Mid-Atlantic Fishery Management Council
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Michael P. Luisi, Chairman | G. Warren Elliott, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: March 30, 2017

To: Council

From: Jason Didden

Subject: Industry-Funded Monitoring (IFM) Amendment

In December 2016 the Council voted to postpone action on the IFM amendment until the completion and report of an ongoing Electronic Monitoring project for the mid-water trawl fleet. In the attached letter immediately below, NMFS has requested that the Council reconsider taking final action. Also attached are documents that have been created/updated because the New England Fishery Management Council (NEFMC) voted preferred alternatives at its last meeting. They are relevant in case the Council changes its decision to postpone, and because the herring requirements could affect vessels in the Mid-Atlantic.

-Executive Summary of Environmental Assessment (full document is available at http://www.mafmc.org/briefing/april-2017)

-Two summaries of recent calls by the technical team working on this action

-"Proposed Action" Discussion document for NEFMC

-Technical team's memo on proposed clarifications to facilitate implementation

-NMFS comments/concerns about the NEFMC proposed actions

To allow referencing of these documents, there is a running underlined page number in the bottom right of the pages in this tab.

Staff note that moving forward with the omnibus portion of the document and allowing IFM programs to be frameworked could achieve substantial administrative savings in the future if the Council wanted to implement additional IFM coverage in the mackerel fishery later. If the Council chose this route, no additional monitoring would be required at this time, and additional Council consideration/action and NMFS rulemaking would be required before any IFM coverage could be required.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

FEB - 2 2017

Mr. Michael Luisi
Chairman
Mid-Atlantic Fishery Management Council
Suite 201
800 N. State Street
Dover, DE 19901

Dear Mike:

I request that you and the Council considering adjusting the Council's intended timeline for work on the Industry-Funded Monitoring (IFM) Omnibus Amendment. As you know, this is an action of both Councils, working jointly, to establish new monitoring programs for the fishing vessels that participate in the Atlantic herring and/or Atlantic mackerel fisheries, and to set the stage for future IFM programs in other fisheries. In December, the Mid-Atlantic Council opted to postpone further action on this amendment, pending completion of an electronic monitoring pilot project currently underway. This would delay final action by the Council for at least one year. The New England Council, however, in January selected preferred alternatives and moved forward on the amendment with plans to take final action in April.

This action of the New England Council creates a disconnect with the December decision of the Mid-Atlantic Council that we hope can be resolved between now and April. While we understand the reasons members of the Mid-Atlantic Council preferred to delay further decision on the amendment, we are confident that sufficient information is available, and is presented in the amendment document, for the Council to move forward with the amendment and make informed decisions, as the New England Council has done.

Therefore, I request that the Mid-Atlantic Council, at its upcoming February meeting, reconsider its motion from December that postponed further action on the IFM Amendment. If successful, I would ask that the Council then plan to take final action on the amendment at its April meeting, including the selection of final preferred alternatives for the omnibus measures and the mackerel-specific measures.

Effective monitoring is a priority for the Mid-Atlantic and New England Councils. Both Councils have devoted a great deal of time and effort over the past few years to jointly develop the IFM Amendment. Final action by both Councils is needed for the National Marine Fisheries Service to consider

implementation of any omnibus measures. For these reasons, I hope the Mid-Atlantic Council will reconsider taking final action on the omnibus measures and the mackerel measures in the IFM Amendment in April.

Sincerely,

John K. Bullard
Regional Administrator

cc: Chris Moore, Mid-Atlantic Fishery Management Council
Tom Nies, New England Fishery Management Council

Industry-Funded Monitoring

An Omnibus Amendment to the Fishery Management Plans of the Mid-Atlantic and New England Fishery Management Councils

April 2017

(Updated to include recommendations made at the January 2017 New England Council meeting and will be updated following the April 2017 Mid-Atlantic and New England Council Meetings)

Amendment X to the Atlantic Bluefish Fishery Management Plan (FMP);

Amendment 7 to the Atlantic Herring FMP;

Amendment X to the Atlantic Salmon FMP;

Amendment 17 to the Atlantic Sea Scallop FMP;

Amendment 5 to the Deep-Sea Red Crab FMP;

Amendment XX to the Mackerel, Squid, and Butterfish FMP;

Amendment 8 to the Monkfish FMP;

Amendment 22 to the Northeast Multispecies FMP;

Amendment 5 to the Northeast Skate Complex FMP;

Amendment X to the Spiny Dogfish FMP;

Amendment XX to the Summer Flounder, Scup, and Black Sea Bass FMP;

Amendment XX to the Surfclam and Ocean Quahog FMP; and

Amendment X to the Tilefish FMP

Including a
Draft Environmental Assessment

April 2017

Prepared by the

New England Fishery Management Council
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National Marine Fisheries Service
Greater Atlantic Regional Fisheries Office
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Draft EA Adopted by MAFMC: June 15, 2016
Draft EA Adopted by NEFMC: June 23, 2016
Draft EA Available for Public Comment: September 23, 2016
Final EA Submitted to NMFS:

Executive Summary

The New England Fishery Management Council (NEFMC) and the Mid-Atlantic Fishery Management Council (MAFMC) are interested in increasing monitoring and/or other types of data collection in some fishery management plans (FMPs) to assess the amount and type of catch, to more precisely monitor annual catch limits, and/or provide other information for management. This increased monitoring would be above coverage required through the Standardized Bycatch Reporting Methodology (SBRM), the Endangered Species Act (ESA) or Marine Mammal Protection Act (MMPA). The amount of available Federal funding to support additional monitoring and legal constraints associated with industry-funded monitoring cost responsibilities have prevented the National Marine Fisheries Service (NMFS) from approving recent industry-funded monitoring proposals, specifically Atlantic Herring Amendment 5, Atlantic Mackerel, Squid, and Butterfish Amendment 14, and Northeast (NE) Multispecies Framework Adjustment 48.

The Industry-Funded Monitoring Omnibus Amendment would provide the measures necessary for industry funding and available Federal funding to pay for additional monitoring to meet specific monitoring coverage targets for each FMP. This action is needed for the Councils to prioritize industry-funded monitoring programs across fishery management plans when available Federal funding falls short of the total needed to fully fund all monitoring programs. This omnibus amendment would also ensure consistency for industry-funded monitoring programs across New England and Mid-Atlantic FMPs.

This amendment includes a set of Omnibus Alternatives that would modify all the FMPs managed by the New England and MAFMCs to allow standardized~~, streamlined~~ development of future FMP-specific industry-funded monitoring programs. Additionally, this amendment includes alternatives for specific industry-funded monitoring programs for the Atlantic Herring FMP and the Atlantic Mackerel, Squid, and Butterfish FMP, which would be implemented as part of this action. All of the alternatives are summarized below.

Overview of Omnibus Alternatives

The Omnibus Alternatives consider (1) standard cost responsibilities associated with industry-funded monitoring for NMFS and the fishing industry, 2) a process for FMP-specific industry-funded monitoring to be implemented via an amendment **and revised via a** ~~future~~ framework adjustment, (3) standard administrative requirements for industry-funded monitoring service providers, and (4) process to prioritize new industry-funded monitoring programs in order to allocate available Federal resources for industry-funded monitoring across FMPs, **including the type of weighing approach and the timing of revising the weighing approach**, and (5) process for FMP-specific monitoring set-aside programs to be implemented via a future framework adjustment action The NEFMC and MAFMC selected Omnibus Alternative 2 as the preferred alternative.

Omnibus Alternative 1 (No Action) – No standardized structure for industry-funded monitoring programs

- No standard definition of cost responsibilities of industry and NMFS;
- No standardized framework adjustment process to ~~implement future~~ **revise** industry-funded monitoring programs ~~in other FMPs~~;
- No standardized observer service provider requirements;
- No process for prioritizing industry-funded monitoring programs in order to allocate available Federal resources across all FMPs; and
- No standardized framework adjustment process to implement future monitoring set-aside programs.

Omnibus Alternative 2 (Preferred Alternative) – Standardized structure for industry-funded monitoring programs and option for monitoring set-aside provision.

- Standard definition for cost responsibilities of industry and NMFS;
- Standard ~~framework adjustment~~ **amendment** process to implement ~~future~~ industry-funded monitoring programs **and standard framework adjustment process to revise industry-funded monitoring programs** ~~in other FMPs~~;
- Standard observer service provider requirements;
- Process for prioritizing industry-funded monitoring programs in order to allocate available Federal resources across all FMPs; and
- Option for standard framework adjustment process to implement future monitoring set-aside programs.

Omnibus Alternatives 2.1-2.5 are variations on the prioritization process in Omnibus Alternative 2, and consider specific options for what to do when Federal funding is not sufficient to cover NMFS costs to support the Council's desired monitoring coverage level for a given FMP. The NEFMC and MAFMC selected Omnibus Alternatives 2.2 and 2.6 as the preferred alternatives.

1. Omnibus Alternative 2.1 – NMFS-led prioritization process. NMFS prepares analysis and prioritization in consultation with the Councils.
2. Omnibus Alternative 2.2 (Preferred Alternative) – Council-led prioritization process. Council prepares analysis and recommended priorities to NMFS.
3. Omnibus Alternative 2.3 – Proportional prioritization process. Available Federal funding would be allocated proportionally among all industry-funded monitoring programs.
4. Omnibus Alternative 2.4 – Coverage ratio-based prioritization process. The amount of available Federal funding would be allocated to each FMP relative to the extra coverage needed and total fleet activity. Alternative 2.4 would favor coverage for the FMPs that do not need much additional monitoring to meet coverage targets and have the most active fleets.
5. Omnibus Alternative 2.5 – Coverage ratio-based prioritization process. The amount of available Federal funding would be allocated to each FMP relative to the extra coverage needed and total fleet activity. Alternative 2.5 would favor coverage for the FMPs that need more additional monitoring to meet coverage targets and have the least active fleets.

Omnibus Alternative 2.6 (Preferred Alternative) (Monitoring Set-Aside) would provide a structure to develop future monitoring set-aside programs which could generally consist of reserving a portion of the annual catch limit for a fishery to assist in funding vessel/non-governmental costs for additional monitoring coverage beyond the SBRM requirements. No monitoring set-aside program would be directly established by this action.

Overview of Atlantic Herring Coverage Target Alternatives

The NEFMC is interested in increasing catch monitoring in the Atlantic herring fishery to address the following goals and objectives: (1) Accurate estimates of catch (retained and discarded), (2) accurate catch estimates for incidental species for which catch caps apply, and (3) affordable monitoring for the herring fishery. The Herring Alternatives provide a range of data collection and monitoring costs through various monitoring types including Northeast Fisheries Observer Program (NEFOP)-level observing, at-sea monitoring (ASM), electronic monitoring (EM), and portside sampling. Existing industry reporting requirements and observer coverage to meet SBRM, ESA, and MMPA requirements under the No Action alternative would continue. Any information collected under the herring coverage target action alternatives would be in addition to existing reporting and monitoring. **The NEFMC selected Herring Alternatives 2.5 and 2.7 as preferred coverage target alternatives**.

TABLE 1. RANGE OF INDUSTRY-FUNDED MONITORING HERRING COVERAGE TARGET ALTERNATIVES

Gear Type	Midwater Trawl	Purse Seine	Small Mesh Bottom Trawl
Herring Alternative 1: No Coverage Target for IFM Program (No Action)	SBRM		
Herring Alternative 2: Coverage Targets for IFM Program	Includes Sub-Options: 1) Wavier Allowed, 2) Wing Vessel Exemption, 3) 2 Year Sunset, 4) 2 Year Re-evaluation, and 5) 25 mt Threshold		
Herring Alternative 2.1: 100% NEFOP-Level Coverage on Category A and B Vessels	100% NEFOP-Level Observer		
Herring Alternative 2.2: ASM Coverage on Category A and B Vessels	25%, 50%, 75% or 100% ASM		
Herring Alternative 2.3: Combination Coverage on Category A and B Vessels and Midwater Trawl Fleet	50% or 100% EM/Portside	25%, 50%, 75% or 100% ASM	
Herring Alternative 2.4: EM and Portside Coverage on Midwater Trawl Fleet	50% or 100% EM/Portside	SBRM (No Action)	
Herring Alternative 2.5 (Preferred Alternative): 100% NEFOP-Level Coverage on Midwater Trawl Fleet in Groundfish Closed Areas*	100% NEFOP-Level Coverage	SBRM (No Action)	

Gear Type	Midwater Trawl	Purse Seine	Small Mesh Bottom Trawl
Herring Alternative 2.6: Combination Coverage on Midwater Trawl Fleet in Groundfish Closed Areas	Coverage would match selected alternative 2.1-2.4	SBRM (No Action)	
Herring Alternative 2.7 (Preferred Alternative): ASM Coverage on Category A and B Vessels, then Vessels may choose either ASM or EM/Portside Coverage	~~25%,~~ 50%~~, 75% or 100%~~ ASM or EM/Portside	~~25%,~~ 50%~~, 75% or 100%~~ ASM or EM/Portside	~~25%,~~ 50%~~, 75% or 100%~~ ASM or EM/Portside
* Sub-Options do not apply to Herring Alternative 2.5.			

As noted in the table above, Herring Alternative 2 would allow several sub-options to apply to the herring coverage target alternatives. Sub-options could apply to any of the alternatives except Herring Alternative 2.5. **The NEFMC selected Sub-Options 1, 2, 4, and 5 as preferred alternatives.**

- Sub-Option 1 would allow vessels to be issued waivers to exempt them from industry-funded monitoring requirements, for either a trip or the fishing year, if coverage was unavailable due to funding or logistics. Selection of this sub-option preserves the NEFMC's intent for additional monitoring in the herring fishery, but would not prevent vessels from participating in the herring fishery if monitoring coverage was not available. **Should the NEFMC not select Sub-Option 1, then fishing effort would be reduced to match the available level of monitoring (i.e., the fleet would not fish if NMFS does not have funding to support the administration of the program).** Reducing fishing effort to match available monitoring may lack sufficient justification and be inconsistent with National Standards.
- Sub-Option 2 would exempt a wing vessel pair trawling with another vessel from industry-funded monitoring requirements, provided the vessel does not carry any fish.
- Sub-Option 3 would require that industry-funded monitoring requirements expire two years after implementation.
- Sub-Option 4 would require the NEFMC to examine the results of any increased coverage in the herring fishery two years after implementation, and consider if adjustments to the coverage targets are warranted. Depending on the results and desired actions, subsequent action to adjust the coverage targets could be accomplished via a framework adjustment or an amendment to the Herring FMP, as appropriate.
- Sub-Option 5 would exempt trips that land less than 25 mt of herring from industry-funded monitoring requirements.

