



Mid-Atlantic Fishery Management Council

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MEMORANDUM

Date: January 31, 2013

From: Jason Didden *JDD*

To: Council

Subject: MSB Briefing Materials for February 2013 Council Meeting – Am15 Update

Note: All pages in this tab have consecutive page numbers, which are underlined and bolded toward the bottom-right of each page. There may be other page numbers from source documents.

Page Tab Contents

1	Memo
3	Clips from Amendment 14
21	Am15 Provisions Matrix

To begin development of Amendment 15, the Amendment 15 Fishery Management Action Team (FMAT) will meet on February 4, 2013 (after mail-out but before the February 2013 Council meeting).

The first task of the FMAT is to fill in the details about the range of options that might be considered in an FMP. Magnuson clearly spells out the required and discretionary provisions of fishery management plans for “each fishery...that requires conservation and management.” The FMAT will be evaluating how required provisions may be addressed and which discretionary provisions might be useful.

In general it is likely that two routes will ultimately be available to the Council: 1) Pursue river herring and shad (RH/S) conservation goals via existing authorities (e.g. Amendment 14

measures, complementary ASMFC/Federal measures, potential ESA-related measures [no decision about listing RH had been made by NMFS as of 1/30/13], etc.), or 2) pursue RH/S conservation through adding any or all RH/S species as stocks in the MSB Plan (or via a new RH/S Plan which in practice may be mostly the same as if RH/S are added to the MSB Plan).

For background, several relevant sections of Amendment 14 are included, as is a still in-development matrix of potential FMP alternatives - the FMAT meeting will be working on fleshing out the Matrix, so it is a working draft at this point. There is less detail for discretionary provisions since they are mostly supportive of the mandatory provisions and will be explored throughout Amendment development. At the Council meeting, I will update the Council on the FMAT meeting's outcome and the Council can provide additional direction as appropriate. A written summary of the FMAT meeting will be available at the Council meeting and emailed to the Council ASAP, along with any updates to the matrix.

5.9 Alternative Set 9 - Add RH/S Stocks as "Stocks in the Fishery" within the MSB FMP

5.9.1 Statement of Problem/Need for Action

The overall existing federal/state/regional management framework may be insufficient to adequately conserve RH/S stocks (see Section 6.2 for a summary of RH/S stock statuses). Adding RH/S stocks as “stocks in the fishery” in the MSB FMP would not fix every problem but would bring some additional resources to bear on RH/S problems, though that may mean that other management priorities receive less resources.

Note: It is not possible to develop all of the measures (especially essential fish habitat or EFH) that would be necessary for the FMP not to be deficient if any RH/S species were officially added as stocks in the fishery in this document. Instead, selection of an Alternative Set 9 action alternative would “kick off” another Amendment to fully add stocks to the MSB FMP in a manner that would keep the plan in compliance with the Magnuson Stevens Act. The Act’s required provisions for management plans are included below.

5.9.2 General Rationale & Background

Current Management

The Atlantic States Marine Fisheries Commission (Commission) manages RH/S with its Interstate Fishery Management Plan for Shad and River Herring (FMP) under the authority of the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA). Shad and river herring management authority lies with the coastal states and is coordinated through the Commission. Responsibility for compatible management action in the Exclusive Economic Zone (EEZ) from 3-200 miles from shore lies with the Secretary of Commerce through ACFCMA in the absence of a federal fishery management plan. Comprehensive assessments are not currently available for RH/S but most indications point to depressed runs in most river systems.

The ASMFC implemented river herring moratoria for all states on Jan 1, 2012 except those states (e.g. Maine which landed over 1,000,000 pounds of river herring in 2010) that have approved sustainable fishing plans. The ASMFC will have implemented shad moratoria for all states by Jan 1, 2013 except those states have approved sustainable fishing plans. Ocean shad fisheries have been phased out for all states but some in-river fisheries still exists.

The ASMFC defines a sustainable fishery as “a commercial and/or recreational fishery that will not diminish the potential future stock reproduction and recruitment.” Submitted plans must clearly demonstrate that the state’s or jurisdiction’s fisheries meet this definition of sustainability through the development of sustainability targets which must be achieved and maintained. All river systems are allowed to maintain a catch and release recreational fishery. States and jurisdictions are also required to identify local significant threats to shad critical habitat and develop a plan for mitigation and restoration. Recommendations for river herring habitat improvement have also been approved by the ASMFC.

Approved sustainable fishing plans vary by state and are available by contacting the ASMFC (asmfc.org), but the main point is that by 2013, any state landings of RH/S should be sustainable (ASMFC 2011).

Habitat restoration efforts have focused on improved fish passages around dams and dam removal with 100s of projects completed in that last 25 years. Each project opens up varying additional river miles to anadromous fish passage and spawning (Pers Com Kate Taylor, ASMFC). These are often joint state-federal projects with cooperation between the states, NOAA, U.S. Fish and Wildlife (U.S. F&WS), and private organizations such as American Rivers. Hundreds of millions of dollars have been spent on such activities over the last 25 years (pers com, Larry Miller, U.S. F&WS). Additional information on current RH/S stock status is available in Section 6.2 and detailed information on the RH/S stocks and fisheries is available in the ASMFC's annual RH/S status update, available at: <http://www.asmfc.org/shadRiverHerring.htm>.

While states cannot make regulations in federal waters (beyond three miles), state requirements can have impacts on federal vessels since vessels must transit state waters to land their fish. It is not entirely clear how impending state moratoria will impact federal vessels since some are just coming online and they may differ between the states. However, some states like Virginia are prohibiting all possession of any river herring in addition. This means that a vessel with incidental river herring catch onboard from fishing in federal waters would be in violation once it entered state waters. Other states, may prohibit retention of river herring caught in state waters but allow transiting. Once the Final EIS is written there should be additional clarity on the various state regulations for 2012.

Magnuson Stevens Act

The Magnuson Stevens Act (MSA) states the following regarding Council responsibilities: "...Each Council shall...for each fishery under its authority that requires conservation and management, prepare and submit to the Secretary (A) a fishery management plan..."

Regarding Councils' authorities, MSA states: "The Mid-Atlantic Fishery Management Council shall consist of the States of New York, New Jersey, Delaware, Pennsylvania, Maryland, Virginia, and North Carolina and shall have authority over the fisheries in the Atlantic Ocean seaward of such States..."

NMFS has published guidelines (available at: <http://www.nmfs.noaa.gov/msa2007/catchlimits.htm>) in the Federal Register regarding MSA's National Standard 1 (NS1) which states: "Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry."

