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Industry-Funded Monitoring Omnibus Amendment Discussion Document

Omnibus Alternatives

New England Fishery Management Council
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Prepared by NOAA's National Marine Fisheries Service

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1.1 PURPOSE AND NEED

The purpose of this action is to consider measures that would allow the Councils to implement new industry-funded monitoring coverage in New England and Mid-Atlantic Fishery Management Plans (FMPs) in an organized fashion. This amendment would allow industry funding to be used in conjunction with available Federal funding to pay for additional monitoring to meet FMP-specific coverage targets. This amendment also considers (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 a future framework adjustment action, (3) standard administrative requirements for industry-funded monitoring service providers, (4) a process to prioritize available Federal funding for industry-funded monitoring across FMPs, and (5) a process for monitoring set-aside programs to be implemented via a future framework adjustment action. This action is needed to allow Councils to implement industry-funded monitoring programs for the Greater Atlantic Region, and prioritize the allocation of Federal funding across those programs when available funding falls short of the total need. This omnibus amendment would ensure consistency for industry-funded monitoring programs across New England and Mid-Atlantic FMPs.

Additionally, this amendment has a second purpose, to consider specific industry-funded monitoring options for the Atlantic Herring FMP and the Atlantic Mackerel, Squid, Butterfish (MSB) FMP. Additional monitoring is necessary to generally improve the accuracy of catch estimated (landings and discards) and to better estimate the catch of incidental species for which catch caps apply (i.e., the river herring/shad and haddock catch caps). The effectiveness and affordability of the industry-funded monitoring program are of primary importance when considering monitoring coverage targets for these fisheries. This action is needed to allow the Councils to monitor catch in these fisheries at their desired levels.

Detailed background information for this amendment is described in Appendix 1 - Background Information.

1.2 OVERVIEW OF OMNIBUS ALTERNATIVES

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

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

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

- Standard definition for cost responsibilities between industry and NMFS;
- Standard framework adjustment process to implement future industry-funded monitoring programs in other FMPs;
- Standard observer service provider requirements;
- Process for prioritizing available Federal funding across industry-funded monitoring programs; and
- Option for standard monitoring set-aside provision.

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's costs to support the Council's desired coverage level for a given FMP.

1. Omnibus Alternative 2.1– NMFS-led prioritization process. NMFS prepare analysis and prioritization in consultation with the Councils.
2. Omnibus Alternative 2.2 – Council-led prioritization process. Council prepares analysis and recommended priorities to NMFS.
3. Omnibus Alternative 2.3 – Proportional prioritization process. Shortfalls in Federal funding to support industry-funded monitoring would be distributed proportionally among all industry-funded monitoring programs.
4. Omnibus Alternatives 2.4 – Coverage ratio-based prioritization process. The amount of funding would be allocated to each FMP related to the extra coverage needed and total fleet activity. Alternative 2.4 would favor coverage for the FMPs that don't need much additional coverage to meet targets and the most active FMPs with IFM programs.
5. Omnibus Alternatives 2.5 – Coverage ratio-based prioritization process. The amount of funding would be allocated to each FMP related to the extra coverage needed and total fleet activity. Alternative 2.5 would favor coverage for the FMPs that need more coverage to meet targets and the least active FMPs with IFM programs.

Omnibus Alternative 2.6 – Monitoring Set-Aside

This alternative would provide a structure to develop future monitoring set-aside programs which would 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 Standardized Bycatch Reporting Methodology (SBRM) requirements. No monitoring set-aside programs would be directly established by this action.

1.3 MANAGEMENT ALTERNATIVES

The current alternatives include the following:

- Standard cost responsibilities associated with industry-funded monitoring for NMFS and the fishing industry; (Omnibus)
- A process by which industry-funded monitoring programs (e.g., at-sea monitoring, dockside monitoring, electronic monitoring) can be implemented via framework adjustment in each FMP; (Omnibus)
- Standards for industry-funded monitoring service providers (e.g., for dockside monitoring, at-sea monitoring, and electronic monitoring); (Omnibus)
- A process by which NMFS and/or the Councils would prioritize available Federal funding for industry-funded monitoring across FMPs, when Federal funding is not sufficient to meet all coverage targets; (Omnibus)
- A process by which monitoring set-aside programs can be implemented via framework adjustment in each FMP for those FMPs with industry-funded monitoring programs; (Omnibus) and
- Monitoring coverage targets or requirements for certain permit categories and/or gear types for the herring and mackerel fisheries. (Herring and Mackerel specific)

1.4 DESCRIPTION OF OMNIBUS ALTERNATIVES

The following omnibus alternatives consider provisions that would apply to all New England and Mid-Atlantic FMPs, including (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 a future framework adjustment action, (3) standard administrative requirements for industry-funded monitoring service providers, (4) a process to prioritize available Federal funding for industry-funded monitoring across FMPs, and (5) a process to develop monitoring set-aside programs via a future framework adjustment action.

1.4.1 Omnibus Alternative 1: No Industry-Funded Monitoring Programs

Under Omnibus Alternative 1 (No Action), there would be no standardized structure developed for Greater Atlantic Region industry-funded monitoring programs. There would be no standard definition of costs and cost responsibility for industry-funded monitoring in the New England and Mid-Atlantic fisheries. Cost definitions and the determination of who pays for them would be considered individually by each FMP as industry-funded monitoring programs are developed. Under Omnibus Alternative 1, there would be no process to prioritize available Federal funding to meet Council desired monitoring coverage target above and beyond SBRM coverage and no standard administrative requirements for industry-funded monitoring service providers. The allocation of available Federal funding to increase monitoring to meet Council

desired coverage levels and observer service provider requirements for industry-funded monitoring would be evaluated on an case-by-case, FMP-by-FMP basis. Additionally, under Omnibus Alternative 1, there would be no framework adjustment process to implement FMP-specific industry-funded monitoring or therefore, no framework adjustment process to implement FMP-specific monitoring set-aside program. Rather, industry-funded monitoring programs and monitoring set-aside programs would be developed and established in FMP-specific amendments.

Timing for the Omnibus Alternative 1 (No Action)

The following table outlines the existing timeline for sea day allocation related to SBRM, Sector At-Sea monitoring, and the scallop fishery (compensation rate determination). The SBRM year runs from April to March, the NE Multispecies fishing year runs from May to April, and the scallop fishing year runs from March to February. The schedule below would remain unchanged under the status quo alternative.

TABLE 1. STATUS QUO TIMING OF GREATER ATLANTIC REGION SBRM, SECTOR AND SCALLOP MONITORING ALLOCATION AND ANALYSIS

Year	Month	SBRM schedule	Sector ASM Schedule	Scallop Compensation Rate Determination Schedule
Year 1	January to April			
	April/May			
	May to October			
	October	• Observer data July Year 0 – June Year 1 available • Begin analysis for SBRM	Work on analysis for sector ASM using most recent complete fishing year (May Year 0 – April Year 1)	
	November	Work on discard estimation analysis for SBRM from November through early February		
	December			
Year 2	January	Receive Year 2 budget	Sector ASM coverage rates published in proposed rule	Determine compensation rate
	February		Collect public comment	

	March	If funding shortfall, run SBRM prioritization process	Sector ASM coverage rates published in final rule	Begin Year 2
	April	Determine and begin Year 2 sea day schedule	Determine sea day schedule	Determine and begin sea day schedule
	May		Begin Sector ASM Year 2	

1.4.2 Omnibus Alternative 2: Industry-Funded Monitoring Programs

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 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: (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 a future framework adjustment action, (3) standard administrative requirements for industry-funded monitoring service providers, and (4) a process for FMP-specific monitoring set-aside program to be implemented via a future framework adjustment action. Additionally, Omnibus Alternative 2 would include a range of options for the process to prioritize available Federal funding for industry-funded monitoring across FMPs. **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. Other parts of this action discussed later do consider specific programs for the Atlantic herring and Atlantic mackerel fisheries.

<u>Current Monitoring Types in the Greater Atlantic Region</u>

The existing types of monitoring programs include:

1. At-sea monitoring, which focuses on data collection at sea, recording the type and quantity of retained and/or discarded catch.
2. Dockside monitoring, which focuses on data collection at the dock, accounting for landings of target species and incidental catch. If all fish caught are retained and landed, dockside monitoring can also record type and quantity of total catch.
3. Electronic monitoring (EM), which uses video cameras and other sensors to monitor discards at sea or to monitor compliance with full retention requirements or other at-sea requirements.

The following section provides further detail on these monitoring types, and their current uses in the Greater Atlantic Region.

At-Sea Monitoring

At-sea monitoring (ASM) is used to refer to the collection of data at sea aboard fishing vessels by human observers. The Northeast Fisheries Science Center (NEFSC) Fisheries Sampling Branch currently manages the collection and processing of data and biological samples obtained during commercial fishing trips through the Northeast Fisheries Observer Program (NEFOP) and groundfish ASM programs.

The Fisheries Sampling Branch oversees observer training, translates data requirements from the NEFSC research programs into a detailed schedule of fisheries to be sampled and at what frequency, manages data collected by observers, and provides qualified researchers with audited data files and summaries. Observers collect operational fishing data, biological data, and economic data while on board fishing vessels. Additionally, in support of the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA), observers monitor interactions with protected and endangered species. Summaries of fishery observer data are provided to scientists and analysts of the Greater Atlantic Regional Fisheries Office (GARFO), NEFSC, and the Regional Fishery Management Councils to support quantitative and qualitative evaluations of various management actions.

This document uses the terms "observer" and "at-sea monitor" interchangeably. However, the reader should note the following:

- The term "NEFOP-level observer" is used to refer to observers that collect an advanced and diverse set of information on fishing trips; and
- This document refers to FMP-specific at-sea monitoring programs by prefacing the terms "at-sea monitor" or "ASM" with a fishery name (e.g., the groundfish ASM program, groundfish at-sea monitors, the herring/mackerel ASM program, etc.). Fishery-specific at-sea monitors collect a more limited set of information on fishing trips than NEFOP-level observers, in direct support of FMP-specific goals.

NEFOP-level observers collect a wide array of information on a subset of the trips in all Greater Atlantic Region fisheries. The information they collect includes:

- Fishing gear information (i.e., size of nets and dredges, 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 kept and discarded catch (fish, sharks, crustaceans, invertebrates, and debris) on observed hauls (species, weight, and disposition);
- Kept catch on unobserved hauls (species, weight, and disposition);
- Actual catch weights whenever possible, or alternatively, weight estimates derived by sub-sampling methodologies;

- Whole specimens, photos, and biological samples (i.e., scales, ear bones, and/or vertebrae from fish, invertebrates, and incidental takes);
- Information on interactions with protected species, such as sea turtles, porpoise, dolphins, whales, and birds; and
- Vessel trip costs (i.e., operational costs for trip including food, fuel, oil, and ice).

In recent years, NEFOP-level observer coverage has largely been allocated as part of the SBRM. The SBRM is the combination of sampling design, data collection procedures, and analyses used to estimate bycatch in multiple fisheries. The SBRM provides a structured approach for evaluating the effectiveness of the allocation of fisheries observer effort across multiple fisheries to monitor a large number of species. Although management measures are typically developed and implemented on an FMP-by-FMP basis, from the perspective of developing a bycatch reporting system, there is overlap among the FMPs and the fisheries that occur in New England and the Mid-Atlantic that could result in redundant and wasteful requirements if each FMP is addressed independently.

For example, New England vessels using extra-large mesh gillnets catch monkfish, skates, and Northeast multispecies, often on the same fishing trip, and, therefore, most participants in this fishery must operate according to the regulations implemented under three different FMPs. To distinguish between the management units identified in individual FMPs and the fisheries that operate under one or more FMPs, the SBRM is designed around "fishing modes" defined by the type of fishing gear used and the area from which the vessels depart.

There are 56 fishing modes defined in the SBRM, some of which further subdivide a fishery by the mesh size of the gear used (for gillnets and otter trawls), or by the type of permit and access area program (for sea scallop dredges). Although there are differences among the modes, the participants in these fishing modes fish throughout the Gulf of Maine, Georges Bank, and the Mid-Atlantic Bight, and land their catch across a large number of fishing ports from the Outer Banks of North Carolina to Downeast Maine. The SBRM is limited to those fisheries that are prosecuted in the Federal waters of the Greater Atlantic Region and managed through an FMP developed by either the Mid-Atlantic or New England Council.

The Atlantic Sea Scallop observer program, described in further detail in Appendix 1, is the only existing industry-funded monitoring program in the region that uses NEFOP-level observer coverage.

While NEFOP-level observers are used to cover all fisheries, including sector trips, groundfish at-sea monitors are deployed on vessels participating in the groundfish sector program. Groundfish at-sea monitors follow a rigorous sampling protocol to collect weights of fish catch (kept and discarded), to measure the lengths of groundfish species, and document interactions with protected species. Groundfish at-sea monitors also collect information on trip costs, gear type, and tow locations. In contrast to NEFOP-level observers, groundfish at-sea monitors collect a reduced set of data, thereby reducing training time, gear requirements, and internal support resources necessary to administer this program.

Dockside (Portside) Monitoring

Dockside monitoring programs deploy trained monitors to vessel landing locations to monitor the weights and species composition of landed catch. Landings sampling protocols for dockside monitoring differ between programs depending on the program goals. Monitors typically monitor offloads directly to dealers, but roving monitoring programs can be established in cases where landings are offloaded to a truck for later delivery to a dealer. The reader should note that the terms "dockside monitor" and "portside sampler" are used interchangeably in this document.

There are not any Federal dockside monitoring programs currently administered in the Greater Atlantic Region. However, there was previously an industry-funded dockside monitoring requirement for groundfish sectors. Sectors were required to implement a dockside monitoring program to validate dealer-reported landings, with 50-percent coverage of sector trips in the 2010 groundfish fishing year, and 20-percent coverage each year thereafter. In 2010, NMFS reimbursed sectors for the costs of dockside monitoring. Shortly after the implementation of Amendment 16 to the NE Multispecies FMP, the Council became concerned that the industry would not be able to support full responsibility for the costs of monitoring programs, beginning with dockside monitoring in 2011 and at-sea monitoring in 2012. Through Framework 45 to the Northeast Multispecies FMP, the Council suspended the dockside monitoring requirements until FY 2013 and required dockside monitoring only to the extent that NMFS could fund it. In 2011, NMFS made the determination that dockside intercepts by enforcement personnel were sufficient to monitor sector landings and reprioritized financial support for dockside monitoring to alleviate general sector operating costs. The dockside monitoring program was ultimately eliminated in Framework 48 to the Northeast Multispecies FMP in advance of the 2013 groundfish fishing year.

A number of states in this region administer dockside monitoring programs related to state-managed species; a number of Federal permit holders are sampled through the state dockside monitoring programs. The Massachusetts Department of Marine Fisheries and Maine Department of Marine Resources portside monitoring programs for Atlantic herring are described under the herring coverage target alternatives.

Electronic Monitoring

The use of electronic monitoring systems on fishing vessels, namely electronic systems that incorporate video cameras, sensors, and electronic reporting systems into a vessel's fishing operations, has been a relatively recent development in fisheries around the world. Electronic monitoring can be used to augment or replace onboard human observers in some data collection tasks.

The technology supporting electronic monitoring has advanced significantly in a short time span and issues of image quality that were once prevalent are virtually nonexistent when the

cameras are properly placed. There have been regional and national workshops to explore the technology and capabilities of EM, examine how EM can meet scientific and management needs, and understand the legal requirements, data integration, and costs of implementing EM. The majority of applications using electronic monitoring have been developed to monitor gear interactions with protected species and birds, to detect presence or absence of specific fish species occurring as bycatch, or to validate vessel landing and logbook information. There are two primary approaches for electronic monitoring: 1) the audit approach, and 2) the optimized or full retention approach.

- Under the audit approach, EM technology is used to account for catch, and catch estimation is substantiated through a data validation source, such as vessel trip reports. This model is associated with increased captain responsibility and places a greater emphasis on industry-reported data. Electronic monitoring applications have been deployed successfully in fixed gear fisheries (i.e., longline, pot/trap, mechanical jig) and in trawl fisheries with relatively homogeneous catch composition.
- Under optimized or full retention approach, electronic monitoring is used to monitor for discards. In this case, electronic monitoring must be paired with dockside monitoring to gather information about landed species composition.

In the Greater Atlantic Region, the at-sea observer programs are very complex in their sampling schemes and in regards to the data collected. Electronic monitoring technology is currently not capable of performing most of the detailed data collection tasks performed by human observers. However, depending on the monitoring needs for a given fishery, electronic monitoring could provide a cost-effective alternative to human observers. Electronic monitoring is being developed for the groundfish fishery, as described below. In addition, this amendment contains alternatives that would implement electronic monitoring for the Greater Atlantic Region midwater trawl fleet, which includes vessels permitted in the herring and mackerel fisheries.

The need to balance the financial viability of sectors with the expectation to have the fishing industry fund groundfish ASM precipitated several efforts to explore electronic monitoring as an alternative to ASM. EM may be a suitable replacement to ASM, provided EM has the ability to identify species, and verify weights and counts of discards in the groundfish fishery. Balancing management data needs with the costs of a comprehensive EM system that satisfies monitoring requirements remains an ongoing endeavor.

From 2004-2006, the Cape Cod Commercial Fishermen's Alliance (CCCFA) and Archipelago Marine Research Ltd. (AMR) tested EM systems on longline and gillnet vessels targeting groundfish and compared EM and observer data. Beginning in 2010, NMFS and Archipelago conducted a more comprehensive study in three phases. Phase one identified baseline metrics for detecting fishing events, counting fish, and identifying species. Phase two addressed issues such as weight estimation and expanded species identification methods through catch handling. The third phase tested catch handling methods to simulate an operational EM program. Currently, the Gulf of Maine Research Institute (GMRI), the Maine Coast Community Sector

(MCCS), The Nature Conservancy (TNC), and Ecotrust Canada (EC), have collaborated to operationalize an EM program using open-source software. Funding for this pilot project has come from grants through foundations. Their model uses EM to validate captain-reported data on vessel trip reports and has introduced a new EM provider to the fishery. The first year (2013) was designed to be a training period for captains. For 2014 and 2015, the project's goal is to complete the necessary data collection and analysis to demonstrate the ability that EM can replace ASM for sectors in the New England groundfish fishery.

In concert with the release of the Plan, GARFO and NEFSC partnered with GMRI, MCCS, TNC, and EC as they continue their project to address these final issues and fully develop an EM model for groundfish sectors. This pre-implementation group has worked from an agreed set of questions and tasks, which has facilitated a fully transparent and coordinated process. The group holds monthly face-to-face meetings to discuss data collection, retrieval, review, and storage, the roles and responsibilities in a functional program, and the process for approving and implementing EM for 2016. These partnerships have provided GARFO and NEFSC with an understanding of how reasonable certain program requirements may be for a fisherman or an EM provider, and have also provided insight to non-NMFS partners on the existing gaps between the pilot projects and fully implementing EM. The intention is that this group will continue to meet moving forward, adding additional partners such as CCCFA and AMR, to develop the final data and provider standards, EM monitoring plans, and regulatory framework for implementing EM for a portion of the groundfish fishery. If adopted by the Councils, NMFS intends to use elements of this pre-implementation approach when developing implementation details for the EM program for the herring and mackerel midwater trawl fleet.

Since these pilot projects, EM proponents have supported implementation of EM in the groundfish fishery. However, given legal, analytical, and logistical obstacles that remain, EM has not yet been approved for implementation as an alternative to ASM.

In January 2015, NMFS' Greater Atlantic Regional Fisheries Office and the NEFSC released a Regional Electronic Technologies Implementation Plan that articulated the remaining aspects of a comprehensive EM program that need to be addressed. Some outstanding questions include:

- What are the detailed roles and responsibilities of the various parties involved?
- Who will have responsibility to store the data and for how long?
- Who will have access to the data and for what purpose?
- How much will it cost the government and the industry?

Currently, GARFO and NEFSC are building the database infrastructure and processing tools for data collected from EM video footage, conducting comparative analysis to the existing catch monitoring systems in the groundfish fishery, and addressing the final legal and logistical hurdles. Because EM would replace ASM for some vessels and/or sectors, GARFO is evaluating how best to implement EM in each sector's operations plan and ensure that the plans are enforceable and adequate for reporting and monitoring sector catch. Pending the results of the pre-implementation work, GARFO intends to propose approval of EM standards and monitoring

plans prior to next groundfish fishing year, set to begin May 1, 2016. GARFO expects that grant funding, through the partner organizations noted above, will be used to fund industry costs for the groundfish sector participants that use EM in 2016.

Standard Cost Responsibilities

Omnibus Alternative 2 would include standard cost responsibilities between NMFS and the industry for supporting monitoring programs targeting coverage above and beyond SBRM. As described in the Introduction, legal requirements dictate that certain cost responsibilities must be borne by NMFS. Because legal requirements dictate the cost responsibilities for NMFS, the cost responsibilities described below cannot be modified through this action (for more information see Appendix 1). These cost responsibilities would be codified into regulation for industry-funded monitoring in New England and Mid-Atlantic FMPs. If Omnibus Alternative 2 was not selected by the Councils, cost responsibilities for industry-funded monitoring would be codified on an FMP-by-FMP basis.

The cost responsibilities described below would be considered by the Councils when developing any industry-funded monitoring program for New England and Mid-Atlantic FMPs in future actions. 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. Selection of the Omnibus Alternative 2 would codify NMFS cost responsibilities for industry-funded monitoring into regulation for all New England and Mid-Atlantic FMPs, but it would not change NMFS cost responsibilities for the industry-funded monitoring programs currently established in the scallop or multispecies fisheries.