Under Herring Alternative 1 (No Action), there would be no coverage target specified for an industry-funded monitoring program in the Herring FMP. Observer coverage for herring vessels would be allocated according to SBRM, and there would be no additional cost to the

herring industry for monitoring coverage. If there was Federal funding available after SBRM coverage requirements were met, additional monitoring for the herring fishery would be evaluated on a case-by-case basis.

Under Herring Alternative 2, the NEFMC would specify the details of an industry-funded monitoring program for the Herring FMP. These details may include, but are not limited to: (1) Level and type of coverage target, (2) rationale for level and type of coverage, (3) minimum level of coverage necessary to meet coverage goals, (4) consideration of coverage waivers if coverage target cannot be met, (5) process for vessel notification and selection, (6) process for payment of industry cost responsibilities, (7) standards for monitoring service providers, and (8) any other measures necessary to implement the industry-funded monitoring program. Additional National Environmental Policy Act (NEPA) analysis would be required for any subsequent FMP framework adjustment action implementing and/or modifying the specified industry-funded monitoring programs.

Herring Alternatives 2.1-2.7 specify specific monitoring options for the herring fishery. Alternatives differ by monitoring type, coverage target, and how coverage is allocated. ~~The NEFMC has not yet selected a preferred herring coverage target alternative~~.

1. Herring Alternative 2.1 – Vessels with All Areas (Category A) and Areas 2/3 (Category B) Limited Access Herring Permits would be required to carry a NEFOP-level observer on every declared herring trip.
2. Herring Alternative 2.2 – Vessels with Category A and B herring permits would be required to carry an at-sea monitor on every declared herring trip selected for coverage by NMFS. Vessels would be selected to carry an at-sea monitor by NMFS to meet the at-sea monitor coverage target (25%, 50%, 75%, or 100%) specified in this action.
3. Herring Alternative 2.3 – Vessels with Category A and B herring permits using purse seine and small mesh bottom trawl gear would be required to carry an at-sea monitor on every declared herring trip selected for coverage by NMFS. Vessels would be selected to carry an at-sea monitor by NMFS to meet the at-sea monitor coverage target (25%, 50%, 75%, or 100%) specified in this action. Additionally, midwater trawl vessels would be required to carry an operating EM system on every trip declared into the herring fishery and allow portside sampling of catch on declared herring trips selected for coverage by NMFS. The intention of the NEFMC would be that all declared herring trips by midwater trawl vessels would have some percentage of EM footage sampled (50% or 100%) and that same percentage of trips sampled portside (50% or 100%).
4. Herring Alternative 2.4 – Midwater trawl vessels would be required to carry an operating EM system on every trip declared into the herring fishery and allow portside sampling of their catch on declared herring trip selected for coverage by NMFS. The intention of the NEFMC would be that all declared herring trips by midwater trawl vessels would have some percentage of EM footage sampled (50% or 100%) and that same percentage of trips sampled portside (50% or 100%).

5. Herring Alternative 2.5 **(Preferred Alternative)** – Vessels fishing with midwater trawl gear would be required to carry a NEFOP-level observer on every trip into the Groundfish Closed Areas.
6. Herring Alternative 2.6 – Vessels fishing with midwater trawl gear would be required to comply with any ASM or EM and portside monitoring requirements selected in this action for the herring fishery (i.e., Herring Alternatives 2.2-2.4 or 2.7) on every trip into the Groundfish Closed Areas.
7. Herring Alternative 2.7 **(Preferred Alternative)** – Initially, vessels with Category A and B herring permits would be required to carry an at-sea monitor on every declared herring trip selected for coverage by NMFS. Vessels would be selected to carry an at-sea monitor by NMFS to meet the ASM coverage target (~~25%,~~ 50%~~, 75%, or 100%~~) specified in this action. If the NEFMC determines that EM and portside sampling is an adequate substitute for ASM coverage aboard midwater trawl vessels, then Category A and B vessels using midwater trawl gear would be able to choose whether to use ASM or EM and portside sampling coverage **(50% coverage target)**. The NEFMC ~~may~~ **selected** ~~a different~~ **the same** coverage target for ~~each monitoring type (ASM or EM and portside sampling) and~~ each gear type (midwater trawl, purse seine, bottom trawl).

Overview of Atlantic Mackerel Coverage Target Alternatives

The MAFMC is interested in increasing catch monitoring in the Atlantic mackerel fishery to address the following goals and objectives: (1) Accurate estimates of catch (retained and discarded), (2) accurate catch estimates for incidental species for which catch caps apply, and (3) effective and affordable monitoring for the mackerel fishery. The Mackerel Alternatives provide a range of data collection and monitoring costs through various monitoring types including NEFOP-level observing, ASM, EM, and portside sampling. Existing industry reporting requirements and observer coverage to meet SBRM, ESA, and MMPA requirements under the No Action alternative would continue. Any information collected under the mackerel coverage target action alternatives would be in addition to existing reporting and monitoring. **The MAFMC has not yet selected a preferred mackerel coverage target alternative.**

TABLE 2. RANGE OF INDUSTRY-FUNDED MONITORING MACKEREL COVERAGE TARGET ALTERNATIVES

Gear Type **Permit Categories**	**MWT** **All Tiers**	**SMBT** **Tier 1**	**SMBT** **Tier 2**	**SMBT** **Tier 3**
Mackerel Alternative 1: No Coverage Target for IFM Program (No Action)	SBRM			
Mackerel Alternative 2: Coverage Target for IFM Program	Includes Sub-Options: 1) Waiver Allowed, 2) Wing Vessel Exemption, 3) 2 Year Sunset, 4) 2 Year Re-evaluation, and 5) 25 mt Threshold			

Gear Type Permit Categories	MWT All Tiers	SMBT Tier 1	SMBT Tier 2	SMBT Tier 3
Mackerel Alternative 2.1: NEFOP-Level Coverage	100% NEFOP-Level Observer		50% NEFOP-Level Observer	25% NEFOP-Level Observer
Mackerel Alternative 2.2: ASM Coverage	25%, 50%. 75%, or 100% ASM		SBRM (No Action)	
Mackerel Alternative 2.3: Combination Coverage	50% or 100% EM/Portside	25%, 50%, 75%, or 100% ASM	SBRM (No Action)	
Mackerel Alternative 2.4: EM and Portside Coverage	50% or 100% EM/Portside	SBRM (No Action)		
Mackerel Alternative 2.5: ASM Coverage on MWT Vessels, then Vessels may choose either ASM or EM/Portside Coverage	25%, 50%, 75% or 100% ASM or EM/Portside	SBRM (No Action)		
MWT indicates midwater trawl and SMBT indicates small mesh bottom trawl vessels.				
Mackerel Alternatives would only apply to trips that land greater than 20,000 lb of mackerel. Sub-Options could apply to any of the alternatives.				

As noted in the table above, Mackerel Alternative 2 would allow several sub-options to apply to the mackerel coverage target alternatives. Sub-options could apply to any of the Mackerel Alternatives (2.1-2.4).

- Sub-Option 1 would allow vessels to be issued waivers to exempt them from industry-funded monitoring requirements, for either a trip or the fishing year, if coverage was unavailable due to funding or logistics. Selection of this sub-option preserves the MAFMC's intent for additional monitoring in the mackerel fishery, but would not prevent vessels from participating in the mackerel fishery if monitoring coverage was not available. **Should the MAFMC not select Sub-Option 1, then fishing effort would be reduced to match the available level of monitoring (i.e., the fleet would not fish if NMFS does not have funding to support the administration of the program).** Reducing fishing effort to match available monitoring may lack sufficient justification and be inconsistent with National Standards.
- Sub-Option 2 would exempt a wing vessel pair trawling with another vessel from industry-funded monitoring requirements, provided the vessel does not carry any fish.
- Sub-Option 3 would require that industry-funded monitoring requirements expire two years after implementation.
- Sub-Option 4 would require the MAFMC to examine the results of any increased coverage in the mackerel fishery two years after implementation, and consider if adjustments to the coverage targets are warranted. Depending on the results and

desired actions, subsequent action to adjust the coverage targets could be accomplished via a framework adjustment or an amendment to the MSB FMP, as appropriate.
- Sub-Option 5 would exempt trips that land less than 25 mt of mackerel from industry-funded monitoring requirements.

Under Mackerel Alternative 1 (No Action), there would be no coverage target specified for an industry-funded monitoring program in the mackerel fishery. Observer coverage for mackerel vessels would be allocated according to SBRM, and there would be no additional cost to the mackerel industry for observer coverage. If there was Federal funding available after SBRM coverage requirements were met, additional monitoring for the mackerel fishery would be evaluated on a case-by-case basis.

Under Mackerel Alternative 2, the MAFMC would specify the details of an industry-funded monitoring program for the mackerel fishery. These details may include, but are not limited to: (1) Level and type of coverage target, (2) rationale for level and type of coverage, (3) minimum level of coverage necessary to meet coverage goals, (4) consideration of coverage waivers if coverage target cannot be met, (5) process for vessel notification and selection, (6) process for payment of industry cost responsibilities, (7) standards for monitoring service providers, and (8) any other measures necessary to implement the industry-funded monitoring program. Additional NEPA analysis would be required for any subsequent FMP framework adjustment action implementing and/or modifying the specified industry-funded monitoring programs.

Mackerel Alternatives 2.1-2.5 specify specific industry-funded monitoring options for the mackerel fishery. Alternatives differ by monitoring type, coverage target, and how coverage is allocated. These monitoring requirements would apply to trips landing more than 20,000 lb of mackerel.

1. Mackerel Alternative 2.1 – Vessels would be required comply with the following levels of NEFOP-level observer coverage on declared mackerel trips:
    - 100% coverage on all limited access vessels using midwater trawl gear,
    - 100% coverage on vessels with Tier 1 mackerel permits using small mesh bottom trawl gear,
    - 50% coverage on vessels with Tier 2 mackerel permits using small mesh bottom trawl gear, and
    - 25% coverage on vessels with Tier 3 mackerel permits using small mesh bottom trawl gear.
2. Mackerel Alternative 2.2 – Vessels with limited access mackerel permits using midwater trawl gear and vessels with Tier 1 mackerel permits using small mesh bottom trawl gear would be required to carry an at-sea monitor on every declared mackerel trip selected for coverage by NMFS. Vessels would be selected to carry an at-sea monitor by NMFS to meet the at-sea monitor coverage target (25%, 50%, 75%, or 100%) specified in this action.

3. Mackerel Alternative 2.3 – Vessels with Tier 1 mackerel permits and using small mesh bottom trawl gear would be required to carry an at-sea monitor on every declared mackerel trip selected for coverage by NMFS. Vessels would be selected to carry an at-sea monitor by NMFS to meet the at-sea monitor coverage target (25%, 50%, 75%, or 100%) specified in this action. Additionally, vessels with limited access mackerel permits using midwater trawl gear would be required to carry an operating EM system on every trip declared into the mackerel fishery and allow portside sampling of their catch on every declared mackerel trip selected for coverage by NMFS. The intention of the MAFMC would be that all declared mackerel trips by midwater trawl vessels would have some percentage of EM footage sampled (50% or 100%) and that same percentage of trips sampled portside (50% or 100%)
4. Mackerel Alternative 2.4 – Vessels with limited access mackerel permits using midwater trawl gear would be required to carry an operating EM system on every trip declared into the mackerel fishery and allow portside sampling of their catch on every declared mackerel trip selected for coverage by NMFS. The intention of the MAFMC would be that all declared mackerel trips by midwater trawl vessels would have some percentage of EM footage sampled (50% or 100%) and that same percentage of trips sampled portside (50% or 100%).
5. Mackerel Alternative 2.5 – Initially, vessels with limited access vessels using midwater trawl gear would be required to carry an at-sea monitor on every declared mackerel trip selected for coverage by NMFS. Vessels would be selected to carry an at-sea monitor by NMFS to meet the ASM coverage target (25%, 50%, 75%, or 100%) specified in this action. If the MAFMC determines that EM and portside sampling is an adequate substitute for ASM coverage aboard midwater trawl vessels, then limited access vessels using midwater trawl gear would be able to choose whether to use ASM or EM and portside sampling coverage. The MAFMC may select a different coverage targets for each monitoring type (ASM and EM and portside).

Overview of Impacts Associated with Omnibus Alternatives

The omnibus alternatives (Omnibus Alternatives 1, 2, and 2.1-2.6) in this amendment are procedural in nature—focused on standardizing ~~and streamlining~~ the establishment of future industry-funded monitoring programs. Therefore, there are no expected direct physical or biological impacts associated with the alternatives under consideration for the omnibus portions of the action. The indirect impacts of the omnibus alternatives on the biological resources (target species, non-target species, and protected species) and fishery-related businesses and communities are summarized in Table 3.

Overall, there will be negative direct economic impacts to fishing vessels as a result of selecting Omnibus Alternative 2 if both of the following occur: 1) There is an established industry-funded monitoring program for the FMP; and 2) there is Federal funding available to cover all, or a portion, of the costs of industry-funded monitoring programs after SBRM coverage requirements are met. The indirect impacts of the various aspects of the Omnibus Alternatives on human communities are summarized in Table 3, but should be interpreted within the context of the economic impacts being overall negative.

TABLE 3. SUMMARY OF THE INDIRECT IMPACTS OF OMNIBUS ALTERNATIVES COMPARED TO EACH OTHER

Alternatives	Impacts on Biological Resource	Impacts on Fishery-Related Businesses and Communities
Alternative 1: No Industry-Funded Monitoring Programs (No Action)	Potential low negative impact related to allocating funding to industry-funded monitoring programs on a case-by-case basis (rather than aligning to Council priorities)	Potential low negative impact related to continued uncertainty about true discard rates (could lead to overly cautious management)
Alternative 2: Industry-Funded Monitoring Programs (Action Alternative)	Negligible impact related to standardized cost responsibilities and process for future industry-funded programs implemented via framework Potential low positive impact related to standardized service provider requirements and process to prioritize additional monitoring	Potential low positive impact related to standardized cost responsibilities and process for future industry-funded programs implemented via framework Potential low positive impact related to establishing service provider requirements, and process to prioritize additional monitoring
Alternative 2.1: NMFS-Led Prioritization Process	Potential low positive impact because all industry-funded programs are considered; compared to other prioritization processes allows an evaluation of program need/design when assigning priority	Potential low positive impact because all industry-funded programs are considered; compared to other prioritization processes allows an evaluation of program need/design when assigning priority
Alternative 2.2: Council-Led Prioritization Process		
Alternative 2.3: Proportional Prioritization Process	Potential low positive impact related to information collection because process considers all industry-funded programs Does not allow for prioritization based on program need/design	Potential low positive impact related to information collection because process considers all industry-funded programs Does not allow for prioritization based on program need/design
Alternative 2.4 and 2.5: Coverage Ratio-Based Prioritization Processes		
Alternative 2.6 Monitoring Set-Aside	Negligible impact related to standardized process for monitoring set-asides implemented via framework	Negligible impact related to standardized process for monitoring set-asides implemented via framework
Impacts to physical environment were not discussed in this table because they are negligible. These alternatives will not alter fishing behavior, or directly impact fishing regulations (gears used or areas fished).		

