recommendations for annual MSB specifications and related management measures, including but not limited to (detailed below):
    - Butterfish Allowable Biological Catch for 2014
    - River Herring/Shad cap for mackerel fishery
    - Gear stowage requirements
    - Longfin roll-over and reserve options
    - Longfin mesh requirements
    - Longfin possession limits for Illex fishery

- Consider *Illex* control date
    -The Council approved a new longfin squid control date at its last meeting but the Advisory Panel requested that the Council consider a control date for *Illex* as well. **DECISION POINT**.

- Amendment 15 update
    -The NMFS Northeast Regional Office (NERO) will be providing a letter with guidance on approaches to considering the "stock in the fishery" question for river herrings and shads (RH/S) prior to the meeting. Staff will forward that letter and bring hard-copies to the meeting.

- Squid management port meeting results (Pt. Judith RI, and Cape May, NJ)
    -A summary of the port meetings will be forwarded to the Council before the Council meeting (the meetings were not concluded before mail-out).

The rest of this tab primarily deals with the MSB specifications issues. The issues are described below in the order that the Monitoring Committee evaluated them, which is slightly different than the order on the agenda.

2014 Specification Measures

As documented in the May 2013 Scientific and Statistical Committee Report (included in this briefing tab), the SSC affirmed the status-quo multi-year ABCs for Atlantic mackerel, longfin squid, and *Illex* squid. Accordingly, no changes to specifications (catch quantities/quotas) for those fisheries are discussed in this document (including RSA, up to 3%). There are some other potential management measures related to longfin squid that are discussed below however.

A summary of all existing MSB management measures is included later in this tab for reference purposes. NMFS' Northeast Regional Office staff recently began producing these and they provide a handy reference for status-quo specifications and other management measures.

Gear Stowage Requirements

The New England Fishery Management Council (NEFMC) and NMFS have been working on changing the gear stowage requirements, which often apply when vessels are transiting closed areas. The New England Council had recommended totally removing groundfish stowage requirements but it was disapproved by NMFS. For plans with the requirements, they are still proposing to modify several requirements. Specifically, the following modifications would be made:

---Remove the requirement for vessels transiting the Gulf of Maine Rolling Closure Areas, the Georges Bank Seasonal Area Closure, and the Conditional Gulf of Maine Rolling Closure Area to detach towing wires from doors when using on-reel net stowage. (Safety issue)

---Remove the requirement to cover nets with canvass or other similar opaque materials and instead allow NMFS to specify in the Federal Register what kind of covering (or additional approved stowage methods) would be required. The Monitoring Committee thought this seemed reasonable as long as NMFS include at least a 30-day comment period and hold at least one public hearing (preferably via webinar) on any proposed changes. See the letter from the NEFMC later in this tab for additional details.

The Monitoring Committee noted that these would apply to several MAFMC-managed fisheries because these regulations (648.23) are referenced in other regulations for those fisheries. The Monitoring Committee also discussed if things like this should be moved into a "General" category as an issue of clarity in the regulations, and whether NMFS should do a regulatory amendment to reorganize the regulations, but full analysis of such an endeavor was beyond the scope of this meeting.

DECISION POINT - Change the requirements or not. Staff recommends changing them.

River Herring & Shad Cap (RH/S)

The Monitoring Committee first discussed the status of the RH Endangered Species Listing Determination. Diane Borggaard of NMFS' Office of Protected Resources subsequently provided a summary of where things stand with the listing, copied below:

> The Herring PDT/Mackerel MC briefly discussed the status of the petition to list river herring/shad as threatened or endangered under the Endangered Species Act (ESA). NMFS reviewed the petition submitted by NRDC in August 2011 and published a positive 90-day finding in November 2011; the finding stated that the information in the petition, coupled with information otherwise available to the agency, indicated that the petitioned action may be warranted. As a result of the positive finding, the Agency is required to review the status of the species to determine if listing under the ESA is warranted. ASMFC completed a stock assessment for river herring in May 2012, covering over 50 river specific stocks throughout the species U.S. range. NMFS will utilize the information from the stock assessment as a critical component in the ESA listing decision for these two species. Due to the nature of the stock assessment, it did not contain all elements necessary for making a listing determination under the ESA; therefore, NMFS identified the additional required elements and held workshops focused on addressing this information. The three workshops organized for this purpose addressed river herring stock structure, extinction risk analysis (ERA), and climate change. Reports from the workshops were independently peer reviewed and have been made available by NMFS. NMFS will use these reports and the modeling results along with the ASMFC river herring stock assessment and all other best available information to develop a listing determination, which will be published in the Federal Register as soon as possible (anticipated summer 2013). If listing is determined to be warranted, NMFS will publish a proposed rule and will seek public comment and most likely hold public hearings. During this time, the species would be proposed species and it is possible to prepare a conference opinion under section 7 of the ESA to determine if federal actions may jeopardize the species. During the development of a conference opinion and further management action under the MSA, there is an opportunity for NMFS, NEFMC, MAFMC, and others to work together to improve coordination on the various actions moving forward. The timing of the ESA determination should not, however, affect the Councils' ability to develop management actions to establish RH/S catch caps in the herring and mackerel fisheries given the current timelines for these actions.