<u>NMFS Cost Responsibilities</u>

NMFS would be responsible for funding the costs to set standards for, monitor performance of, and support 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

NMFS cost responsibilities for all types of existing monitoring, including NEFOP-level observer coverage, fishery-specific at-sea monitoring programs, dockside monitoring, and electronic monitoring, including details on how NMFS cost responsibilities were derived, are included in the text below.

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 support industry-funded monitoring would be fully funded with Federal funds. For more information on cost sharing, including external funding, see Appendix 1. The industry would be responsible for its cost responsibilities; 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. The administrative mechanism by which industry cost responsibilities could be offset using available Federal funding is being developed by NMFS separately and can be used in conjunction with Omnibus Alternative 2.

Factors that Affect Industry Costs for Monitoring

The following section discusses the factors that affect industry costs for at-sea, dockside, and electronic monitoring programs. There are several factors that can significantly affect sea day costs in any industry-funded monitoring program. Industry costs would be largely determined by the contracts with the service providers. For example, the $640/day paid to providers may cover such things as: Labor and overtime, data editing, project management and administration, benefits (vacation and sick leave), health insurance, and workers compensation. Additionally, service providers may have individual requirements for training and debriefing, such as annual observer training or semi-annual safety training.

Cost for industry-funded monitoring programs is a very important consideration. The requirement to pay for an observer increases operating costs for fishing vessels, which in turn reduces net revenues (as described later in Section 1.5.3: Impacts to Human Communities). While the total cost for each sea day can vary between service providers, various individual components (i.e., costs for deployment and sampling, costs for equipment)

are necessary to successfully execute a monitoring program. Because each of these components is essential, in most cases, it is not appropriate to reduce industry's cost responsibilities by removing or adjusting components of the sea day cost. Since vessels would be contracting directly with observer providers they may be able to negotiate prices, but due to the requirements for observers and observer providers, the ability to negotiate lower prices may be limited. Also, since vessels are contracting with the providers for much smaller amounts of monitoring coverage than NMFS does, project management costs for service providers may increase, which could actually increase the costs that providers charge for contracts directly with vessels.

There are two, more viable ways to limit the costs of an industry-funded monitoring program for industry. Both of these approaches limit the total cost of the observer program rather than adjusting the industry cost responsibilities. The first way to limit costs to industry is to set coverage levels at the lowest level necessary to gather information to meet program goals. For example, it may be possible to sufficiently increase precision around discard estimates for a certain species by setting a coverage target of 50 percent, rather than a coverage target of 100 percent. The second way to limit costs to industry is to select the appropriate type of coverage to meet program goals. For example, it may be more cost effective to use electronic monitoring rather than at-sea observers to confirm compliance with slippage prohibitions on herring and mackerel vessels.

Factors that Affect Industry Costs for At-Sea and Portside Monitoring

Representatives from the NEFOP, service provider companies in the northeast U.S., and representatives from U.S. west coast service provider companies identified the following factors that most commonly increase sea day costs. The cost drivers for at-sea and portside monitoring programs are similar, so are discussed together here.

- *Requirements for New Data Collection/New Equipment.* New or different sampling protocols require modifications to observer training, which could increase training costs for both the government and service providers. If new or different sampling equipment is required to meet the monitoring program needs, the expense of the additional equipment will be incurred by the service provider. In addition, re-designing existing observer databases to incorporate new data introduces a significant administrative expense.
- *SCA and FLSA Requirements***.** Requirements associated with the Service Contract Act (SCA) and Fair Labor Standards Act (FLSA) apply to any contracts in which the Federal government is involved. There may be some reduction in sea day cost associated with eliminating any legal requirements that apply specifically to contracts involving the Federal government. However, service provider companies would still be subject to FLSA requirements and other applicable labor laws.
- *Ability to Predict the Fishery***.** Sea day costs will likely be higher if service providers cannot predict how the fishery will operate (numbers of vessels/trips, length of trips, seasonality and spatial distribution of trips) in order to accurately estimate costs

(administrative, overhead, communications, logistics) associated with deploying observers to meet the needs of the monitoring program. Predictability increases efficiency and therefore reduces costs. With limited information to predict the fishery, service providers are more likely to over-estimate costs associated with travel and observer deployment to ensure that they cover their costs.

- *Complicated Logistics (Vessel Selection and Observer Deployment*)**.** The more infrastructure necessary to efficiently deploy observers to meet the needs of the monitoring program (field offices, coordinators, communications networks), then the higher the sea day costs will be. If pre-trip notification systems need to be expanded to determine observer/monitor deployment, this would likely increase costs.

Cost Estimates for Monitoring

Developing cost estimates for new monitoring programs is challenging. The cost of monitoring is affected by many factors, such as the type of monitoring program, scale of monitoring program, and availability of service providers, and can vary from year to year. Monitoring cost estimates developed for this amendment were generated using many different sources and used information from many different programs. The details of how cost estimates were developed are described in Appendix 2 – Cost Estimates.

The table below shows the monitoring cost estimates used in the economic analysis of the herring and mackerel coverage target alternatives. Cost estimates from the NEFOP-level observers and at-sea monitors were generated from existing programs in the Greater Atlantic Region. Cost estimates for electronic monitoring and portside sampling were generated from programs in other regions of the country as well as programs in the Greater Atlantic Region.

The cost estimates shown below are only estimates. The actual costs to NMFS and the industry of an industry-funded monitoring program may be higher or lower than the cost estimates analyzed in this amendment.

TABLE 2. MONITORING COST ESTIMATES

Types of Monitoring	NMFS Cost	Industry Cost
NEFOP-Level Observer	$479 per sea day	$818 per sea day
At-Sea Monitor	$530 per sea day	$710 per sea day
Electronic Monitoring	Year 1: $36,000 startup plus $97 per sea day Year 2: $97 per sea day	Year 1: $15,000 startup plus $325[1] or $187[2] per sea day Year 2: $325[1] or $187[2] per sea day
Portside Sampling	$479-$530 per sea day	$5.12[1] or $3.84[2] per mt

1 – Initial cost assumptions based on video collected for the duration of a trip, 100% video review, 100% of trips sampled portside, and including portside administration costs.
2 – Revised cost assumptions based on video collected only around haulback, 50% video review, 50% of trips sampled portside, and not including portside administration costs.

Framework Adjustment Process

Omnibus Alternative 2 would include the ability for Councils to implement industry-funded monitoring programs, including at-sea monitoring, dockside monitoring, or electronic monitoring, 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, a full FMP amendment would be required to implement 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 MSB FMPs.

Under Omnibus Alternative 2, the details of any industry-funded monitoring program, including at-sea, dockside, or electronic monitoring, would be specified and/or modified in a subsequent framework adjustment to the relevant 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) fee collection and administration, (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 action implementing and/or modifying industry-funded monitoring programs regardless if a framework adjustment or full amendment was used to consider modifications of new programs.

Omnibus Alternative 2 contains a framework adjustment component for the known types of monitoring that are available for Greater Atlantic Region fisheries. The existing types of monitoring include at-sea monitoring (data collection at sea); dockside monitoring (data collection at the dock); and electronic monitoring (using video cameras and other sensors to monitor fishing activity at sea). Depending on the information needs for a given fishery, a dockside and/or electronic monitoring program could be used in addition to at-sea monitoring to provide more complete catch monitoring, or to reduce the overall monitoring costs for a given fishery (if dockside or electronic monitoring can be administered at a lower cost). If an additional industry-funded monitoring program is established through a future framework adjustment, it would become subject to prioritization for funding under one of the alternatives for the prioritization process described later in this document.

Cost for industry-funded monitoring programs is a very important consideration. The requirement to pay for an observer substantially increases operating costs for fishing vessels, which in turn reduces revenues. The best ways to limit the financial burden of an industry-

funded monitoring program is to carefully design the program to minimize total program costs. As described in the cost responsibility discussion above, this can be accomplished by setting coverage levels at the lowest level necessary to gather information to meet program goals (i.e., not setting the coverage target at 100 percent if only 50 percent is necessary), or by selecting the appropriate type of coverage to meet program goals (i.e., choosing a less expensive type of monitoring, like dockside or electronic monitoring).

Monitoring Service Providers

Omnibus Alternative 2 would include standard administrative requirements for industry-funded monitoring service providers, including at-sea monitoring, dockside monitoring and electronic monitoring. These service provider requirements would serve as the default service provider requirements for any future industry-funded monitoring programs developed through future framework actions (see Appendix 3: Service Provider Requirements). If Omnibus Alternative 2 is not selected by the Councils, service provider requirements for industry-funded monitoring programs would be developed and implemented in individual FMPs.

Monitoring Service Provider Regulations for At-Sea and Dockside Monitoring Programs

The SBRM Omnibus Amendment modified the scallop industry-funded observer service provider requirements (at 50 CFR 648.11(h) and (i)) to apply to all New England and Mid-Atlantic FMPs. Specifically, the SBRM Amendment authorized observer service provider approval and certification for all applicable fisheries, should a Council develop and implement a requirement or option for an industry-funded observer program to support SBRM in other fisheries beside scallops. However, the SBRM Amendment did not address service provider requirements for other types of industry-funded monitoring programs.

Omnibus Alternative 2 would modify the SBRM observer service provider approval and certification process to be a monitoring service provider approval and certification process that would 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. In the future, if the Councils implement any industry-funded at-sea or dockside monitoring programs through a future action, the process to develop those monitoring programs would be streamlined.

The Appendix 3 – Service Provider Requirements describes the monitoring service provider regulations based on SBRM Amendment regulations. Omnibus Alternative 2 would revise these regulations so that they would apply to both at-sea and dockside observers. Additionally, regulations may be revised as part of this amendment to better address requirements associated with Omnibus Alternative 2.

The requirements for groundfish sector at-sea monitor service providers are very similar to the service provider requirements described above, with a few exceptions such as education

requirements. The service provider requirements for groundfish sector at-sea monitor and electronic monitoring service providers are in Appendix 3 – Service Provider Requirements.

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. These requirements are included in Appendix 3 – Service Provider Requirements. In addition, the NMFS West Coast Region is currently working to develop regulations for the industry-funded electronic monitoring program for the At-Sea and Shoreside Hake West Coast Whiting fishery. The Greater Atlantic and West Coast Regions will be working together to develop consistent electronic monitoring service provider regulations.

Special Considerations for Service Provider Requirements

During development of this section of the Amendment, the Councils explored options to reduce the cost of industry-funded monitoring programs by adjusting the service provider requirements or modifying the monitor certification requirements. After analyzing the possible adjustments to the service provider regulations, the PDT/FMAT concluded that the best ways to limit the financial burden of an industry-funded monitoring program is to carefully design the program to minimize total program costs. This can be accomplished by setting coverage levels at the lowest level necessary to gather information to meet program goals (i.e., not setting the coverage target at 100 percent if only 50 percent is necessary), or by selecting the appropriate type of coverage to meet program goals (i.e., choosing a less expensive type of monitoring, like dockside or electronic monitoring).

Given this, 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, MMPA, 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-by-FMP basis. For example, the groundfish at-sea monitor service provider requirements only require a monitor to have a high school diploma, while the overarching industry-funded monitoring service provider regulations require a college degree. The herring and mackerel at-sea monitoring programs also have deviations from the overarching monitoring service provider regulations, these include training requirements for NEFOP-level observers, education requirement for at-sea monitors, and lifting restrictions on re-deploying NEFOP-level observers and/or at-sea monitors on the same vessel more than two consecutive multi-day trips or for more than twice in a given month.

The following is a description of some of the provisions in the overarching industry-funded monitoring service provider regulations that the Councils discussed adjusting during the development of this amendment.

Education Requirements for Observers

The National Minimum Eligibility Standards for Marine Fisheries Observers were published in 2007 (04-109-01). The development of the national standards grew out of concern from the Office of Inspector General, NOAA Science Board, National Observer Program Advisory Team, observer provider companies, professional observer associations, and the fishing industry that observers were not appropriately trained to observe fishing trips, that high levels of attrition were resource inefficient, and that the lack of standards was confusing and deterring interested and qualified observer candidates nationally. All observer programs in the United States (Greater Atlantic Region, Southeast, Alaska, Northwest, Southwest, and Pacific Islands) currently follow the National Minimum Eligibility Standards. The standards are also adopted and supported as best practices by the International Fisheries Observer and Monitoring Conference.

The most controversial standard is the requirement that observer candidates must have a bachelor's degree with a major in the natural sciences. However, Regional Administrators and Science Directors may waive the education and experience requirements if a candidate has acquired the required skills to be considered eligible for observer training through a NMFS-approved alternative training program that includes activities such as:

a) Participating in or/and observing ocean fishing activities consistent with those that would be required during observer work performance;
b) Participating in fisheries research cruises;
c) Recording data on marine mammal sightings and fishing activities;
d) Tallying incidental take of marine mammals, sea turtles, and sea birds from fishing platforms;
e) Collecting biological samples and specimens from postmortem animals;
f) Entering data into a database using computers; and
g) Completion of a biological training program, equivalent to that received as part of a bachelor's degree, conducted by or approved by NMFS with the specific objective of preparing potential candidates for observer training.

The Council expressed interest in removing the bachelor's degree requirement from the overarching industry-funded monitoring service provider regulations for observers in order to save costs, with the rationale that monitors with bachelor's degrees may command a higher hourly wage than those without bachelor's degrees. While it is consistent with regional policy to require a lower education requirement for fishery specific at-sea monitoring programs, for the overarching industry-funded monitoring service provider requirement for observers a bachelor's degree is obligatory to comply with national standards and for the reasons detailed

below. Through future development of FMP-specific industry-funded monitoring programs, the minimum education requirement for an observer can be reconsidered.

Contrary to the intent of negating the national education standard for becoming a fisheries observer, requiring only a high school diploma will likely not lower the cost of observer coverage. Nationally, there was no increase in sea day costs with the adoption of the educational standard national policy in 2007. Instead, national observer programs found that the education standard resulted in recruitment of higher quality observer candidates and better observer retention. There is not currently a shortage of interested and qualified applicants with bachelor's degrees, and many candidates have fishing and sea-going experience in addition to their bachelor's degrees. Observers often hold multiple certifications in a variety of observing programs, which helps with observer availability to meet coverage targets and improves retention of certified observers.

The information observers collect is necessary for assessing the nation's managed biological resources, and for evaluating the social and economic impacts of catch allocations, entitlements and fishing regulations on fishermen and their communities. Thus reducing education standards has a direct impact on the information used to support critical NMFS goals. Studies comparing observer candidates without a college degree to those with college degrees show that candidates without degrees had:

- Higher drop-out and failure occurrences during observer training, despite additional resources invested to support the candidates;
- Lower compliance in following detailed program requirements and meeting data loading deadlines;
- Lower accuracy with species identification and catch estimation;
- Lower data quality scores and overall performance; and
- Lower retention rates.

In addition, there was concern that codifying the requirement in the overarching service provider regulations would prevent fisherman from participating as observers. However, we reiterate that the current education standard policy includes a waiver if the observer candidate has fishing experience. There are a number of current observers who were fishermen, though the policy does outline potential conflicts of interest that may prohibit some fishermen who are still financially vested in the industry from participating as observers. In order to encourage and support employment of former fishermen, NEFOP developed an optional alternative training program for fishermen with interest in becoming observers.

<u>The Fair Labor Standards Act and Service Contract Act Requirements</u>

The Services Contract Act (SCA) applies to every contract entered into by the United States (government) or the District of Columbia. Contractors and subcontractors performing on these Federal contracts must observe minimum wage standards (based on the prevailing wage for a locality, as determined by the Department of Labor) as well as safety and health standards, and

they must maintain certain records. The SCA requires that every employee working under the contract must be paid not less than the monetary wages, and must be furnished fringe benefits, which are determined based on locality. Fringe benefits include paid holiday leave, vacation time, and minimum requirements for health and welfare (80/20 compensation for health insurance). Because contracts for industry-funded monitoring program will be between service providers and participants in the fishing industry, it will not be necessary for these contracts to meet the requirements of the SCA.

However, even without the SCA requirements, service provider companies will still be required to pay employees not less than the federal minimum wage provided in the Fair Labor Standards Act (FLSA). The FLSA establishes minimum wage, overtime pay, recordkeeping, and youth employment standards affecting employees *in the private sector as well as in Federal, State, and local governments.* Covered non-exempt workers are entitled to a minimum wage of not less than $7.25 per hour effective July 24, 2009. Overtime pay at a rate not less than one and one-half times the regular rate of pay is required after 40 hours of work in a workweek.

According to a report published by MRAG Americas (June 2012), Northern Economics (2011) estimated that the SCA and FLSA requirements are likely to add $50-$100 to the sea day cost for an industry-funded monitoring program. However, eliminating SCA requirements by privatizing contracts in this region is not likely to decrease sea day costs by as much as $100 for two reasons: (1) FLSA requirements for minimum wage and overtime would still apply to vessel/provider contracts; and (2) employees working for companies currently providing observer coverage and at-sea monitoring services in this region have been working (some for many years) under government contracts, which are consistent with SCA requirements for wages and fringe benefits. It may be very difficult for service providers in this region to change the wage and benefit structure they offer to their employees, many of whom have been working in observer and ASM programs in this region for several years. Therefore, the reduction in sea day cost that can be expected from the privatization of contracts cannot be estimated with certainty but is likely to be on the lower end of the range predicted in the MRAG Report.

<u>Streamlining the Application Process for Observer Service Providers</u>

The Councils discussed a number of options to simplify the application process for service providers, including “grandfathering in” states as service providers, allowing the service provider approval from one NMFS region to extend to other regions, or developing a standardized national application for service providers. The rationale for these provisions is that limiting the application process for service providers could translate into reductions in program administration costs, which could ultimately reduce sea day costs for industry. While there are potential cost savings with these approaches, many have national implications and will need to be investigated outside of this amendment. Ultimately, because the information collected through our monitoring programs support our mission to conserve and manage fisheries and other marine resources, we are obligated to assure the quality of data collected through these programs. This means that any process used to evaluate service providers ensures that the providers are able to comply with regional requirements. NMFS is

investigating these ideas at a national level, and any results from this effort will not be available for informing this amendment.

Prioritization Process

Omnibus Alternative 2 includes a prioritization process to allocate available Federal funding across FMPs to cover NMFS cost responsibilities for coverage targets above and beyond SBRM and independent from ESA and MMPA requirements. Again, due to legal and budgetary constraints described in Appendix 1, NMFS cannot approve and implement monitoring requirements for which it does not have the 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 industry-funded monitoring programs and coverage levels exist for multiple FMPs (e.g., the herring and mackerel FMPs), and when Federal funding is not sufficient to cover all associated NMFS cost responsibilities, the Councils and/or NMFS must decide how to allocate available Federal funding across the relevant FMPs. Available Federal funding refers to any funds in excess of those allocated to meet SBRM or other existing monitoring requirements. The prioritization processes outlined in Omnibus Alternative 2 would guide the allocation of available Federal funding to cover NMFS cost responsibilities, and would determine which industry-funded monitoring programs would operate for a given year and which would not. At this time, the prioritization process would not apply to the existing scallop and groundfish industry-funded monitoring programs. The prioritization process alternatives in the IFM Omnibus Amendment could apply to groundfish sectors and/or the scallop fishery if, in a future action, the Council desires coverage above the levels currently set by these FMPs and/or if the Council wants Federal funding prioritized for NMFS administrative costs associated with these programs.

When there is no Federal funding available to cover NFMS' cost responsibilities above and beyond 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, then fishing effort will be reduced to match available monitoring. In the event that no Federal funding is available, and the IFM program does allow for vessels to be issued waivers to exempt them from industry-funded monitoring requirements, then there would be no additional monitoring.

Alternatives 2.1 and 2.2 provide the Councils and NMFS with more discretion to make trade-offs between FMPs, but also require more recurring analysis and resources. The primary difference between these two alternatives is who (NMFS or Councils) would lead the prioritization process and analysis. Alternatives 2.3, 2.4, and 2.5 use formulaic approaches, eliminating much of the discretion and analytical burden of Alternatives 2.1 and 2.2. However, the formulaic approaches in Alternatives 2.3, 2.4 and 2.5 may reduce the effectiveness of the resulting outcome relative to Council priorities. Under all of the options described below, the

industry would be responsible for covering its cost responsibilities, unless it was determined that Federal funds were also available to be used to offset industry cost responsibilities. If Omnibus Alternative 2 was not selected by the Councils, available Federal funding would be allocated toward industry-funded monitoring on an FMP-by-FMP basis.

The following tables summarize the discretionary and formulaic prioritization alternatives to facilitate comparisons.

TABLE 3. SUMMARY OF PRIORITIZATION ALTERNATIVES

	Alternative	Summary
Discretionary	2.1 NMFS-led	NMFS staff would use a weighting approach (described below pages 26-33), in consultation with the Councils, to determine how NMFS funding is allocated among IFM programs.
	2.2 Council-led	Both Councils would work together using a weighting approach to determine how NMFS funding is allocated among IFM programs.
Formulaic	2.3 Proportional	Each IFM program would be reduced by the same percentage as the funding shortfall (i.e. if NMFS funding is short by 20%, each IFM program would receive only 80% of the Federal funded need for that program).
	2.4 Lowest Coverage Ratio-based	The amount of funding would be allocated to each FMP by prioritizing coverage in fisheries that have the lowest coverage needs relative to fleet activity. This alternative would favor coverage for the FMPs that don't need much additional coverage to meet targets and the most active FMPs with IFM programs.
	2.5 Highest Coverage Ratio-based	The amount of funding would be allocated to each FMP by prioritizing coverage in fisheries that have the highest coverage needs relative to fleet activity. This alternative would favor coverage for the FMPs that need more coverage to meet targets and the least active FMPs with IFM programs.