Overview of Impacts Associated with Herring Alternatives

The impacts of the Herring Alternatives (1, 2, and 2.1-2.7) on the biological resources (herring resource, non-target species, and protected species) are summarized below in Table 4. The benefits of these herring alternatives to biological resources are indirect because they affect levels of monitoring rather than harvest specifications. Indirect benefits to the biological resources are possible if increased monitoring can reduce uncertainty of catch tracked against catch limits and generate more information for stock assessments. However, these alternatives may lead to direct positive impacts on biological resources if fishing effort is limited, either through monitoring availability or catch tracked against catch limits, leading to increased reproductive potential of biological resources. The impacts of these herring alternatives on biological resources are not significant because they would not cause any biological resource to become overfished, would not result in overfishing, and/or would not cause a change in population status.

TABLE 4. IMPACTS SUMMARY OF HERRING COVERAGE TARGET ALTERNATIVES ON BIOLOGICAL RESOURCES

Alternatives	Impacts on Biological Resources
Herring Alternative 1: No Coverage Target Specified For IFM Programs (No Action)	• Low positive impact associated with observer coverage allocated by SBRM • Low negative impact associated with no additional monitoring to reduce uncertainty around catch estimates
Herring Alternative 2: Coverage Target Specified For IFM Programs	• Positive impact associated with additional monitoring to reduce uncertainty around catch estimates • Low negative impact associated with no additional monitoring unless available Federal funding can cover NMFS cost responsibilities • Magnitude of impacts associated with additional monitoring would be primarily dependent on the type of information collected, amount of coverage, how coverage is allocated, and amount of available Federal funding • Positive impact associated with Sub-Option 1 not being selected if fishing effort is limited and reproductive potential is increased • Negative impact associated with Sub-Option 5 if it biases data used to track catch against catch caps
Herring Alternative 2.1: 100% NEFOP-Level Coverage on Category A and B Vessels	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with Category A and B vessels • Positive impact if fishing effort is limited and reproductive potential is increased
Herring Alternative 2.2: ASM Coverage on Category A and B Vessels	• Low positive impact associated with additional information reduce around uncertainty around catch estimates associated with Category A and B vessels • Positive impact if fishing effort is limited and reproductive potential is increased

Alternatives	Impacts on Biological Resources
Herring Alternative 2.3: Combination Coverage on Category A and B Vessels and Midwater Trawl Fleet	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with the midwater trawl fleet • Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with Category A and B vessels • Positive impact if fishing effort is limited and reproductive potential is increased
Herring Alternative 2.4: EM and Portside Sampling on Midwater Trawl Fleet	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with the midwater trawl fleet • Positive impact if fishing effort is limited and reproductive potential is increased
Herring Alternative 2.5: 100% NEFOP-Level Coverage on Midwater Trawl Fleet Fishing in Groundfish Closed Areas	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with the midwater trawl fleet • Negligible impact associated with changes in fishing effort
Herring Alternative 2.6: Combination Coverage on Midwater Trawl Fleet Fishing in Groundfish Closed Areas	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with the midwater trawl fleet • Negligible impact associated with changes in fishing effort
Herring Alternative 2.7: ASM Coverage on Category A and B Vessels, then Vessels may choose either ASM or EM/Portside Coverage	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with Category A and B vessels • Positive impact if fishing effort is limited and reproductive potential is increased

The impacts of the Herring Alternatives (1, 2, and 2.1-2.7) on the physical environment are summarized below in Table 5. The impact of the herring fishery on the physical environment is thought to be minimal and temporary. Therefore, the expected impact on the physical environment of increased monitoring in the herring fishery is expected to be negligible under both Herring Alternatives 1 and 2.

TABLE 5. SUMMARY OF PHYSICAL ENVIRONMENT IMPACTS OF HERRING COVERAGE TARGET ALTERNATIVES

Alternatives	Impacts on Physical Environment
Herring Alternative 1: No Coverage Target Specified For IFM Programs (No Action)	• Negligible impact associated with minimal and temporary effects on the environment from herring fishery
Herring Alternative 2: Coverage Target Specified For IFM Programs	• Negligible impact associated with minimal and temporary effects on the environment from herring fishery • Low positive impact if fishing effort is limited by monitoring availability • Negligible impact associated with switching gear modes

The impacts of the Herring Alternatives (1, 2, and 2.1-2.7) on fishery-related businesses are summarized below in Table 6. The direct economic impacts on herring vessels associated with Herring Alternatives 2.1-2.7 are negative. Impacts result from reductions in return to owner (RTO). RTO is calculated by subtracting fixed and operational costs from gross revenue and was used rather than net revenues to more accurately reflect income from fishing trips. Reductions in RTO are related to paying for monitoring coverage and possible reductions in fishing effort to match monitoring availability and would vary in magnitude by alternative. Indirect economic impacts on herring vessels result from increased monitoring and relate to whether or not vessels would be able to fully harvest herring annual catch limit (ACL). An indirect positive impact would result if increased monitoring decreases the uncertainty around catch estimates tracked against catch caps such that vessels would be more likely to be able to fully harvest the herring ACL without being constrained by catch caps. An indirect negative impact would result if increased monitoring shows higher than expected catch of haddock, river herring, and shad such that vessels would be less likely to be able to fully harvest the herring ACL because they were constrained by catch caps.

TABLE 6. SUMMARY OF ECONOMIC IMPACTS OF HERRING COVERAGE TARGET ALTERNATIVES

Alternatives	Impacts on Fishery-Related Businesses and Communities
Herring Alternative 1: No Coverage Target Specified For IFM Programs (No Action)	• Low positive impact associated with observer coverage allocated by SBRM • Low negative impact associated with no additional monitoring to reduce uncertainty around catch estimates
Herring Alternative 2: Coverage Target Specified For IFM Programs	• Negative impact associated with potential reduction in RTO • Negative impact if fishing effort is limited by monitoring availability and herring ACLs are not harvested • Low positive impact associated with additional monitoring to reduce uncertainty around catch estimates in the herring fishery • Low negative impact associated with no additional monitoring unless available Federal funding can cover NMFS cost responsibilities • Magnitude of impacts associated with additional monitoring would be dependent on the type of information collected, amount of coverage, how coverage is allocated, and amount of available Federal funding • Magnitude of impacts associated with selection of Sub-Options
Herring Alternative 2.1: 100% NEFOP-Level Coverage on Category A and B Vessels	• Negative impact associated with potential 44.7%-11.5% reduction in RTO • Negative impact associated with potential 42.2%-5.8% reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and herring ACLs are not harvested • Low positive impact associated with additional information to reduce uncertainty of catch estimates in the herring fishery
Herring Alternative 2.2: ASM Coverage on Category A and B Vessels	• Negative impact associated with potential 38.9%-3.0% reduction in RTO • Negative impact associated with potential 36.7%-1.4% reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and herring ACLs are not harvested • Low positive impact associated with additional information to reduce uncertainty of catch estimates in the herring fishery
Herring Alternative 2.3: Combination Coverage on Category A and B Vessels and Midwater Trawl Fleet	• Negative impact associated with potential 38.5%-3.0% reduction in RTO • Negative impact associated with potential 36.7%-1.4% reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and herring ACLs are not harvested • Low positive impact associated with additional information to reduce uncertainty of catch estimates in the herring fishery

Alternatives	Impacts on Fishery-Related Businesses and Communities
Herring Alternative 2.4: EM and Portside Sampling on Midwater Trawl Fleet	• Negative impact associated with potential 29.1%*-6.9% reduction in RTO • Negative impact associated with potential 27.5%*-2.4% reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and herring ACLs are not harvested • Low positive impact associated with additional information to reduce uncertainty around catch estimates in the herring fishery
Herring Alternative 2.5: 100% NEFOP-Level Coverage on Midwater Trawl Fleet Fishing in Groundfish Closed Areas	• Negative impact associated with potential 5.4%-1.0% reduction in RTO • Low positive impact associated with additional information to reduce uncertainty around catch estimates in the Groundfish Closed Areas • Negligible impact associated with changes in fishing effort
Herring Alternative 2.6: Combination Coverage on Midwater Trawl Fleet Fishing in Groundfish Closed Areas	• Negative impact associated with potential reduction in RTO • Low positive impact associated with additional information to reduce uncertainty around catch estimates in the Groundfish Closed Areas • Negligible impact associated with changes in fishing effort
Herring Alternative 2.7: ASM Coverage on Category A and B Vessels, then Vessels may choose either ASM or EM/Portside Coverage	• Negative impact associated with potential 34.6%*-1.0%* reduction in RTO • Negative impact associated with potential 29.7%-*0.9%* reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and herring ACLs are not harvested • Low positive impact associated with additional information to reduce uncertainty of catch estimates in the herring fishery
* Reflects RTO from Year 2	

TABLE 7. SUMMARY OF OVERALL IMPACTS ASSOCIATED WITH HERRING COVERAGE TARGET ALTERNATIVES

Alternatives	Herring Resource	Non-Target Species	Protected Species	Physical Environment	Fishery-Related Businesses
Herring Alternative 1: No Coverage Target Specified For IFM Programs (No Action)	Low Positive	Low Positive	Low Positive	Negligible	Low Positive
Herring Alternative 2: Coverage Target Specified For IFM Programs	Low Positive	Low Positive	Low Positive	Negligible	Negative
Herring Alternative 2.1: 100% NEFOP-Level Coverage on Category A and B Vessels	Low Positive	Low Positive	Low Positive	Negligible	Negative
Herring Alternative 2.2: ASM Coverage on Category A and B Vessels	Low Positive	Low Positive	Low Positive	Negligible	Negative
Herring Alternative 2.3: Combination Coverage on Category A and B Vessels and Midwater Trawl Fleet	Low Positive	Low Positive	Low Positive	Negligible	Negative
Herring Alternative 2.4: EM and Portside Sampling on Midwater Trawl Fleet	Low Positive	Low Positive	Low Positive	Negligible	Negative
Herring Alternative 2.5: 100% NEFOP-Level Coverage on Midwater Trawl Fleet Fishing in Groundfish Closed Areas	Low Positive	Low Positive	Low Positive	Negligible	Negative
Herring Alternative 2.6: Combination Coverage on Midwater Trawl Fleet Fishing in Groundfish Closed Areas	Low Positive	Low Positive	Low Positive	Negligible	Negative
Herring Alternative 2.7: ASM Coverage on Category A and B Vessels, then Vessels may choose either ASM or EM/Portside Coverage	Low Positive	Low Positive	Low Positive	Negligible	Negative

Overview of Impacts Associated with Mackerel Alternatives

The impacts of the Mackerel Alternatives (1, 2, and 2.1-2.5) on the biological resources (mackerel resource, non-target species, and protected species) are summarized below in Table 7. The benefits of these mackerel alternatives to biological resources are indirect because they affect levels of monitoring rather than harvest specifications. Indirect benefits to the biological resources are possible if increased monitoring can reduce uncertainty of catch tracked against catch limits and generate more information for stock assessments. However, these alternatives may lead to direct positive impacts on biological resources if fishing effort is limited, either through monitoring availability or catch tracked against catch limits, leading to increased reproductive potential of biological resources. The impacts of these mackerel alternatives on biological resources are not significant because they would not cause any biological resource to become overfished, would not result in overfishing, and/or would not cause a change in population status.

TABLE 8. SUMMARY OF MACKEREL COVERAGE TARGET ALTERNATIVES ON BIOLOGICAL RESOURCES

Alternatives	Impacts on Biological Resources
Mackerel Alternative 1: No Coverage Target Specified For IFM Programs (No Action)	• Low positive impact associated with observer coverage allocated by SBRM • Low negative impact associated with no additional monitoring to reduce uncertainty around catch estimates
Mackerel Alternative 2: Coverage Target Specified For IFM Programs	• Positive impact associated with additional monitoring to reduce uncertainty around catch estimates • Low negative impact associated with no additional monitoring unless available Federal funding can cover NMFS cost responsibilities • Magnitude of impacts associated with additional monitoring would be primarily dependent on the type of information collected, amount of coverage, and amount of available Federal funding • Positive impact associated with Sub-Option 1 not being selected if fishing effort is limited and mackerel reproductive potential is increased • Negative impact associated with Sub-Option 5 if it biases data used to track catch against catch caps
Mackerel Alternative 2.1: NEFOP-Level Coverage on Limited Access Vessels	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with limited access midwater trawl vessels • Low positive impact associated with additional information to reduce uncertainty around catch estimates for Tier 1-3 small mesh bottom trawl vessels • Positive impact if fishing effort is limited and reproductive potential is increased

Alternatives	Impacts on Biological Resources
Mackerel Alternative 2.2: ASM Coverage on Midwater Trawl Vessels and Tier 1 SMBT Vessels	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with limited access midwater trawl vessels • Low positive impact associated with additional information to reduce uncertainty around catch estimates for Tier 1-3 small mesh bottom trawl vessels • Positive impact if fishing effort is limited and reproductive potential is increased
Mackerel Alternative 2.3: Combination Coverage on Midwater Trawl Vessels and Tier 1 SMBT Vessels	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with limited access midwater trawl vessels • Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with Tier 1 small mesh bottom trawl vessels • Positive impact if fishing effort is limited and reproductive potential is increased
Mackerel Alternative 2.4: EM and Portside Sampling Midwater Trawl Vessels	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with limited access midwater trawl vessels • Positive impact if fishing effort is limited and reproductive potential is increased
Mackerel Alternative 2.5: ASM Coverage on MWT Vessels, then Vessels may choose either ASM or EM/Portside Coverage	• Low positive impact associated with additional information to reduce uncertainty around catch estimates associated with limited access midwater trawl vessels • Positive impact if fishing effort is limited and reproductive potential is increased

The impacts of the Mackerel Alternatives (1, 2, and 2.1-2.5) on the physical environment are summarized below in Table 8. The impact of the mackerel fishery on the physical environment is thought to be minimal and temporary. Therefore, the expected impact on the physical environment of increased monitoring in the mackerel fishery is expected to be negligible under both Mackerel Alternatives 1 and 2.