The NS1 Final Rule states: "The relevant Council determines which specific target stocks and/or non-target stocks to include in a fishery." Regarding non-target species like RH/S, the rule states "They may or may not be retained for sale or personal use. Non-target species may be included in a fishery and, if so, they should be identified at the stock level." The rule also describes a concept called ecosystem component species but it is not clear what obligations that would trigger other than standard MSA provisions to reduce bycatch under National Standard 9. Regardless, guidance that ecosystem component species should "Not be likely to become subject to overfishing or overfished... in the absence of conservation and management measures" and "Not generally be retained for sale or personal use" would seem to preclude designation of RH/S as ecosystem component species.

Given the preceding paragraph, it would seem to be at the discretion of the Council whether to adopt RH/S as “stocks” in the fishery within the MSB FMP. Doing so essentially would add RH/S as managed resources just like the squids, mackerel, and butterfish and would trigger requirements including status determination criteria, ACLs/AMs, EFH designations, and rebuilding if necessary.

Given that the Atlantic States Marine Fisheries Commission (ASMFC) already has a plan to manage RH/S, it would appear viable to either continue to address the RH/S incidental catch that occurs in the Councils’ existing managed fisheries cooperatively with the ASMFC or to add one or more of the RH/S species to the MSB FMP depending on the Council’s judgment about which route will provide for optimal management.

One question that has surfaced repeatedly has been could the Council add river herring or shad as stocks in the fishery but use the ACL/AM flexibility provisions of the NS1 guidance to defer to ASMFC for primary management as the NPFMC is considering for salmon and deferring to Alaska? This could theoretically allow the designation of EFH and result in greater federal resources without having to deal with ACLs for these currently data-poor stocks. There are several key issues however, which become evident when reviewing analysis for updating the NPFMC's salmon plan (<http://www.fakr.noaa.gov/npfmc/>), where Alaska has primary authority even though it is a federally managed species. First, Alaska has a long history of well-documented successful/sustainable management with salmon. Second, the salmon situation is different in that RH/S landings, and certainly discards, appear not nearly as well documented (especially at the species level) as salmon. Existing or pending ASMFC moratoriums will likely address most of the landings control, but not address discarding in state or Federal fisheries. For these reasons it currently seems likely that the establishment ACLs and AMs would be necessary. This is at least the viewpoint of the Amendment 14 FMAT and NOAA GC, though the Council looks forward to getting additional perspectives on this topic during the public input process.

The ACL flexibility guidelines also still require consistency with Magnuson (alternatives to ACLs/AMs would have to essentially achieve the same results). So even if primary management could be ceded to the ASMFC, the Council’s suite of management measures would still have to function as ACLs/AMs. Thus the Council would still have to implement hard caps on its other managed species to control overall catch. Further, even if ASMFC had primary responsibility, the Council would still have to limit incidental catch in its directed fisheries based on the best available science about what catch level is consistent with sustainability and/or rebuilding as well as accounting upfront for whatever catch (landings and/or discards) occurs in state waters. Thus while there might not be ACLs/AMs on paper, the caps on incidental catch in Council-managed fisheries would need to have the same function as ACLs/AMs in order to be consistent with the Magnuson Act and the National Standard One final rule guidelines. Again however, this is the viewpoint of the Amendment 14 FMAT and NOAA GC and the Council looks forward to getting additional perspectives on this topic during the public input process.

If RH/S were added to the MSB FMP, the Magnuson Act states that fishery management plans shall:

- (1) contain the conservation and management measures, applicable to foreign fishing and fishing by vessels of the United States, which are--
 - (A) necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery;
 - (B) described in this subsection or subsection (b), or both; and
 - (C) consistent with the national standards, the other provisions of this Act, regulations

implementing recommendations by international organizations in which the United States participates (including but not limited to closed areas, quotas, and size limits), and any other applicable law;

(2) contain a description of the fishery, including, but not limited to, the number of vessels involved, the type and quantity of fishing gear used, the species of fish involved and their location, the cost likely to be incurred in management, actual and potential revenues from the fishery, any recreational interest in the fishery, and the nature and extent of foreign fishing and Indian treaty fishing rights, if any;

(3) assess and specify the present and probable future condition of, and the maximum sustainable yield and optimum yield from, the fishery, and include a summary of the information utilized in making such specification;

(4) assess and specify--

(A) the capacity and the extent to which fishing vessels of the United States, on an annual basis, will harvest the optimum yield specified under paragraph (3),

(B) the portion of such optimum yield which, on an annual basis, will not be harvested by fishing vessels of the United States and can be made available for foreign fishing, and

(C) the capacity and extent to which United States fish processors, on an annual basis, will process that portion of such optimum yield that will be harvested by fishing vessels of the United States;

(5) specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, charter fishing, and fish processing in the fishery, including, but not limited to, information regarding the type and quantity of fishing gear used, catch by species in numbers of fish or weight thereof, areas in which fishing was engaged in, time of fishing, number of hauls, economic information necessary to meet the requirements of this Act, and the estimated processing capacity of, and the actual processing capacity utilized by, United States fish processors;

(6) consider and provide for temporary adjustments, after consultation with the Coast Guard and persons utilizing the fishery, regarding access to the fishery for vessels otherwise prevented from harvesting because of weather or other ocean conditions affecting the safe conduct of the fishery; except that the adjustment shall not adversely affect conservation efforts in other fisheries or discriminate among participants in the affected fishery;

(7) describe and identify essential fish habitat (EFH) for the fishery based on the guidelines established by the Secretary under section 305(b)(1)(A), minimize to the extent practicable adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat;

(8) in the case of a fishery management plan that, after January 1, 1991, is submitted to the Secretary for review under section 304(a) (including any plan for which an amendment is submitted to the Secretary for such review) or is prepared by the Secretary, assess and specify the nature and extent of scientific data which is needed for effective implementation of the plan;

(9) include a fishery impact statement for the plan or amendment (in the case of a plan or amendment thereto submitted to or prepared by the Secretary after October 1, 1990) which shall assess, specify, and analyze the likely effects, if any, including the cumulative conservation, economic, and social impacts, of the conservation and management measures on, and possible mitigation measures for—

(A) participants in the fisheries and fishing communities affected by the plan or amendment;

(B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants; and

(C) the safety of human life at sea, including whether and to what extent such measures may affect the safety of participants in the fishery;

(10) specify objective and measurable criteria for identifying when the fishery to which the plan applies is overfished (with an analysis of how the criteria were determined and the relationship of the criteria to the reproductive potential of stocks of fish in that fishery) and, in the case of a fishery which the Council or the Secretary has determined is approaching an overfished condition or is overfished, contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery;

(11) establish a standardized reporting methodology to assess the amount and type of bycatch occurring in the fishery, and include conservation and management measures that, to the extent practicable and in the following priority--

(A) minimize bycatch; and

(B) minimize the mortality of bycatch which cannot be avoided;

(12) assess the type and amount of fish caught and released alive during recreational fishing under catch and release fishery management programs and the mortality of such fish, and include conservation and management measures that, to the extent practicable, minimize mortality and ensure the extended survival of such fish;

(13) include a description of the commercial, recreational, and charter fishing sectors which participate in the fishery, including its economic impact, and, to the extent practicable, quantify trends in landings of the managed fishery resource by the commercial, recreational, and charter fishing sectors;

(14) to the extent that rebuilding plans or other conservation and management measures which reduce the overall harvest in a fishery are necessary, allocate, taking into consideration the economic impact of the harvest restrictions or recovery benefits on the fishery participants in each sector, any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery and;

(15) establish a mechanism for specifying annual catch limits (ACLs) in the plan (including a multiyear plan), implementing regulations, or annual specifications, at a level such that overfishing does not occur in the fishery, including measures to ensure accountability (AMs).