TABLE 4. PROS AND CONS OF DISCRETIONARY VERSUS FORMULAIC PRIORITIZATION ALTERNATIVES

	Pros	Cons
Discretionary Alternatives: Alternative 2.1 and 2.2	More discretion over funding priorities	Complex, and requires additional workload to prioritize
	Takes objectives and context into account	Timeline > 1 year
	Could result in funding of most important programs first	May require rulemaking
Formulaic Alternatives: Alternatives 2.3, 2.4, and 2.5	Shorter timeline	No discretion
	Adaptive to budget changes and timing	Blunt instrument

Only one of the prioritization process alternatives will be selected. It is important to consider the advantages and disadvantages that each alternative will provide to the management of future IFM programs. For example, the discretionary alternatives 2.1 and 2.2 would allow NMFS and/or the Councils the opportunity to determine priority among FMPs/IFM programs, but would be more complex, take longer, and involve more staff resources. Comparing the discretionary alternatives to each other, the only difference is which entity, either NMFS or the Councils, will be conducting the prioritization. The formulaic alternatives 2.3, 2.4, and 2.5 have the advantage of taking less time and staff resources to develop, but do not allow discretion of priority among FMPs/IFM programs. When comparing the formulaic alternatives the proportional alternative 2.3 would equally consider FMPs/IFM programs needs such that Federal budgetary shortfalls in any particular year would equally impact IFM programs. While the coverage ratio-based alternatives 2.4 and 2.5 would be formulaically-biased between FMPs/IFM programs based on the needed coverage to meet targets and the total activity in the relevant fleets.

1.4.2.1 Omnibus Alternative 2.1: NMFS-led Prioritization Process for Industry-Funded Monitoring Programs

Under Omnibus Alternative 2.1, the Regional Administrator and Science and Research Director would use the weighting approach below to determine, in consultation with the Councils, how to allocate NMFS available resources to support NMFS cost responsibilities required to achieve coverage targets for industry-funded monitoring coverage. After those costs are funded, NMFS would also determine, in consultation with the Councils, the allocation of any remaining funding available to offset industry costs established in this amendment for the Herring and MSB FMPs and other FMP actions. The costs would be defined as described by Omnibus Alternative 2. Funding for SBRM, ESA, and MMPA observer coverage would not be changed by this measure. Any funding for industry-funded monitoring programs would be allocated

separately from any funding for SBRM or other statutory requirements and any coverage would be above and beyond coverage for SBRM or other statutory requirements.

The prioritization process would have the following steps:

1. NMFS would apply the weighting approach (described below) to develop a proposed allocation of Federal resources across FMPs with industry-funded monitoring programs. If available funding in a given year is sufficient, this distribution would be based on the allocation necessary to fully implement the industry-funded monitoring coverage targets specified in each FMP. If available funding is not sufficient to fully fund all industry-funded monitoring programs, then NMFS would recommend an allocation of resources across FMPs that would include:
    - The total amount of funding and sea days necessary to meet the coverage targets specified by each FMP if each FMP were fully funded, including each FMP's share of the total;
    - The coverage level for each FMP if each FMP maintains its percentage share of the total funding (e.g., a fishery with a bigger proportion of the total funding would absorb a bigger proportion of the shortfall);
    - The coverage levels that incorporate the weighting approach; and
    - The rationale for the recommended prioritization.

2. At a joint New England/Mid-Atlantic committee meeting, NMFS and the Councils would review NMFS's proposed allocation of funding and recommend any modifications to the prioritization.

3. NMFS would provide the Councils, at the earliest practicable opportunity: (1) The estimated industry-funded monitoring coverage levels that incorporate the recommended prioritization, based on available funding; and (2) the rationale for the recommended prioritization, including the reason for any deviation from the joint committee or joint Council's recommendations. The Councils may recommend revisions and additional considerations to be made by the Regional Administrator and Science and Research Director.

Step 3 allows the Councils and NMFS to discuss any final revisions to the distribution, which might be necessary if the final budget is not known at the time of initial prioritization and is less than expected.

Timing for this process is described in Table 7.

1.4.2.2 Omnibus Alternative 2.2: Council-led Prioritization Process for Industry-Funded Monitoring Programs

Under Omnibus Alternative 2.2, the Regional Administrator and Science and Research Director would inform the Councils of NMFS's available funding to achieve coverage targets for industry-

funded monitoring coverage, including supporting NMFS's infrastructure costs and/or any offset of industry costs established in this amendment for the Herring and MSB FMPs and other FMP actions. If available funding in a given year was sufficient, this distribution would be based on the allocation necessary to fully implement the industry-funded monitoring coverage targets specified in each FMP. If available funding was not sufficient, the Councils would apply a weighting approach (example weighting approach detailed below) to determine the best allocation of available funding across FMPs with industry-funded monitoring programs to meet regional priorities and make recommendations to NMFS. NMFS and industry's costs would be defined as described by Omnibus Alternative 2. Funding for SBRM, ESA, and MMPA observer coverage would not be changed by this measure.

The prioritization process would have the following steps:

1. If available funding is not sufficient to fully fund all industry-funded monitoring programs, the Councils could work together to develop criteria to evaluate industry-funded monitoring programs (example weighting approach detailed below) in order to allocate NMFS resources across FMPs with industry-funded monitoring programs that would include:
    - The total amount of funding and sea days necessary to meet the coverage targets specified by each FMP if each FMP were fully funded, including each FMP's share of the total;
    - The coverage level for each FMP if each FMP maintains its percentage share of the total funding (e.g., a fishery with a bigger proportion of the total funding would absorb a bigger proportion of the shortfall);
    - The coverage levels that incorporate the weighting approach; and
    - The rationale for the recommended prioritization.

2. At a joint New England/Mid-Atlantic committee meeting, NMFS and the Councils would review the results of the Councils' proposed allocation of funding for NMFS's infrastructure costs and offsets for industry costs. The joint committee or Councils would make any modifications and recommend a prioritization to NMFS. This would be the opportunity to resolve any differences in prioritization between the two Councils.

3. NMFS would provide the Councils, at the earliest practicable opportunity: (1) The estimated industry-funded monitoring coverage levels that incorporate the recommended prioritization, based on available funding; and (2) the rationale for the recommended prioritization, including the reason for any deviation from the Councils' recommendations. The Councils may recommend revisions and additional considerations to be made by the Regional Administrator and Science and Research Director.

Timing for this process is discussed in Table 7.

Weighting Approach

The weighting approach is generally based on the draft processes developed by the Mid-Atlantic Fishery Management Council Scientific and Statistical Committee to prioritize research proposals. The weighting approach could give NMFS or the Council a transparent, deliberative framework to decide how to allocate NMFS's available resources to support NMFS cost responsibilities required to achieve coverage targets for industry-funded monitoring.

If Alternative 2.1 (NMFS-led Prioritization) is selected, NMFS will use the approach outlined below to prioritize NMFS funding for industry-funded programs. If Alternative 2.2 (Council-led Prioritization) is selected, the Councils have the option to use this approach, or develop their own joint process for prioritization, provided that criteria used to evaluate industry-funded monitoring programs, as well as the rationale for the recommended prioritization approach, are made available to the public in advance.

The proposed weighting approach has 2 steps outlined in more detail in the following pages:

Step 1

- Compare industry-funded monitoring criteria to each other to create a criteria weighting

Step 2

- Evaluate how each industry-funded monitoring program meets each criterion

Step 1: Compare Industry-Funded Monitoring Criteria to Each Other to Create a Criteria Weighting

The weighting approach first requires NMFS or the Councils to determine the relative importance of criteria that will be used to evaluate the industry-funded monitoring programs. The list of eight criteria proposed below would be used by NMFS, and could be used by the Councils, for the first prioritization cycle, and every cycle thereafter, unless the Councils change the criteria in a framework adjustment.

1. The industry-funded monitoring program relates to stocks that are overfished or subject to overfishing.

   Overfished stocks have biomass levels depleted to a degree that the stock's capacity to produce maximum sustainable yield (MSY) is jeopardized. Stocks subject to overfishing have a mortality rate that is higher than the rate that produces MSY. Under this criterion, preference would be given to stocks that are in poor condition because those stocks may benefit from additional monitoring support.

2. The species has high commercial or recreational value.

   This criterion prioritizes industry-funded monitoring programs related to species with high dollar value in the case of a commercial fishery, or a high number of annual landings or gross weight in the case of a recreational fishery.

3. The industry's daily revenue is high relative to the cost of industry costs for monitoring.

   This criterion evaluates industry's ability to fund its cost responsibilities related to industry-funded monitoring programs requirements established by the Councils. Preference will be given to industry-funded monitoring programs with high daily revenue relative to the daily costs of the industry funded monitoring.

4. The species has special importance to the ecosystem.

   An industry-funded monitoring program may be important because of the biological relationship of the target species to the ecosystem. For example, the species could be a choke species, a forage fish, or have positive or negative impacts on other species. This criterion evaluates the need to prioritize industry-funded monitoring programs species with special ecosystem importance.

5. Industry-funded monitoring program has clear objectives, and a strong statistical basis for the FMP coverage target, including evaluation of the basis for the coverage target.

   Monitoring should have clear objectives and a statistical design for sampling that achieves those objectives. Monitoring programs should also have a clear link to current or future FMP needs. The basis for coverage rates, and/or target coefficient of variation (CV) or variance should be justified. As an example, an industry funded monitoring program with a 100 percent coverage target should have statistical analysis supporting this need (e.g., identification/quantification of significant bias).

6. Fleets monitored under the program are compatible with existing SBRM fleet definitions.

   There are a number of reasons why it is beneficial to design monitoring programs to be compatible with SBRM fleet definitions.

   First, NMFS must be able to identify trips *a priori* in order to deploy coverage effectively. The SBRM fleet definitions (gear, mesh size, area) are robust to this requirement. Some other definitions (e.g., by target species or permit category) have proven difficult to implement coverage for, leading to inefficient use of resources. One example is the design of the coverage requirements for the longfin squid fishery related to the butterfish cap. Vessels intending to land over 2,500 lb longfin squid must notify

the observer program 48 hours prior to departure in order to facilitate observer placement. Many vessels fishing with small mesh gear wished to have the option to land large quantities of longfin squid, should they encounter it. However, in that case, requiring vessels to notify the observer program about intent to target squid could lead to coverage on trips that do not ultimately target squid.

Second, vessel trip reports typically include information on gear and statistical area associated with a trip, but do not include other identifiers to link the landed catch (e.g., several sector exempted fisheries). If a vessel trip report does not include details on a specific type of gear (e.g., Ruhle Trawl) or indicate that the trip is part of an exempted fishery or in an access area, then one cannot properly use the information to obtain expanded discard totals for the fleet.

Finally, increasing coverage for a specific target species or certain permit types can bias discard estimates for a given SBRM fleet.

Overall, industry-funded monitoring programs designed to allocate observer coverage according to SBRM fleets should have priority over those that allocate observers using other criteria because monitors can be deployed effectively, and can provide information to be included in SBRM discard analyses, which makes them more cost-efficient.

7. Uncertainty surrounding catch estimates

   This criterion prioritizes industry-funded monitoring programs related to target and non-target species with high uncertainty regarding catch estimates. This means that species with higher CVs related to discards or landings would be rated higher and receive higher priority for funding.

8. Risk to management based on fishery performance

   A stock for which the quota is consistently under-harvested is unlikely to face the same management risk as one with a constraining quota. Industry-funded monitoring programs related to fisheries for stocks with constraining quotas should have priority over those for under-harvested stocks.

Some of the information above would be defined or analyzed in the original FMP action that created the industry-funded monitoring program. NMFS or the Council would first look to the original FMP action for information and update or supplement this information as necessary.

The eight criteria may not have equal importance, so NMFS or the Councils can assign weights to the relative importance of these criteria. The end result of this process is just a simple percentage weight for each criterion. For example, one criterion might count for 15% of the decision. The proposed method described below (Table 5) allows an explicit evaluation of each

criterion against all the other criteria so that the final weights are consistent with the values decision makers actually place on the criteria. While it seems intricate, it is a systematic way to arrive at weights for the criteria based on what decision makers really think is important.

- The comparison table is built by entering each criterion to be prioritized into a table, with criteria repeated along both the horizontal and vertical axis.
- The NMFS or the Councils would then compare the criterion to each other to determine importance. For example, first "stock status" is compared to "ecosystem importance", then "stock status" is compared to "SBRM compatibility," and so on, until all of the criteria have been compared to each other. Place an "x" in the boxes where the same two criteria are being compared.
- Each time a weight is recorded in a row cell, its reciprocal value must be recorded in the corresponding column.
- Comparison values:
    - 1 = criteria are equally important
    - 5 = criterion is more important
    - 10 = criterion is much more important
    - 0.2 = criterion is less important
    - 0.1 = criterion is much less important
- After completing the comparisons, total each horizontal row.
- The row totals should then be added to create a grand total.
- Then each row should be divided by the grand total to get a relative weighting value. This value is termed the "IFM Criterion Weighting."

TABLE 5. EXAMPLE IFM CRITERIA COMPARISON TABLE

IFM Evaluation Criteria	Stock status	Com/ Rec Value	Ability to pay	Ecosystem importance	Strong statistical	SBRM compatibility	Catch estimate	Risk to management	Row total	IFM Criterion Weighting	Percent
Stock status	x	10	0.1	5	1	10	1	0.2	27.3	0.15	15%
Com/Rec Value	0.1	x	5	1	10	0.1	0.2	10	26.4	0.14	14%
Ability to pay	10	0.2	x	1	5	0.2	10	5	31.4	0.17	17%
Ecosystem importance	0.2	1	1	x	0.2	1	10	1	14.4	0.08	8%
Strong statistical basis	1	0.1	0.2	5	x	0.2	0.1	0.1	6.7	0.04	4%
SBRM compatibility	0.1	10	5	1	5	x	10	0.2	31.3	0.17	17%
Catch estimate uncertainty	1	5	0.1	0.1	10	0.1	x	10	26.3	0.14	14%
Risk to management	5	0.1	0.2	1	10	5	0.1	X	21.4	0.12	12%
								Grand total	185.2		

In the above example, industry's ability to pay and SBRM compatibility are the most important criteria, and will each contribute 17% to the weight of the score of the industry-funded monitoring programs. The statistical basis for the program is the least important criterion, and will only contribute 4% to the weight of the score.

In practice, a very simple survey of Council members can be used to implement this exercise, and the New England Council's Observer Policy Committee has already successfully participated in a trial of such a survey.

Once the relative importance of each evaluation criteria is determined, the next step is to compare how the industry-funded monitoring programs measure up against the criteria.

Step 2: Evaluate How Each Industry-Funded Monitoring Program Rates Relative to Each Criterion

Rate each industry funded monitoring program:

- For criteria, reading across the vertical axis, assign a number based on how much each industry funded monitoring program meets the criterion. These are the ratings in the table below:
    - 0 = doesn't meet criterion at all
    - 1 = slightly meets criterion
    - 2 = somewhat meets criterion
    - 3 = mostly meets criterion
    - 4 = fully meets criterion
- After completing the comparisons, multiply the rating assigned to each criterion by the IFM Criterion Weighting in Step 1.
- Total the columns. Now the industry-funded monitoring programs can be ranked.

TABLE 6. EXAMPLE FMP RANKING USING IFM EVALUATION CRITERIA

IFM Evaluation Criteria	IFM Criteria Weighting	FMP 1 Ranking	IFM Criteria Weighting x FMP 1 Ranking	FMP 2 Ranking	IFM Criteria Weighting x FMP 2 Ranking	FMP 3 Ranking	IFM Criteria Weighting x FMP 3 Ranking
Stock status	0.15	4	0.59	0	0.00	2	0.00
Com/Rec Value	0.14	1	0.14	3	0.43	1	0.43
Ability to Pay	0.17	2	0.34	1	0.34	0	0.00
Ecosystem importance	0.08	0	0.00	2	0.00	4	0.00
Strong objective	0.04	3	0.11	3	0.33	1	0.33
SBRM compatibility	0.17	1	0.17	3	0.51	4	2.03
Catch estimate uncertainty	0.14	0	0.00	4	0.00	4	0.00
Risk to management	0.12	1	0.12	1	0.12	4	0.46
IFM Program Overall Ranking			1.46		1.71		3.24

In the example, FMP 3 ranks the highest, followed by FMP 2, then FMP 1.

After the process is complete, NMFS and the Councils may now use the rankings to prioritize the allocation of available funding to the FMPs to cover NMFS's costs. One possible way to do this would be to fully fund the highest ranked program, and then work through the ranking list sequentially until funding to cover NFMS's cost was completely allocated. Funding would not be allocated to a program if the available allocation would fund less than ¼ of the necessary funding.

Timing of Discretionary Alternatives (Alternatives 2.1 and 2.2)

The discretionary prioritization alternatives (Alternatives 2.1 and 2.2) require a more time-intensive evaluation and ranking of industry funded monitoring programs, and would require rulemaking to solicit public comment on NMFS or the Council's recommended allocation of available funding. The status quo timing outlined under the status quo alternative would still apply, and this new process would apply alongside the existing timeline.

There are two options for this process so that it could be matched with annual funding levels and the SBRM cycle:

1. The Council could choose to have the entire process 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. This path would mean that, once the prioritization was developed it could be in place indefinitely, until the next industry-funded monitoring program was finalized. Readjusting the weighting approach on an as-needed basis would mean that, after going through the entire timeline, the process outlined in Year 2 below would repeat each year until new programs were added/old programs were adjusted or terminated, at which point the timeline would start over as outlined for Year 1.
2. Alternatively, the Councils could elect to do the process every 3 years unless new IFM programs are approved, or whenever existing IFM programs are adjusted or terminated.

TABLE 7. TIMING OF DISCRETIONARY ALTERNATIVES (ALTERNATIVES 2.1 AND 2.2)

Year	Month	SBRM/ASM/Scallop Schedule (status quo)	Alternatives 2.1 and 2.2
Year 1	January to April	SBRM analyses are completed late January/early February	• NMFS (2.1) prepares and analyze weighting approach for Year 2 **–OR** • Joint Committee or Council meeting to conduct weighting approach (2.2)
	April to May		Council and NFMS meet to review/finalize ranking of existing IFM programs (2.1 and 2.2)
	May to October		NMFS conducts proposed and final rulemaking to finalize rankings for IFM programs for Years 2-4 (or for indefinite period).
	October to December	• Observer data July Year 0 – June Year 1 available • Begin analysis for SBRM • Work on discard estimation analysis for SBRM from November through early February • Work on analysis for sector ASM using most recent complete fishing year (May Year 0 – April Year 1)	Begin analysis to determine necessary IFM sea days
Year 2	January to February	• Receive Year 2 budget • Sector ASM coverage rates published in proposed rule/collect public comment • Determine scallop compensation rate	
	March	• If funding shortfall, run SBRM prioritization process • Start of scallop Year 2	If funding shortfall, issue funding based on finalized weighting approach
	April	• Begin Year 2 sea day schedule • Sector ASM coverage rates published in final rule	Implement Year 2 IFM coverage levels
	May	Begin Sector ASM Year 2	
	June		NMFS briefs Councils on final year 2 IFM sea day allocation

1.4.2.3 Omnibus Alternative 2.3: Proportional Prioritization Process for Industry-Funded Monitoring Programs

Under Omnibus Alternative 2.3, the amount of Federal funding available to support industry-funded monitoring in each FMP would be reduced by the same percentage as the funding shortfall. If the available Federal funding falls short, the amount of the shortfall would be deducted from the total amount of funding to be allocated to each FMP, proportional to that FMP's share of the total funding need. For example, an FMP that represents 20% of the total funding need would absorb 20% of the total funding shortfall.

There could be a scenario where the available Federal funding for a given FMP would produce a coverage level below the coverage target defined by the FMP as providing sufficient information to meet an FMP's objectives for monitoring. For example, an additional 10 observed trips may provide additional data, but not sufficient data to provide a robust estimate of bycatch of the species of interest. In this case, that FMP would not receive additional coverage and the funding for that FMP would be re-allocated proportionally to other FMPs.

NMFS would determine and provide the Councils with: (1) The estimated industry-funded monitoring coverage levels that incorporates the proportional adjustments, based on available funding; and (2) the rationale for the recommended prioritization, including how it deviates from the fully funded coverage levels across all FMPs. This could be done on an annual basis or the allocation of resources could remain as specified unless revised.

Example FMP 1 needs $3 million, FMP 2 needs $5 million, and FMP 3 needs $2 million to fully implement their coverage targets. The total funding need is $10 million. If there is only $8 million in Federal funds for the coming year, then there is a $2 million shortfall, or a 20% shortfall. Using the proportional prioritization process, NMFS would allocate the $8 million such that each FMP has a 20% shortfall, i.e., they would all be funded at 80%. FMP 1 would get 80% of $3 million, or $2.4 million, FMP 2 would get 80% of $5 million, or $4 million, and FMP 3 would get 80% of $2 million, or $1.6 million. These would be the total funds available to the FMPs to fund NMFS's costs for coverage days above SBRM.