TABLE 9. IMPACTS OF MACKEREL COVERAGE TARGET ALTERNATIVES ON PHYSICAL ENVIRONMENT

Alternatives	Impacts on Physical Environment
Mackerel Alternative 1: No Coverage Target Specified For IFM Programs (No Action)	• Negligible impact associated with minimal and temporary effects on the environment from mackerel fishery
Mackerel Alternative 2: Coverage Target Specified For IFM Programs	• Negligible impact associated with minimal and temporary effects on the environment from mackerel fishery • Low positive impact if fishing effort is limited by monitoring availability • Negligible impact associated with switching gear modes

The impacts of the Mackerel Alternatives (1, 2, and 2.1-2.5) on fishery-related businesses are summarized below in Table 9. The direct economic impacts on mackerel vessels associated with Mackerel Alternatives 2.1-2.5 are negative. The negative impacts result from reductions in RTO related to paying for monitoring coverage and possible reductions in fishing effort to match monitoring availability, and vary in magnitude by alternative. An indirect positive impact would result if increased monitoring deceased the uncertainty around river herring and shad catch such that it was less likely that mackerel harvest was constrained by catch caps. An indirect negative impact would result if increased monitoring showed higher than expected catch of river herring and shad such that it was more likely that mackerel harvest would be inappropriately constrained by catch caps.

TABLE 10. SUMMARY OF ECONOMIC IMPACTS OF MACKEREL COVERAGE TARGET ALTERNATIVES

Alternatives	Impacts on Fishery-Related Businesses and Communities
Mackerel Alternative 1: No Coverage Target Specified For IFM Programs (No Action)	• Low positive impact associated with observer coverage allocated by SBRM • Low negative impact associated with no additional monitoring to reduce uncertainty around catch estimates
Mackerel Alternative 2: Coverage Target Specified For IFM Programs	• Negative impact associated with potential reduction in return to owner (RTO) • Negative impact if fishing effort is limited by monitoring availability and mackerel harvest is limited • Low positive impact associated with additional monitoring to reduce uncertainty around catch estimates in the mackerel fishery • Low negative impact associated with no additional monitoring unless available Federal funding can cover NMFS cost responsibilities • Magnitude of impacts associated with additional monitoring would be dependent on the type of information collected, amount of coverage, how coverage is allocated, and amount of available Federal funding • Magnitude of impacts associated with selection of Sub-Options
Mackerel Alternative 2.1: NEFOP-Level Coverage	• Negative impact associated with potential 11.9%-5.1% reduction in RTO • Negative impact associated with potential 6.9%-4.3% reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and mackerel harvest is limited • Low positive impact associated with additional information to reduce uncertainty of catch estimates in the mackerel fishery

Alternatives	Impacts on Fishery-Related Businesses and Communities
Mackerel Alternative 2.2: ASM Coverage	• Negative impact associated with potential 10.3%-1.4% reduction in RTO • Negative impact associated with potential 6.0%-1.4% reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and mackerel harvest is limited • Low positive impact associated with additional information to reduce uncertainty of catch estimates in the mackerel fishery
Mackerel Alternative 2.3: Combination Coverage	• Negative impact associated with potential 10.3%-1.4% reduction in RTO • Negative impact associated with potential 16.4%*-1.4% reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and mackerel harvest is limited • Low positive impact associated with additional information to reduce uncertainty of catch estimates in the mackerel fishery
Mackerel Alternative 2.4: EM and Portside Sampling on Midwater Trawl Vessels	• Negative impact associated with potential 8.3%*-1.8% reduction in RTO • Negative impact associated with potential 7.0%*-1.6% reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and mackerel harvest is limited • Low positive impact associated with additional information to reduce uncertainty around catch estimates in the mackerel fishery
Mackerel Alternative 2.5: ASM Coverage on MWT Vessels, then Vessels may choose either ASM or EM/Portside Coverage	• Negative impact associated with potential 3.7%*-0.5%* reduction in RTO • Negative impact associated with potential 3.4%*-0.5%* reduction in RTO with 25 mt threshold • Negative impact if fishing effort is limited by monitoring availability and mackerel harvest is limited • Low positive impact associated with additional information to reduce uncertainty of catch estimates in the mackerel fishery

TABLE 11. SUMMARY OF OVERALL IMPACTS ASSOCIATED WITH MACKEREL COVERAGE TARGET ALTERNATIVES

Alternatives	Mackerel Resource	Non-Target Species	Protected Species	Physical Environment	Fishery-Related Businesses
Mackerel Alternative 1: No Coverage Target Specified For IFM Programs (No Action)	Low Positive	Low Positive	Low Positive	Negligible	Low Positive
Mackerel Alternative 2: Coverage Target Specified For IFM Programs	Low Positive	Low Positive	Low Positive	Negligible	Negative
Mackerel Alternative 2.1: NEFOP-Level Coverage on Midwater Trawl Vessels and Tier 1-3 SMBT Vessels	Low Positive	Low Positive	Low Positive	Negligible	Negative
Mackerel Alternative 2.2: ASM Coverage on Midwater Trawl Vessels and Tier 1 SMBT Vessels	Low Positive	Low Positive	Low Positive	Negligible	Negative
Mackerel Alternative 2.3: Combination Coverage on Midwater Trawl Vessels and Tier 1 SMBT Vessels	Low Positive	Low Positive	Low Positive	Negligible	Negative
Mackerel Alternative 2.4: EM and Portside Sampling Midwater Trawl Vessels	Low Positive	Low Positive	Low Positive	Negligible	Negative
Mackerel Alternative 2.5: ASM Coverage on MWT Vessels, then Vessels may choose either ASM or EM/Portside Coverage	Low Positive	Low Positive	Low Positive	Negligible	Negative

MEMORANDUM

DATE: February 15, 2017

TO: New England Fishery Management Council
Mid-Atlantic Fishery Management Council

FROM: Industry-Funded Monitoring Plan Development Team (PDT)/Fishery Management Action Team (FMAT)

SUBJECT: Industry-Funded Monitoring (IFM) Omnibus Amendment Development

The PDT/FMAT met by via teleconference on February 15, 2017, to update participants on recent decisions by the Mid-Atlantic Fishery Management Council (MAFMC) and the New England Fishery Management Council (NEFMC) at meetings held in December 2016 and January 2017, respectively. In addition, the meeting intended to discuss preferred alternatives selected by the Councils, the status of analysis within the environmental assessment, implementation issues, and timelines associated with relevant components of this action. Because this meeting was not advertised on either Council's website, no decisions on future work would be made at this meeting. Staff agreed to coordinate future meetings to ensure the pubic was made aware of them in advance. PDT/FMAT participants included: Doug Christel, Brant McAfee, Carrie Nordeen, Alyson Pitts, and Katie Richardson (NMFS GARFO); Liz Chilton, Dr. Andrew Kitts and Sarah Weeks (NMFS NEFSC); Jason Didden (MAFMC); Deirdre Boelke and Dr. Fiona Hogan (NEFMC); Brad Schondelmeier (MA DMF); and several members of the public (Jeff Kaelin, Steve Weiner, Greg Wells and Purcie Bennet-Nickerson).

NEFMC Preferred Alternatives:
The NEFMC identified the following preferred alternatives at its January 2017 meeting, with final action expected at its April meeting:

- Omnibus Alternative 2, including the following measures:
    - Standardized development of new IFM programs through an amendment to ensure adequate public comment;
    - Modified alt to exclude FW measures;
    - Council-led prioritization process for available funds; and
    - A monitoring set-aside as an option for a future framework measure
- Herring Alternative 2.2 sub-options 1 (waiver of monitoring requirements on a particular trip if funds or logistics prevent such coverage), 2 (exemption for monitoring requirements for wing vessels provided the vessels do not carry fish), 4 (reevaluation of IFM measures after two years), and 5 (an exemption from monitoring requirements for vessels that catch less than 25 mt of herring)
- Herring Alternative 2.5 – 100 percent observer coverage on midwater trawl vessels fishing in groundfish closed areas.
- Herring Alternative 2.7 – initially a 50 percent at-sea monitoring (ASM) coverage for Category A and B vessels using any gear type, with vessels allowed to choose 50 percent ASM or 50 percent electronic monitoring (EM)/portside sampling (PS) coverage once deemed acceptable by the NEFMC following the pilot project.

The PDT/FMAT clarified that Herring Alternative 2.5 was intended to be dynamic to accommodate new or revised groundfish closed areas. Therefore, the Council could modify reference to the relevant closed

areas in a future framework action, as needed. Staff clarified that under Herring Alternative 2.7, if a vessel elects to use EM/PS coverage, EM would be turned on for all trips, but only 50 percent of a trip's video footage would be reviewed and that 50 percent of trips would be subject to PS upon arrival in port. Based on examples from other regions implementing similar programs, staff suggested that there is utility in providing flexibility in changing the video review rates in the future.

MAFMC Update:
At its December 2016 meeting, the MAFMC decided to postpone final decision on the IFM Amendment until the completion of the EM pilot project (expected by the end of 2017). Accordingly, the MAFMC did not select preferred alternatives for either the omnibus or mackerel measures. GARFO sent a letter to the MAFMC informing them of the NEFMC's January decision and requesting the Council reconsider their December motion to postpone final action. On February 16, 2017, the MAFMC decided to reconsider its December motion at its April meeting. The MAFMC could take final action at that meeting, with the NEFMC taking final action at its meeting the following week. If the MAFMC does not take final action in April, the NEFMC could take final action on the herring measures, and both Councils could take separate action on the omnibus measures at a future date.

EM Pilot Project:
NMFS staff provided an update on the EM pilot project, noting that 11 out of the 13 midwater trawl vessels are participating in the EM pilot project. The one of the vessels not participating is unlikely to fish during 2017. Data are being collected on trips by these vessels. Staff are reaching out to vessel operators to get initial feedback on the project to date, concerns with EM in general, and ways in which the project can be used to improve long-term monitoring objectives. This outreach will continue throughout the project to gather more input.

Portside Monitoring:
Currently, Massachusetts and Maine run voluntarily portside sampling programs for the herring and mackerel fisheries. It was noted that not all ports are sampled, but that 95 percent of the herring landings are made in ports that are sampled. GARFO staff has requested additional funding to better outfit ports that are currently sampled and to acquire the infrastructure and equipment needed to improve existing sampling sites and those in other non-sampled ports. A decision on the funding request is expected soon.

Based upon a request from the NEFMC, Brant McAfee analyzed using state portside sampling data as an additional source to help monitor river herring and shad and haddock catch caps in the herring fishery. The preliminary analysis was favorably received by the Herring PDT at its February 14, 2017, meeting. He outlined next steps for the analysis, noting some differences between data sources and that the portside monitoring data were used supplement Northeast Fisheries Observer Program (NEFOP) data. Although the MAFMC hasn't made similar request for mackerel, Brant may look at doing similar analysis for the caps in the mackerel fishery. MAFMC staff supported the exploration of this analysis for tracking the mackerel fishery caps.

Combined Coverage Targets:
Both Councils recommended combined coverage targets for IFM observer and ASM coverage targets. This is an approach currently being used in the groundfish fishery, with the rational being that the combined coverage approach is cheaper for industry. This is different from the additive coverage target approach used for EM/PS measures, as the EM/PS coverage would be in addition to coverage required

by the standardized bycatch reporting methodology (SBRM). Participants noted that there is value of having a SBRM observer aboard for a trip monitored by EM/PSM.

Participants expressed several concerns with the combined coverage target approach. Currently, the SBRM fishing year is different than the fishing year identified for the herring and mackerel fisheries. Also, SBRM allocates coverage by fleets, while the IFM Amendment would allocate coverage by permit category and catch amounts. Finally, the NMFS tool used to allocate SBRM coverage, the pre-trip notification system, is currently not capable of allocating IFM coverage on a real-time basis. The FMAT noted that if coverage is additive, ASM may be cheaper than EM/PS. This is because the SBRM may provide more coverage for the herring and mackerel fisheries in any particular year, but the EM/PS coverage requirements, and associated costs, would be fixed at levels specified by the Councils regardless of SBRM coverage.

NMFS staff could use the prior year's SBRM coverage as a proxy for future coverage. However, because SBRM funding and coverage may vary year-to-year, using a previous year's SBRM coverage as a proxy would likely result in variations in coverage leading to too much or too little IFM coverage in a particular year. One way to address this would be to change the coverage rate inseason, but this could negatively affect contracts and coverage costs that vessel owners negotiate with ASM or EM/PS vendors. Additional consultation with potential vendors may be explored to evaluate such impacts.

Slippage Requirements:
As currently proposed by the NEFMC, reporting requirements and slippage consequences (15-nautical mile move along provision or trip termination) would apply when a slippage event occurs under ASM, NEFOP, or EM/PS coverage. In contrast, the MAFMC recommended that reporting requirements apply to trips monitored by ASM and NEFOP, and EM/PS trips, but that slippage consequence measures only apply to ASM and NEFOP trips. Participants expressed concern whether a camera could discern the reason for slippage or verify compliance with slippage consequence requirements. This should be identified to the Councils before they take final action. During previous meetings, the PDT/FMAT recommended that slippage consequences should not apply to EM/PS trips. Staff noted that because all EM trips would be reviewed, at least in part, the slippage requirements would essentially apply to all EM trips. Participants will discuss how vessel operators would be notified of PS coverage to evaluate if such a notification would change incentives to report slippage events and if vessel requirements would be different between fleets using different gear types.

Choice of Monitoring Approach:
Both Councils will consider the results of the EM pilot project to determine if the EM/PS approach is an adequate option for each gear type. Since no pilot program is currently testing EM for small-mesh bottom trawl and purse seine gear, the NEFMC could use its process for introducing new gear types to evaluate EM for those gear types. Staff will identify the numbers of vessels using these gear types to evaluate the potential scale of this issue. Industry participants noted that trawlers compete with purse seiners for market share, so focusing measures on Category A and B permits is a good choice to level costs across all gear types.

If deemed adequate, at least three monitoring programs could be operating simultaneously for the herring fishery (NEFOP, ASM, and EM/PS). Some measures have been developed to help reduce complications with such a system, including requiring vessels to declare a monitoring type six months in advance of the fishing year, committing to that monitoring type for the entire year, and minimum participation levels for ASM and EM/PS approaches. Minimum EM participation levels are being

evaluated nationally, and could inform Council decisions in this action. Participants noted that if only ASM would be implemented during the first year, participation in the EM/PS program would likely be diminished. To prevent this, maybe EM/PS measures should be made ready sooner rather than later. Therefore, the timing of any peer review and the Council's review of the EM pilot project could influence the effective date of this action.

Monitoring Exemption for Vessels Landing Less than 25 mt:
This exemption was intended to reduce costs for vessels landing low amounts of herring. There remains confusion in how this exemption would apply. Some believe it would be a trip-level declaration of intent, while the NEFMC interpreted it as based on catch. This needs clarification before it could be implemented. Few vessels would be affected by this measure based on previous analysis, but clarification will be provided to the NEFMC in April.

Participants were concerned that this exemption could inadvertently create a loophole to avoid coverage and that it could bias data used for monitoring. For example, the 25 mt threshold to exempt a vessel from monitoring coverage is different from the 6,600 lb threshold used to monitor catch caps. This would require additional stratification to ensure accurate monitoring and will complicate analysis. Specifically, the PDT/FMAT noted this group of vessels will not get additional IFM coverage, and will likely need to rely on SBRM funded observer trips to generate their bycatch estimates for applicable catch caps. Also, participants noted that this exemption would likely require enforcement validation. An industry participant was less concerned about the potential exploitation of this exemption, noting that this fleet catches small amounts of herring and river herring/shad. A larger concern identified by industry is the ability of freezer trawlers to identify the scale of catch on any particular trip.