5.9.3 Management Alternatives

NOTE ON COMBINATIONS: All of the action alternatives in the set could be adopted individually or together.

9a. No-action

Under the no-action alternative, primary RH/S management would continue to rest with the states as coordinated through the ASMFC as described above in section 5.9.2. The states would continue to address catch in state waters and address habitat improvements through collaborative work with NOAA, U.S. F&W Service, and private partners. From the Council perspective, RH/S would continue to be managed as a bycatch species, with bycatch to be minimized to the extent practicable. The Council could also continue to consider discretionary measures designed to reduce retained incidental catch (bycatch is defined as discards in the MSA) as it is doing in Amendment 14.

9b. Add blueback herring as a stock in the MSB FMP.

9c. Add alewife as a stock in the MSB FMP.

9d. Add American shad as a stock in the MSB FMP.

9e. Add hickory shad as a stock in the MSB FMP.

The Council could add none, one, or any combination of these species as “stocks” in the fishery. Selecting any of the action alternatives would result in the Council immediately beginning another amendment to add all of the provisions 1-15 above to the FMP for any species that is added. Such a process would likely take another 1-2 years to complete, with the development of ACLs/AMs (or ACL alternatives) and essential fish habitat designations taking the most time and being the most substantive of those provisions.

If an assessment was available and if it contained accepted reference points, any need for rebuilding that was indicated by those reference points could also lead to major actions.

Since RH/S are already managed by the ASMFC, and since substantial catches of RH/S take place in state waters, the plan would likely have to be a joint plan with the ASMFC. It is possible that the Council could attempt to defer primary management of catches (ACLs) to the ASMFC as discussed below.

Once the species were added through the follow-up amendment, NMFS would begin conducting habitat consultations for any identified EFH for federal and/or federally permitted actions (i.e. non-fishing impacts). An evaluation of fishing activities impacts on RH/S habitat and consideration of measures to minimize such impacts would also take place, possibly in the follow-up amendment or possibly afterward through another action.

In the amendment to implement the MSA provisions for a “stock in the fishery,” the Council would have to decide whether to implement standard ACLs with accountability measures or make the case that an alternative equivalent could function as an ACL (this applies to any RH/S species that were added). In the first case, the Council’s SSC would have to provide an Acceptable Biological Catch (ABC) (regardless of whether information was available on sustainable catch levels), which would be the ACL,

and then all sources of mortality would have to be accounted for and controlled to ensure that the ACL was not exceeded. Such controls could involve RH/S retention limits, retention prohibitions, and or measures to reduce discards from relevant gear types such that ACLs would not be exceeded.

In the second case, the Council would have to make the case that alternative management measures are taking the place of an ACL, in the way that the North Pacific Fishery Management Council has made the case that Salmon moratoria in certain federal waters plus Alaska's escapement-based management measures effectively create a justifiable alternative approach to Council-derived ACLs/AMs. Their argument hinges on the fact that the State of Alaska monitors catch in all of the salmon fisheries and manages salmon holistically by incorporating all the sources of fishing mortality on a particular stock or stock complex in calculating the escapement goal range. As explained above, overfishing is prevented by in-season monitoring and data collection that indicates when an escapement goal is not being met. When the data indicate low run strength due to natural fluctuations in salmon abundance, Alaska Department of Fish & Game closes the fishery to ensure the escapement goal range is reached. Biological escapement goal (BEG) means the escapement that provides the greatest potential for maximum sustained yield. BEG is the primary management objective for escapement (NPFMC 2011).

In order to pursue a similar path a be consistent with the MSA, it would appear that the Council would have to make that argument that the States were pursuing management based on biologically-based escapement goals and that those goals had taken all sources of mortality into account, including ocean-intercept fishing mortality. This may be problematic especially in states with moratoriums because they do not know the status of their runs (most) – if they do not know the status of their runs it would seem to be difficult to make the case that whatever at-sea mortality occurs has been accounted for and that taking everything into consideration a sustainable outcome would result.

The two ACL/AM approaches described above would be options for the Council to explore if it decided to move forward with adding any RH/S species as stocks in the MSB FMP.

Note: Due to the difficulty in identifying the two river herrings and the two shads in landings data it is assumed that for ACL/AM purposes that they could be addressed together (i.e. a river herring ACL and a shad ACL).

7.9 Alternative Set 9 – Addition of RH/S as "Stocks in the Fishery" in the MSB FMP

Statement of Problem/Need for Action:

The overall existing federal/state/regional management framework may be insufficient to adequately conserve RH/S stocks (see Section 6.2 for a summary of RH/S stock statuses). Adding RH/S stocks as “stocks in the fishery” in the MSB FMP would not fix every problem but would bring some additional resources to bear on RH/S problems, though that may mean that other management priorities receive less resources.

It is not possible to develop all of the measures (especially ACLs/AMs and essential fish habitat or EFH) that would be necessary for the FMP not to be deficient if any RH/S species were officially added as stocks in the fishery in this document. Instead, selection of an Alternative Set 9 action alternative would “kick off” another Amendment to fully add stocks to the MSB FMP in a manner that would keep the plan in compliance with the Magnuson Stevens Act. The Act’s required provisions for management plans are detailed in section 5.9.

Background:

The Magnuson Stevens Act describes various “National Standards” for fishery management plans. National Standard One (NS1) states: “Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.” NMFS has published detailed guidance for NS1, available at: <http://www.nmfs.noaa.gov/msa2007/catchlimits.htm>. While Council’s are provided considerable flexibility, the guidance describes which stocks should be “in the Fishery” and describes the requirements for those stocks deemed by a Council to be “in the Fishery.” The NS1 guidance is described in more detail in Section 5.

The impacts for all of the RH/S species are essentially the same so they are discussed together. While there may be differences of degrees, since these fish occupy similar habitats and trophic niches, and face similar challenges, the differences do not warrant a discussion for each species separately. Thus, when RH/S is used it means one, several, or all four of the relevant species.