1.4.2.4 Omnibus Alternative 2.4: Lowest Coverage Ratio-based Prioritization Process for Industry-Funded Monitoring Programs

Under Omnibus Alternative 2.4, the amount of funding would be allocated to each FMP by prioritizing coverage in fisheries that have the lowest coverage needs (based on projections for the coming year) **relative** to effort (based on vessel trip reports from the previous year). In practice, this would mean that fisheries with the highest ratio of coverage to effort would be sequentially eliminated until the available Federal funding is sufficient to meet the coverage

targets of the remaining FMPs. This alternative would favor fleets with low additional needed coverage days and/or high overall activity.

NMFS would determine and provide the Councils with: (1) the estimated industry-funded monitoring coverage levels that incorporate the prioritization, based on available funding; and (2) the rationale for the recommended prioritization, including how it deviates from the fully funded coverage levels across all FMPs. This could be done on an annual basis or the allocation of resources could remain as specified unless revised.

Example FMP 1 needs $3 million, FMP 2 needs $5 million, and FMP 3 needs $2 million to fully implement their coverage targets. The total funding needed is $10 million, but there is only $8 million in Federal funds for the coming year, so there is a $2 million shortfall. Under the coverage ratio-based prioritization approach, NMFS would calculate the following ratio for each FMP:

$$\text{Coverage Ratio} = \frac{\text{Projected coverage days needed in the coming year}}{\text{Level of effort in the previous year}}$$

If FMP 1 had a ratio of 0.1, FMP 2 a ratio of 0.08, and FMP 3 a ratio of 0.2, FMP 3 would be eliminated from coverage first. Because the total funding need of the remaining programs, $8 million, can be met by the available Federal funding, $8 million, coverage for FMP 1 and FMP 2 would be fully funded. FMP 3 would receive no additional coverage in the coming year. The key here is that fewer needed coverage days and/or higher levels of effort in the previous year will both lead to a higher prioritization, and it is the interplay of these two factors that would determine the prioritization.

This alternative is based on an approach selected by the Councils in the SBRM amendment. SBRM sets "minimum pilot coverage" levels for each fishing mode to ensure that a fleet is not allocated too few observer sea days to generate meaningful discard estimations. If the total of agency funded sea days is greater than the total minimum pilot coverage, then the Penultimate Cell approach would be applied. If the funded days exactly equals the total minimum pilot coverage sea days then the sea days would be assigned to fishing modes according to the minimum pilot coverage. However, it is theoretically possible that the available funding for SBRM observers in a given year could be so restricted that the minimum pilot coverage for each fleet could not be achieved. In such a case, it would be necessary to determine which fleets would get enough observer coverage to reach the minimum pilot coverage and which would not. The Councils' preferred alternative for adjusting coverage levels below minimum pilot coverage would eliminate the funding shortfall by sequentially removing coverage in fleets that had the highest ratio of minimum pilot coverage to days absent from port based on VTR reports in the previous year. Because the number of days absent from port is typically much larger than the minimum pilot coverage for a fishing mode, this alternative would maintain at-sea observer coverage on the most active fishing modes.

1.4.2.5 Omnibus Alternative 2.5: Highest Coverage Ratio-based Prioritization Process for Industry-Funded Monitoring Programs

Under Omnibus Alternative 2.5, the amount of funding would be allocated to each FMP by prioritizing coverage in fisheries that have the highest coverage needs (based on projections for the coming year) **relative** to effort (based on vessel trip reports from the previous year). In practice, this would mean that fisheries with the lowest ratio of coverage to effort would be sequentially eliminated until the available Federal funding is sufficient to meet the coverage targets of the remaining FMPs. This alternative would favor fleets with high additional needed coverage days and/or low overall activity.

NMFS would determine and provide the Councils with: (1) the estimated industry-funded monitoring coverage levels that incorporate the prioritization, based on available funding; and (2) the rationale for the recommended prioritization, including how it deviates from the fully funded coverage levels across all FMPs. This could be done on an annual basis or the allocation of resources could remain as specified unless revised.

Example

FMP 1 needs $3 million, FMP 2 needs $5 million, and FMP 3 needs $2 million to fully implement their coverage targets. The total funding needed is $10 million, but there is only $8 million in Federal funds for the coming year, so there is a $2 million shortfall. Under the coverage ratio-based prioritization approach, NMFS would calculate the following ratio for each FMP:

$$\text{Coverage Ratio} = \frac{\text{Projected coverage days needed in the coming year}}{\text{Level of effort in the previous year}}$$

If FMP 1 had a ratio of 0.1, FMP 2 a ratio of 0.08, and FMP 3 a ratio of 0.2, FMP 2 would be eliminated from coverage first. Because the total funding need of the remaining programs, $5 million, can be met by the available Federal funding, $8 million, coverage for FMPs 1 and 3. FMP 2 would receive no additional coverage in the coming year. The key here is that greater needed coverage days and/or lower levels of effort in the previous year will both lead to a higher prioritization, and it is the interplay of these two factors that would determine the prioritization.

Timing for Formulaic Alternatives (Alternatives 2.3, 2.4 and 2.5)

The formulaic alternatives (Alternatives 2.3, 2.4, and 2.5) could be implemented annually in concert with the existing SBRM cycle. Rulemaking would not be required, and the process outlined in Year 2 below would occur on an annual basis for all subsequent years.

TABLE 8. TIMING FOR DISCRETIONARY ALTERNATIVES (ALTERNATIVES 2.3, 2.4, AND 2.5)

Year	Month	SBRM/ASM/Scallop Schedule (status quo)	Alternatives 2.3 and 2.4
Year 1	January to April		
	April/May		
	May to October		
	October	• Observer data July Year 0 – June Year 1 available • Begin analysis for SBRM • Work on discard estimation analysis for SBRM from November through early February • Work on analysis for sector ASM using most recent complete fishing year (May Year 0 – April Year 1)	Begin analysis for required IFM coverage rates
	November		
	December		
Year 2	January	• Receive Year 2 budget • Sector ASM coverage rates published in proposed rule/collect public comment • Determine compensation rate	
	February		
	March	• If funding shortfall, run SBRM prioritization process • Start of scallop Year 2	If funding shortfall exists, run IFM prioritization
	April	• Begin Year 2 sea day schedule • Sector ASM coverage rates published in final rule	Implement Year 2 IFM coverage levels
	May	Begin Sector ASM Year 2	
	June		NMFS briefs Councils on final year 2 IFM sea day allocation

1.4.2.6 Omnibus Alternative 2.6: Monitoring Set-Aside

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.

However, there are many possible ways to structure a monitoring set-aside program, and the details of each program would need to be developed on an FMP-by-FMP basis. 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. In this example, if a vessel in that fishery is selected to carry an at-sea observer, that vessel 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. This example is very similar to the monitoring set-aside program that currently operates in the scallop fishery. 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 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. These details may include, but are not limited to: (1) the basis for the monitoring set-aside; (2) the amount of the set-aside (e.g., quota, DAS, etc.); (3) how the set-aside is allocated to vessels required to pay for monitoring (e.g., an increased trip limit, differential DAS counting, additional trips, an allocation of the quota, etc.); (4) the process for vessel notification; (5) how funds are collected and administered from the industry to cover the costs of monitoring coverage; and (6) any other measures necessary to develop and implement a monitoring set-aside. 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.

Considerations for Monitoring Set-Asides

The text below outlines some of the concepts for the Councils and NMFS to consider when determining whether developing a future monitoring set-aside program for a given fishery could be successful.

Value of the Resource

It is important to determine if the value of a monitoring set-aside program would be significantly beneficial for the goals of off-setting additional monitoring costs.

For example, in 2010, the stock wide Atlantic herring ACL was 201 million lb and the herring ex-vessel price was approximately $0.13/lb. Landings that year were approximately 145 million lb (approximately 72% of the ACL). If 3 percent of the ACL was set-aside for monitoring (6.03 million lb), that would equate to approximately $784,140 to cover monitoring costs in the Atlantic herring fishery. However, the fishery may only catch a portion of the monitoring set-aside. For example, if only approximately 72 percent of the monitoring set-aside was harvested, then only approximately $564,581 (72% of $784,140) would be available to cover monitoring costs for the entire fishery (all gear types and permit categories). There are also costs associated with fishing, and only the extra profits, not the full ex-vessel value, are a benefit to the fishermen.

Depending on the monitoring program in place, a set-aside would only partially cover monitoring costs. The high ex-vessel value of scallops and modest level of additional sampling currently allows for the scallop monitoring set-aside program to fully off-set the monitoring costs in the scallop fishery, but if ex-vessel value of scallops falls to a low enough level, it may not allow full funding in the future.

Management Measures and Fishery Operations

When developing a monitoring set-aside program managers need to consider the operation of the fishery as well as the comprehensive management measures within a fishery to create a successful monitoring set-aside program. It is also important to consider fishery management partners when developing exemptions or measures for a monitoring set-aside program. Finally, and perhaps most importantly, there needs to be incentive and benefit to the vessels associated with the ability to harvest additional pounds to off-set additional monitoring costs.

In the scallop monitoring set-aside program, vessels can harvest additional scallops above the possession limit, or fish at a reduced days-at-sea accrual rate, when they carry an observer. This provides vessels additional revenue from that trip to off-set the costs of the observer. However, in a fishery like Atlantic herring, some limited access vessels do not have a regulated possession limit and often fish to the maximum capacity of the vessel. Since some vessels in this fishery do not have a possession limit, harvesting additional fish on a trip may not be an effective option. However, there could be other management measure incentives such as allowing fishing during a closed season, in a closed area, or following a seasonal closure. However, benefits from such exemptions would only occur in some fisheries and may not offer an immediate return of funds to offset observer costs.

In the summer flounder, scup, and black sea bass fisheries, in addition to Federal possession limits, states often implement possession limits for these species. If vessels participating in these fisheries were provided exemptions to the Federal possession limits for a monitoring set-aside program, they would also need to be exempt from a state possession limit in order to land over the possession limit in that state. This type of monitoring set-aside program would require coordination with the states and the Atlantic States Marine Fisheries Commission, and may create additional administrative burden for states.

ACL Allocation Within a Fishery

FMPs use a wide range of structures to apportion ACLs to different fishery participants (e.g., commercial and recreational allocations). Monitoring set-aside program managers must consider how the ACL is distributed within the fishery when deciding how to structure the set-aside program. For example, in the Bluefish FMP, there is only one ACL from which a commercial and a recreational ACT are derived. If 3 percent of the ACL is allocated for a monitoring set-aside program, both the commercial and recreational ACTs would be reduced proportionally. However, it is most likely that only the commercial sector would have additional monitoring requirements, therefore the commercial fishery would benefit from the additional monitoring set-aside pounds to cover monitoring costs, but the recreational fishery would simply have a reduced quota.

On the other hand, Amendment 16 to the Northeast Multispecies FMP allows the Council to set sub-ACLs for groundfish stocks through framework adjustments. This vehicle could be used to create a monitoring set-aside program by designating sub-ACLs for some, or all, of the groundfish stocks. The landings allocated to those sub-ACLs could then be used to cover additional monitoring costs in that fishery. It is important to consider how quotas are allocated within the fishery and how to most appropriately distribute the monitoring set-aside pounds. As an aside, it is worth exploring whether the sub-ACL approach may be an alternative approach for establishing monitoring set-asides for the groundfish fishery.

Shared Burden and Benefit

It is important to consider whether the reallocation of quota for a monitoring set-aside program will be equally beneficial and/or burdensome to all fishery participants, and how monitoring set-aside programs could affect different permit categories or different gear types within a fishery. For example, in the Atlantic herring fishery, hypothetically a monitoring set-aside program would allocate 3 percent of the ACL to off-set monitoring costs. However, the monitoring alternatives under consideration for the herring fishery apply coverage to a subset of the herring fishery participants. For example, in some alternatives, the mid-water trawl vessels may be the only gear type that has industry-funded monitoring requirements. If a monitoring set-aside were established to offset the costs of this program, the mid-water trawl vessels would receive the benefits of additional pounds for monitoring costs, but the purse seine vessels would have a smaller annual quota to harvest, and may therefore endure increased hardship despite not having additional monitoring requirements.

In contrast, in the groundfish fishery, the burden of monitoring costs may be more evenly dispersed with the establishment of a monitoring set-aside program. Currently, not all vessels participating in sectors are active in the fishery. Those inactive vessels lease their allocation to the active vessels, but the active vessels would be responsible for additional monitoring costs. If the monitoring set-aside program reserved 3 percent of the overall ACL, then the allocation to each vessel would be equally reduced, therefore sharing the burden more evenly among all participants in the fishery as opposed to just the active vessels.

Availability and Prevalence of the Resource

The health and availability of a fishery will dictate whether the fishery can sustain a monitoring set-aside program. For example, the Atlantic mackerel fishery has continually been underperforming and annual landings have been declining for approximately the past 10 years. At this time it is unclear if the mackerel stock is declining or if the fish are behaving differently in terms of migration or schooling. Providing mackerel vessels with additional pounds of fish to land to off-set additional monitoring cost would not be beneficial because the fish are predominately unavailable or unattainable and the quota has not been limiting.

Additionally, it is important to consider whether the monitoring set-aside program would affect fishing pressure on a sub-component of a stock. For example, if monitoring is only required for vessels fishing in certain areas, those vessels would be provided the additional monitoring set-aside pounds, and therefore could increase fishing effort in those areas. In this example, there may be disproportionate fishing pressure on a sub-component of the stock that exists in the area where additional monitoring is required. Managers need to consider the current health of the stock, the recent performance of the fishery, whether the current management measures appropriately address the potential for the effects of catch on different components of the stock, and how to create a dynamic monitoring set-aside program for changes in stock status and performance to develop a successful program.

Enforcement Issues

Fishery managers should also consider methods to enforce a monitoring set-aside program to prevent abuse to the system. The Mid-Atlantic Research Set-Aside (RSA) program was recently suspended, in part due to issues revolving around enforcement and abuse of the program that resulted in overexploitation of some fisheries. Some monitoring set-aside models could be structured similarly to the Mid-Atlantic RSA program where vessels receive exemptions from certain regulations (i.e., possession limits or closed seasons/areas) to harvest monitoring set-aside pounds. Similar enforcement, monitoring, and reporting issues would need to be addressed when developing a monitoring set-aside program to prevent abuse and over-exploitation of a fishery resource.

Estimated Potential Revenue for Certain FMPs

An estimate of the amount of revenue that could be generated from a set aside is shown in the table below. This table is generated using the lowest and highest average ex-vessel price of herring and mackerel from the 2010-2014 fishing years. Inability to locate either the herring or mackerel resources, reductions in ABCs, or lower prices would reduce expected revenues from a monitoring set-aside. In addition, changes to the management program (i.e., changes to the current unlimited possession limits for Category A herring and Tier 1 mackerel permits) may be necessary, depending on the structure of the set aside. For the herring fishery, using 1 to 5 percent of the 2015 annual catch limit could fund 357 to 2,020 NEFOP-level monitoring days at $818 per sea day, and 411 to 2,327 at-sea monitoring days at $710 per sea day. For the mackerel fishery, using 1 to 5 percent of the 2015 annual catch limit could fund 110 to 1,131

NEFOP-level monitoring days at $818 per sea day, and 127 to 1,303 at-sea monitoring days at $710 per sea day.

TABLE 9. POTENTIAL FUNDING TO OFFSET MONITORING COSTS FROM MONITORING SET-ASIDES FOR THE ATLANTIC HERRING AND MACKEREL FISHERIES

	2015 Total ACL	Available set-aside			Price per mt*		Potential funding available to offset monitoring costs					
							5% of the ACL		3% of the ACL		1% of the ACL	
Stock		5%	3%	1%	Low	High	Low	High	Low	High	Low	High
Atlantic herring	104,566	5,228	3,137	1,046	279	316	$ 1,458,696	$1,652,143	$875,217	$991,286	$291,739	$330,429
			Sea days at $818/sea day				1,783	2,020	1,070	1,212	357	404
			Sea days at $710/sea day				2,055	2,327	1,233	1,396	411	465
Atlantic mackerel	25,039	1,252	751	250	360	739	$450,702	$ 925,191	$270,421	$555,115	$ 90,140	$185,038
			Sea days at $818/sea day				551	1,131	331	679	110	226
			Sea days at $710/sea day				635	1303	381	782	127	261
* Per metric ton prices are the average high and low prices during 2010-2014.												

1.4.3 Considered But Rejected Omnibus Alternatives

The January 2014 version of the Discussion Document contained a Vessel Cancellation Charge Option. That option included discussion of a fee to be paid by the vessel to the at-sea observer service provider when vessels are a "no show" or when they cancel trips less than 12 hours before the scheduled departure time. That option also discussed that payment of fees would be a vessel permit requirement and that outstanding fees would result in non-renewal of vessel permits.

As the PDT/FMAT further developed this option, the Department of Commerce Office of General Counsel advised that the government may not dictate the terms of a private transaction such as this fee. As a result, the Vessel Cancellation Charge Option is likely not legal because it involves the terms of a private business contract between a vessel and an observer service provider. While an observer service provider or a vessel could specify a cancellation fee as part of a contract, thereby eliminating the necessity of increasing the base rate that all vessels pay, it is unlikely that NMFS could legally require or specify the amount of such a fee.

The August 2014 version of the Discussion Document contained a Cost-based Prioritization Process for Industry-Funded Monitoring Programs Option. Under that option, the Federal funding would be assigned to each FMP by sequentially eliminating coverage in FMPs that have the highest funding need until the available funding is sufficient to meet the funding needs of the FMPs remaining. That process would have prioritized fisheries with the least expensive programs first. NMFS would have determined and provided the Councils with: (1) The estimated industry-funded monitoring coverage levels that incorporates the prioritization, based on available funding; and (2) the rationale for the recommended prioritization, including how it deviates from the fully-funded coverage target across all FMPs. This option could be done on an annual basis or the allocation of resources could remain as specified unless revised.

At its August 19, 2014, meeting the New England's Observer Policy Committee recommended that this option be considered but rejected because cost-based prioritization option lacked rationale and eliminating FMPs with the highest funding needs would not likely meet the goals/objectives of the industry-funded monitoring programs established by the New England Council.

1.5 IMPACTS OF OMNIBUS ALTERNATIVES

General Discussion of Omnibus Alternative Impacts

The omnibus alternatives (Omnibus Alternatives 1, 2, and 2.1-2.6) in this amendment are procedural in nature—focused on the definition of cost responsibilities between NMFS and industry, the process that will be used to prioritize the allocation funding for NMFS cost responsibilities related to industry-funded monitoring programs established for Greater Atlantic Region fisheries, industry-funded monitoring program service provider standards, and the establishment of future industry-funded monitoring programs. Subsequently, there are no expected direct physical or biological impacts associated with the alternatives under consideration for the omnibus portions of the action. Due to the nature of the omnibus alternatives evaluated in this amendment, there very few functional differences (as far as environmental effects are concerned) between the status quo alternatives and the other alternatives under consideration.

The expected direct effects are generally well-defined for most fishery management actions, but indirect effects are often less so. During the development of this amendment, there have been occasions when discussions began to diverge from how bycatch data may best be collected into discussions about the likely management implications of an "improved" data collection program. These discussions generally focused on the potential for improvements in stock assessments and on the types of management measures that may be necessary to address bycatch concerns where they may exist.

There are three reasons why these types of potential downstream effects (e.g., subsequent management measures to address bycatch issues) of this action are considered too remote and speculative to be appropriate for consideration in this amendment. First, while this amendment is focused on potentially expanding observer coverage above the level required under SBRM, implementation of this amendment does not, by itself, automatically allow for higher observer coverage in Greater Atlantic Region fisheries or coverage above status quo. While increases in target observer coverage levels for some fisheries may be expected to improve data quality, realization of an improvement in data quality is contingent upon sufficient funding to expand coverage beyond SBRM.

The second reason these types of potential effects are too remote and speculative to be appropriate for consideration in this amendment is that there is no way to predict the effect that an improvement in data quality would have for managing the affected fisheries. Improvements in data quality would give assessment scientists and fishery managers more confidence in the data. However, there is no way to predict the type of new information that would arise from future catch estimations (e.g., higher or lower discard estimates). Because any change in direction of catch estimation cannot be predicted at this time, there is no way to predict whether changes in management would be required to address any potential issues that may arise.

The third reason is that the management measures that might be implemented, should action be determined to be necessary to address a bycatch concern, also cannot be predicted. Depending on the specific fishery, resource species, time, area, and manner of interaction leading to the concern, different types of management measures would be appropriate. Some types of concerns may best be addressed with a bycatch quota, others may best be addressed with an area or seasonal closure, and yet others may best be addressed through changes to the fishing gear used. As the actual environmental impacts of these potential management changes would vary with and depend upon the type of measure proposed, the management system to be changed, and the time, area, and species fished, there is no way to speculate as to what the most likely environmental impacts may be.

Therefore, because these types of potential management actions, which may eventually stem from implementation of the industry-funded monitoring amendment, are too remote and speculative to be adequately or meaningfully addressed in this amendment, this analysis focuses solely on the potential direct, indirect, and cumulative effects expected to be immediately associated with the proposed action and primary alternatives. Any future management actions that may result from the information collected through industry-funded monitoring programs would be subject to all the requirements of NEPA at the appropriate time.

The discussion of environmental effects that follows is organized to present the relevant biological, physical, and socio-economic considerations for each of the omnibus alternatives. Thus, the effects on biological resources of the each of the omnibus alternatives are discussed, followed by the effects on the physical environment (habitat) of each of the omnibus alternatives, and finally followed by the socio-economic effects of each of the omnibus alternatives. In this way, the effects of each of the alternatives on each portion of the affected environment can be appropriately compared.