Environmental Assessment and Implementation Concerns:
GARFO staff will work with Council staff to coordinate review of the environmental assessment (EA) and decide how best to inform Councils of implementation issues and associated concerns. The PDT/FMAT will assemble any implementation/administration concerns before the April Council meetings. The PDT/FMAT suggested that we should err on the side of inclusion for Council consideration, as the Councils may want to provide additional detail on how to implement/administer certain measures.

Specific implementation concerns noted by participants include:

- Streamlining declarations is needed to ensure that all data users (vessel operators; monitoring vendors; and GARFO, Center, and Council staff) get the data they need in the format they prefer. This will require coordination among various groups and programs, including groundfish monitoring discussions, the regional data visioning project, and Center updates to data systems. Current declaration tools (PTNS, vessel monitoring systems, and call-in programs) may not be adequate to handle declarations associated with this action.
- Increasing the efficiency of NEFOP/ASM/PSM training programs should be pursued to reduce costs, maximize the utility to vendors, and increase the availability of monitors to all fisheries.
- Improving integration of enforcement concerns with measures proposed under this action is necessary to ensure enforcement concerns are considered, particularly for vessel monitoring plans and coverage exemptions. The PDT/FMAT noted that enforcement representatives have not been consulted during the early development of this action.
- Coordinating the ongoing development of this action and the effective date of any approved measures to avoid duplication of effort, conflicts with similar actions, and unnecessary delays. The PDT/FMAT aspires to use this action to reorganize all monitoring regulations for Northeast Fisheries. This will require close coordination with developments in other fisheries.

MEMORANDUM

DATE: March 17, 2017

TO: New England Fishery Management Council (NEFMC)
Mid-Atlantic Fishery Management Council (MAFMC)

FROM: Industry-Funded Monitoring Plan Development Team (PDT)/Fishery Management Action Team (FMAT)

SUBJECT: Industry-Funded Monitoring (IFM) Omnibus Amendment Development

The PDT/FMAT met by via teleconference on March 17, 2017, to discuss the cumulative decisions made by the NEFMC regarding the preferred herring measures under the IFM Amendment. The intent was to look at the decisions in total to evaluate whether there are unintended consequences associated with the interactions of measures selected to date. Further, the PDT/FMAT sought to identify any issues that require further clarification before final adoption by the NEFMC. PDT/FMAT participants included: Doug Christel, Brant McAfee, and Carrie Nordeen (NMFS GARFO); Liz Chilton and Sarah Weeks (NMFS NEFSC); Jason Didden (Mid-Atlantic Fishery Management Council (MAFMC)); Deirdre Boelke and Dr. Fiona Hogan (NEFMC); Brad Schondelmeier (Massachusetts Division of Marine Fisheries); and several members of the public (Ryan Hare (F/V Providian), Greg Wells and Purcie Bennet (PEW)).

IFM Amendment Timeline Update:
GARFO staff indicated that the Herring Advisory Panel and Committee will meet April 4 and 5, respectively, to review the proposed action, and make any clarifications and adjustments prior to the final vote by the NEFMC. At its April 18-20 meeting, the NEFMC is expected to review the preferred alternatives it selected in January and any recommendations from the AP and Committee before considering whether to adopt the IFM Amendment and associated omnibus and herring measures.

The MAFMC will meet on April 12 to reconsider taking final action on the amendment. The MAFMC will likely discuss preferred herring measures selected by the NEFMC and a February 2, 2017, letter from NMFS recommending the MAFMC reconsider taking final action on the IFM Amendment. The MAFMC could adopt omnibus and mackerel measures at this meeting, or adopt omnibus measures, but delay a decision on potential mackerel measures for adoption through a separate action.

Cumulative Decisions Under the Proposed Action:
GARFO staff presented two documents to the PDT/FMAT for their consideration. The first document ("IFM Proposed Action") lists each of the omnibus alternatives selected by both Councils and the herring measures preferred by the NEFMC. The document is intended to lay out proposed action and what all measures mean together, including any clarifications made by NEFMC to date. For the herring measures, GARFO staff outlined several additional suggested clarifications for the AP, Committee, and NEFMC to consider before making a final decision. The second document ("Potential Unintended Consequences in Herring Fishery") identifies potential unintended consequences for several preferred herring measures selected by the NEFMC, offering suggestions for revisions to such measures that may better achieve the objectives specified for this action.

Clarifications for Herring Alternatives:
During its previous call, the PDT/FMAT suggested further clarification is necessary for some herring measures. The PDT/FMAT discussed proposed clarifications offered by GARFO staff and recommended that they be made available to the AP and Committee for their meetings April 4 and 5, as follows:

1. Prioritizing Available Federal Funds for EM/PS: The PDT/FMAT supported prioritizing funding for at-sea monitoring (ASM) and electronic monitoring (EM)/portside sampling (PS) (Alternative 2.7) over funding for Northeast Fishery Observer Program (NEFOP) level observer coverage for trips into groundfish closed areas (Alternative 2.5). The PDT/FMAT concluded that since Alternative 2.5 only applies to mid-water trawl (MWT) vessels fishing in closed areas, and that Omnibus Habitat Amendment, if approved, would likely reduce the number of groundfish closed areas in the near future, ensuring funding to cover the costs of ASM and EM/PSM would be more important to the monitoring and management of the herring fishery under this amendment. The PDT/FMAT understood, and GARFO staff later confirmed, that Herring Amendment 5 intended NEFOP-level observer requirements for herring trips into groundfish closed areas would also apply to anticipated changes to these areas in the omnibus habitat amendment.

2. Calculating Combined Coverage Targets: Consistent with the way combined coverage targets are calculated in the groundfish fishery, the PDT/FMAT suggested clarifying that combined coverage targets would be calculated by NMFS in consultation with Council staff.

3. Applying the Most Robust Monitoring Requirements: This action could establish different monitoring requirements for the herring and mackerel fisheries. Because of the overlap between the herring and mackerel fisheries, the Councils should clarify that the most robust requirements apply if coverage requirements differ between herring and mackerel fisheries. To date, the Councils have been consistent in selecting monitoring measures between the fisheries, but this clarification would be necessary if the MAFMC selects different measures or does not adopt mackerel measures in this action. This approach is consistent with how we've dealt with similar measures in other fisheries.

   As an example, if herring vessels are subject to 50% ASM coverage, but mackerel is subject to 25% coverage, trips declared into both fisheries would be subject to 50% target coverage. The PDT/FMAT noted that If different monitoring types are selected by the Councils, it would be more difficult to determine most restrictive measures and further clarification may be necessary. Because the MAFMC will meet first, the NEFMC will have an opportunity to consider any decisions made by the MAFMC and respond accordingly.

4. Evaluating the Adequacy of EM/PS for Different Gear Types: Under Herring Alternative 2.7, Category A and B vessels would have the choice between 50% ASM and 50% EM/PS monitoring. However, since the Councils are only considering applying EM/PS requirements for mid-water trawl gear, the Councils will only be evaluating these methods for that one gear type.

   Initially, the PDT/FMAT suggested that the Councils could determine if these methods are adequate for small-mesh bottom trawls and purse seine gear through a separate action using the process for evaluating new gear types. Then GARFO staff consulted with General Counsel about how the Councils could efficiently document their endorsement of EM/PS for all gear types, as appropriate. GARFO staff recommended, and General Council approved, mirroring the groundfish ASM/EM approval process from Amendment 16. In that process, EM/PS would need to meet operational

standards and monitoring objectives outlined in the amendment. The Council could then notify NMFS that EM/PS used by certain gear types meet those standards/objectives. The Regional Administrator would then approve the use of EM/PS on yearly basis through a vessel's monitoring plan. NEFMC and NMFS staff agreed to recommend the Amendment 16 process for the Councils to approve EM/PS rather than the new gear process.

5. Identifying a Minimum Participation Threshold: Standing up multiple monitoring programs on a yearly basis takes time and resources. Currently, the IFM amendment does not specify a minimum number of participants that would facilitate the cost-effective operation of one program or another (ASM or EM/PS). This issue is being discussed at the national level, but no recommendations have been offered to date. The Northeast Fishery Observer Program will discuss this internally and make a recommendation to the Councils on a minimum number of participants to operate either program.

6. Applying Coverage Exemptions Under Sub-option 1: Sub-option 1 would allow waivers from IFM requirements if coverage was not available due to funding or logistics. The PDT/FMAT suggest that the Councils clarify whether ports without a PS sampler available (e.g., Vinalhaven, Maine) should get a waiver from PS coverage and better define which ports do not have a PS sampler to make it easier to determine coverage exemptions upon implementation. GARFO staff noted that state PS programs have provided an inventory of ports with the capacity for PS and that grant funds are being sought to purchase more equipment for ports that don't have the infrastructure to support PSM.

   The PDT/FMAT discussed if NMFS could use same state samplers with IFM. It was noted that states use contractors, as would the IFM programs. NMFS would approve vendors to provide service to vessels similar to the groundfish fishery. GARFO staff recognized there could be some changes to the list of vendors, but suggested any changes would likely be small.

7. Using Declared Intent for Exemptions Under Sub-Option 5: Sub-option 5 would allow vessels that land less than 25 mt of herring to be exempt from IFM requirements. The PDT/FMAT suggests that vessels declare their intent to land less than 25 mt on a particular trip via the vessel monitoring system (VMS) and that waivers for trips intending to land less than 25 mt would not be necessary. Only vessels intending to land more than 25 mt would notify through existing pre-trip notification system and request coverage.

   The PDT/FMAT discussed examples of other fisheries in which catch is uncertain at the time of initial declaration. GARFO staff clarified that if a vessel doesn't declare into PTNS, but lands more than 25 mt, it would still be able to land, but would be out of compliance. All agreed that the program review would be helpful to evaluate if vessels are landing more than 25 mt, but were not subject to coverage. Participants discussed efforts to minimize the reporting burden for vessels that rarely or don't catch more than 25 mt. GARFO staff noted that all Category A and B permits should have the choice to notify intent on trip basis, as they could operate differently in future and or place their permits on a bigger vessel. All reporting requirements apply to all trips, regardless of notification or not, so treating them the same is consistent with other practices. GARFO staff intended to explore ways to further reduce reporting burdens for vessels that land smaller amounts.

Unintended Consequences:
GARFO staff developed a table ("Potential Unintended Consequences in Herring Fishery") highlighting how the certain herring measures may have unintended consequences to make sure the alternatives selected reflect original goals and objectives of action. Many stakeholders support EM/PS as a cost-effective monitoring alternative to ASM. This document notes that some alternatives, as currently written, seem to create regulatory and economic disincentives to choose EM/PS. GARFO staff sought technical comments on pros/cons and unintended consequences, noting that it is not role of the PDT/FMAT to suggest that the Council adjusts the proposed action. The table offers ways to address these unintended consequences and the pros and cons associated with each choice for three key issues.

1. Timing of ASM or EM/PS Choice: The IFM amendment allows vessels to choose between ASM and EM/PS once the EM/PS pilot program is completed and the Council agrees that EM/PS is an adequate substitute for ASM. Because the pilot program will not be completed until December 2017, ASM measures would apply for the first year. The delayed availability of EM/PS could increase costs and reduce incentives to use EM/PS once available. One suggestion is to adjust Alternative 2.7 to delay ASM and allow vessels to choose between ASM and EM/PS sometime during 2018 to maintain consistency with the intent of the measure to offer a cost-effective choice between monitoring options.

   GARFO estimates that EM/PS could be evaluated and ready for implementation by mid-year 2018. Even if a final rule is published in December, NMFS often delays the effective date to allow vessels to purchase and install new equipment. NEFOP indicated that pilot project equipment would be removed in December, although GARFO staff hoped there was a way vessels could retain equipment to reduce future installation and purchase costs. NEFOP staff confirmed that vessels could take over the equipment lease from NMFS after the pilot program concludes, but that it would have to be a decision between Saltwater and each vessel. This may help reduce purchase and installation costs if a vessel intends to continue to use EM/PS after the pilot program concludes.

2. Combined Versus Additive Coverage: The IFM Amendment originally added IFM coverage to coverage required by the standardized bycatch reporting methodology (SBRM) implemented using NEFOP observers. However, the NEFMC recommended that SBRM coverage be combined with IFM coverage to reduce industry costs. NEFOP staff noted that combined coverage rates are difficult to track and creates economic disincentives to use EM (e.g., vessels choosing ASM benefit from reduced costs due to the inclusion of SBRM coverage). SBRM coverage also operates on a different year, with coverage levels varying dramatically each year. This complicates a vessel's business planning, as IFM coverage expenses would only be known just before the date owners have to decide which monitoring type to use for the next fishing year. Finally, combined coverage may result in excessively high or low coverage rates, depending on the level of SBRM coverage.

   The PDT discussed two possible options to address this issue: (1) Change the coverage year to match the SBRM year (April – March) if combined coverage is still preferred, or (2) revert to additive coverage, with the Council identifying a preferred level of IFM coverage over and above SBRM coverage. Because the groundfish fishing year is close to the SBRM year, this has not been an issue in that fishery, and the scallop fishery handles coverage differently based on different incentives. NEFOP staff indicated the disconnect has often been ignored, but is relevant given the timing associated with monitoring choice for herring vessels in this action. NEFOP and GARFO staff favored additive coverage for simplicity in administration and business planning. GARFO staff noted that

IFM coverage levels could be adjusted via framework, particularly following the Councils' intent to reexamine the program after two years.

Currently, the NEFMC has selected 50% IFM coverage for midwater trawlers. The PDT/FMAT noted that 25% coverage almost always results in a coefficient of variation (CV) less than 30% – the precision target for monitoring coverage. Under an additive approach, the fishery will always have over 50% coverage, as currently proposed. NEFOP will be discussing SBRM at April council meetings, so the Councils will be informed of what SBRM coverage to expect during 2018. The PDT/FMAT would present this to the AP and Committee to see if the additive or combined coverage approach would work better for their business models.

3. Application of Slippage Reporting and Consequence Measures: Originally, slippage reporting requirements only applied to trips covered by ASMs. With the addition of EM/PS measures, the NEFMC extended these reporting requirements to EM trips. Because EM would be recording fishing activity on all trips, the NEFMC recommended that slippage reporting requirements would apply to all EM trips. This is not consistent with how such requirements apply for vessels opting to use ASM instead. To make these measures more equitable, GARFO staff suggested applying the slippage reporting requirements only to trips assigned PS coverage (50%), or applying such requirements to all ASM trips. This would reduce incentives to select ASM over EM/PSM and make the choice between approaches more even given the objectives for this action.