The Monitoring Committee agreed on several general points related to the cap:

-We do not have information to link cap levels to specific RH/S stock effects/abundance (consistent with Amendment 14).

-There is always a risk of the cap not tracking stock trends in a timely fashion. If RH/S stocks improve and the cap is low then the cap could unnecessarily constrain the mackerel fishery, or not be

sufficiently constraining if RH/S stocks decline (based on RH/S catch in the mackerel fishery having a discernible impact on RH/S stocks). Trends in the directed fishery will also impact cap performance as well, and recent years may or may not be reflective of upcoming years (a public comment at the Monitoring Committee meeting noted that in terms of mackerel size, mackerel availability, and mixing of Atlantic herring and mackerel, that recent years have been unusual in terms of directed mackerel fishing).

-The current 20,000 pound directed trip definition and/or 20,000 pound post-closure trip limit appears reasonable based on mackerel landings 2004-2012. Trips over 20,001 pounds accounted for 98.5% of all mackerel landings and on those trips landings less than 20,001 pounds, mackerel made up a small portion (on average) of their overall landings, suggesting that landings under 20,001 pounds are truly incidental. There was also input at the Advisory Panel meeting that a 20,000 pound trip limit would effectively close directed mackerel fishing.

DECISION POINT - Change the directed trip/cap trip definition or not. Staff recommends staying at 20,000 pounds.

The Monitoring Committee agreed that continuing close coordination with Atlantic herring management is very important. Given the timeline of MSB specifications and New England's Atlantic herring management measure development, for 2014 and 2015 coordination will likely have to be at the level of keeping each Council informed of concurrent developments, but the goal should be to eventually have a meshed RH/S cap that applies to both mackerel and Atl. herring fishing in the Mid-Atlantic and Southern New England during the first part of the calendar year (Jan-April when mackerel fishing is occurring) given the overlap between the fisheries. The May 23, 2003 joint MSB Monitoring Committee and Atlantic Herring Plan Development Team meeting was a good example of useful coordination and helped inform the MSB Monitoring Committee's discussions on May 28, 2003.

The Monitoring Committee discussed the utility of allowing a minimum amount of mackerel to be landed before the mackerel fishery closed regardless of the cap extrapolation estimation. The rationale would be to avoid closing the fishery based on a few initial observer trips that were high, before either encounter rates averaged out or the fishery figured out how to avoid RH/S in a given year. Ultimately the Monitoring Committee decided that such a provision would really depend on the Council's risk preferences (mackerel landings vs RH/S catch limitation).

Subsequent discussion with NMFS staff concluded that while such a provision could potentially be part of the cap system, since it was not really contemplated in Amendment 14 and would require further analysis, it would have to be a Frame-worked provision. Possible ways to address this issue in this specification cycle would be to set a relatively higher cap or to specify a longer transition from using the average of the previous year's data to the current year's data. The butterfish cap transitions from the previous year's data to the current year's data over 4 trips (on the 5th trip only the new/current year's data is used). Given the high volume nature of the mackerel fishery and the patchy nature of RH/S catch, staff recommends considering specifying that the transition from the previous year's data to the current year's data occur over more (6-8) observed trips to dampen potential volatility in the observed RH/S catch rate. Council and NMFS staff will conduct additional analysis regarding exactly what number may be most appropriate prior to the Council meeting.

DECISION POINT - Specify the data transition period or not. Staff recommends at least recommending to NMFS that they consider a longer transition period.

A public comment at the Monitoring Committee meeting suggested that a minimum-mackerel provision would not be consistent with Amendment 14 and that a seasonal split could address this issue, but such a change would also likely be an action that would require a framework action versus direct implementation via annual specifications.

The Monitoring Committee spent considerable time discussing what might constitute appropriate RH/S cap levels (a joint RH+S cap appears most feasible given the difficulty of monitoring/tracking shad catch, which has been relatively low in the mackerel fishery). Ultimately the question depends on how much the Council wants to reduce RH/S catch and compared to which baseline. The lack of information about how much RH/S should be caught overall makes the question quite difficult for the monitoring committee to evaluate from a technical/biological perspective.