Due to the administrative nature of much of this action (i.e., the action is focused on establishing a process) in many cases there are no environmental impacts associated with the omnibus alternative under consideration. In these cases, an explanation for this conclusion is presented, but no separate discussion of the alternatives is provided. Separate discussion of the likely impacts of alternatives is only provided where there are measurable differences in impacts between the alternatives.

This section considers the potential impacts of omnibus alternatives considered by the NEFMC and MAFMC to establish a common structure for industry-funded monitoring programs that would apply to all Greater Atlantic Region FMPs.

Alternatives under consideration include the following:

- Alternative 1: Case-by-case Industry-Funded Monitoring Programs (No Action); and
- Alternative 2: Standardized Industry-Funded Monitoring Programs.

The standardized industry-funded monitoring program under consideration includes (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 a future framework adjustment action, (3) standard administrative requirements for industry-funded monitoring service providers, and (4) a process to prioritize available Federal funding for industry-funded monitoring across FMPs, and (5) a process for monitoring set-aside programs to be implemented via a future framework adjustment action.

There are five alternative processes for prioritizing available Federal funding for industry-funded monitoring programs across FMP, including:

- Alternative 2.1: NMFS-led prioritization process;
- Alternative 2.2: Council-led prioritization process;
- Alternative 2.3: Proportional prioritization process;
- Alternative 2.4: Lowest coverage ratio prioritization process; and
- Alternative 2.5: Highest coverage ratio prioritization process.

TABLE 10. SUMMARY OF THE INDIRECT IMPACTS OF OMNIBUS ALTERNATIVES COMPARED TO EACH OTHER

Alternatives	Target Species Non-Target Species Protected Species	Human 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 first come, first served 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	Negligible 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 Process		
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).		

1.5.1 OMNIBUS ALTERNATIVE IMPACTS TO BIOLOGICAL RESOUCES

Under Omnibus Alternative 1 (No Action), there would be no standardized structure developed for Greater Atlantic Region industry-funded monitoring programs, meaning that there would be no standard definition of cost responsibilities for industry-funded monitoring in the New England and Mid-Atlantic fisheries, no standard administrative requirements for industry-funded monitoring service providers, no framework adjustment process to implement FMP-specific industry-funded monitoring, and no process to prioritize available Federal funding to meet Council desired monitoring coverage target above and beyond SBRM coverage. If there was Federal funding available after SBRM coverage requirements were met, additional monitoring for Greater Atlantic Region FMPs would be evaluated on a case-by-case basis. If no Federal funding were available after SBRM coverage requirements were met, then none of the established industry-funded monitoring programs would operate and there would be no additional observer coverage above SBRM levels.

In contrast, Omnibus Alternative 2 would establish a standardized structure for industry-funded monitoring programs that would apply to all New England and Mid-Atlantic FMPs that choose to use industry funding to increase monitoring. This industry-funded monitoring program structure would include the following components: (1) standard cost responsibilities associated with industry-funded monitoring for NMFS and the fishing industry, (2) process for FMP-specific industry-funded monitoring to be implemented via a future framework adjustment action, and (3) standard administrative requirements for industry-funded monitoring service providers. Under Omnibus Alternative 2, if enough Federal funding available after SBRM coverage requirements were met to cover NMFS costs for all of the established industry-funded monitoring programs, they would all operate at the target coverage levels established through each individual FMP. If there is some Federal funding available after SBRM coverage requirements are met, but not enough to cover all of the industry-funded monitoring programs, one of five possible prioritization processes would be used to decide how to allocate available Federal funding to the various industry-funded monitoring program. If no Federal funding were available after SBRM coverage requirements were met, then, similar to the No Action alternative, none of the established industry-funded monitoring programs would operate and there would be no additional observer coverage above SBRM levels.

In general, there are no direct impacts on biological resources (target, non-target, and protected species) related to either Omnibus Alternative 1 (No Action), or the various permutations of Omnibus Alternative 2. Again, these alternatives are entirely focused on the process of developing industry-funded monitoring programs, and thus do not directly affect the level of fishing activity, fishing operations, the species targeted, or areas fished in the Greater Atlantic Region. The indirect impacts of the various aspects of the Omnibus Alternatives on biological resources is discussed below.

Compared to the No Action alternative, the establishment of standardized cost responsibilities and the framework adjustment process to allow for the future establishment of industry-funded monitoring programs in individual FMPs under Omnibus Alternative 2 has a negligible

impact on biological resources when compared with the No Action alternative. These aspects of Omnibus Alternative 2 are entirely focused on the process of developing industry-funded monitoring programs, and thus do not directly affect the level of fishing activity, fishing operations, the species targeted, or areas fished in the Greater Atlantic Region. As there are no biological impacts associated with the cost responsibility and framework adjustment aspects of the Omnibus Alternative 2 and the No Action alternative, there are no differences among them.

There is a low positive indirect impact on biological resources related to establishment of standardized industry-funded monitoring service provider requirements. Standardized service provider requirements may lead to greater consistency in the information collected about target, non-target, and protected species through industry-funded monitoring programs, provided that individual FMPs do not drastically alter the service provider requirements when establishing monitoring programs. Improved catch information that results from greater consistency in information collection may lead to better management of biological resources. In contrast, under the No Action alternative, industry-funded monitoring service provider requirements would need to be established separately for each FMP.

The magnitude of the potential indirect impacts of the prioritization process on biological resources varies depending on the selected prioritization process. The impacts discussed in this paragraph apply at times when there is some Federal funding available after SBRM coverage requirements are met, but not enough to cover all of the established industry-funded monitoring programs. Under the Omnibus Alternative 1 (No Action), the absence of a process to prioritize between established industry-funded monitoring programs means that Federal funding available after SBRM coverage requirements are met is allocated to industry-funded monitoring programs on a first-come, first-served basis. There is a potential low negative impact to biological resources under the No Action alternative if industry-funded monitoring programs necessary to gather important catch information go unfunded because they are developed after other programs. In general, the establishment of a prioritization process under Omnibus Alternative 2 provides a low positive impact on biological resources compared to the No Action alternative because all established industry-funded monitoring programs will be considered when deciding how to allocate available Federal funding, and funding will either be allocated proportionally to all industry-funded monitoring programs (under Alternative 2.3), or will be distributed among industry-funded programs based on a method selected by the Councils (under Alternatives 2.1, 2.2, 2.4, and 2.5).

The discretionary prioritization processes (Alternatives 2.1 and 2.2) have the greatest potential for positive impacts to biological resources compared to the No Action and formulaic alternatives (Alternatives 2.3-2.5) because they allow for the evaluation of program need and design when assigning priority. This means that, in years where there is Federal funding available to prioritize, the discretionary prioritization alternatives allow the potential to direct funding towards monitoring programs that improve information about specific target, non-target, and protected species.

The formulaic prioritization alternatives (Alternative 2.3-2.5) all provide a low positive impact

on biological resources compared to No Action because they consider all established Greater Atlantic Region industry-funded monitoring programs when deciding how to allocate available Federal funds, rather than considering funding allocation on a case-by-case basis under the No Action alternative. In the case of the proportional prioritization process (Alternative 2.3), available Federal funding would be allocated proportionally to all established industry funded monitoring programs, rather than on a first-come, first-served basis under the No Action alternative. This means that, in years where there is Federal funding available to prioritize, all industry-funded monitoring programs would result in some additional monitoring, which may have low positive impacts on biological resources in terms of information collection. The lowest coverage ratio based alternative (Alternative 2.4) would favor coverage for the FMPs that don't need much additional coverage to meet targets and the most active fisheries. The highest coverage ratio based alternative (Alternative 2.5) would favor coverage for the FMPs that need more coverage to meet targets and the least active fisheries. While both of these alternatives could result in certain industry-funded monitoring programs receiving no funding, there is still some benefit to biological resources that results from evaluating the allocation of available Federal funding across all Greater Atlantic Regional industry-funded monitoring programs in a structured way, rather than on a case-by-case basis.

Due to the nature of Alternative 2.6 (Monitoring Set-Aside), which is limited to a decision regarding creating the mechanism needed to develop and implement monitoring set-aside programs, rather than actually implementing such programs, there are no direct or indirect effects on any biological resources (fishery resources, protected resources, or other non-fishery resources) anticipated for this alternative. Any impacts that may be associated with actually implementing a monitoring set-aside program through a framework adjustment to an FMP would be fully analyzed in the documents supporting the action.

1.5.2 OMNIBUS ALTERNATIVE IMPACTS TO PHYSICAL ENVIRONMENT

Because neither the status quo omnibus alternative nor the other omnibus alternatives (2.1-2.5) would directly impose or likely result in any changes in fishing effort or behavior, fishing gears used, or areas fished, there are no potential impacts to the physical environment (including Essential Fish Habitat (EFH)) associated with the omnibus alternatives under consideration for this item. There are also no differences among the various omnibus alternatives.

Due to the nature of this Alternative 2.6 (Monitoring Set-Aside), which is limited to decisions regarding creating the mechanisms needed to develop and implement monitoring set-aside programs, there are no direct or indirect effects on any physical environment (including EFH) anticipated for this alternative. Any impacts that may be associated with actually implementing a monitoring set-aside program through a framework adjustment to an FMP would be fully analyzed in the documents supporting the action.

1.5.3 OMNIBUS ALTERNATIVE IMPACTS TO HUMAN COMMUNITIES

Under Omnibus Alternative 1 (No Action), there would be no standardized structure developed for Greater Atlantic Region industry-funded monitoring programs, meaning that there would be no standard definition of cost responsibilities for industry-funded monitoring in the New England and Mid-Atlantic fisheries, no standard administrative requirements for industry-funded monitoring service providers, no framework adjustment process to implement FMP-specific industry-funded monitoring, and no process to prioritize available Federal funding to meet Council desired monitoring coverage target above and beyond SBRM coverage. If there was Federal funding available after SBRM coverage requirements were met, additional monitoring for Greater Atlantic Region FMPs would be evaluated on a case-by-case basis. If no Federal funding were available after SBRM coverage requirements were met, then none of the established industry-funded monitoring programs would operate and there would be no additional observer coverage above SBRM levels.

In contrast, Omnibus Alternative 2 would establish a standardized structure for industry-funded monitoring programs that would apply to all New England and Mid-Atlantic FMPs that choose to use industry funding to increase monitoring. This industry-funded monitoring program structure would include the following components: (1) standard cost responsibilities associated with industry-funded monitoring for NMFS and the fishing industry, (2) process for FMP-specific industry-funded monitoring to be implemented via a future framework adjustment action, and (3) standard administrative requirements for industry-funded monitoring service providers. Under Omnibus Alternative 2, if enough Federal funding available after SBRM coverage requirements were met to cover NMFS costs for all of the established industry-funded monitoring programs, they would all operate at the target coverage levels established through each individual FMP. If there is some Federal funding available after SBRM coverage requirements are met, but not enough to cover all of the industry-funded monitoring programs, one of five possible prioritization processes would be used to decide how to allocate available Federal funding to the various industry-funded monitoring program. If no Federal funding were available after SBRM coverage requirements were met, then, similar to the No Action alternative, none of the established industry-funded monitoring programs would operate and there would be no additional observer coverage above SBRM levels. No individual FMP would be subject to an industry-funded monitoring program as a result of implementation of this action. Rather, any FMP that wishes to develop an industry-funded monitoring program would need to develop the program that meets the specifications of this action in a separate framework or amendment.

Overall, there will be negative 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 estimated vessel contribution is between $106 and $818 per sea day. If no Federal funding were available after SBRM coverage requirements were met, then,

similar to the No Action alternative, none of the established industry-funded monitoring programs would operate and there would be no additional observer coverage above SBRM levels. It is important to reiterate that the economic impacts associated with coverage targets for industry-funded monitoring programs must be evaluated on an FMP-by-FMP basis at the time each program is established (e.g., the economic analysis of coverage target impacts is provided for the Atlantic herring and Atlantic mackerel fisheries in Sections 4.2 and 4.3 of the IFM Amendment Environmental Assessment document). The indirect impacts of the various aspects of the Omnibus Alternatives on human communities are discussed below, but should be interpreted within the context of the economic impacts being overall negative.

Compared to the No Action alternative, the establishment of the framework adjustment process to allow for the future establishment of industry-funded monitoring programs in individual FMPs under Omnibus Alternative 2 has a negligible impact on human communities when compared with the No Action alternative. This aspect of Omnibus Alternative 2 is entirely focused on the process of developing industry-funded monitoring programs, and thus does not directly affect fishing vessels, fleets, or ports. As there is no direct impact to human communities associated with the framework adjustment aspects of the Omnibus Alternative 2 and the No Action alternative, there are no differences between the alternatives.

There is a potential low positive indirect impact on human communities associated with the establishment of standardized industry-funded monitoring service provider requirements. The service provider requirements match the existing service provider requirements codified for other industry-funded monitoring programs in the Greater Atlantic Region. Standardized service provider requirements may allow for efficiencies in the administration of industry-funded monitoring programs (e.g., initial applications to be approved as service providers, training for monitors, etc.) compared to the No Action alternative, which could ultimately reduce industry's contribution to monitoring costs. In addition, standardized service provider requirements could lead to greater consistency in the information collected about through industry-funded monitoring programs, provided that individual FMPs do not drastically alter the service provider requirements when establishing monitoring programs. Improved catch information that results from greater consistency in information collection may lead to better management of biological resources, which could eventually lead to greater fisheries yields. In contrast, under the No Action alternative, industry-funded monitoring service provider requirements would need to be established separately for each FMP.

The establishment of standardized cost responsibility definitions could have low positive impacts compared to No Action. While industry cost responsibilities are not codified in this action, the categorization and characterization of cost responsibilities in this action could provide industry members information necessary to negotiate contracts with industry-funded monitoring service providers, which may ultimately reduce industry cost responsibilities.

The magnitude of the potential indirect impacts of the prioritization process on human communities varies depending on the selected prioritization process. The impacts discussed in this paragraph apply at times when there is some Federal funding available after SBRM

coverage requirements are met, but not enough to cover all of the established industry-funded monitoring programs. Under the Omnibus Alternative 1 (No Action), the absence of a process to prioritize between established industry-funded monitoring programs means that Federal funding available after SBRM coverage requirements are met is allocated to industry-funded monitoring programs on a first-come, first-served basis. There is a potential low negative impact to human communities under the No Action alternative if industry-funded monitoring programs necessary to gather important information catch information go unfunded because they are developed after other programs. In general, the establishment of a prioritization process under Omnibus Alternative 2 provides a low positive impact on human communities compared to the No Action alternative because all established industry-funded monitoring programs will be considered when deciding how to allocate available Federal funding, and funding will either be allocated proportionally to all industry-funded monitoring programs (under Alternative 2.3), or will be distributed among industry-funded programs based on a method selected by the Councils (under Alternatives 2.1, 2.2, 2.4, and 2.5).

The discretionary prioritization processes (Alternatives 2.1 and 2.2) both provide a low positive impact on human communities compared to No Action because they consider all established Greater Atlantic Region industry-funded monitoring programs when deciding how to allocate available Federal funds, rather than considering funding allocation on a case-by-case basis under the No Action alternative. These alternatives have the greatest potential for positive impacts to human communities compared to the No Action and formulaic alternatives (Alternatives 2.3-2.5) because they allow for the evaluation of program need and design when assigning priority. This means that, in years where there is Federal funding available to prioritize, the discretionary prioritization alternatives allow the potential to direct funding towards monitoring programs with specific characteristics. These alternatives could allow the Council or NMFS to preferentially support industry-funded monitoring programs for species with economic value, programs where industry is most able to bear the cost of additional monitoring, or programs that gather information about species with special ecosystem importance (e.g., choke species or forage species). Improved catch information that results from the opportunity to focus funding on the most important industry-funded monitoring programs may lead to better management of biological resources, which could eventually lead to greater fisheries yields.

The formulaic prioritization alternatives (Alternative 2.3-2.5) all provide a low positive impact on human communities compared to No Action because they consider all established Greater Atlantic Region industry-funded monitoring programs when deciding how to allocate available Federal funds, rather than considering funding allocation on a case-by-case basis under the No Action alternative. In the case of the proportional prioritization process (Alternative 2.3), available Federal funding would be allocated proportionally to all established industry funded monitoring programs, rather than on a first-come, first-served basis under the No Action alternative. This means that, in years where there is Federal funding available to prioritize, all industry-funded monitoring programs would result in some additional monitoring, which may have low positive impacts on human communities in terms of information collection. The lowest coverage ratio based alternative (Alternative 2.4) would prioritize industry-funded

monitoring programs associated with the most active fisheries. The highest coverage ratio based alternative (Alternative 2.5) would prioritize industry-funded monitoring programs associated with the least active fisheries. While both of these alternatives could result in certain industry-funded monitoring programs receiving no funding, there is still some benefit to human communities that results from evaluating the allocation of available Federal funding across all Greater Atlantic Regional industry-funded monitoring programs in a structured way, rather than on a case-by-case basis.

The monitoring set-aside (Alternative 2.6) concept has the potential cost of removing harvest from a fishery, but the potential benefit of allowing parts of the fishery to defray costs for additional monitoring, essentially spreading the cost among more fishery participants. However, due to the nature of this alternative, which is limited to decisions regarding creating the mechanisms needed to develop and implement monitoring set-aside programs, there are no direct or indirect socio-economic effects on fishing vessels, fleets, or ports anticipated for this alternative. Any impacts that may be associated with actually implementing a monitoring set-aside program through a framework adjustment to an FMP would be fully analyzed in the documents supporting the action.

Appendix 1 – Background Information on the Industry-Funded Monitoring Omnibus Amendment

The New England and Mid-Atlantic Fishery Management Councils have been 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 and beyond coverage required for the Standardized Bycatch Reporting Methodology (SBRM), the Endangered Species Act (ESA) or Marine Mammal Protection Act (MMPA). Recognizing that the lack of availability of Federal funding prevented the National Marine Fisheries Service (NMFS) from increasing monitoring coverage, both Councils proposed industry-funded monitoring requirements in some fisheries. However, NMFS disapproved these proposals because they were inconsistent with Federal law. In order to meet the Councils' desires for increased monitoring, this amendment would provide options and set priorities for industry funding to be used in conjunction with Federal funding to pay for additional monitoring to meet fishery-specific coverage targets.

Industry-funded monitoring is a complex and highly sensitive issue. In addition to accounting for socioeconomic conditions of the fleets that must bear the cost of industry-funded monitoring requirements, it involves the Federal budgeting and appropriations process and a diverse suite of Federal mandates. In an effort to simplify these issues for fisheries stakeholders, we use a question and answer format throughout the introduction and background, alternatives descriptions, and impacts sections of this document. We hope this approach helps clarify the considerations that drove the development of the alternatives considered in this action, as well as the expected function and impacts of the alternatives.

The introduction and background section includes 4 categories of questions and answers, including: 1) General questions about the Industry-funded Monitoring Omnibus amendment; 2) Cost responsibilities; 3) NMFS administrative costs; and 4) Industry Costs. The list of questions under each of these categories is summarized below. If you are viewing this document electronically, click on any question of interest, and the hyperlink will take you to the page with the answer. Page numbers are provided for those viewing paper copies of the document.

<u>General questions about this amendment</u>

For example, if the Atlantic herring FMP sets a coverage target of 100% for 2017, does this amendment ensure that level of coverage would be achieved? (p. 5)

- How are existing industry-funded monitoring programs administered in the Greater Atlantic Region? (p. 6)
- Why does this action propose to consider industry-funded monitoring programs in a different way than it is considered for the NE Multispecies and Scallop FMPs? (p. 8)
- Why does NMFS caution the Councils about additional costs for monitoring but not for other FMP requirements, such as vessel trip reports? (p. 8)
- What types of monitoring are considered in this amendment? (p. 9)

Cost responsibilities

- What are the cost components for monitoring programs? (p. 9)
- What is cost sharing? Can industry split the cost of monitoring with the government by some percent (e.g., industry pays for 30%, NMFS pays for 70%) or some dollar amount (e.g., industry pays for $325, NMFS pays for the rest)? (p. 10)
- Why can't NMFS directly collect fees for monitoring programs? (p. 10)
- Why has it been difficult for NMFS to give cost estimates for various types of monitoring programs? (p. 11)

NMFS administrative costs

- How was the use of certain funding lines changed related to SBRM? (p. 12)
- What funding lines are available to fund administrative costs for industry-funded monitoring programs? (p. 13)
- Can NMFS accept funding from external groups to fund administrative costs for monitoring programs? (p. 13)
- How does NMFS cover its administrative costs for the groundfish at-sea monitoring (ASM) program? (p. 14)
- When could SBRM funds be used to cover the administrative costs for monitoring? (p. 14)
- If SBRM isn't fully funded every year, how could there be discretionary funding available to cover administrative costs from industry-funded programs? (p. 15)

Industry costs

- The expected industry contribution for monitoring in the Northeast seems a lot higher than other regions. Don't Alaska fishermen only pay $325 per sea day for observer coverage? (p. 16)
- The scallop fishery has an observer set aside to help defray industry costs for monitoring. Can other FMPs use this approach? What are some of the challenges of using a monitoring set-aside to pay for industry costs? (p. 16)
- Can there be a fully industry-funded program where industry pays for both administrative and monitoring costs, and hands packaged data over to NMFS? (p. 17)

- If NMFS has extra funding available, can the money be passed along to industry to help defray its cost responsibilities for monitoring? (p. 17)

General questions about the Industry-Funded Monitoring Omnibus Amendment

How is this document organized?