   Currently, there are two consequences for slippage events: Terminate the trip or move 15 miles from the last tow's location if slippage occurred for several allowable reasons (excessive dogfish catch, safety reasons, or mechanical breakdown). Because it is unclear whether EM could detect the reason for a slippage event, GARFO suggested applying the 15-mile move along requirement to all trips assigned PS coverage (50%) or to 100% of ASM trips.

   NEFMC recommended that slippage prohibitions, reporting requirements, and consequence measures apply on observer, ASM, and EM/PS trips. In contrast, the MAFMC decided that slippage prohibitions and reporting requirements would apply to all trips and that slippage consequence measures would apply on observer and ASM trips, but not EM/PS trips. A representative from PEW asked if these decisions could be revised at the April MAFMC meeting, which was confirmed.

   For either issue, the PDT/FMAT did not reach a consensus and wanted additional time to evaluate the implications of GARFO's suggestions. NEFOP staff indicated that PS sampling of landed catch is equivalent to an ASM monitoring catch retained on board. However, staff cautioned that they are still evaluating what EM can and cannot do through the pilot project. Some participants were concerned that prior notification of PS coverage during a trip would create a type of "observer effect" that may change behavior and redirect vessels to ports that do not have adequate PS capacity, which could undermine the effectiveness of linking PS requirements with slippage reporting and consequence measures. Industry participants noted that each vessel identifies 2-3 ports well in advance and would be unlikely to change the decision on a landing port during a trip.

Industry-Funded Monitoring Omnibus Amendment

Proposed Action

New England Fishery Management Council

Herring Advisory Panel and Committee Meetings

April 4-5, 2017

This document describes preferred omnibus alternatives selected by the New England Fishery Management Council (NEFMC) at its November 2016 meeting and the Mid-Atlantic Fishery Management Council at its December 2016 meeting. This document also describes the preferred herring coverage target alternatives selected by the NEFMC at its January 2017 meeting. The preferred omnibus alternatives and the preferred herring coverage target alternatives comprise the proposed action.

1.1.1 Omnibus Alternative 2: Industry-Funded Monitoring Programs (*Preferred Alternative)*

Under Omnibus Alternative 2, there would be an established, standardized structure for new industry-funded monitoring programs that would apply to all New England and Mid-Atlantic fishery management plans (FMPs) that choose to use industry funding to increase monitoring via new programs (the existing scallop and groundfish programs would not be affected by this action). This industry-funded monitoring program structure would include the following components:

- Standard cost responsibilities associated with industry-funded monitoring for NMFS and the fishing industry,
- Process for FMP-specific industry-funded monitoring to be implemented via an **amendment and revised** via a framework adjustment,
- Standard administrative requirements for industry-funded monitoring service providers,
- Process to prioritize new industry-funded monitoring programs in order to allocate available Federal resources for industry-funded monitoring across all FMPs, **including the type of weighing approach and the timing of revising the weighing approach**, and
- Process for FMP-specific monitoring set-aside programs to be implemented via a future framework adjustment action. No individual FMP would be subject to an industry-funded monitoring program as a result of implementation of the Omnibus alternatives proposed in this action. Rather, any FMP that wishes to develop an industry-funded monitoring program, and optionally, a monitoring set-aside program would need to develop the program that meets the specifications of this action in a separate framework.

1.1.1.1 Standard Cost Responsibilities

Omnibus Alternative 2 would establish standard cost responsibilities between NMFS and the industry for supporting monitoring programs targeting coverage above the Standardized Bycatch Reporting Methodology (SBRM). The cost responsibilities described below are already in operation in the Atlantic Sea Scallop and NE Multispecies FMPs, although the cost responsibilities are not explicitly defined in those FMPs.

NMFS Cost Responsibilities

NMFS would be responsible for funding the costs to set standards for, monitor performance of, and administer industry-funded monitoring programs. These program elements would include:

- The labor and facilities costs associated training and debriefing of monitors
- NMFS-issued gear (e.g., electronic reporting aids used by human monitors to record trip information)
- Certification of monitoring providers and individual monitors; performance monitoring to maintain certificates
- Developing and executing vessel selection
- Data processing (including electronic monitoring video audit, but excluding electronic video review)
- Costs associated with liaison activities between service providers, and NMFS, Coast Guard, Councils, sector managers and other partners.

Industry Cost Responsibilities

The industry would be responsible for funding all other costs of the monitoring program. These program elements and activities would include, but are not limited to:

- Costs to the provider for deployments and sampling (e.g., travel and salary for observer deployments and debriefing)
- Equipment, as specified by NMFS, to the extent not provided by NMFS (e.g., electronic monitoring system)
- Costs to the provider for observer time and travel to a scheduled deployment that doesn't sail and was not canceled by the vessel prior to the sail time
- Costs to the provider for installation and maintenance of electronic monitoring systems
- Provider overhead and project management costs (e.g., provider office space, administrative and management staff, recruitment costs, salary and per diem for trainees)
- Other costs of the provider to meet performance standards laid out by a fishery management plan

NMFS costs to administer industry-funded monitoring would be fully funded with Federal funds. The industry would be responsible for its costs; unless it was determined that appropriately-designated Federal funds were also available to offset industry cost responsibilities. If NMFS has funds to cover its administrative cost responsibilities with additional funds remaining, then NMFS may be able to help cover some of the industry's cost responsibilities, such as through reimbursement. The administrative mechanism by which industry cost responsibilities could be offset using available Federal funding can be used in conjunction with Omnibus Alternative 2. *(See Sections 1.1.3 and 1.1.4 in draft EA.)*

1.1.1.2 Framework Adjustment Process

Omnibus Alternative 2 would include the ability for Councils to implement new industry-funded monitoring programs, including at-sea monitoring, dockside monitoring, or

electronic monitoring, through **amendments and revise programs through** framework adjustments to the relevant FMP. ~~Omnibus Alternative 2 would provide the option to implement new industry-funded monitoring programs via a framework adjustment, but it would not require any particular new industry-funded monitoring programs. Under Omnibus Alternative 2, Councils would retain the ability to implement new industry-funded monitoring program via the amendment process.~~ If Omnibus Alternative 2 was not selected by the Councils, Councils would not have the option to use a framework adjustment ~~when suitable~~ **to revise FMP-specific** industry-monitoring **programs** , and a full FMP amendment would be required to ~~implement~~ **revise** industry-funded monitoring programs for any New England and Mid-Atlantic fisheries, excluding existing industry funded monitoring programs in the Scallop and Multispecies FMP~~, and any program developed in this action for the Herring or Mackerel, Squid, and Butterfish FMPs~~.

1.1.1.3 Monitoring Service Providers

Omnibus Alternative 2 would modify the existing SBRM observer service provider (at 50 CFR 648.11(h) and (i)) approval and certification process to also apply to observer and dockside service providers for all New England and Mid-Atlantic FMPs. The selection of Omnibus Alternative 2 would not implement any new at-sea observer or dockside monitoring programs, but would only implement a process and standards to approve and certify monitoring service providers.

Monitoring service provider regulations for electronic monitoring programs. Monitoring service provider regulations for electronic monitoring programs will be based on regulations for existing regional and national electronic monitoring programs. Electronic monitoring service provider regulations are currently in place for the NE multispecies fishery *(See Appendix 2 in draft EA)*. The Greater Atlantic and West Coast Regions will be working together to develop consistent electronic monitoring service provider regulations. *(West Coast Region published a proposed rule (FR 61161) on September 6, 2016).*

Special considerations for service provider requirements

In order to minimize costs, the overarching service provider requirements for all industry-funded programs, including at-sea, dockside, and electronic monitoring programs, are proposed to be the same for all FMPs. This means that the overarching industry-funded monitoring service provider regulations will be standardized for all FMPs, whether industry funding is necessary to support statutory monitoring requirements (Magnuson-Stevens Act, Marine Mammal Protection Act (MMPA), Endangered Species Act (ESA)), or monitoring coverage above statutory requirements. However, the Amendment would allow individual FMPs to deviate from the overarching monitoring service provider requirements on an FMP-specific basis.

1.1.1.4 Prioritization Process

If sufficient Federal funding was not available to cover NMFS cost responsibilities, Omnibus Alternative 2 includes a prioritization process for coverage targets above SBRM and independent from ESA and MMPA requirements in order to allocate available Federal funding across FMPs. Prioritization criteria would enable the Council and/or NMFS to decide what is funded. The prioritization process would not apply to the existing scallop and groundfish industry-funded monitoring programs as funding for those programs would be different than any new industry-funded monitoring programs.

NMFS cannot approve and implement monitoring requirements for which it does not have available Federal funding to cover NMFS cost responsibilities. NMFS can, however, approve coverage targets associated with industry-funded monitoring programs for FMPs with the understanding that annual funding available to cover NMFS cost responsibilities will dictate realized coverage levels. When there is no Federal funding available to cover NMFS cost responsibilities above SBRM coverage, then no industry-funded monitoring program could operate.

In the event that no Federal funding is available, and the IFM program does not allow for vessels to be issued waivers to exempt them from industry-funded monitoring requirements, the fishing effort will be reduced to match available monitoring. However, if waivers are able to be issued then fishing could continue in the absence of additional monitoring.

1.1.1.5 Omnibus Alternative 2.2: Council-led Prioritization Process for Industry-funded Monitoring Programs (Preferred Alternative)

Alternative 2.2 would require the Regional Administrator and Science and Research Director to inform the Councils of NMFS's available funding to achieve targets for industry-funded monitoring coverage, including the level available for NMFS's infrastructure costs and any additional funds to offset industry costs, as defined under Alternative 2. If available funding in a given year was sufficient, funds would be distributed to fully implement the industry-funded monitoring coverage targets specified in each FMP. If available funding was not sufficient, the Councils would apply the weighting approach below to determine the best prioritization of industry-funded monitoring in order to meet regional priorities and make recommendations to NMFS. Funding for SBRM, ESA, and MMPA observer coverage would not be changed by this measure.

~~The Councils will need to identify a weighting approach to prioritize industry-funded monitoring programs under the Council-led prioritization process alternative in this action.~~ **Both Councils identified** ~~The Councils may want to consider specifying~~ an equal weighting approach **as the preferred alternative** in this action, acknowledging that a more complex weighting approach could be developed in the future. An example of an equal weighting approach would be funding both industry-funded monitoring programs at 70%, if only 70% of the Federal funding needed to administer both programs was available.

Revising the prioritization process (e.g., change from Council-led to NMFS-led) could be done in a future framework action. But, the Councils could also change the weighting approach for the Council-led prioritization process by considering a new weighting approach at a public meeting, where public comment is taken, and asking NMFS to publish a notice or rulemaking modifying the weighting approach. Both Councils would have to agree to any weighting approach. Establishing an equal weighting approach in this action would ensure that the management objectives of both Councils are initially given equal weight and allow time for more complex weighting systems to be developed without delaying implementation.

The Council identified readjusting the weighting approach on an as-needed basis as the preferred alternative in this action for revising the timing approach. The weighting approach would occur on an as-needed basis (i.e., whenever new IFM programs are approved, or whenever existing IFM programs are adjusted or terminated), with the adjusted prioritization implemented in time for the next SBRM cycle. Once the prioritization was developed it would be in place indefinitely, until the next industry-funded monitoring program was finalized.

Rationale: This alternative would allow both Councils to work together in determining a weighting approach that best achieves priorities among new IFM programs. The ability to adjust the equal weighting approach, when needed, provides flexibility to the Councils in the event additional IFM programs are developed, existing IFM programs are revised, or priorities have changed.

1.1.1.6 Omnibus Alternative 2.6: Monitoring Set-Aside (Preferred Alternative)

Omnibus Alternative 2.6 would include general language in the regulations of each FMP that would allow monitoring set-aside provisions to be implemented via a framework adjustment. A monitoring set-aside program would devote a portion of the annual catch limit (ACL) from a fishery to offset the industry cost responsibilities for at-sea, electronic, or dockside monitoring. All potential monitoring set-aside programs should be considered as an alternative to off-set monitoring cost, and should not be expected to fully cover monitoring costs. Most fisheries will not have enough value, capacity, or abundance/availability (i.e., stock size, distribution, etc.) to fully cover the costs of intense monitoring goals.

One monitoring set-aside model for a fishery that uses possession limits could consist of reserving some percentage of the ACL (e.g., up to 3 percent) to be allocated to certain vessels to help off-set the additional monitoring costs. Any vessel in that fishery that is selected to carry an at-sea observer would be granted a certain amount of pounds from the monitoring set-aside allocation to land above the possession limit. The revenue obtained from the sale of the additional landings would help offset the vessel's costs of carrying an at-sea observer. Preliminary analysis suggests that set-asides for monitoring will work best in profitable fisheries and when only a modest increase in monitoring is desired (like scallops).

Absent this measure, a full FMP amendment would be required for all fisheries intending to implement a monitoring set-aside to defray industry costs for monitoring programs. Adopting this measure would not implement a monitoring set-aside for any individual FMP. Rather, it would expedite the development of monitoring set-aside provisions for FMPs in future framework adjustments.

Under Omnibus Alternative 2.6, the details and impacts analysis of any monitoring set-aside program would be specified and/or modified in a subsequent framework adjustment to the relevant FMP. Additional NEPA analysis would be required for any action implementing and/or modifying monitoring set-aside provisions, regardless if it required a framework adjustment or full amendment.

Rationale: This alternative allows for a streamlined process to implement monitoring set-asides in individual FMPs in the event the Councils deem this to be an appropriate tool to fund industry-funded monitoring. Monitoring set-asides may help offset industry cost responsibilities associated with industry-funded monitoring.

1.1.2 Herring Alternative 2: Coverage Target Specified for Industry-Funded Monitoring Program (*Preferred Alternative*)

Under Herring Alternative 2, the NEFMC would specify the details of an industry-funded monitoring program for the Herring FMP. These details may include, but are not limited to: (1) Level and type of coverage target, (2) rationale for level and type of coverage, (3) minimum level of coverage necessary to meet coverage goals, (4) consideration of coverage waivers if coverage target cannot be met, (5) process for vessel notification and selection, (6) process for payment of industry cost responsibilities, (7) standards for monitoring service providers, and (8) any other measures necessary to implement the industry-funded monitoring program. Additional NEPA analysis would be required for any subsequent FMP ~~framework adjustment~~ action implementing and/or modifying the specified industry-funded monitoring programs.

The realized coverage level in a given year would be determined by the amount of funding available to cover NMFS cost responsibilities in a given year. The realized coverage for the fishery in a given year would fall somewhere between no additional coverage above SBRM and the specified coverage target.

Herring Alternative 2 would allow several sub-options to apply to the herring coverage target alternatives. Sup-options could apply to any of the alternatives except Herring Alternative 2.5.