Even though many of the details would have to be developed in another action, this action provides a good way to evaluate the benefits and costs of adding RH/S as stocks in MSB fishery. The potential costs and benefits are described below for the valued ecosystem components but one additional cost is the costs incurred by management if RH/S. It is likely that several additional Council and/or NMFS staffers would become involved in RH/S management. If these were new hires then there is cost to the taxpayers of those new hires. If existing staff are re-purposed then the cost is the priorities they were working on no longer get as much attention.

NOTE ON IMPACT ANALYSIS FOR ALTERNATIVES: Impacts would be similar for all four species so they are addressed as a group below. While impacts compared to the no-action

alternative would be largest if all four species were added, further delineation of how impacts would change for any of the 15 possible combinations of the 4 species being added (1, 2, 3, or all) is not possible. Unlike a traditional alternative that has impacts on managed species, non-target species, habitat, protected resources, and human communities, this alternative involves shifting a non-target species to a managed resource.

NOTE ON COMBINATIONS: All of the action alternatives in the set could be adopted individually or together.

9a. No-action

Under the no-action alternative, primary RH/S management would continue to rest with the states as coordinated through the ASMFC as described in section 5.9. The states would continue to address catch in state waters and address habitat improvements through collaborative work with NOAA, U.S. F&W Service, and private partners. From the Council perspective, RH/S would continue to be managed as a bycatch species, with bycatch to be minimized to the extent practicable within the Council's FMPs. The Council could also continue to consider discretionary measures designed to reduce retained incidental catch (bycatch is defined as discards in the MSA) as it is doing in Amendment 14.

The Atlantic Coastal Fisheries Cooperative Management Act organizes the States in marine conservation efforts and within the status quo provides for the ASMFC to request that the Secretary of Commerce implement measures in federal waters to complement any state waters conservation measures.

If this alternative is selected, then no measures from Alternative Set 9 would be implemented and the existing state management measures (as described in section 5.9) would remain in place. Thus there would be no incremental impacts compared to the status quo, but there are relative impacts compared to the action alternatives, as described below. While this section focuses on incremental impacts, cumulative impacts are discussed in Section 8.

Specific potential forgone benefits (detailed in the action alternative impact analyses) and avoided costs of choosing the no-action alternative versus choosing action alternatives would include the following for whichever species were not added as stocks in the fishery:

1. Currently Managed Resources Impacts (mackerel, *Illex*, butterfish, longfin squid)

It is not expected that adding RH/S as stocks in the fishery would directly impact the managed resources. However future closures of the directed fisheries could be required as a result of ACLs/AMs if RH/S were added as stocks in the fishery (due to incidental RH/S catch issues), resulting in lower managed species catches and thus potential positive impacts for the managed fisheries. Since fully catching the managed resources' quotas should be sustainable, such positive impacts would likely be low, but forgone if the no-action alternative was chosen.

2. Other non-target Species Impacts besides RH/S (RH/S are discussed in detail below)

It is not expected that adding RH/S as stocks in the fishery would directly impact non-RH/S non-target species currently impacted by the MSB FMP. However future closures of the directed fisheries could be required as a result of ACLs/AMs if RH/S were added as stocks in the fishery (due to incidental RH/S catch issues), resulting in less fishing effort and thus lower non-target species catches. These potential positive impacts for non-target species would be forgone if the no-action alternative was chosen.

3. Habitat Impacts Including EFH to the currently managed species.

It is not expected that adding RH/S as stocks in the fishery would directly impact habitat. However future closures of the directed fisheries could be required as a result of ACLs/AMs if RH/S were added as stocks in the fishery (due to incidental RH/S catch issues), resulting in less fishing effort and thus lower habitat impacts. These potential positive impacts for habitat would be forgone if the no-action alternative was chosen.

4. Protected Resources

Blueback herring and alewife are candidate ESA species but impacts related to RH/S are discussed below. It is not expected that adding RH/S as stocks in the fishery would directly impact other protected resources. However future closures of the directed fisheries could be required as a result of ACLs/AMs if RH/S were added as stocks in the fishery (due to incidental RH/S catch issues), resulting in less fishing effort and thus lower protected species impacts. These potential positive impacts for protected resources would be forgone if the no-action alternative was chosen.

5. Human Communities

If future closures of the MSB fisheries were avoided by not taking action this would be a positive impact associated with the no-action alternative.

Potential Human community benefits from rebuilt fisheries if conserving RH/S stocks through more direct federal management led to rebuilding (which itself is an uncertain outcome) would be forgone. To the extent that these alternatives lead to better management (i.e. sustainable fisheries producing optimal yields) of RH/S, then choosing the no-action alternative in comparison to the other alternatives might result in foregone benefits related to lost commercial revenues, recreational opportunities, ecosystem services, cultural values for RH/S, and/or other non-market existence values (i.e. value gained by the public related to the knowledge that these species are being conserved successfully). Due to the uncertainty about how the productivity of either the managed species or RH/S is impacted by current catch levels these impacts are not quantifiable. However, the actual rebuilding of RH/S runs to optimally productive levels would be expected to lead to substantial positive benefits. These fisheries have supported thriving (if

seasonal) commercial and recreational fisheries in the past. Public interest in this amendment demonstrates that the general public holds a certain value for the knowledge that these fisheries are being sustainably managed, and even if each individual's value is small the total public value may be quite large. If limiting RH/S catch through this alternative set led to rebuilding then the benefits of the action alternatives would be large. If limiting RH/S catch through this alternative set did not substantially lead to rebuilding (i.e. other factors are primarily to cause for RH/S declines - see sections 6.2.5 and 6.2.6) then the benefits of the action alternatives would be minor. Future research may provide information on what factors are primarily responsible to RH/S declines but currently that information is not available.

6. River Herring and Shad Stocks, i.e. potential future managed resources.

While potential benefits of adding RH/S stocks are described below, the forgone benefits may be summarized as:

- There would not be additional federal support of RH/S management or additional coordination among management partners including more federal involvement in assessments.
- There would not be explicit consideration of RH/S observer coverage needs.
- Other than mortality caps instituted in the MSB or Atlantic herring fisheries there would not be direct controls (ACLs/AMs) on federal catch of RH/S.
- The Council would not be able to address the catch and/or discarding of RH/S in other fisheries.
- EFH would not be designated which could mean less habitat improvements for RH/S.
- The costs of management (hiring of additional staff or redirection of staff away from other tasks) would not be incurred. These could include staff at NERO, the NEFSC, and the MAFMC.

9b. Add blueback herring as a stock in the MSB FMP.

9c. Add alewife as a stock in the MSB FMP.

9d. Add American shad as a stock in the MSB FMP.

9e. Add hickory shad as a stock in the MSB FMP.

Addressed as a
group below

Analyzing the impacts of adding a species as a stock in the fishery in the MSB FMP is slightly unique. The analysis first concentrates on impacts to resources currently impacted by the MSB fisheries and then moves to impacts on RH/S.