Possible baselines to reduce catch from would include A) recent years, B) recent years relative to the years analyzed in Amendment 14, or C) a potential reduction in a particular year compared to what would have occurred in that year had there been no cap. Each baseline means something different in terms of the range of potential caps and their means (averages) and medians (half of the range is above and half below a particular number). The Monitoring Committee did think that only looking at years from 2005 forward would be most appropriate given improvements to high-volume sampling protocols that were implemented in 2005.

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A	B	C	D	E	F	G	H	I
Year	Mackerel Landings	Total Landings on Mackerel Trips (the difference is mostly from Atl. Herring)	% of RH/S catch vs all catch on observed mackerel trips	Number of observed trips that ratio is derived from	Percent of total mackerel landed that was observed by those trips	Amount RH/S Estimated to be caught by mackerel trips based on methods used for butterfish and other similar caps	Amount of RH/S that would have been caught for a given year's ratios if fishery had caught the current mackerel quota (33,821 mt)	45% of total RH/S catch from Amendment 14 analysis - 45% was the average amount of RH/S that Quarter 1 was responsible for 2005-2010
2005	42,270	44,155	0.38%	12	3%	167	134	301
2006	56,860	59,976	0.51%	14	5%	308	183	130
2007	25,546	31,441	4.05%	9	3%	1,273	1,685	328
2008	21,734	28,438	0.46%	16	13%	132	206	332
2009	22,635	30,891	0.27%	17	10%	84	126	195
2010	9,877	15,063	0.52%	20	16%	78	266	132
2011	531	1,095	0.54%	5	29%	6	377	na
2012	5,332	8,408	1.26%	14	12%	106	674	na
Mean	23,098	27,433	1.00%	13	11%	269	456	236
Median	22,184	29,665	0.51%	14	11%	119	236	248
High	56,860	59,976	4.05%	20	29%	1,273	1,685	332
Low	531	1,095	0.27%	5	3%	6	126	130

*Note: on the Monitoring Committee call staff raised mackerel landings by an average of 16% to account for other landings on mackerel trips based on dealer weighout data. In the table above the actual other landings from mackerel trips in each year were utilized, which modified the results in column G slightly, but follow-up discussions with the monitoring committee concluded that using the actual amount from year to year was more appropriate.

To get an idea of the amount of RH/S that has been caught by the mackerel fishery in recent years, staff utilized the methodology used from the butterfish cap to examine what the mackerel fishery would have generated for RH/S cap catches looking back several years (see table above). An important factor to consider is that the RH/S estimates in Amendment 14 were quite imprecise in most cases, and while precision estimates are not available for the calculations in column G, they would likely be even more imprecise than the estimates generated in Amendment 14 (note the low number of observed trips/landings). Hopefully Amendment 14 will lead to more precise estimates.

Column H approaches the question from a different perspective. It lists annual cap amount that would have been generated in each year given the yearly ratios and if the current mackerel quota (33,821 mt) had been caught. From staff's perspective these numbers are useful in terms of examining an appropriate range of options. 1,685 mt appears to be a cap number that would almost never close the mackerel fishery given the range of recent catch ratios and the current mackerel quota. The Monitoring Committee concluded that a cap of 1,685 mt or higher would be unlikely to match the intent of Amendment 14 to reduce RH/S catch. Another way to utilize column H is that the lower amounts in column H suggest caps that would allow the mackerel fishery to land its quota if it can maintain a low RH/S catch rate.

Column I lists 45% of the amounts of the total RH/S estimates produced from Amendment 14. 45% of those total RH/S amounts were caught in Quarter 1 on average from 2005-2010 (34% from the Mid-Atlantic and 11% from New England). The Amendment 14 analysis stratified RH/S catch by year, gear, RH/S species, quarter, and region. While the Amendment 14 analysis was not done the same way that the cap will be calculated, these numbers may still provide a useful reference point for recent RH/S catch. While 2007 appears to represent a divergence between the Amendment 14 analyses (see table below) and the cap estimates in the above table, given the CVs (estimates of uncertainty) in the table below, and given mackerel cap trips will be a different draw of trips compared to the Amendment 14 analyses, the difference is not that large given to the high uncertainty. This highlights the ongoing technical concern that without additional sampling coverage, cap estimates (whether historical or future) are likely to be very imprecise.