- Sub-Option 1 (***Preferred Alternative***) would allow vessels to be issued waivers to exempt them from industry-funded monitoring requirements, for either a trip or the fishing year, if coverage was unavailable due to funding or logistics. Selection of this

sub-option preserves the NEFMC's intent for additional monitoring in the herring fishery, but would not prevent vessels from participating in the herring fishery if monitoring coverage was not available. Should the NEFMC not select Sub-Option 1, the fishing effort would be reduced to match the available level of monitoring (i.e., the fleet would not fish if NMFS does not have funding for the program). Reducing fishing effort to match available monitoring may lack sufficient justification and be inconsistent with National Standards.

- Sub-Option 2 (***Preferred Alternative***) would exempt a wing vessel pair trawling with another vessel from industry-funded monitoring requirements, provided the vessel does not pump or carry any fish onboard.
- Sub-Option 3 would require that industry-funded monitoring requirements expire two years after implementation.
- Sub-Option 4 (***Preferred Alternative***) would require the NEFMC to examine the results of any increased coverage in the herring fishery two years after implementation, and consider if adjustments to the coverage targets are warranted. Depending on the results and desired actions, subsequent action to adjust the coverage targets could be accomplished via a framework adjustment or an amendment to the Herring FMP, as appropriate.
- Sub-Option 5 (***Preferred Alternative***) would exempt trips that land less than 25 mt of herring from industry-funded monitoring requirements.

In addition to the standard monitoring and service provider requirements specified in Omnibus Alternative 2, Herring Alternative 2 would specify that requirements for industry-funded observer and at-sea monitors include a High Volume Fishery (HVF) certification for the herring fishery. The existing NEFOP HVF certification training program would be available to industry-funded observers and NEFOP would develop a new HVF certification training program for industry-funded at-sea monitors.

Under Herring Alternative 2, the process for vessel notification and selection and payment of industry cost responsibilities would be developed during the rulemaking and amendment approval process.

1.1.2.1 Herring Alternative 2.5: 100% NEFOP-Level Coverage on Midwater Trawl Fleet Fishing in Groundfish Closed Areas (Preferred Alternative)

NEFMC ~~would~~ select**ed** 100% NEFOP-Level coverage for all vessels using midwater trawl gear fishing in Groundfish Closed Areas.

Herring Alternative 2.5 would require vessels fishing with midwater trawl gear in the Groundfish Closed Areas to carry a NEFOP-level observer. The sub-options (i.e., waiver allowed, wing vessel exemption, 2 year sunset, 2 year evaluation, and 25 mt threshold) described under Herring Alternative 2 would not apply to Herring Alternative 2.5.

The Groundfish Closed Areas ***currently*** include: Closed Area I, Closed Area II, Nantucket Lightship Closed Area, Cashes Ledge Closure Area, and Western Gulf of Maine Closure Area.

Prior to any Groundfish Closed Area trip declared into the herring fishery, representatives for vessels with midwater trawl gear would be required to provide notice to NMFS and request a NEFOP-level observer through the pre-trip notification system. If an SBRM observer was not selected to cover that trip, NMFS would notify the vessel representative that NEFOP-level observer coverage must be procured through an industry-funded at-sea monitoring service provider. The vessel representative would then be required to contact an industry-funded monitoring service provider to obtain and pay for a NEFOP-level observer to carry on its next fishing trip within a Groundfish Closed Area. The vessel would be prohibited from fishing for, taking, possessing, or landing any herring on any trip within a Groundfish Closed Area without carrying a NEFOP-level observer for that trip. Acknowledging that available Federal funding to cover NMFS cost responsibilities may be limited, this alternative would likely reduce the ability of the midwater trawl fleet to participate in the herring fishery inside the Groundfish Closed Areas.

NEFOP-level observers would collect the following information on herring trips in Groundfish Closed Areas:

- Fishing gear information (i.e., size of nets, mesh sizes, and gear configurations);
- Tow-specific information (i.e., depth, water temperature, wave height, and location and time when fishing begins and ends);
- All retained and discarded catch (fish, sharks, crustaceans, invertebrates, and debris) on observed hauls (species, weight, and disposition);
- Retained catch on unobserved hauls (species, weight, and disposition);
- Actual catch weights whenever possible, or alternatively, weight estimates derived by sub-sampling;
- Whole specimens, photos, length information, and biological samples (i.e., scales, otoliths, and/or vertebrae from fish, invertebrates, and incidental takes);
- Information on interactions with protected species, such as sea turtles, marine mammals, and sea birds; and
- Vessel trip costs (i.e., operational costs for trip including food, fuel, oil, and ice).

The 100% NEFOP-level observer coverage target for this alternative would be calculated by combining SBRM and industry-funding monitoring coverage. One way to achieve this combined coverage target would be to use an estimate of the previous year's SBRM coverage for midwater trawl vessels (e.g., 5%) combined with industry-funded monitoring (e.g., 95%). Because the coverage target is calculated by combining SBRM and industry-funded monitoring coverage, a vessel would not carry an SBRM observer and industry-funded observer on the same trip.

Under Herring Alternative 2.5, slippage restrictions and reporting requirements would apply to all midwater trawl vessels with limited access herring permits fishing in Groundfish Closed Areas and slippage consequences would apply to all midwater trawl vessels with Category A and B herring permits fishing in Groundfish Closed Areas.

Rationale: The requirement that midwater trawl vessels fishing in the Groundfish Closed Areas carry a NEFOP-level observer was established in Herring Amendment 5. Analyses in Amendment 5 suggest that midwater trawl vessels are not catching significant amounts of groundfish either inside or outside the Groundfish Closed Areas. Additionally, the majority of groundfish catch by midwater trawl vessels is haddock, and the catch of haddock by midwater trawl vessels is already managed through a haddock catch cap for the herring fishery. However, the rationale in Amendment 5 described the importance of determining the extent and nature of catch and bycatch in the herring fishery. This alternative would still allow the herring midwater trawl fishery to operate in the Groundfish Closed Areas, but it would ensure that opportunities for sampling are maximized.

Revisions to the SBRM in April 2015 affected how funding is used to allocate observer coverage, such that SBRM funding must first be used to provide SBRM coverage. SBRM coverage is used to estimate amount of fish discarded at sea. Since midwater trawl vessels generally discard only a small percentage of catch at sea, SBRM coverage allocated to midwater trawl vessels is relatively low compared to coverage allocated to other gear types that have higher discard rates. Thus, the realized coverage level of midwater trawl vessels fishing in Groundfish Closed Areas will only be equivalent to SBRM coverage aboard midwater trawl vessels, likely less than 100% observer coverage. This alternative was added to this amendment to increase observer coverage on midwater trawl vessels and allow those vessels access to the Groundfish Closed Areas with industry-funded monitoring.

1.1.2.2 Herring Alternative 2.7: At-Sea Monitoring Coverage on Category A and B Vessels, Then Vessels May Choose Either At-Sea Monitoring Coverage or Electronic Monitoring and Portside Sampling Coverage (Preferred Alternative)

~~NEFMC would select ASM coverage targets (25%, 50%, 75%, or 100%) and EM/Portside sampling coverages for all Category A and B vessels. A different coverage target (25%, 50%, 75%, or 100%) may be selected for each monitoring type (ASM or EM/Portside sampling) and each gear type (midwater trawl, purse seine, bottom trawl)~~.

NEFMC selected an ASM coverage target of 50%, using the combined coverage target approach, and EM/portside sampling coverage target of 50%, using the additive coverage target approach, for all Category A and B vessels. Different coverage target (25%, 50%, 75%, or 100%) were analyzed for each gear type (midwater trawl, purse seine, bottom trawl), but the NEFMC selected a 50% coverage target for all gear types.

Initially, Herring Alternative 2.7 would require vessels with Category A and B herring permits to carry an at-sea monitor on every declared herring trip selected for coverage by NMFS. Vessels would be selected to carry an at-sea monitor by NMFS to meet the ASM coverage target (~~25%,~~ 50%~~, 75%, or 100%~~) specified in this action.

Prior to any trip declared into the herring fishery, representatives for vessels with Category A and B herring permits would be required to provide notice to NMFS and request an at-

sea monitor through the pre-trip notification system. If an SBRM observer was not selected to cover that trip, NMFS would notify the vessel representative whether or not an at-sea monitor must be procured through an industry-funded monitoring service provider. If NMFS informs the vessel representative that at-sea monitoring coverage is necessary, they would then be required to contact an industry-funded monitoring service provider to obtain and pay for an at-sea monitor to carry on its next fishing trip. The vessel would be prohibited from fishing for, taking, possessing, or landing any herring without carrying an at-sea monitor on its next trip. If NMFS informs the vessel representative that at-sea monitoring coverage is not necessary on its next trip, NMFS would issue the vessel an at-sea monitoring coverage waiver.

At-sea monitors would collect the following information on herring trips:

- Fishing gear information (i.e., size of nets, mesh sizes, and gear configurations);
- Tow-specific information (i.e., depth, water temperature, wave height, and location and time when fishing begins and ends);
- All retained and discarded catch (fish, sharks, crustaceans, invertebrates, and debris) on observed hauls (species, weight, and disposition);
- Actual catch weights whenever possible, or alternatively, weight estimates derived by sub-sampling;
- Length data on retained and discarded catch;
- Information on interactions with protected species, such as sea turtles, marine mammals, and sea birds; and
- Vessel trip costs (i.e., operational costs for trip including food, fuel, oil, and ice).

Revising the duties for an at-sea monitor, such that additional biological information would be collected, could be done in a future framework action. The NEFMC may also recommend that at-sea monitors collect additional biological information by considering the issue at a public meeting, where public comment is taken, and asking NMFS to publish a notice or rulemaking modifying the duties for at-sea monitors.

The ASM coverage target (~~25%~~, 50%, ~~75%, or 100~~%) for this alternative would be calculated by combining SBRM and industry-funding monitoring coverage. One way to achieve this combined coverage target would be to use an estimate of the previous year's SBRM coverage for vessels with Category A and B herring permits (e.g., 15%) combined with industry-funded monitoring (e.g., 10%). Because the coverage target is calculated by combining SBRM and industry-funded monitoring coverage, a vessel would not carry an SBRM observer and industry-funded at-sea monitor on the same trip.

Initially, Herring Alternative 2.7 would require all vessels with Category A and B permits to carry an at-sea monitor on every declared herring trip selected for coverage by NMFS. If an at-sea monitor was not available to cover a specific herring trip (either due to logistics or a lack of funding), that vessel would be prohibited from participating in the herring fishery on that trip.

If the NEFMC determines that EM/portside sampling is an adequate substitute for ASM coverage aboard midwater trawl vessels, then Category A and B vessels using midwater trawl gear would be able to choose whether to use ASM or EM/portside sampling coverage. The coverage targets (~~25%, 50%, 75%, or 100%~~) for each monitoring type (ASM and EM/portside) and each gear type (midwater trawl, purse seine, bottom trawl) would be selected by the NEFMC.

If in the future, the NEFMC determined that EM/portside sampling is an adequate substitute for ASM coverage aboard purse seine or bottom trawl vessels. If so, then the ability of Category A and B vessels using purse seine or bottom trawl gear to choose whether to use ASM or EM/portside sampling coverage would be considered in a future action, consistent with the NEFMC's process to approve a new gear type.

Once Category A and B vessel using midwater trawl gear are able to choose between ASM and EM/portside sampling, midwater trawl vessels would be required to: 1) Choose one monitoring type per fishing year and 2) declare their preferred monitoring type six months in advance of the fishing year. After consulting with NMFS, the Councils will establish a minimum participation threshold for each monitoring type for a fishing year. If the minimum participation level for a monitoring type was not achieved for a given year, then midwater trawl vessels would not be able to use that monitoring type during that given year.

If a Category A or B vessel using midwater trawl gear chose EM/portside monitoring coverage for a given year, that vessel would be required to carry an operating EM system on every trip declared into the herring fishery and allow portside sampling of their catch on declared herring trip selected for coverage by NMFS. The intention of the NEFMC would be that all declared herring trips by midwater trawl vessels would have some percentage of EM footage sampled (~~25%, 50%, 75%, or 100%~~) and that same percentage of trips sampled portside (~~25%, 50%, 75%, or 100%~~). ~~However, factors such as where catch is landed, ability to access the offload, and infrastructure limitations at certain landing ports, may prevent the program from achieving 100% coverage, even if funding is not limiting.~~

~~If an operative EM system or portside sampler was not available to cover a specific herring trip (either due to logistics or a lack of funding), that midwater vessel would be prohibited from participating in the herring fishery on that trip.~~

The EM footage and portside sampling coverage target (~~25%, 50%, 75%, or 100%~~) for this alternative would be calculated independent of and in addition to SBRM coverage. To reach a 50% coverage target in a given year, the rate of EM footage review and portside sampling would both equal 50%, regardless of the amount of SBRM coverage on midwater trawl vessels. Because the coverage target is calculated independent of and in addition to SBRM coverage, a vessel may carry an SBRM observer on that same trip that would be sampled portside.

As recommended by the NEFMC, Herring Alternative 2.7 would have a pre-implementation plan to help the industry understand any new EM and portside monitoring requirements

and become compliant with sampling equipment, notification, sampling, and reporting requirements.

Under Herring Alternative 2.7, all slippage restrictions, reporting requirements, and slippage consequences would apply to vessels with Category A and B herring permits.

The realized observer coverage level for this alternative in a given year would be determined by the amount of Federal funding available to cover NMFS cost responsibilities. The realized observer coverage level would fall anywhere between SBRM coverage and the specified at-sea monitoring coverage level on vessels with Category A and B herring permits. Acknowledging that available Federal funding to cover NMFS cost responsibilities may be limited, this alternative would likely **have** reduce**d** the ability of vessels with Category A and B herring permits using midwater trawl gear to participate in the herring fishery~~, unless~~ **if** Sub-Option 1 ~~was~~ **had not been** selected allowing coverage requirements to be waived.

Rationale: In contrast to NEFOP-level observers, at-sea monitors would not collect whole specimens, photos, or biological samples (other than length data) from catch or data on interactions with protected species. The NEFMC recommended that at-sea monitors collect only a limited data set compared to NEFOP-level observers to allow for any possible cost savings associated with reducing training time, gear requirements, and internal support resources necessary to administer an at-sea monitoring program for the herring fishery. *(See Appendix 5 – Analysis of ASM Costs for additional details.)*

Because the midwater trawl fleet discards only a small percentage of its catch at sea, EM and portside sampling have the potential to be a cost effective way to address monitoring goals for the midwater trawl fleet harvesting herring. EM would be used to verify retention of catch on the midwater trawl fleet and portside sampling would be used to verify amount and species composition of landed catch.