The Industry-funded Monitoring Omnibus Amendment had three sets of alternatives.

The first set of alternatives is referred to as the "Omnibus alternatives." These alternatives include: (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 a future framework adjustment action, (3) standard administrative requirements for industry-funded monitoring service providers, and (4) a process to prioritize available Federal funding for industry-funded monitoring across FMPs. If selected, these alternatives will apply to all New England and Mid-Atlantic Fishery Management Council fishery management plans.

The second set of alternatives includes monitoring coverage target alternatives specific to the Atlantic herring FMP. These alternatives are referred to as the "Herring alternatives."

The third set of alternatives includes monitoring coverage target alternatives specific to the Atlantic mackerel fishery, which is managed as part of the Atlantic Mackerel, Squid, and Butterfish FMP. These alternatives are referred to as the "Mackerel" alternatives.

Why are the Councils establishing industry-funded monitoring programs?

The New England and Mid-Atlantic Councils have been interested in increasing monitoring and/or other types of data collection in some FMPs to assess the amount and type of catch, to more precisely monitor annual catch limits, and/or provide other information for management. NMFS has limited financial resources, so both Councils have considered requiring industry to contribute to the cost of monitoring. Therefore, this amendment considers measures that would provide options to allow the Councils to implement industry-funded monitoring coverage in New England and Mid-Atlantic fishery management plans. Industry funding would be used in conjunction with available Federal funding to pay for additional monitoring to meet FMP-specific coverage targets. This amendment would also set priorities for meeting coverage targets when Federal funding is limited.

How is the Federal budget for monitoring decided each year?

Each year, the White House Office of Management and Budget submits a budget request for the entire Federal government for the following fiscal year, which starts in October. The budget request contains numerous funding lines and Congress makes the final determination on that request. Each of these funding lines is accompanied by a brief description which explains to

Congress and the public how the funding in that line will be used. Funds cannot be used for activities that are not included in the description of the budget line, or as directed by Congress in appropriations bills.

Why did NMFS disapprove past Council proposals for industry-funded monitoring programs?

Recent Council proposals for industry-funded monitoring either attempted to require NMFS to spend money that was not in the budget, or attempted to split monitoring costs between industry and NMFS in ways that are not consistent with Federal law. These actions raised concerns relating to the Miscellaneous Receipts Statute,[1] the Anti-Deficiency Act,[2] and other statutes and regulations that govern federal budgets. The concepts behind the disapprovals are summarized here.

Congress must decide how to finance any program or activity it establishes. Typically, programs and activities are funded by appropriating funds from the U.S. Treasury. In addition to designating the funds necessary for a program or activity, a congressional appropriation sets a maximum authorized program level. The maximum authorized program level functions as a cap on funding for a program or activity. A Federal agency cannot spend money on a program or activity beyond the maximum authorized program level without authorization from Congress. A Federal agency also cannot get around the maximum authorized program level by adding to its appropriations from sources outside the government without permission from Congress.

The disapproved monitoring provisions in Herring Amendment 5 and Mackerel Amendment 14 would have required NMFS to fund very high levels of observer coverage in the herring and mackerel fisheries. Because NMFS's spending is limited by its Congressional appropriations, NMFS cannot approve a monitoring program that it doesn't have enough money to fund. NMFS also cannot take money from budget lines intended for other activities in order to fund monitoring programs.

Second, the Herring Amendment 5 and Mackerel Amendment 14 attempted to specify a set industry contribution for industry-funded monitoring (i.e., industry would only pay $325 per sea day). Similarly, the NE Multispecies Framework 48 attempted to limit the types costs that industry would be responsible for in an industry-funded program (i.e., industry would only have to pay for observer salary). These proposals were disapproved because the government cannot

[1] The Miscellaneous Receipts Statute provides that "an official or agent of the United States Government having custody or possession of public money shall keep the money safe" and may not lend, use, deposit in a bank or exchange the money for other amounts. 31 U.S.C. § 3302(a). It obliges government officials "receiving money for the Government from any source [to] deposit the money in the Treasury as soon as practicable without deduction for any charge or claim." *Id.*

[2] The Anti-Deficiency Act prevents federal officers from "mak[ing] or authoriz[ing] an expenditure or obligation exceeding an amount available in an appropriation" from Congress or "involv[ing] either government in a contract or obligation for the payment of money before an appropriation is made [by Congress] unless authorized by law." 31 U.S.C. § 1341(a)(1).

commit to pay for costs that are not inherently the responsibility of the government. In the case of industry-funded monitoring, NMFS interpreted this to mean that it is only obligated to pay for its administrative costs to support industry-funded programs and is not obligated to pay for any costs generated from sampling activities for these programs. This standard was applied to the monitoring cost provisions recently proposed in the Herring, Mackerel, and NE Multispecies FMPs and resulted in the disapproval of those measures.

How does this amendment fix the issues that resulted in the recent disapprovals?

The amendment addresses the disapprovals by: 1) Establishing a process through which NMFS can approve new monitoring programs without committing funding that is not in the budget, and 2) establishing a legal approach to allow industry funding to be used in conjunction with Federal funding to pay for additional monitoring to meet fishery-specific coverage targets.

First, the concept of a monitoring *coverage target*, as opposed to a mandatory monitoring coverage level, allows NMFS to approve new monitoring programs without committing to support coverage levels above appropriated funding or before funding is determined to be available. The realized coverage in a given year would be determined by the amount of Federal funding available to cover NMFS cost responsibilities in a given year. Fishery management plans interested in coverage above SBRM would set coverage targets in an individual fishery management plan action (i.e., a framework adjustment or amendment). The realized coverage for the fishery in a given year would fall somewhere between no additional coverage above SBRM and the specified coverage target.

Second, this amendment establishes a description of the division of cost responsibilities for industry-funded monitoring programs between industry and NMFS that is consistent with legal requirements. This division of costs is described under the heading "Standardized Cost Responsibilities" in Omnibus Alternative 2. Department of Commerce General Counsel has advised NMFS that monitoring cost responsibilities may be allocated between industry and the government as long as the costs of government responsibilities are paid by the government, and the government's costs are differentiated from the industries responsibilities. Currently, the delineation has been made between administrative and sampling costs. This amendment will set a standard delimitation to avoid confusion and ensure compliance with appropriations requirements. Establishing a common definition means that all future Council proposals for industry-funded monitoring programs would consider NMFS and industry cost responsibilities in the same way.

Under this amendment, would setting an industry-funded monitoring coverage target for a given FMP mean that the fishery is guaranteed that level of coverage for a given year? For example, if the herring FMP sets a coverage target of 100% for 2017, does this amendment ensure that level of coverage be achieved?

No. This amendment establishes tools that NMFS and the Councils could use to provide for and prioritize additional monitoring in Northeast fisheries when Federal funding is available, but it

cannot resolve the underlying issue of limited Federal funding. This means that this industry-funded omnibus amendment WOULD NOT automatically allow for higher coverage levels in Northeast fisheries. During years when there is no additional funding to cover NMFS cost responsibilities above funding for SBRM, there would be no additional monitoring coverage, even if industry is able to fully fund their cost responsibilities.

How are existing industry-funded monitoring programs administered in the Greater Atlantic Region?

The Greater Atlantic Region currently administers an industry-funded monitoring program for the Atlantic sea scallop fishery, and will be transitioning to an industry-funded monitoring program for groundfish sectors in the NE Multispecies FMP. Additional detail about the industry-funded monitoring programs for these fisheries is provided below.

The IFM Omnibus Amendment does not currently modify the coverage levels or allocation of funding for NMFS administrative costs for the scallop or groundfish sector industry-funded monitoring programs. The standardized structure and prioritization process considered in the IFM Omnibus Amendment could apply to groundfish sectors and/or the scallop fishery if, in a future action, the Council desires coverage above the levels currently set by these FMPs and/or if the Council wants Federal funding prioritized for NMFS administrative costs associated with these programs.

Scallop Industry-funded Observer Program. NMFS incorporated the industry-funded observer program into the Atlantic Sea Scallop FMP in 1999 in Framework Adjustment 11 (64 FR 31144, June 10, 1999). The scallop industry-funded observer program first applied to the Closed Area II scallop fishery exemption program. Six subsequent management actions addressed major aspects of the industry-funded observer program:

- Framework 13 to the Scallop FMP (65 FR 37903, June 19, 2000) kept the program in place for the Closed Area I, Closed Area II, and Nantucket Lightship exemption program;
- Framework 14 to the Scallop FMP (66 FR 24052, May 11, 2001) kept the program in place for the Hudson Canyon and Virginia Beach Area Access program;
- Amendment 10 to the Scallop FMP (69 FR 35194, June 23, 2004) formally included the program for all limited access scallop fishing under the area access and open area days-at-sea programs;
- Framework 16 the Scallop FMP (69 FR 63460, November 2, 2004) established observer coverage levels to meet a 30-percent CV for Closed Area 1, Closed Area II, and the Nantucket Lightship area access fisheries;
- Secretarial Emergency Rule (71 FR 34832, June 16, 2006; extension 71 FR 69073, November 29, 2006) established a mechanism for vessels to contract directly with observer service providers to resolve legal constraints of industry paying for observer coverage; and

- Amendment 13 to the Scallop FMP (72 FR 32549, June 13, 2007) formally incorporated the emergency action industry funded observer measures into the Scallop FMP.

As monitoring needs expanded and administration of the program became more efficient, the Council and NMFS ultimately expanded the scallop industry-funded monitoring program to all access areas, open areas, and to the limited access general category individual fishing quota fleet. The Council and NMFS have made minor operational modifications to the program over the years. The Scallop FMP's program is therefore a good example of an effective industry funded program that phased in changes as program and administration needs evolved.

The need for the scallop industry-funded program consistently has been to collect catch information (kept fish and bycatch) through levels of at-sea observer coverage that could not otherwise be consistently achieved through NMFS observer program funding alone. NMFS has, and continues to be able to pay for its costs of administering the Scallop industry-funded observer program because the coverage level is primarily set through SBRM. Prior to the implementation of the 2007 SBRM amendment, the Council concluded that industry-funded coverage levels set to achieve a 30-percent CV performance standard would appropriately reduce variability in bycatch estimates for yellowtail flounder, other finfish, and sea turtles. When the SBRM was first implemented, this goal for monitoring the scallop fishery was included in the SBRM coverage goals. The Scallop industry-funded observer program provides funding through a quota set-aside (described below) that enables the scallop fishery to pay for coverage levels that meet or exceed the SBRM coverage targets.

The observer set-aside model works well in the scallop fishery because the high value of scallops allocated to vessels that carry an observer helps compensate the vessel for the cost of the observer. The vessel receives extra pounds or days-at-sea on each observed trip that provides additional funds to pay for the observer. However, vessel owners are required to pay for the observer even if the vessel does not catch any scallops or the additional set-aside of scallops, or if there is insufficient set-aside allocated to compensate the vessel. NMFS's goal is to set a compensation rate (the amount of extra pounds of scallops allocated to trips that carry observers) that covers the cost of an observer, without providing financial incentive for a vessel to desire observer coverage, which could bias sampling.

Groundfish Industry-funded At-Sea Monitoring. The groundfish sector at-sea monitoring (ASM) program was first developed by the Council in Amendment 16 to the Northeast Multispecies FMP (75 FR 18262; April 9, 2010). Amendment 16 stated that the primary purpose of the groundfish ASM program was to verify area fished, catch, and discards by species on sector trips, and that coverage levels must be sufficient to at least meet the coefficient of variation (CV) (a measurement of the precision of the estimate) performance standard in SBRM (i.e., a 30% CV). This CV standard is achieved through a combination of SBRM (fully-NMFS funded) and ASM (industry-funded) coverage. Framework 48 to the Northeast Multispecies FMP (78 FR 26118; May 3, 2013) further defined specific goals and objectives for the ASM program, and also clarified that the 30% CV standard for ASM should apply at the stock level (i.e., each stock

of fish for the fishery as a whole). In contrast, the SBRM CV standard for groundfish applies at the stock complex level (e.g., for all groundfish stocks in aggregate).

The groundfish ASM program was designed to transition to an industry-funded program in 2012, but from groundfish fishing years 2010 through 2014, NMFS was able to fully fund both the NMFS and industry cost responsibilities for groundfish ASM. Though NMFS has paid both sampling and administrative costs for ASM for groundfish sectors since 2010, groundfish sectors are responsible for covering the sampling costs for the ASM program if NMFS is unable. In a letter to the sectors dated February 24, 2015, NMFS indicated that, due to funding changes required by the SBRM Amendment (described above), industry would be required to cover its portion of the ASM cost responsibilities before the end of the 2015 calendar year. NMFS and industry are currently working through the logistics of transitioning to an industry-funded ASM program.

Why does this action propose to consider industry-funded monitoring programs in a different way than it is considered for the NE Multispecies and Scallop FMPs?

The Atlantic sea scallop and NE Multispecies monitoring programs have already been established by the Councils, and the operation of their fisheries depends on these programs. For example, the sector fishery requires at-sea monitoring to reliably estimate catch to ensure that the groundfish catch limits are not exceeded and that overfishing does not occur. Sectors could not operate without these at-sea monitoring programs. In addition to the programs they already established, the Councils have been increasingly interested in requiring monitoring coverage for purposes different than those for which NMFS is legally required to provide monitoring coverage (e.g, Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), MMPA, ESA). NMFS's limited budget requires NMFS to prioritize resources across competing monitoring interests. The standardized process for industry-funded programs described in this amendment, including the prioritization process detailed under Omnibus Alternative 2, provides a method to address the Councils' identified monitoring needs within NMFS's budget limitations. This process would allow NMFS and the Councils to work together to prioritize coverage where it is most needed to achieve the highest priority objectives, and allows both the Council and the public to be informed about funding limitations and to contribute to the decision-making process about tradeoffs.

Why does NMFS caution the Councils about additional costs for monitoring but not for other FMP requirements, such as vessel trip reports?

NMFS evaluates its ability to financially administer all of the Councils' recommendations prior to approval. Certain requirements, for example, an increase to weekly vessel trip reports (VTRs) for a fishery, can be administered within existing resources because they are either cost neutral under the existing administrative infrastructure, or they only add incrementally to NMFS costs. In the example of VTRs, NMFS already has staff processing weekly VTRs for a number of fisheries, and most Greater Atlantic Region permit holders already submit VTRs weekly related to permit requirements for the NE Multispecies and Atlantic herring fisheries.

In contrast, the costs associated with implementing new at-sea monitoring, portside sampling, or electronic monitoring programs are often substantial and cannot be easily completed by existing staff using the existing budget. In addition, the amount of money Congress appropriates to fund monitoring costs fluctuates from year to year, so NMFS cannot commit to pay for new, expensive monitoring programs indefinitely. For these reasons, NMFS has made efforts to communicate to the Councils that funding for new monitoring programs must be a significant consideration during program development.

What types of monitoring are considered in this amendment?

This amendment discusses industry-funded programs to implement three types of monitoring: 1) at-sea monitoring; 2) dockside monitoring; and 3) electronic monitoring. These three types of monitoring are briefly described below.

1. At-sea monitoring focuses data collection at sea, recording the type and quantity of retained and/or discarded catch. This document uses the terms "observer" and "at-sea monitor" interchangeably. However, the reader should note the following:

    - The term "NEFOP-level observer" is used to refer to observers that collect an advanced and diverse set of information on fishing trips; and
    - This document refers to FMP-specific at-sea monitoring programs by prefacing the terms "at-sea monitor" or "ASM" with a fishery name (e.g., the groundfish ASM program, groundfish at-sea monitors, the herring/mackerel ASM program, etc.). Fishery-specific at-sea monitors collect a more limited set of information on fishing trips than NEFOP-level observers, in direct support of FMP-specific goals.

2. Dockside monitoring focuses data collection at the dock, accounting for landings of target species and incidental catch. If all fish caught are retained and landed, dockside monitoring can also record type and quantity of total catch. The reader should note that the terms "dockside monitor" and "portside sampler" are used interchangeably in this document.

3. Electronic monitoring (EM) uses video cameras and other sensors to monitor discards at sea or to monitor compliance with full retention requirements or other at-sea requirements.

<u>Cost Responsibilities</u>

What are the cost components for monitoring programs?

There are two types of costs associated with monitoring programs: (1) Sampling costs, such as observer salary and travel costs, and (2) NMFS administrative costs, such as observer training and data processing. This amendment would codify the separation of monitoring cost

responsibilities such that industry is responsible for sampling costs and NMFS is responsible for administrative costs. This division of costs is described under the heading "Standardized Cost Responsibilities" in Omnibus Alternative 2.

What is cost sharing? Can industry split the cost of monitoring with the government by some percent (e.g., industry pays for 30%, NMFS pays for 70%) or some dollar amount (e.g., industry pays for $325, NMFS pays for the rest)?

The concept of "cost sharing" has come up throughout the discussions of industry-funded monitoring. Conceptually, cost sharing implies that industry and the government both contribute to the cost of the monitoring program. However, given legal constraints that require NMFS to pay for certain cost categories in an industry-funded monitoring program, it is necessary to correctly refer to this concept as a division of cost responsibilities between NMFS and industry, rather than as NMFS and industry truly sharing costs.

Department of Commerce General Counsel has advised NMFS that monitoring cost responsibilities can be allocated between industry and the government by delineating the sampling and administrative portions of the costs of monitoring. Industry would be responsible for costs directly attributable to the sampling portion of a monitoring program, and NMFS would be responsible for costs directly attributable to the administrative portion of the monitoring program (See Omnibus Alternative 2 under "Standardized Cost Responsibilities"). Thus, the division of cost responsibilities should remain the same and should differentiate between inherently governmental responsibilities and industry costs.

It is illegal for industry to pay inherently government costs, but either group can pay for sampling costs. Actual payment of different cost responsibilities for monitoring programs can work in two ways: 1) NMFS can pay for its cost responsibilities, such as support and administrative costs, and also pay for the industry's cost responsibilities, such as sampling costs (e.g., the Northeast Fisheries Observer Program); or 2) NMFS can pay for its cost responsibilities, such as support and administrative costs, and industry can pay for its cost responsibilities, such as sampling costs (e.g., industry-funded Atlantic scallop observer program). Additionally, NMFS can help to offset industry's cost responsibilities by reimbursing vessel owners through cooperative agreements with third parties when funding is available.

Why can't NMFS directly collect fees for monitoring programs?

The Miscellaneous Receipts Act requires Federal employees to deposit any money received on behalf of the government into the general Treasury, unless otherwise directed by law. This means that if NMFS could accept funds from the industry, NMFS would be required to direct those funds to the Treasury and would not be able to reserve them to pay for monitoring in the Greater Atlantic Region without a change in law to allow that to happen. For example, the Alaska Region has special authorization in the Magnuson-Stevens Act to collect fees from the industry and to put these fees into a fund to be used to defray the costs of monitoring in that region (Magnuson-Stevens Act § 313). The Greater Atlantic Region does not have such

authority, except for cost recovery for Limited Access Privilege Programs (LAPPs). Currently, cost recovery is applicable only to the Atlantic sea scallop limited access general category individual fishing quota (IFQ) and the golden tilefish IFQ programs (both are forms of LAPPs). These fisheries, along with the surfclam and ocean quahog fisheries, are the only programs in the Greater Atlantic Region that are subject to the cost recovery requirement.

Under the LAPP cost recovery authority (Magnuson-Stevens Act § 303A(e)) and the authority to establish fees (Magnuson-Stevens Act § 304(d)), the Magnuson-Stevens Act requires NMFS to collect a fee to recover the actual costs directly related to the management, data collection, and enforcement of any LAPP and community development quota program that allocates a percentage of the total allowable catch of a fishery to such program. NMFS must collect a fee not to exceed 3 percent of the ex-vessel value of fish harvested under these programs. The fees are deposited into a unique fund that NMFS uses to directly pay for the management, data collection, and enforcement of the program. The relevant costs to recover are the incremental costs, meaning those costs that would not have been incurred but for the LAPP. If the Councils decided at some future point to develop additional LAPPs in other fisheries, cost recovery programs could be implemented in those fisheries. Development of LAPPs and cost recovery programs are complex and often take several years.

Why has it been difficult for NMFS to give cost estimates for various types of monitoring programs?

Monitoring program costs include a variety of administrative and sampling costs that vary substantially within and between years. This variability affects the estimates of both NMFS and industry costs for monitoring programs, which means that the estimate of the total or per sea day cost for the same monitoring program can vary depending on the time period of interest. A discussion of the difficulties with generating a cost estimates for monitoring is included in the 2015 Program Review of the Northeast Fisheries Science Center Fisheries Sampling Branch, available at http://www.nefsc.noaa.gov/fsb/index.html#fsb-review.

Some of the reasons why estimates of NMFS administrative costs can vary include:

- The costs associated with training vary substantially within and between years because of the high monitor turnover rate.
- The costs associated with data editing varies greatly depending on the experience of the cohort of monitors for a given time period. Data editing costs may be lower for a given period if the cohort of monitors is highly experienced. Conversely, data editing costs may be higher for a period with a large cohort with less experienced monitors.

In addition, the breakdown of industry costs for sampling for a single sea day can vary depending on:

- How close the monitor's home port is to the port of deployment (an observer will be reimbursed travel costs which include mileage and an hourly wage for time traveling if traveling greater than 50 miles from their assigned home port);
- How long monitors are retained by the service provider (training wages are amortized over the career span of the monitors);
- Trip length;
- How accurately a vessel schedules its departure time; and
- A given service providers' business models (provider observer support, strategies for retention, observer bonus structure, benefits).