1. Currently Managed Resources Impacts (mackerel, *Illex*, butterfish, longfin squid)

A neutral or minimal impact would be expected compared to the no-action alternative for the managed species. Just adding additional stocks to the MSB FMP should not substantially change landings of the currently managed species or their stock status. However, it is possible that future closures of the currently managed fisheries could be required as a result of implementing ACL/AMs requirements for RH/S in order to keep overall RH/S catch below the ACL. Closures resulting from such measures could benefit the currently managed species by lowering overall fishing effort and catch. However, catching the full quota of the managed species is not expected to cause sustainability problems for the managed species so impacts are minimal. The impacts of such actions would be analyzed separately in future specifications, frameworks, or amendments.

2. Non-target Species Impacts (Including RH/S and species managed in other plans)

Impacts specific to RH/S are discussed in detail below. A neutral or minimal impact would be expected compared to the no-action alternative. Just adding additional stocks to the MSB FMP should not substantially change effort for current managed species. As discussed under the managed resource above, it is possible that future closures of the currently managed fisheries could be required as a result of implementing ACL/AM requirements for RH/S. Closures resulting from such measures could benefit the currently impacted non-target species by lowering overall fishing effort, which could translate to fewer non-target species interactions in the managed fisheries. The impacts of such actions would be analyzed separately in future specifications, frameworks, or amendments.

3. Habitat Impacts Including EFH

A neutral or minimal impact would be expected compared to the no-action alternative for existing EFH. Impacts related to new EFH that would be designated if stocks were added to this fishery are discussed below. Just adding additional stocks to the MSB FMP should not substantially change effort. As discussed under the managed resource above, it is possible that

future closures of the currently managed fisheries could be required as a result of implementing ACL/AM requirements for RH/S. Closures resulting from such measures could benefit the currently impacted habitat by lowering overall fishing effort, which could less habitat interactions with the gears used in the managed fisheries. The impacts of such actions would be analyzed separately in future specifications, frameworks, or amendments.

4. Protected Resources

A neutral or minimal impact would be expected compared to the no-action alternative for existing EFH. Blueback herring and alewife are candidate ESA species but impacts related to RH/S are discussed below. Just adding additional stocks to the MSB FMP should not substantially change effort. As discussed under the managed resource above, it is possible that future closures of the currently managed fisheries could be required as a result of implementing ACL/AM requirements for RH/S. Closures resulting from such measures could benefit the currently impacted protected resources by lowering overall fishing effort, which could less protected resources interactions with the gears used in the managed fisheries. The impacts of such actions would be analyzed separately in future specifications, frameworks, or amendments. If interactions with protected species were occurring related to directed RH/S fishing that activity might have to be mitigated.

5. Human Communities

Compared to the no-action alternative, impacts are mixed and the net benefit is uncertain due to the uncertainties involved. On one hand, if additional incidental catch reduction was required as a result of adding this species as a stock in the fishery there could be negative economic impacts to the MSB or other fisheries. Such actions and their impacts would be analyzed separately in other specifications, frameworks, or amendments. This document considers a number of different measures to reduce incidental catch of RH/S, and the reader can look to Sections 7.6-7.8 for analyses of how some types of RH/S catch reduction measures can impact human communities. Revenue losses (or potentially forgone revenue) from such measures range from very low in the case of a cap that does not constrain the fishery to near elimination of the mackerel and longfin squid fisheries in the case of the broadest area closures (they have had a combined value in the \$18-\$36 million dollar range in the last 5 years). It is also possible that the Council could select some of these measures to reduce incidental catch in mackerel/longfin squid fisheries, but may still have to implement further measures to reduce RH/S catch through this or its other FMPs for other fisheries.

On the other hand, it is also possible that benefits could accrue in the future if adding these species as federally managed species assisted in conserving these stocks and potentially redeveloping directed fisheries (which is uncertain). While historical high levels of landings may have been unsustainably high, RH/S fisheries had combined landings in the 20,000 mt to 30,000 mt range throughout the 1950s and 1960s ranging from Maine to South Carolina. While there are some issues (climate, stream flow, non-point run-off, etc.) that the Council may have minimal impact upon, to the degree that enhanced conservation efforts can assist recovery, then positive human community impacts are possible in terms of both additional commercial and

additional recreational fishing opportunities that could result from rebuilt RH/S stocks. Recreational benefits could be direct (catching RH/S) or indirect in that RH/S are forage species for higher trophic level predators such as striped bass so higher RH/S populations could indirectly help striped bass populations.

River Herring and Shad runs also are or have been important culturally for communities (just Google “Shad Festival” or “Herring Festival”) and even recently have supported some subsistence fishing (e.g. Mashpee Wampanoag Indian Tribe on Cape Cod, Massachusetts (ASMFC 2011)). There also are other non-market existence values (i.e. value gained by the public related to the knowledge that these species are being conserved successfully) that could increase in value from successful management. Public interest in this amendment demonstrates that the general public holds a certain value for the knowledge that these fisheries are being sustainably managed, and even if each individual's value is small the total public value may be quite large.

If limiting RH/S catch, EFH designation and protection, and increased federal-state cooperation through this alternative set led to rebuilding then the benefits of the action alternatives would be large. If limiting RH/S catch through this alternative set did not substantially lead to rebuilding (i.e. other factors are primarily to cause for RH/S declines - see sections 6.2.5 and 6.2.6) then the benefits of the action alternatives would be minor. Future research may provide information on what factors are primarily responsible to RH/S declines but currently that information is not available.

Impacts Specific for RH/S if They Were Added as Stocks in the Fishery, Compared to the No-Action Alternative

Impacts to RH/S would be expected to be positive for all relevant RH/S species and in approximately the same fashion given their similar life histories and place in the ecosystem. However, quantification is very difficult given the myriad challenges facing RH/S stocks. The only substantial negative impact would be costs for management and whether those costs could be justified by the potential benefits. Accordingly, the focus here is on the potential benefits so that managers can weigh the trade-offs between potential benefits and the additional costs of adding stocks as managed resources in the MSB FMP.

1. There would be additional federal support of RH/S management (assessments, FMP and specifications review, etc.) and additional coordination of conservation activities.

Right now there is some federal involvement by U.S. Fish and Wildlife Service, NMFS Northeast Region Protected Resource Branch staff, NMFS Northeast Fisheries Science Center staff, and Council staff (quasi-federal) in RH/S management. However, these staffers do not have RH/S as a primary responsibility or focus. For example, there is no RH/S coordinator at the NMFS Northeast Regional Office or a fishery management council RH/S coordinator, as there is for directly managed resources. There is direct involvement by a lead Atlantic States Marine Fisheries Commission (ASMFC) staffer but without dedicated leads at other agencies coordination can be difficult (and the ASMFC staffer also coordinates American Eel, Atlantic

Striped Bass, and Sturgeon). If RH/S were added as managed species into the MSB FMP, it may add staff with RH/S responsibilities (at NMFS or at the Council) or at the least existing staff would have RH/S responsibilities added to their primary activities. So for example, there would be a NMFS Northeast Region plan coordinator for RH/S, a Council plan coordinator for RH/S, a NMFS Northeast Fisheries Science Center assessment lead, etc., even if it primarily involves a reassignment of duties among current staff. As part of coordination responsibilities the Council coordinator and NMFS coordinator would each likely become more involved in a wide range of RH/S conservation activities especially in terms of how fishing interacts with the variety of challenges facing RH/S stocks.