	Alewife		American shad		Blueback herring		Herring NK		Hickory Shad	
Year	Catch	CV	Catch	CV	Catch	CV	Catch	CV	Catch	CV
2005	347.43	0.42	78.24	0.32	220.04	0.38	7.18	0.60	19.41	0.38
2006	57.61	0.91	29.29	4.37	187.48	0.67	232.02	1.16	13.35	0.81
2007	484.02	0.79	55.08	0.45	180.13	1.47	105.31	2.08	4.77	0.98
2008	145.03	0.43	52.38	0.32	526.59	0.57	327.99	0.40	7.83	0.65
2009	158.66	0.26	59.54	0.45	202.02	0.30	180.05	0.91	10.89	0.83
2010	118.50	0.20	46.12	0.17	125.02	0.20	86.50	0.32	1.12	0.65

A public comment requested that the Monitoring Committee consider A) recent news about river herring run resurgences, B) the status of results from the SMAST program, C) the level of mortality from directed fisheries, and D) the optimum way to monitor interactions (observer vs. port sampling). Regarding A, staff will include the submitted articles but it is difficult to evaluate the overall status of river herring run strengths from news articles or currently available on-line run records. The ASMFC does not have a way to get an overall real-time picture. Regarding B), before the Council meeting staff will follow-up with SMAST staff for additional input, but one benefit of SMAST would be to help industry stay below whatever cap may be set. Also, since the SMAST river herring avoidance program has been in effect since 2011, river herring catches since 2011 may have been reduced from what they would have been without the SMAST program, but it may not be possible to quantify if or how much of a reduction occurred. Regarding C), from 2005-2011 (2012 is not available yet) river herring and shad landings combined averaged 941 mt, ranging from 698 mt in 2005 to 1186 mt in 2010. Regarding D), in follow-up discussions monitoring committee members discussed that it is likely worth revisiting whether and/or how to incorporate port sampling given the cost-efficient nature of port sampling versus observer sampling.

Staff Recommendation - RH/S Cap

Substantial uncertainty exists regarding both what would be appropriate/sustainable for overall RH/S catch (directed and non-directed) and what levels of RH/S have been caught in the mackerel fishery in recent years. The Monitoring Committee was not able to recommend a particular amount, but did conclude that an amount below 1,685 mt would be an appropriate range and that using information about recent catch and landings is a reasonable way to consider possible cap amounts. Based on staff's understanding regarding the Council's intent in Amendment 14 to reduce RH/S catch and provide incentives for industry to avoid RH/S while attempting to land the mackerel quota, staff recommends an initial cap of 236 metric tons. This is the median value for the recent cap amounts that would allow the mackerel fishery to land the current quota, but means that a relatively low RH/S ratio would have to be maintained in order to land the current quota. 236 metric tons is also slightly below the 2005-2012 average RH/S catch, which suggests that in the long run one would expect some reductions in some years. If RH/S populations increase in the future, the fishery would also have to work harder to keep under the cap while still landing a given amount of mackerel. 236 metric tons is also well below estimated RH/S directed landings.

236 metric tons would have been a limiting cap in two of the 6 years 2005-2010 based on the back-extrapolations described above. Recall 2005 is used as a beginning year for the focus of analysis because that was the year when high-volume sampling procedures were improved. For this particular illustration staff stopped at 2010 because A) mackerel fishing was very poor in 2011 and 2012, B) the SMAST river herring avoidance program was operating in 2011/2012 and may have already reduced catch from what otherwise would have occurred, and C), the data the Council focused on in Amendment 14 was from 2005-2010.

Thus from staff's perspective 236 metric tons seems reasonable and justifiable given staff's understanding of the Council's intent, but the exact appropriate amount will of course depend on the Council's risk preferences in terms of RH/S catch versus mackerel landings.

While not discussed on the Monitoring Committee call, members of the Monitoring Committee had follow-up discussions about how to monitor and/or close the mackerel fishery if the RH/S cap is reached. Between mail-out and the Council meeting the Monitoring Committee will have additional discussions on this topic, but has noted several points:

-Once the cap is closed, no trips that would count against the cap should occur. Therefore, post-closure additions to the cap would not be expected. Therefore, the primary issues with a closure threshold are the issues of monitoring and closure notification/implementation.

-Projecting closures makes it more likely to hit a particular closure threshold, but increases workload for NMFS. Closing once an actual weekly update of the cap has been completed insures that the fishery is not closed too early, but may lead to an overage depending on the closure threshold used. It is difficult to predict how any given closure threshold/buffer might perform given the small amount of the cap and the sometimes rapid pace of mackerel landings. From staff's perspective a 90% closure threshold with no projection or a 95% closure threshold with a projection seems like a reasonable starting point but will have to be evaluated based on actual performance. Council and NMFS staff will have additional discussions on this topic before the meeting, and any additional information will be provided to the Council as soon as feasible. Note: Framework 8 (approved but not yet implemented) changed the butterfish cap closure threshold from 80% to 95% since minimal cap trips (or none) are expected after a cap closure (they would be illegal by federally-permitted vessels).

DECISION POINTS - What does the Council want to specify for a cap amount and closure threshold?