Finally, with the exception of the industry-funded scallop observer program, industry-funded monitoring is a relatively new arrangement for funding monitoring programs in the Greater Atlantic Region. Most of the monitoring program cost estimates in this document are based on costs negotiated and structured as part of Federal contracts between NMFS and various monitoring service providers. When individual vessels or groups of vessels form contracts with service providers for monitoring coverage in future industry-funded monitoring programs, the terms and structure of the contracts may differ from those in recent and existing Federal contracts. This means that the actual costs that industry may pay to service providers for monitoring may differ from the available estimates.

For these reasons, this document presents several of the available Greater Atlantic Region and national cost estimates for at-sea, dockside, and electronic monitoring programs. With each estimate, we state the source and assumptions that generated the estimate. Although this may be confusing, we hope that providing the managers and the public a full understanding of the potential costs will allow for informed decision making when establishing industry-funded monitoring programs.

NMFS administrative costs

How was the use of certain funding lines changed related to SBRM?

The Court order in *Oceana* v. *Locke*, which vacated the 2007 SBRM Omnibus Amendment, found legal fault with two aspects of the process used to prioritize funding for observer coverage. First, the Court found that NMFS had too much discretion in determining whether there were sufficient resources available to fully implement the estimated number of sea days needed to achieve the CV-based SBRM performance standard. Second, the Court found that NMFS had too much discretion in how observer sea days were redistributed under the prioritization process. To address these two aspects of the court order, the revised SBRM established a threshold that would be used to determine what resources are available to implement the SBRM coverage in a given year, and defines a method for distributing the available observer sea days if resources are limited.

Under the revised SBRM prioritization process, the amount of money available for the SBRM will be the funding allocated to the Region under four specific historically-appropriated observer funding lines. In fiscal years 2011-2014, the Northeast Fisheries Observers funding line made up 53 percent to 59 percent of all observer funds for the Greater Atlantic Region under these four funding lines. The Northeast Fisheries Observers funding line is now fully committed to funding SBRM. The three other observer funding lines now dedicated to SBRM are allocated among different NMFS regions, including the Greater Atlantic Region, to meet national observer program needs. The total amount of the funds allocated to the Greater Atlantic Region from these three funding lines will constitute the remainder of the available SBRM funds.

Historically, the available SBRM funding has been insufficient to fully meet the CV-based performance standard for all of the fishing modes (gear type, access area, trip category, region, and mesh group combinations analyzed under SBRM). If the available funding continues to be insufficient to meet the CV-based performance standard, the SBRM amendment establishes a non-discretionary formulaic processes for prioritizing how the available observer sea-days would be allocated to the various fishing modes to maximize the effectiveness of bycatch reporting and bycatch determinations.

What funding lines are available to fund administrative costs for industry-funded monitoring programs?

A number of different funding lines contribute to monitoring programs in the Greater Atlantic Region.

NMFS Greater Atlantic Regional Fisheries Office (GARFO) and Northeast Fisheries Science Center (NEFSC) receive funding amounts through specific budget line items to cover its costs for monitoring programs. Some of the funding lines must be used for specific monitoring programs. With implementation of the Greater Atlantic Region SBRM amendment, NMFS no longer has the flexibility to use certain funding lines as we have in the past, as described above. In addition, there are certain funding lines specifically designated for other monitoring priorities (e.g., protected species monitoring). Thus, there are certain funding lines that will not be available to support industry-funded programs, unless there is excess funding in these lines above the amount needed to meet the designated monitoring obligations for that year.

Other funding lines that include monitoring or administrative aspects of monitoring programs in their described purpose could be used to cover NMFS costs for industry-funded monitoring programs. Once the Council establishes industry-funded monitoring programs, NMFS will be able to determine the funding lines that could contribute to NMFS costs for industry-funded monitoring programs. If there is not enough money to cover NMFS costs related to industry-funded monitoring programs for a given year, either NMFS or the Councils would need to prioritize which programs are funded first.

Can NMFS accept funding from external groups to fund administrative costs for monitoring programs?

Consistent with current law, there are two mechanisms by which the Greater Atlantic Region may accept outside resources for monitoring. First, Section 208 of the Magnuson-Stevens Act established a Fisheries Conservation and Management Fund, which may be funded through quota set-asides, appropriations, states or other public sources, and private or nonprofit organizations. This fund may be used to expand the use of electronic monitoring, and each region must be apportioned at least 5 percent of any money contributed to this fund. There have been inquiries about the fund over the years, but to date no contributions have been made.

Second, Section 403(b) of the Magnuson-Stevens Act allows for NMFS to accept resources and facilities for observer training from state, university, and any appropriate private nonprofit organizations on a limited basis. This provision has not been previously implemented and may have limitations that might undermine its utility for this region's fisheries.

How does NMFS cover its administrative costs for the groundfish ASM program?

In part, NMFS has used funding in budget line items related to Catch Shares to fund administrative and sampling costs for the groundfish ASM program. The groundfish ASM program was designed to be an industry-funded program, but from groundfish fishing years 2010 through 2014, NMFS was able to fully fund both the NMFS and industry cost responsibilities for groundfish ASM. Groundfish sectors are required to pay for their sampling costs responsibilities for the ASM program if NMFS is unable. In a letter to the sectors dated February 24, 2015, NMFS indicated that, due to funding changes required by the SBRM Amendment (described above), industry would be required to cover its portion of the ASM cost before the end of the 2015 calendar year. NMFS and industry are currently working through the logistics of transitioning to an industry-funded ASM program.

When could SBRM funds be used to cover the administrative costs for monitoring?

SBRM funding is used to cover the administrative costs for the industry-funded Atlantic sea scallop observer program. NMFS could explore using SBRM funding to cover the administrative costs for NEFOP-level observer coverage for other FMPs, but there three important considerations for this approach.

First, the sampling criteria (i.e., the gears and areas combinations) that the observer coverage applies to would need to match SBRM modes (gear type, access area, trip category, region, and mesh group combinations analyzed under SBRM). This means that this approach could not be used if the Councils desired to use an industry-funded program to cover specific permit categories unless those permit categories directly aligned with SBRM modes. In the case of the scallop industry-funded observer program, the observer coverage requirements apply to gear and area combinations that match SBRM modes.

Second, industry would be fully responsible for paying the sampling costs for NEFOP-level observer coverage, currently estimated at $816 per sea day. In addition, this approach could not be used for other types of monitoring coverage, including fishery specific at-sea monitors, portside sampling, or electronic monitoring. The scallop industry-funded observer program uses a set-aside to help defray industry costs for monitoring. However, vessel owners are required to pay for the observer even if the vessel does not catch any scallops or the additional set-aside of scallops, or if there is insufficient set-aside allocated to compensate the vessel. These same requirements would apply to other FMPs desiring to use SBRM funding to cover the administrative costs for monitoring.

Third, this approach could only be used to reach SBRM monitoring coverage levels for a given FMP. SBRM seeks to allocate observer coverage to reach a 30% CV on the discard estimate for managed species. This means that if only 10% observer coverage on a given SBRM mode is needed to reach the 30% CV, then this approach would only allow for 10% coverage for that gear and area combination in a given year. The Councils have been interested in higher levels of monitoring coverage for a number of FMPs, so this approach may not provide the level of coverage necessary to meet FMP goals.

If SBRM isn't fully funded every year, how could there be discretionary funding available to cover administrative costs from industry-funded programs?

Under the revised SBRM prioritization process, the amount of money available for the SBRM will be the funding allocated to the Region under four specific historically-appropriated observer funding lines. Unless there is excess funding in these lines above the amount needed to meet the designated monitoring obligations for that year, SBRM funding will not be available to fund industry-funded monitoring programs. Historically, the available SBRM funding has been insufficient to fully meet the CV-based performance standard for all of the fishing modes (gear type, access area, trip category, region, and mesh group combinations analyzed under SBRM). Thus, there is stakeholder concern that there will never be funding available to cover NMFS administrative costs for industry-funded monitoring programs.

We reiterate that other funding lines that include monitoring or administrative aspects of monitoring programs in their described purpose, other than the four funding lines designated for SBRM, could be used to cover NMFS costs for industry-funded monitoring programs. Until the Council establishes industry-funded monitoring programs, it will not be clear what NMFS costs might be related to these new programs, and what amount and type of administrative support will be necessary. Thus it is not possible to list the funding lines that could contribute to NMFS costs for industry-funded monitoring programs at this time. If there is not enough money to cover NMFS costs related to industry-funded monitoring programs for a given year, either NMFS or the Councils would need to prioritize which programs are funded first.

Industry costs

The expected industry contribution for monitoring in the Northeast seems a lot higher than other regions. Don't Alaska fishermen only pay $325 per sea day for observer coverage?

There are a number of factors that influence industry costs for monitoring programs. A 2012 MRAG Americas report titled "Comparison of At-Sea Catch Monitoring Programs with Full Observer Coverage to the Directed Atlantic Herring Fishery – New England" compared the industry costs for NEFOP monitoring in the Atlantic herring fisheries to the industry contribution for several other fisheries that require 100% industry-funded monitoring coverage, including the Hawaii longline swordfish fishery, the Alaska pollock midwater trawl fishery, the west coast at-sea whiting (hake) midwater trawl fishery, and the west coast non-whiting trawl Individual Fishing Quota fishery. The report estimated industry contributions for these programs in the range of $360-420 per sea day. However, the report noted that the short trip duration (1-5 days) and complicated deployment logistics for the herring fleet result in higher per sea day costs for monitoring. In contrast, some of the other fisheries reviewed in the report have much longer trip duration (21-90 days) and have vessels that operate out of a limited number of ports, which simplifies deployment logistics.

The scallop fishery has an observer set-aside to help defray industry costs for monitoring. Can other FMPs use this approach? What are some of the challenges of using a monitoring set-aside to pay for industry costs?

There are aspects of the scallop fishery, including the health and value of the stock, the management regime, and the predictability of landings, that allow the observer set aside model to work well.

First, the health of the scallop resource means that a certain amount of the quota can be set aside to compensate the vessel for the cost of the observer. If a fishery resource is in poor shape, it may not be possible to allocate enough of the quota to a set-aside to effectively offset industry costs for monitoring. In addition, the high value of scallops allocated to vessels that carry observers helps compensate the vessel for the cost of the observer. Other fisheries with a lower price per pound may need to set aside a much larger portion of the resource to compensate industry for monitoring cost.

Second, the management regime of the scallop fishery supports the set-aside model. The scallop fishery uses trip or days-at-sea limits for many of its permits, and vessels receive extra pounds or days-at-sea on each observed trip that provides additional funds to pay for the observer. The set-aside approach may not be appropriate for fisheries that have permits without possession limits (e.g., Herring Category A or Mackerel Tier 1), or would require those fisheries to adjust their management regimes to allow the set-aside to function.

Finally, scallop trips are more predictable than trips targeting other species, specifically migratory species like herring and mackerel. While it is fairly likely that a given scallop trip

could land the set-aside amount necessary to offset the cost of observers, the availability of herring and mackerel is much less predictable, and is influenced by a number of environmental factors. On a given herring or mackerel trip, it is much less likely that a vessel may be able to land a set-aside amount necessary to offset the cost of an observer.

Can there be a fully industry-funded program where industry pays for both administrative and monitoring costs, and hands packaged data over to NMFS?

All governmental agencies perform some work that is so intimately related to the public interest that it requires performance by a Federal employee, rather than a contractor or third party. This type of work is classified as an "inherently government function." Guidance about the types of work that is classified as an inherently government function can be found in the Office of Federal Procurement Policy Letter 11-01, Performance of Inherently Governmental and Critical Functions (76 FR 56227; September 12, 2011).

For NMFS, our responsibilities for maintaining the public interest are governed by a number of Federal mandates, including the Magnuson-Stevens Act, the MMPA and the ESA. Because our monitoring programs are used to support our mission to conserve and manage fisheries and other marine resources, we are obligated to assure the quality of data collected through these programs. Ultimately, this means that there are certain aspects of monitoring programs that NMFS must manage and fund, even if industry contributes for sampling costs.

Department of Commerce General Counsel has advised NMFS that monitoring cost responsibilities may be allocated between industry and the government by delineating the sampling and administrative portions of the costs of monitoring. Industry can be responsible for costs directly attributable to the sampling portion of a monitoring program, but NMFS must be responsible for costs directly attributable to the administrative portion of the monitoring program (See Omnibus Alternative 2 under "Standardized Cost Responsibilities") in cases where the monitoring programs support our management objectives. If industry were to pay for inherently governmental costs such as the administrative costs for monitoring programs that directly support our Federal mandates, it would mean that industry was supplementing Federal appropriations, which would violate appropriations laws.

While it is not possible for industry to fully fund a monitoring program that supports our obligations under the Magnuson-Stevens Act, the MMPA and the ESA, it is possible for industry to fully fund a monitoring program to gather information in support of future management actions. For example, industry could fully fund a monitoring program to gather data on a gear modification to reduce incidental catch of river herring and shad in midwater trawl gear. Industry could then provide the results of the study to the Councils and NMFS, who could in turn make the gear modification a regulatory requirement.

If NMFS has extra funding available, can the money be passed along to industry to help defray its cost responsibilities for monitoring?

Yes, NMFS could reimburse industry for sampling costs through cooperative agreements with third parties if additional funding is available. This model was used to reimburse groundfish sectors for dockside monitoring costs. Additionally, if NMFS received appropriations for industry-funded monitoring programs, NMFS could pay industry's cost responsibilities through a government contract. This model was used to pay for at-sea monitoring coverage of groundfish sectors.

Appendix 2 – Monitoring Cost Estimates for the Industry-Funded Monitoring Omnibus Amendment

NMFS Costs for NEFOP-level observers, at-sea monitors and dockside monitors. Based on fiscal year 2013 expenses, Table 1 shows the level of costs required to support the deployment of all Northeast Region at-sea monitoring programs, including NEFOP observers, and groundfish at-sea monitors, and the scallop industry-funded monitoring program. These are presented as annual costs because while some components can be scaled up proportional to an increase in the total number of sea days, many cannot be scaled proportionally. For example, an increase in observer days would increase the number of hours needed to process data and that need could be met by hiring additional data processing personnel (proportional to the increased need). However, the facilities (particularly office space) needed to accommodate the additional data processing personnel is not proportionally scalable. The approximately $5 million of NMFS costs, detailed below, supported 10,666 sea days in FY 2013, but could support about a maximum of 15,000 sea days per year. The currently leased facilities could accommodate additional personnel to support an additional 2,000 sea days. However, beyond that, new facilities cost would have to be incurred. Facility costs cannot be obtained in small increments, so if sea days beyond 17,000 are considered, new facilities would have to be obtained so that there is sufficient capacity to cover the upper end of any anticipated increase. NMFS costs for dockside monitoring programs are likely similar to the costs described in this annual estimate.

The operational costs are presented as a single figure and are not broken out by each of the three components because there is some overlap, particularly when allocating employees' time over these activities.

TABLE 1. NMFS COST RESPONSIBILITIES FOR MONITORING

NMFS Cost Responsibilities		Annual Cost (FY2013) for all Programs (NEFOP, ASM, and industry funded scallops)
Training and Data Processing Costs	The labor and facilities costs associated with training and debriefing of monitors	$805,700
	Data processing	$2,057,100
Operational Costs	Certification of monitoring providers and individual monitors; performance monitoring to maintain certifications	$2,244,700
	Developing and executing vessel selection	
	Costs associated with liaison activities between service providers, NMFS, Councils, sectors and other partners	
Total		$5,107,500

The groundfish electronic monitoring cost comparison report estimates NMFS costs for the groundfish at-sea monitoring program for fiscal year 2014 costs. In fiscal year 2014, NMFS spent an estimated

$531,953 on training, $626,043 on data processing, and $719,548 on program management for the groundfish at-sea monitoring program for a total cost of $1,877,544 (Table 2). This total cost is divided by the number of at-sea monitor sea days accomplished in 2014 (3,541 days) to get a per sea day administrative costs of $530 (Table 2).

TABLE 1: ANNUAL AT-SEA MONITORING COSTS FOR NOAA FISHERIES

	Estimated Cost	
Program Component	**Total**	**Per Sea Day**
Training	$531,953	$150
Data Processing	$626,043	$177
Program Management	$719,548	$203
Total	$1,877,544	$530

NMFS cost responsibilities for electronic monitoring. In this section, we estimate NMFS costs for administering the example EM programs for groundfish sectors (audit approach) and the midwater trawl fleet (optimized/full retention approach) based on the roles and responsibilities described above. The reader should note that generalized descriptions for industry costs for electronic monitoring programs presented in this section were derived separately and differently than the NMFS costs presented here.

Many of the costs to NMFS for administering the example EM program would be driven by the scale of the program and the level of participation, although these costs do not necessarily increase linearly with the amount of sea days. Thus, we present a range of potential NMFS costs from overseeing an audit approach EM program for a single hypothetical sector (20 vessels) to a program for the entire active groundfish fleet (400 vessels), and for an optimized/full retention approach EM program for an example midwater trawl fleet (9 vessels). We based NMFS costs for the EM program on costs the Northeast Fishery Observer Program incurred for administering programs with similar roles and responsibilities and from the New England EM Project (Archipelago, 2014). These are rough estimates of NMFS potential costs and, unlike the NEFOP-level observer/at-sea monitoring program costs presented in the section above, may not reflect efficiencies or economies of scale that are possible in a mature program. NMFS would also have other incremental costs for enforcement and use of the data for management, which were not estimated here in order to be consistent with the estimates of the NEFOP-level observer/at-sea monitoring program.

In Table 3, training costs include labor and costs of licenses for any proprietary EM review software. The number of annual trainings that would need to be held and, hence, the number of trainers, would depend on the number of EM reviewers employed by the service providers, which would depend on the number and activity levels of vessels using EM in the fishery. For the audit model, training costs do not increase linearly. Although the number of participants increases by a factor of 20 when scaling up from 20 vessels to a fleet-wide program, the training costs increase by a factor of 8. This type of relationship makes it difficult to estimate costs at a unit that is easily multiplied (e.g., sea day cost). For the optimized/full retention model, although the example fleet includes only 9 midwater trawlers, there is a

large amount of video footage to be reviewed, due to a high number of assumed trips (500) and the assumed rate of video review (100 percent) used in the analysis. This much video footage may require a larger cadre of EM reviewers than the number of vessels might indicate, also increasing demand for training and certifications and NMFS's training costs.

NMFS may also have some costs for reviewing and approving individual Vessel Monitoring Plans (VMPs), which are each vessels individualized plans for equipment specifications, installation, and catch handling, and inspecting equipment installation on the vessel. Annual labor and travel associated with this activity is estimated at $15,500 for 9 vessels, $31,000 for 20 vessels and $232,500-$310,000 for 400 vessels.

For the audit model, NMFS costs for auditing the service provider's review of logbooks were estimated to be $46,795 for 20 vessels and $432,405-$525,905 for 400 vessels (Table 3), assuming NOAA Fisheries audits 5 percent of trips. These costs include staff time and licenses for proprietary EM review software. Use of open source software would negate the cost of software licenses in this category. For the optimized full retention model, the staff time and equipment costs to conduct periodic video reviews to audit the service providers are estimated at $26,295, assuming 5 percent of trips are audited.

Program management cost is labor for a program manager, which is necessary to administer the new program, liaise with the service providers, vessel, and enforcement, and coordinate staff. Program management cost is estimated at $86,000 annually, irrespective of the number of vessels participating in the program.

Not included in these cost estimates is the cost of storing any EM data submitted by the service providers or sectors. NMFS data storage costs would be driven by record-keeping and security requirements for EM data, which NMFS is still working to determine. Alternately, NMFS may be able to get remote access to EM data and video stored by the provider, and reduce or eliminate its data storage costs (Van Oyen, pers. comm., 2014).

TABLE 3: NMFS COST RESPONSIBILITIES FOR ELECTRONIC MONITORING PROGRAMS

	Estimated NMFS Cost Responsibilities for Audit and Optimized/Full Retention EM program models		
	Audit Model		**Optimized/Full Retention Model**
Program Component	**20 vessels**	**400 vessels**	**9 vessels**
EM Reviewer Training	$25,000	$187,500 - $250,000	$12,500
VMP Approval, Inspections	$31,000	$232,500 - $310,000	$15,500

EM Review Audit	$46,795	$423,405 - $525,905	$26,295
Program Management	$86,000	$86,000	$86,000
Total	$188,795	$929,405 - $1,171,905	$140,295

Industry Costs for NEFOP-level observers and FMP-specific at-sea monitors. The industry cost responsibilities are presented as costs per sea day because these costs are, for the most part, proportionally scalable to the number of sea days. These per day costs by cost component are shown in the tables below. This per day cost estimate does not include "Other costs of the provider to meet performance standards laid out by a fishery management plan" because those costs will not be known until the details are made explicit in subsequent management plans. These costs are based on the period from October 2012 through May 2014 and are averaged across the three service providers.