These staffers would also become responsible for several annual/cyclic activities. First, they would conduct annual fishery descriptions and fishery reviews as part of specifications. Second, they would become more directly involved in assessments since NMFS strives to complete successful assessments for managed species in order to improve its Fish Stock Sustainability Index score, the primary measure of how well NMFS is performing its duties (<http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm>). Adding these stocks into the FMP would not guarantee that reference points/stock determination criteria would be available (reference points are generally not available for even the existing species in this plan due to high levels of scientific uncertainty) but at least additional resources would likely be expended on RH/S assessment (though they may just be diverted from other species due to the current budget environment). If an assessment successfully generated reference points and status determination criteria then rebuilding requirements would be instituted if a stock was found to be overfished.

As part of specifications the Council's SSC would also review RH/S status and make Acceptable Biological Catch recommendations. If ACLs were instituted (see below) they would provide ACL recommendations but even if ACLs were not instituted (see additional discussion below) the Council would need a functional equivalent for incidental catch in its other managed fisheries and the SSC would likely provide relevant recommendations. Related to incidental catch management, another annual activity would be integrating RH/S considerations into bycatch reporting and observer prioritization. While NMFS has been diverting resources from other small mesh fisheries to mackerel in the last year to better characterize RH/S interactions, as a stock in the fishery NMFS would have to directly describe its plans for RH/S bycatch monitoring, and the Council would presumably have a stronger case arguing for more coverage for a managed species than it currently can make in terms of making a case for more resources about a non-target species.

Adding RH/S as stocks in the fishery would also change the nature of management actions that are available to the Council. Currently the Council is limited to addressing catch in its other managed fisheries. If RH/S were stocks in the fishery, as managed stocks the Council could implement restrictions on other fisheries that interact with RH/S. As an example, currently the Summer Flounder-Scup-Black Sea Bass FMP restricts all bottom trawling in areas where survey data has shown scup to aggregate. If RH/S were managed species the Council could implement broader restrictions on fishing activities beyond its other managed species if necessary and/or appropriate to conserve RH/S.

2. EFH would be designated for RH/S.

Designating EFH for RH/S would increase NMFS's ability to conserve habitats used by these anadromous species, especially freshwater habitats used for spawning and as juvenile nursery areas that are most affected by a wide range of human activities.

Currently, acting under the authority of the MSA, there is a mandatory requirement that NMFS must issue EFH conservation recommendations to federal agencies for activities proposed, funded, permitted, or undertaken by those agencies. Designation of EFH for RH/S would greatly expand the geographic boundaries where mandatory consultations would be required including most coastal rivers and their watersheds on the Atlantic coast. With such designation comes the authority to more aggressively regulate the adverse impacts of non-fishing activities on riverine and estuarine habitats for these species. However, the agency may lack the resources to effectively implement the necessary actions, similar to the Agency's funding issues with Atlantic salmon (see below).

Since A) states are already independently acting to improve riverine habitats B) NOAA has ongoing consultations with upstream dam removal/riverine habitat improvement projects, and C) NMFS has already been successful mitigating impacts to some habitats (tidal riverine waters) used by RH/S because they are forage species for other federally-managed fish species (e.g., bluefish), and are, therefore, considered a component of EFH for these predatory species, it is unclear exactly what the marginal added function of NOAA EFH efforts would be.

NMFS also already prescribes mandatory measures necessary to provide safe, timely and effective passage around hydropower facilities (upstream and downstream) under Section 18 of the Federal Power Act. However, this authority is only applicable to those hydropower facilities licensed by the Federal Energy Regulatory Commission and most FERC licenses are issued for a period of 30 + years.

Freshwater habitats used by RH/S also already benefit indirectly from EFH conservation measures that are proposed for Atlantic salmon because salmon and RH/S share many of the same habitats. However, the indirect benefits of Atlantic salmon EFH conservation are limited to those areas within New England where Atlantic salmon EFH rivers are located and are greatly constrained by funding limitations. The U.S. Fish and Wildlife Service is also engaged in riverine habitat issues but their focus is primarily on dam passage issues.

In summary, designation of EFH for RH/S would greatly expand the geographic boundaries where mandatory consultations would be required for activities that may impact RH/S habitat but it is unclear what tangible benefits would accrue beyond those already being pursued by the states, NMFS, and other federal agencies.

3. ACLs and AMs would likely be implemented.

Compared to the no-action alternative, if ACLs/AMs were established there would be better accounting of RH/S catch. If overfishing limits are identified (none exist now) then high quality catch data can be used to prevent overfishing, which would be a positive impact for any RH/S

species that had ACLs/AMs. Adding ACLs/AMs also has some costs, primarily the costs of reporting and monitoring. However, regardless of the ACL/AM question additional reporting and monitoring provisions are being considered for RH/S.

One question that has surfaced repeatedly has been “Could the Council add river herring or shad as stocks in the fishery but use the ACL/AM flexibility provisions of the NS1 guidance to defer to ASMFC for primary management?” The NPFMC is considering such a path for salmon and deferring to Alaska. This could theoretically allow the designation of EFH and result in greater federal resources without having to deal with ACLs for the currently data-poor RH/S stocks. There are several key issues however, which become evident when reviewing analysis for updating the NPFMC's salmon plan (<http://www.fakr.noaa.gov/npfmc/>), where Alaska has primary authority even though it is a federally managed species. First, Alaska has a long history of well-documented successful/sustainable management with salmon. Second, the salmon situation is different in that RH/S landings, and certainly discards, appear not nearly as well documented (especially at the species level) as salmon landings and discards. Existing or pending ASMFC moratoriums will likely address most of the landings control but not discards and some states may still allow relatively uncontrolled landings of RH/S that are caught incidentally in federal waters. For these reasons it currently seems likely that ACLs and AMs would be needed, i.e. it would be difficult to argue that the state management would effectively account for all catch. This is at least the viewpoint of the Amendment 14 FMAT and NOAA GC, though the Council looks forward to getting additional perspectives on this topic during the public input process.

The ACL flexibility guidelines also still require consistency with Magnuson (alternatives to ACLs/AMs would have to essentially achieve the same results). So even if primary management could be ceded to the ASMFC, the Council’s suite of management measures would still have to function as ACLs/AMs. Thus the Council would still have to implement hard caps on its other managed species to control overall catch (this is the case with Salmon in the North Pacific’s groundfish fishery).