The implementation of EM in the herring fishery would be based on the ongoing EM exempted fishing permit program for the West Coast whiting fishery that is expected to be transitioned into regulation by 2017. The implementation of portside sampling in the herring fishery would be based on the existing portside sampling program for the midwater trawl fleet operated by the Massachusetts Division of Marine Fisheries and Maine Department of Marine Resources.

To ensure an equitable monitoring burden across Category A and B vessels, the NEFMC recommended Category A and B vessels be able to choose between ASM and EM/portside monitoring coverage for a given fishing year.

Slippage restrictions, reporting requirements, and consequences are intended to improve catch monitoring by minimizing discarding events to help ensure that total catch is available for sampling.

Combining SBRM coverage with industry-funded monitoring coverage to achieve the ASM coverage target (~~25%,~~ 50%~~, 75%, or 100%~~) is intended to reduce the costs associated with industry-funded monitoring coverage. Because there in value in comparing information on discarding and catch composition collected by an SBRM observer with data collected by EM and portside sampling, the coverage target for EM and portside sampling is calculated independent of and in addition to SBRM coverage.

MEMORANDUM

DATE: March 17, 2017

TO: New England Fishery Management Council (NEFMC)
Mid-Atlantic Fishery Management Council (MAFMC)

FROM: Industry-Funded Monitoring Plan Development Team (PDT)/Fishery Management Action Team (FMAT)

SUBJECT: Proposed Clarifications to the action proposed by the NEFMC in the Industry-Funded Monitoring (IFM) Omnibus Amendment

This document summarizes the proposed action in the IFM Amendment and proposes clarifications to the proposed action for the NEFMC's consideration at its April 2017 meeting. The proposed clarifications are recommended by the PDT/FMAT to address details of the proposed action that need further development. All proposed clarifications are highlighted.

Proposed Action for All NEFMC FMPs

1. Omnibus Alternative 2, standardized structure for new IFM programs that would apply to all NEFMC FMPs, includes the following components: (1) Standard cost responsibilities associated with IFM for NMFS and the fishing industry, (2) a process for FMP-specific IFM to be revised via a future framework adjustment action, (3) standard administrative requirements for IFM service providers, and (4) a process for FMP-specific monitoring set-aside programs to be implemented via a future framework adjustment action.
    A. Previous Clarification - New IFM programs would be implemented via an amendment.
    B. Previous Clarification - NEFOP-level observers and at-sea monitors may be deployed on the same vessel for more than two consecutive multi-day trips or more than twice in a given month.
2. Omnibus Alternative 2.2, Council-led prioritization process to allocate available Federal funding,
    A. Previous Clarification - Equal weighting approach would be used to prioritize available Federal funding.
    B. Previous Clarification - Weighting approach would be readjusted on an as-needed basis.
3. Omnibus Alternative 2.6, ability to develop monitoring set-asides in a future framework.

Proposed Action for Herring Fishery

1. Herring Alternative 2, establishing an industry-funded monitoring coverage target in the herring fishery,
    A. Previous Clarification - Requirements for industry-funded observer and at-sea monitors include a High Volume Fishery Certification for the herring fishery.
    B. Issue - Alternative includes two types of monitoring programs, but does not specify how available Federal funding would be prioritized between the monitoring types.
    Proposed Clarification - Available Federal funding would be prioritized to ASM and EM/PS coverage on Category A and B vessels (Herring Alternative 2.7) and then to NEFOP-level observer coverage on midwater trawl vessels fishing in Groundfish Closed Areas (Alternative 2.5) to maximize coverage on the most vessels.

C. Issue - Alternative does not specify how combined coverage targets would be calculated.
Proposed Clarification - Combined coverage targets would be calculated by NMFS, in consultation with Council staff.

D. Issue - If monitoring requirements for the herring and mackerel fisheries do not match, alternative does not specify the coverage target for vessels on trips declared into both the herring and mackerel fisheries.
Proposed Clarification - If coverage targets do not match for the herring and mackerel fisheries, then the higher coverage target would apply on trips declared in both the herring and mackerel fisheries.

2. Herring Alternative 2.5, 100% observer coverage on midwater trawl vessels in Groundfish Closed Areas,

A. Issue - Herring Amendment 5 stated that if Groundfish Closed Areas are modified and/or eliminated in the future, access by midwater trawl vessels will be considered accordingly in the related groundfish action. The Habitat Amendment proposes to make changes Groundfish Closed Areas, such as eliminating areas, boundary changes, and seasonality.
Proposed Clarification - This alternative would require 100% observer coverage aboard midwater trawl vessels fishing in the Groundfish Closed Areas, as modified by the Habitat Amendment.

3. Herring Alternative 2.7, initially 50% at-sea monitoring (ASM) coverage on Category A and B vessels, if NEFMC determines that electronic monitoring (EM) and portside sampling (PS) coverage are an adequate substitute for ASM, then vessels may choose either 50% ASM or 50% EM/PS coverage. Once vessels are able to choose between ASM and EM/PS sampling, vessels would be required to: 1) Choose one monitoring type per fishing year and 2) declare their preferred monitoring type six months in advance of the fishing year. After consulting with NMFS, the Councils will establish a minimum participation threshold for each monitoring type for a fishing year.

A. Issue - Alternative specifies coverage on Category A and B vessels using midwater trawl, purse seine, and small mesh bottom trawl. NMFS EM project is only evaluating EM aboard midwater trawl vessels.
Proposed Clarification - Initially, the NEFMC will only be evaluating if EM/PS is an adequate substitute for ASM coverage aboard Category A and B vessels using midwater trawl gear. In the future, the NEFMC may determine that EM/PS is an adequate substitute for ASM coverage aboard purse seine or bottom trawl vessels.

B. Issue - Alternative does not specify a process for NEFMC to evaluate if EM/PS is an adequate substitute for ASM.
Proposed Clarification - Similar to a vessel's ability to choose ASM or EM in Groundfish Amendment 16, this alternative would specify the following language: EM may be used in place of ASM in the herring fishery if the technology is deemed sufficient by the NEFMC. The Regional Administrator, in consultation with the NEFMC, may approve the use of EM systems for the herring fishery in a manner consistent with the Administrative Procedure Act, with final measures published in the *Federal Register*. A vessel electing to use EM in lieu of ASM must develop a vessel monitoring plan to implement EM requirements that is satisfactory to, and approved by, NMFS for monitoring catch, discards and slippage events. The vessel monitoring plan must meet the EM operational standards. The EM/PS program shall be reviewed and approved by the Regional Administrator as part of a vessel's monitoring plan on a yearly basis in a manner consistent with the Administrative Procedure Act.

C. Issue - Alternative does not specify the process for establishing a minimum participation threshold for a monitoring type.
Proposed Clarification - Clarification is still being developed. Clarification may specify the minimum participation level for a monitoring type would depend on 1) the minimum number of vessels required for NMFS to operate that monitoring program and/or 2) the minimum number of vessels required to generate an adequate catch cap estimate. Further clarification will be provided at the April 2017 NEFMC meeting.

4. Sub-Option 1, issue waivers if coverage is unavailable due to funding or logistics,
   A. Issue - Sub-Option does not specify the types of coverage to which it applies.
   Proposed Clarification - Sub-Option 1 would allow IFM coverage waivers to be issued on a trip-by-trip basis to vessels using ASM and EM/PS coverage.
5. Sub-Option 2, exempt wing vessels not carrying fish,
   A. Issue - Alternative does not specify process to exempt wing vessels not carrying fish.
   Proposed Clarification - Sub-Option 2 would allow an exemption to IFM coverage requirements on a trip-by-trip basis to wing vessels not carrying fish. Vessels would notify NMFS via the pre-trip notification system (PTNS) in advance of the wing vessel trip and NMFS would issue a waiver for IFM coverage requirements on that trip. If the vessel carried herring on that trip, the vessel would be out of compliance with IFM coverage requirements.
6. Sub-Option 4, require Council to reconsider IFM requirements 2 years after implementation,
7. Sub-Option 5, exempt vessels landing less than 25 mt of herring,
   A. Issue - Alternative does not specify a process to exempt vessels landing less than 25 mt of herring.
   Proposed Clarification - Sub-Option 5 would allow an exemption to IFM coverage requirements on a trip-by-trip basis to vessels landing less than 25 mt of herring. Vessels would notify NMFS via the PTNS in advance of the trip on which they intend to land less than 25 mt of herring and NMFS would issue a waiver for IFM coverage requirements on that trip. If the vessel landed more than 25 mt of herring on that trip, the vessel would be out of compliance with IFM coverage requirements.

The National Marine Fisheries Service (NMFS) is providing comments on the proposed action for the herring fishery in the Industry-Funded Monitoring (IFM) Omnibus Amendment identified by the New England Fishery Management Council (NEFMC) at its January 2017 meeting.

Most stakeholders support the use of electronic monitoring (EM) and portside sampling (PS) for midwater trawl (MWT) vessels in the herring fishery, but the proposed action may create regulatory and economic disincentives for MWT vessels to use EM/PS coverage. Issues that may create disincentives for MWT vessels to use EM/PS are the timing of being able to choose between at-sea monitoring (ASM) and EM/PS coverage, how coverage targets are calculated, and requirements associated with slippage.

1. Issue – Delaying the ability of MWT vessels to choose between ASM and EM/PS until 2019 may be a disincentive for MWT vessels to choose EM/PS as a monitoring option.

   NMFS EM project will be completed at the end of 2017. Herring Alternative 2.7 specifies that vessels are limited to one monitoring type per year. If there is a full year between the end of the NMFS EM project and when MWT vessels can use EM/PS as a monitoring option, vessels may be unwilling to expend the time and money to re-install EM equipment.

   Recommendation – Adjust the timing of IFM Amendment implementation so that MWT vessels could choose (if appropriate) between ASM and EM/PS coverage in 2018.

Proposed Action - Herring Alternative 2.7	**NMFS Recommendation – Adjusted Herring Alternative 2.7**
• MWT vessels would use ASM in 2018 and could choose (if appropriate) between ASM and EM/PS in 2019 o PS data in 2019 would be primarily generated by a Federal portside program	• MWT vessels could choose (if appropriate) between ASM and EM/PS in 2018 o PS data in 2018 would be primarily generated by the existing state programs in Massachusetts and Maine

2. Issue – NEFMC recommended combined coverage targets for IFM observer and ASM coverage and additive coverage targets for EM/PS coverage. How coverage targets are calculated may affect a MWT vessel's ability to evaluate the more cost effective monitoring type and may discourage MWT vessels from using EM/PS.

   Recommendation – Specify that coverage targets for IFM observer, ASM, and EM/PS coverage are additive and calculated independent of the Standardized Bycatch Reporting Methodology (SBRM).

Proposed Action - Combined Coverage Targets (SBRM + IFM = Target)		**NMFS Recommendation - Additive Coverage Targets (Coverage in addition to SBRM coverage)**	
Pros	**Cons**	**Pros**	**Cons**
• May reduce costs of IFM for observers and at-sea monitors	• The more cost effective monitoring type may vary year to year with SBRM coverage • May need to change coverage year to match SBRM year • Realized coverage may vary year to year and affect contracts between vessels and service providers • EM/PS only cheaper than ASM if SBRM coverage rates are less than around 23% • Labor intensive for NMFS to calculate and track	• The more cost effective monitoring type likely would not vary year to year • Coverage year would match fishing year • Realized coverage would be stable and not dependent upon SBRM coverage • Increases the cost effectiveness of EM/PS relative to ASM • Less labor intensive for NMFS to calculate and track	• Would not reduce costs of IFM for observers and at-sea monitors • Should consider SBRM coverage when selecting IFM coverage targets

3. Issue – NEFMC recommended slippage prohibitions and reporting requirement apply on all trips with an at-sea monitor (50% of trips) and all trips with EM (100% of trips). For this reason, the compliance burden associated with slippage requirements may be higher on trips with EM compared to trips with ASM, but the rate of sampling on EM/PS and ASM trips would be the same (50% coverage target).

   Recommendation – Specify that slippage prohibition and reporting requirements apply on all trips sampled portside (50% of trips) or on all trips during a year that a vessel is using ASM coverage (100% of trips).

<table>
<tr><th colspan="2">Proposed Action - Slippage Requirements on all EM Trips (100%)</th><th colspan="2">NMFS Recommendation - Slippage Requirements on all Trips Sampled Portside (50%)</th></tr>
<tr><th>Pros</th><th>Cons</th><th>Pros</th><th>Cons</th></tr>
<tr><td rowspan="5">• Vessels notified during trip whether or not they would be sampled portside</td><td rowspan="5">• Increased slippage compliance burden without the benefit of additional sampling data
• Potential inequity in slippage compliance burden between trips with ASM and EM/PS coverage
• May be a disincentive for vessels to use EM/PS</td><td>• Slippage compliance burden is balanced by the benefit of additional sampling data
• Equity in slippage compliance burden between trips with ASM and EM/PS coverage
• Consistent with slippage requirements when an observer or at-sea monitor is aboard</td><td>• Similar to ASM and observer coverage, vessels notified before they left the dock whether or not they would be sampled portside</td></tr>
<tr><td colspan="2">Alternative NFMS Recommendation - Slippage Requirements on all Trips During the Year When a Vessel is Using ASM Coverage (100% of trips)</td></tr>
<tr><td>Pros</td><td>Cons</td></tr>
<tr><td>• Equity in compliance burden between trips with ASM and EM/PS coverage</td><td>• Increased slippage compliance burden without the benefit of additional sampling data
• Compliance only verified when an at-sea monitor is aboard</td></tr>
</table>

4. Issue – NEMFC recommended slippage consequence measures apply on all trips with an at-sea monitor (50% of trips) and all trips with EM (100% of trips). If EM cannot verify the reason for slippage, then it may not be an appropriate tool to verify compliance with slippage consequence measures and NMFS may have difficulty approving the requirement that slippage consequence measures apply on all EM trips.

   Recommendation – Specify that a 15-mile slippage consequence measure would apply on all trips sampled portside (50% of trips) so that EM would not need to be used to verify the reason for slippage.

Proposed Action - Slippage Consequence Measures on all EM trips		**NMFS Recommendation - 15-Mile Slippage Consequence Measure on all Trips Sampled Portside**	
Pros	**Cons**	**Pros**	**Cons**
• Vessels notified during trip whether or not they would be sampled portside	• Unknown if EM can be used to verify reason for slippage • NMFS may have difficulty approving EM as a tool to verify compliance with slippage consequence measures • Potential inequity in slippage compliance burden between trips with ASM and trips with EM/PS • May be a disincentive for vessels to use EM/PS	• EM would not need to verify reason for slippage • Equity in slippage compliance burden between trips with ASM and trips with EM/PS • May be an incentive for vessels to use EM/PS	• Similar to ASM and observer coverage, vessels notified before they left the dock whether or not they would be sampled portside • Only trips with ASM would have a trip termination requirement