Also if ASMFC had primary responsibility, the Council would have to limit incidental catch in its directed fisheries based on the best available science about what catch level is consistent with sustainability and/or rebuilding as well as accounting upfront for whatever catch (landings and/or discards) occurs in state waters. Thus while there might not be ACLs/AMs on paper, the caps on incidental catch in Council-managed fisheries would need to have the same function as ACLs/AMs in order to be consistent with the Magnuson Act and the National Standard One final rule guidelines. Again however, this is the viewpoint of the Amendment 14 FMAT and NOAA GC and the Council looks forward to getting additional perspectives on this topic during the public input process.

If the Council added RH/S as a stock in the fishery and just the provisions deferring primary management to the ASMFC were disapproved by NMFS or struck down in subsequent legal action then the standard ACL provisions would presumably apply. If such events took place, or if the Council decided to just outright add one or more RH/S stocks into the fishery then ACLs and AMs would be required, along with all the other requirements of fishery management plans (EFH, rebuilding when appropriate, etc.) as detailed in section 5.9.

While ASMFC/Council coordination for RH/S issues has been extensive in the last 2 years the ramifications of ACLs would likely lead to additional collaboration. The Council would either have a joint or complementary plan with the Commission and ACLs or other catch quotas for federal management would be based on ABCs provided by its SSC and would have to account for any state fishing mortality beyond the control of the Council. While the Council would not be able to totally control all mortality because of state fisheries and discards in state waters, mortality in federal waters would be limited. If an Acceptable Biological Catch (ABC) provided by the Council's SSC was greater than anticipated state mortality then the difference could be utilized as federal water mortality.

Alternative Set 9 Summary and Conclusion

The two key questions that will have to be answered by the Council are: 1) Is the current management framework is sufficient to conserve RH/S stocks; **and** 2) Can federal management by the Council improve management of RH/S enough to justify the management cost burden. It is not clear that Council involvement would be sufficient to conserve RH/S stocks given the varied challenges faced by RH/S stocks. It also may be true that the Council could achieve much of what it would do for RH/S informally outside of federal FMP management. However, adding RH/S stocks into an FMP would likely bring additional resources to bear and at least result in additional efforts and coordination between ASMFC, NMFS, the Council, the states, and other management partners for whichever stocks were chosen if any. The future efforts of these organizations are difficult to predict, but it is reasonable to conclude that there would be some gains for RH/S species through future actions if they are listed as stocks in the MSB fishery, as described above. However, the uncertainty regarding the current factors causing RH/S populations to remain in a depressed state means that it is difficult to identify specific causes and link remedies to specific outcomes. Given this, the extent of benefits from adding RH/S as stocks in the fishery is very difficult to quantify even though impacts are likely to be positive.

Given RH/S share similar life histories each would benefit to some degree if any were chosen, but each species would benefit most if it itself was chosen due to the catch control, EFH conservation, and general management coordination that would result.

8.0 Cumulative Effects Assessment

A cumulative effects assessment (CEA) is a required part of an EIS according to the Council on Environmental Quality (CEQ) (40 CFR part 1508.7). The purpose of the CEA is to integrate into the impact analyses the combined effects of many actions over time that would be missed if each action were evaluated separately. CEQ guidelines recognize that it is not practical to analyze the cumulative effects of an action from every conceivable perspective but rather, the intent is to focus on those effects that are truly meaningful. This section serves to examine the potential direct and indirect effects of the alternatives in Amendment 14 together with past, present, and

	Required Provision	Required Provision	Required Provision
	1	2	3
FMP Requirement	contain the conservation and management measures... (A) necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery...	contain a description of the fishery, including, but not limited to, the number of vessels involved, the type and quantity of fishing gear used, ...any recreational interest in the fishery, ...	assess and specify the present and probable future condition of, and the maximum sustainable yield and optimum yield from, the fishery, and include a summary of the information utilized in making such specification;
Importance for RH/S Conservation	General - these measures are spelled out elsewhere	Having a good description of a fishery is important for assessment and management.	Better assessment information leads to better management
How being addressed now	General - these measures are spelled out elsewhere	Generated regularly by ASMFC for Amendments, Assessments, and annual FMP Reviews	ASMFC-led assessments with NEFSC input. NEFSC input in last RH assessment mostly focused on providing RH discard info
Gaps - how this is not being addressed and impact on RH/S	General - these measures are spelled out elsewhere	?	No coast-wide assessment information "Estimates of abundance and fishing mortality could not be developed because of the lack of adequate data."
How existing authorities could fill gaps	General - these measures are spelled out elsewhere	NA	Uncertain if additional person-hours from NEFSC would fix assessment difficulties but additional resources would probably help. NEFSC does get more directly involved in some other ASMFC-fisheries.
How direct Council management could fill gaps and at what cost?	General - these measures are spelled out elsewhere	redundant	NMFS would have to devote additional resources to RH/S assessing but uncertain if additional person-hours from NEFSC would fix assessment difficulties but additional resources would probably help.

	Required Provision	Required Provision	Required Provision
	4	5	6
FMP Requirement	assess and specify-- (A) the capacity...to harvest/process optimum yield	specify the pertinent data which shall be submitted to the Secretary with respect to commercial, recreational, charter fishing, and fish processing in the fishery...	consider and provide for temporary adjustments...regarding access to the fishery
Importance for RH/S Conservation	NA	Efforts to assess the status of river herring on the Atlantic coast are hampered by a lack of data.	NA
How being addressed now	Fishery is described by ASMFC	ASMFC integrates state data. The stock assessment identified a number of high priority research needs.	NA
Gaps - how this is not being addressed and impact on RH/S	?	Bycatch data remains uncertain (observer coverage issues). Various issues ID'ed in assessments	NA
How existing authorities could fill gaps	NA	States can implement and enforce a variety of reporting requirements for state waters. Councils are addressing federal-waters bycatch issues through Ams 5/14	NA
How direct Council management could fill gaps and at what cost?	redundant	Reporting is tied to permits and most vessels and dealers that do or would catch/process federally-caught RH/S and might get RH/S permits probably already have federal permits that require extensive reporting.	NA

	Required Provision	Required Provision	Required Provision
	7	8	9
FMP Requirement	-describe and identify essential fish habitat for the fishery -minimize to the extent practicable adverse effects on such habitat caused by fishing -identify other actions to encourage the conservation and enhancement of such habitat;	specify the nature and extent of scientific data which is needed for effective implementation of the plan;	...analyze the likely effects, on fishery participants & fishing communities (including safety, the cumulative conservation, economic, and social impacts) of the conservation and management measures
Importance for RH/S Conservation	Habitat issues are likely critical for RH/S	Efforts to assess the status of river herring on the Atlantic coast are hampered by a lack of data.	May guide management decisions
How being addressed now	Variety of state, federal, private, and cooperative efforts ranging from permitting (404/10) to fish ladders to dam removal.	The stock assessment identified a number of high priority research needs.	Generated to some degree by ASMFC for Amendments, Assessments, and annual FMP Reviews
Gaps - how this is not being addressed and impact on RH/S	In-river habitat being fairly closely examined/regulated. Ocean habitat not designated as EFH.	?	Limited analysis compared to Council-managed FMPs
How existing authorities could fill gaps	Could discretionary #12 be used to designate EFH now??	Resource Issue	Resource Issue
How direct Council management could fill gaps and at what cost?	EFH designation would lead to additional NOAA and Council commenting on activities impacting EFH. Other agencies must respond to NOAA. Minimization of federal fishing activities on EFH. Cost tied to NMFS/Council time to develop and review projects' impacts	redundant	somewhat redundant, some additional analysis would be required.

	Required Provision 10	Required Provision 11	Required Provision 12
FMP Requirement	specify objective and measurable criteria for overfished determination and contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery;	establish a SBRM and include conservation and management measures that, to the extent practicable and in the following priority-- (A) minimize bycatch; and (B) minimize the mortality of bycatch which cannot be avoided;	assess the type and amount of fish caught and released alive during recreational fishing
Importance for RH/S Conservation	Better assessment information leads to better management	Bycatch information is likely important for conservation	Probably important - most states are C&R only for RH/S
How being addressed now	ASMFC-led assessments with NEFSC input. NEFSC input in last RH assessment mostly focused on providing RH discard info	NMFS is providing at-sea bycatch information; Councils are mandating coverage levels;	MRIP
Gaps - how this is not being addressed and impact on RH/S	No coast-wide assessment information "Estimates of abundance and fishing mortality could not be developed because of the lack of adequate data."	RH/S not directly incorporated into observer prioritization; State fisheries??	MRIP
How existing authorities could fill gaps	Uncertain if additional person-hours from NEFSC would fix assessment difficulties but additional resources would probably help. NEFSC does get more directly involved in some other ASMFC-fisheries.	Could NMFS add RH/S into SBRM prioritization now? State roles?	MRIP
How direct Council management could fill gaps and at what cost?	NMFS would have to devote additional resources to RH/S assessing but uncertain if additional person-hours from NEFSC would fix assessment difficulties but additional resources would probably help.	SBRM would be applicable but observer funding may be zero-sum issue	?

	Required Provision 13	Required Provision 14	Required Provision 15
FMP Requirement	include a description of the fishing sectors (general), including economic impacts, and, to the extent practicable, quantify trends in landings	allocate, any harvest restrictions or recovery benefits fairly and equitably among the commercial, recreational, and charter fishing sectors in the fishery and;	establish a mechanism for specifying ACLs at a level such that overfishing does not occur in the fishery, including measures to ensure accountability.
Importance for RH/S Conservation	Having a good description of a fishery is important for assessment and management.	NA	Having ability to limit catch important generally
How being addressed now	Generated regularly by ASMFC for Amendments, Assessments, and annual FMP Reviews	ASMFC provisions being applied to com and rec sectors for directed catch. Council measures directed at commercial bycatch	Directed fisheries limited by states. Bycatch limits being implemented by Council's for Atl. Herring and Mackerel fisheries
Gaps - how this is not being addressed and impact on RH/S	? Limited economic analysis currently	?	? - depends on what the Councils set catch caps at
How existing authorities could fill gaps	Resource Issue	?	Authority appears available to limit most fishing mortality.
How direct Council management could fill gaps and at what cost?	somewhat redundant, some additional analysis would be required.	?	ACLs would provide harder limits that are set by SSC, but may be as-hoc approach without better assessment data

	Discretionary Prov.			
	1	2	3	4
FMP Option	Require Permits from vessels, operators, processors	Use time/area-based management	Limitations on shipment, sale, or catch on fish (catch based on area, species, size, number, weight, sex, bycatch, total biomass, or other factors)	limit or require gear, including devices which may be required to facilitate enforcement of the provisions of this Act;
Importance for RH/S Conservation	?	Possibly Useful	Useful	Possibly Useful
How being addressed now	States can control state-water fisheries, no federal waters directed fishing	Has been evaluated, can be implemented for bycatch issues.	States can control state-water fisheries, no federal waters directed fishing	?
Gaps - how this is not being addressed and impact on RH/S	?	Can only be instituted within another FMP to address that fishery's interactions.	?	?
How existing authorities could fill gaps	?	Able to be implemented by states or in other federal fisheries	?	Able to be implemented by states or in other federal fisheries
How direct Council management could fill gaps (costs would be addressed when implemented)	?	Able to impact non-MAFMC-managed fisheries in federal waters	?	?

	Discretionary Prov.			
	5	6	7	8
FMP Option	incorporate as appropriate measures of nearby coastal States	Establish Limited Access/LAPPs	require fish processors who first receive fish that are subject to the plan to submit data which are necessary for the conservation and management of the fishery;	Require Observers
Importance for RH/S Conservation	Useful	?	Useful	Useful
How being addressed now	? - Commission can always petition for complementary management	?	Federally permitted processors must report all catch. States control state-only processors	States can control state-water fisheries, no federal waters directed fishing, other federal fisheries can be made to carry observers
Gaps - how this is not being addressed and impact on RH/S	?	?	Not all RH/S separated	Limited coverage
How existing authorities could fill gaps	? - Commission can always petition for complementary management	?	enforcement issue?	Resource Issue
How direct Council management could fill gaps (costs would be addressed when implemented)	?	?	enforcement issue?	Resource Issue

	Discretionary Prov.				
	9	10	11	12	14
FMP Option	assess and specify the effect which the conservation and management measures of the plan will have on the stocks of naturally spawning anadromous fish in the region;	use harvest incentives to lower levels of bycatch or lower levels of the mortality of bycatch;	RSA	measures in the plan to conserve target and non-target species and habitats, considering the variety of ecological factors affecting fishery populations	prescribe such other measures, requirements, or conditions and restrictions as necessary/appropriate
Importance for RH/S Conservation	Useful	Possibly Useful	Possibly Useful	Possibly Useful	Possibly Useful
How being addressed now	feasibility without assessment?	Bycatch caps being implemented	A variety of research into RH/S issues is ongoing.	Being done in Atl. Herring and MSB plans	?
Gaps - how this is not being addressed and impact on RH/S	?	?	limited resources	?	?
How existing authorities could fill gaps	feasibility without assessment?	Bycatch caps being implemented	given bycatch issue, Council could entertain RH/S projects already	Being done in Atl. Herring and MSB plans	?
How direct Council management could fill gaps (costs would be addressed when implemented)	feasibility without assessment?	?	?	No directed fisheries so no bycatch of other fish	?