TABLE 4. INDUSTRY COST RESPONSIBILITIES FOR NEFOP AND AT-SEA MONITORING

Industry Cost Responsibilities	**NEFOP-level observer cost per observed sea day (FY2013)**	**Fishery Specific At-sea monitoring cost per sea day**
Costs to the provider for deployments and sampling (e.g., travel and salary for observer deployments and debriefing)	Sea day charges paid to providers: $640/day Travel: $71/day Meals: $22/day Other non-sea day charges: $12/day	Sea day charge paid to providers: $561/day Travel: $67/day Meals: $18/day Other non-sea day charges: $14/day
Equipment, as specified by NMFS, to the extent not provided by NMFS	$11/day	
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.	$1/day	
Provider overhead and project management costs not included in sea day charges above (e.g., per diem costs for trainees)	Training: $61/day	Training: $50/day
Other costs of the provider to meet performance standards laid out by a fishery management plan	TBD – won't know these costs until an industry funded observer coverage program is implemented in a fishery	TBD – won't know these costs until an industry funded observer coverage program is implemented in a fishery
Total (not including other costs)	$818/day	$710/day

Additional estimates for industry contributions for NEFOP-level observer coverage and the groundfish at-sea monitoring program were provided in the Fisheries Monitoring Roadmap (Lowman et al., 2013). This report based the estimated costs on the 2011 fiscal year. For 2011, the industry cost for NEFOP-level coverage was estimated at $917 per sea day, and the industry cost groundfish at-sea monitoring was estimated at $847 per sea day. These additional estimates are provided to highlight the inter-annual variability in the sea day estimate for NMFS and industry costs, as outlined in the introduction (Section 1.0).

Industry cost responsibilities for dockside monitoring. The industry costs of a dockside monitoring program are generally broken into several components: Program management and overhead costs of the provider company; travel costs for the monitor to travel from home or office to offload port, for non-principle ports; and hourly salary for the monitor, including, in some instances, waiting time at the dock.

A number of example industry costs for dockside monitoring are presented below. Dockside monitoring costs can be represented in three ways: 1) as a cost per sea day; 2) as a cost per landing event; and 3) as a cost per pound landed. The paragraphs below will discuss the different available estimates of dockside monitoring costs using each of these representations, and the pros and cons of each representation.

- Cost per sea day – This document uses a cost estimate of $106 per sea day based on publicized estimates for other dockside monitoring programs. In particular, the estimate is influenced by the industry costs for the NE Multispecies dockside monitoring program. The Fisheries Monitoring Roadmap (Lowman et al., 2013) provides per sea day rates of $51 and $82 for dockside monitoring for the British Columbia Hook and Line Groundfish fishery and the Pacific Groundfish (non-whiting) IFQ fishery, respectively. The “cost per sea day” representation makes the cost of dockside monitoring easy to compare against industry costs for at-sea and electronic monitoring. However, this representation of dockside monitoring costs implies that costs scale linearly with trip length, which does not accurately represent dockside monitoring costs. For example, if we assume the cost for monitoring is $106 per sea day, then a 3 day trip would cost $318 and 10 day trip would cost $1,060 to monitor. However, a 10-day trip could come back with its hold only half full with fish, or a 3-day trip could come back with a full hold. In this example, the 3-day trip with the full hold would actually cost more to monitor than the 10-day trip.
- Cost per landing event - The average cost per landing event for the NE Multispecies groundfish dockside monitoring program ranged from $36.87-$212.32 for all sectors. Though this range is a more accurate representation of costs than the cost per sea day representations, it is not easy to compare against industry costs for at-sea and electronic monitoring.
- Cost per pound of fish landed – The analysis assumes the cost per pound landed for each specific FMP is the most accurate way to represent the potential industry costs for monitoring. The average cost per pound of groundfish landed for the NE Multispecies groundfish dockside monitoring program range ranged from $0.006-$0.12 per pound for all sectors. The average

cost per pound landed and per trip is inversely related to the average pounds landed – that is, larger trips are less expensive to monitor, by pound, than smaller trips. This was due to several factors, including that larger trips typically landed in a principle port (no roving monitor required and, depending on the location, no travel costs) and much of the cost of providing a monitor is fixed, due to the logistics of having monitors present while vessels land their catch (e.g., insurance, administrative costs). The analysis uses estimated a cost of $0.002 per pound of herring landed, based on state dockside monitoring programs for herring, to analyze the economic impacts of Herring Alternative 2.3 and 2.4 and Mackerel Alternative 2.3 and 2.4.

Industry cost responsibilities for electronic monitoring. Portions of the discussion that follows were originally included in the March 2015 version of the Environmental Assessment for the Omnibus Standardized Bycatch Reporting Methodology Amendment. The description of costs and costs responsibilities below is generalized to encompass a range of potential program designs.

The economic impacts associated with the alternative to implement an electronic video monitoring program for one or more fisheries in the Greater Atlantic Region are derived directly from the expected costs to purchase, install, and maintain the electronic monitoring systems. Industry would be required to purchase, install, and maintain the electronic monitoring equipment aboard their vessels.

Based on cost estimates as of May 2006, it is likely that the cost to purchase a complete electronic video monitoring system would be approximately $7,200 per vessel (Archipelago Marine Research, Ltd. 2006).[1, 2] Installation costs are highly variable and depend upon the size of the vessel, the number of cameras to be installed, and other complicating factors such as the need to retrofit the vessel to support the installation of the equipment. Kinsolving (2006) estimates installation costs as ranging from $650 to $4,225 per vessel, based on a service rate of $65 per hour and the installation time ranging from 10 hours to as many as 65 hours per vessel, depending on the aforementioned complexity. In addition to the cost to purchase and install a system, it is expected that an annual registration fee would be required by the contractor providing the equipment and this is estimated to be approximately $600 per year. Maintenance costs would be expected to vary, but for the purposes of analysis, Kinsolving's (2006) estimate of $975 per year is used. The total first year costs would be approximately

[1] Archipelago Marine Research, Ltd. (2006), identifies the costs to purchase, install, and maintain a complete electronic monitoring system. While this fee schedule is focused on the British Columbia groundfish longline fisheries, the costs identified are presumed to be transferable to other fisheries. Published costs in Canadian dollars were converted to U.S. dollars based on the published exchange rate for September 7, 2006.

[2] Kinsolving (2006) also provides estimates of the cost to purchase a complete electronic monitoring system, ranging from $4,250, if off-the-shelf components are used, to $8,000 if a package system is purchased from an approved contractor. For the purposes of this analysis, the costs published by Archipelago Marine Research, Ltd. (2006), were used to simplify the analysis and to clearly identify the source of the costs used.

$10,200 per vessel, with continuing costs of approximately $1,600 per vessel per year for the second year and beyond (see **Error! Reference source not found.**).

TABLE 5. ESTIMATED COSTS PER FISHING VESSEL TO PURCHASE, INSTALL, AND MAINTAIN AN ELECTRONIC VIDEO MONITORING SYSTEM (ARCHIPELAGO MARINE RESEARCH, LTD. 2006; KINSOLVING 2006).

	Year 1 (per vessel)	Year 2+ (per vessel)
Equipment purchase	$7,194	N/A
Installation costs (average)	$2,438	N/A
Annual program registration fee	$608	$608
Annual maintenance	N/A	$975
Total	**$10,240**	**$1,583**

The information presented above and in **Error! Reference source not found.** provide an estimate of the per vessel costs of implementing an industry-funded electronic monitoring requirement. The next step is to estimate the number of affected vessels within the fisheries for which this alternative would be considered.

The costs discussed above address only the purchase, installation, and annual maintenance of the electronic video monitoring systems, but do not address the costs associated with extracting the data from the video recording systems, or storing, maintaining, editing, and reviewing the data.

Agency or contractor personnel would be required to obtain the video data from fishing vessels (either through dockside extraction or a mail-in hard drive exchange program), to review the video footage in order to document discard events, to oversee and perform quality control on the extracted data, and to archive and maintain the data. Video reviewing and data archiving equipment would also be required. Kinsolving (2006) estimates that data storage systems would be required to support approximately 20 terabytes of data per year, but this was an estimate solely for the Pacific rockfish pilot program, which has a fleet of approximately 25 vessels (consolidating to 18 active vessels) that make an average of seven fishing trips per year, with trips averaging 3 days each. Therefore, extrapolating to determine the data storage needs were this program implemented in the Greater Atlantic Region would most likely be orders of magnitude greater.

Potential Industry Cost Saving with Electronic Monitoring and Portside Monitoring. For both electronic monitoring and portside monitoring it is difficult to predict whether and/or how costs may change if industry is contracting directly with providers (versus the federal government contracting with providers). General program overhead/management is a substantial part of the costs and it is difficult to know whether these costs will be reduced when industry is contracting with providers, and if so how much. Based on the amount of coverage/monitoring several potential cost savings have been identified however, as described

below. It is also important to remember that all of these cost figures (including the original values) are estimates, and may be higher or lower than actual costs once implemented.

Electronic Monitoring

Based on "A Cost Comparison of At-Sea Observers and Electronic Monitoring for a Hypothetical Midwater Trawl Herring/Mackerel Fishery." https://www.greateratlantic.fisheries.noaa.gov/stories/2015/september/em_cost_assessment_for_gar_herring_150904_v6.pdf

100% recording, 100% Review: ***$325***

Haulback Recording Only, 100% Review: $***248*** - Reduction: $78 of the $160 data services cost (49%). [(325 – (.49*160)) = (325 – 78) = $248]. $82 of data services costs remaining.

Haulback Recording Only, 50% Review: ***$218*** - $61 is the cost for haulback review, so if only half of the trips are reviewed, this would save about another $30. [(248 – (61/2)) = (248 – 30.5) = $218]

Field Services are $78/day, and "Field services costs are largely driven by the frequency of hard drive retrievals from the vessel, and the associated travel and labor costs." "Repair and technical support needs also drive field services costs." However, the document also states that repair and technical support costs were low because it was believed that minor problems could be addressed during data retrieval. If 25% of costs were repair and technical support but this amount doubled due to additional single purpose technical support trips, an overall 40% savings from mailing hard drives appears reasonable. 40% of $78 = $31. Saving $31 would reduce the overall cost to around ***$187*** per seaday. [(218 – 31) = $187]

Portside Monitoring

The Portside Monitoring cost estimate is $5.12/mt, but this includes administration costs that have been borne by the State of Massachusetts, and could be paid for by NMFS (subject to funds being available to run such a program). For NEFOP observers, the administrative cost for NMFS is approximately 37% ($479 NMFS cost $818 at-sea industry cost - http://s3.amazonaws.com/nefmc.org/150929-NEFMC-Meeting-Presentation-without-notes.pdf, slide 32). If one assumes that 25% or 33% of these costs would not be directed at vessels (conservatively less than 37%), the cost for vessels per mt would be $3.84/mt and $3.41/mt respectively.

If only 50% of trips were sampled, while any particular trip might still have to pay $3.84/mt or $3.41/mt, over the course of a year it should reduce average costs to $1.92/mt or $1.71/mt.

The table below describes the total costs for trips landing different amounts of fish, and daily costs assuming a 3-day trip.

	25% Admin		33% Admin	
Full Cost	$5.12	Per day cost	$5.12	Per day cost
Cost less Admin	$3.84	with 3/day	$3.41	with 3/day
50% Coverage	$1.92	trip	$1.71	trip
100 mt trip cost	$192	$64	$171	$57
200 mt trip cost	$384	$128	$341	$114
300 mt trip cost	$576	$192	$512	$171
400 mt trip cost	$768	$256	$683	$228

Table 6 summarizes the ways that sea day costs can be minimized reduced in an industry-funded monitoring program. The discussion provided in Table 6 was generated from information provided by NEFOP personnel, observers, and representatives from service providers in the northeast and west coast. To the extent that the issues identified in Table 6 can be addressed through the management measures that establish/implement the IFM program, sea day costs borne by the fishing industry can be reduced.

TABLE 6 SUMMARY DISCUSSION – HOW TO REDUCE SEA DAY COSTS

How to Reduce Sea Day Costs	Discussion/Rationale
Build from existing observer sampling protocols; do not require new/different data to be collected	• Collecting data in a new/different way will require modifications to existing observer sampling protocols and training procedures, new/revised manuals/logs, possibly new/additional sampling equipment, and database design or restructure; this could increase administrative and training costs
Eliminate SCA and related regulatory requirements for Federal contracts	• Federal requirements for wage structure/overtime/paid holidays/vacation are not necessary for contracts between vessels/providers; without specifically implementing these requirements as part of the IFM regulations, wage structure and benefits for employees would be determined by individual service provider companies; MRAG report (June 2012) estimates that eliminating these requirements may reduce costs by $50-$100 per sea day; • FLSA and other Federal labor laws would still apply to service provider companies; however, eliminating the SCA requirements from IFM regulations is likely to result in some reduction in sea day cost; • Not likely to result in $100 per sea day cost savings in this region due to existing pay structure/benefits for observers required by Federal contracts
"Grandfather in" current service providers approved for NEFOP observer coverage and GF ASM programs – approve these providers immediately for any new, fishery-specific ASM program	• Reduces expense of applying/re-approving service provider companies already approved for other programs in the region; observers/monitors for approved service providers would still need to be certified for existing monitoring programs to participate as fishery-specific at-sea monitors; • Allows vessels to select from multiple service providers when program is established; increases negotiating opportunities for vessels at onset of program by creating competition between companies; • Provides opportunity for existing service providers to offer more work days to their observers (could reduce staff/overhead expenses for both programs)
Allow cross-certification of NEFOP and GF ASM observers for new, fishery-specific ASM programs; combine/overlap training and recertification whenever possible	• Cross-training and applying training courses to multiple certifications reduces training costs (travel, hotel, per diem for service providers); • Reduces equipment costs for service providers – no need to purchase duplicative equipment • As previously noted, this may reduce overhead costs for service providers by providing their observers with a greater number of days to work (improving ability for service providers to retain full-time employees)

Table 6 continued. Summary Discussion – How to Reduce Sea Day Costs

How to Reduce Sea Day Costs	Discussion/Rationale
Provide detailed information about fishing patterns for vessels participating in the industry-funded monitoring program	• Allows providers to more accurately estimate manpower/resources needed, logistics, overhead, and travel costs - reduces need for providers to over-estimate these costs to cover expenses that cannot be predicted prior to the start of the year; • Increases predictability of fishery for observer/monitor deployment; • Increases efficiency for service providers
Minimize observer deployment logistics	• Simplifying the selection process for vessels/trips that require industry-funded observers/monitors reduces costs for service providers because vessel selection/notification would not require additional staff or resources
Allow industry to negotiate less significant costs with providers	• Structure the provisions in the industry-funded monitoring program to allow the industry to negotiate as many minor costs as possible with service providers, to better meet their individual vessel needs circumstances; • These may include costs for trip cancellations and no-shows, meal reimbursements, partial day/hourly billing (see below), land-hour rates (if necessary), or other costs
Encourage service providers/industry to negotiate billing by partial days (versus 24 hour days)	• Sea scallop regulations 648.11(g)(5)(i)(A)(2) state that "For the purposes of determining a daily rate…a service provider may charge a vessel owner for not more than the time an observer boards a vessel until the vessel disembarks (dock to dock), where a day is defined as a 24-hour period, and portions of other days would be pro-rated at an hourly charge." • Industry participants should be aware that this can be negotiated in contracts with providers; may be an opportunity to reduce sea day costs for some vessels depending on fishing operations; • Consideration should be given to the possibility of land hour time for observers/monitors, which may be necessary if days are billed partially or by the hour
Allow observers to be deployed on the same vessel for more than two consecutive multi-day trips, and more than twice in any given month for multi-day deployments	• Prohibited in current regulations for industry-funded observer coverage, implemented in SBRM amendment • Increases flexibility and reduces travel costs for service providers; appears to be consistent with regulations for Groundfish ASM

Table 6 continued. Summary Discussion – How to Reduce Sea Day Costs

How to Reduce Sea Day Costs	Discussion/Rationale
Encourage vessels in close proximity to negotiate contracts together so that they can utilize the same observers and minimize travel expenses	• Industry can reduce costs by collaborating with vessels that fish from same ports and/or during same seasons to reduce travel and related costs for observers/monitors
Streamline debriefing and re-certification requirements	• Reduces costs to service providers (travel/per diem)
Insurance	• There may be ways to reduce/streamline insurance requirements to reduce costs for providers. To the extent that duplicative or redundant insurance requirements can be eliminated, costs can be reduced. This issue requires further investigation.
Combine the IFM programs for multiple fisheries, when appropriate	• Would reduce complexity (PTNS, deployment, travel) and increase efficiency for service providers; increases number of sea days for amortizing travel/training expenses over the year; • Could increase the total number of work days available for ASM-certified observers/monitors and may reduce staff/overhead costs for service providers

Cost drivers for electronic monitoring. There are a number of variables in the design of an electronic monitoring program. The text below briefly summarizes some of the program specifications related to data submission, video review, video audit, and data storage that can reduce the industry contribution for electronic monitoring programs.

Data Submission

- Allow the hard drives that store EM footage to be submitted by mail, rather than requiring them to be retrieved by a technician.
- For fisheries that have dockside monitoring programs in addition to EM, consider having dockside monitor retrieve/transmit hard drives.

Video Review

- Design a random sampling program to select trips or portions of trips (i.e., around haulback on herring and mackerel trips) from which video would be reviewed.
- For audit approaches, specify an assumed discard rate in lieu of additional video review in the instances where the EM validation fails.
- Documentation of discards at the species level, including identifying and counting the fish and measuring the length of the fish, for only a few species of interest (e.g., only species in the NE multispecies complex on groundfish trips).
- Software solutions may be able to automate review of portions of video footage.

Data storage

- Allow video data to be stored in the “cloud” (as permitted within security and data confidentiality regulations).
- Determine the lowest possible frame rate and image resolution necessary to document the activity of interest for the EM program. Slow activities such as identifying large objects in a pile of fish being sorted, requires more frames per second. The higher the frame rate, the more likely it is that the camera will capture detailed information. Similarly, identifying fish to species requires higher resolution than verifying when fishing gear is deployed. Higher frame rate and resolution results in larger video files and requires additional storage requirements.

Appendix 3 – Service Provider Requirements

The following sections are the existing regulations for monitoring service providers. Omnibus Alternative 2 would revise these requirements to apply to all industry-funded monitoring programs in the New England and Mid-Atlantic FMPs.

§ 648.11 -- At-sea sea sampler/observer coverage.

(g)((5)(3)) Owners of scallop vessels shall pay observer service providers for observer services within 45 days of the end of a fishing trip on which an observer deployed.

(h) Observer service provider approval and responsibilities—(1) General. An entity seeking to provide observer services must apply for and obtain approval from NMFS following submission of a complete application. A list of approved observer service providers shall be distributed to vessel owners and shall be posted on the NMFS/NEFOP website at: www.nefsc.noaa.gov/femad/fsb/.

(2) [Reserved]

(3) Contents of application. An application to become an approved observer service provider shall contain the following:

(i) Identification of the management, organizational structure, and ownership structure of the applicant's business, including identification by name and general function of all controlling management interests in the company, including but not limited to owners, board members, officers, authorized agents, and staff. If the applicant is a corporation, the articles of incorporation must be provided. If the applicant is a partnership, the partnership agreement must be provided.

(ii) The permanent mailing address, phone and fax numbers where the owner(s) can be contacted for official correspondence, and the current physical location, business mailing address, business telephone and fax numbers, and business email address for each office.

(iii) A statement, signed under penalty of perjury, from each owner or owners, board members, and officers, if a corporation, that they are free from a conflict of interest as described under paragraph (h)(6) of this section.

(iv) A statement, signed under penalty of perjury, from each owner or owners, board members, and officers, if a corporation, describing any criminal conviction(s), Federal contract(s) they have had and the performance rating they received on the contracts, and previous decertification action(s) while working as an observer or observer service provider.

(v) A description of any prior experience the applicant may have in placing individuals in remote field and/or marine work environments. This includes, but is not limited to, recruiting, hiring, deployment, and personnel administration.

(vi) A description of the applicant's ability to carry out the responsibilities and duties of a fishery observer services provider as set out under paragraph (h)(5) of this section, and the arrangements to be used.

(vii) Evidence of holding adequate insurance to cover injury, liability, and accidental death for observers during their period of employment (including during training). Workers' Compensation and Maritime Employer's Liability insurance must be provided to cover the observer, vessel owner, and observer provider. The minimum coverage required is $5 million. Observer service providers shall provide copies of the insurance policies to observers to display to the vessel owner, operator, or vessel manager, when requested.

(viii) Proof that its observers, whether contracted or employed by the service provider, are compensated with salaries that meet or exceed the U.S. Department of Labor (DOL) guidelines for observers. Observers shall be compensated as Fair Labor Standards Act (FLSA) non-exempt employees. Observer providers shall provide any other benefits and personnel services in accordance with the terms of each observer's contract or employment status.

(ix) The names of its fully equipped, NMFS/NEFOP certified, observers on staff or a list of its training candidates (with resumes) and a request for an appropriate NMFS/NEFOP Observer Training class. The NEFOP training has a minimum class size of eight individuals, which may be split among multiple vendors requesting training. Requests for training classes with fewer than eight individuals will be delayed until further requests make up the full training class size.

(x) An Emergency Action Plan (EAP) describing its response to an “at sea” emergency with an observer, including, but not limited to, personal injury, death, harassment, or intimidation.

(4) Application evaluation. (i) NMFS shall review and evaluate each application submitted under paragraph (h)(3) of this section. Issuance of approval as an observer provider shall be based on completeness of the application, and a determination by NMFS of the applicant's ability to perform the duties and responsibilities of a fishery observer service provider, as demonstrated in the application information. A decision to approve or deny an application shall be made by NMFS within 15 business days of receipt of the application by NMFS.

(ii) If NMFS approves the application, the observer service provider's name will be added to the list of approved observer service providers found on the NMFS/NEFOP Website specified in paragraph (h)(1) of this section, and in any outreach information to the industry. Approved observer service providers shall be notified in writing and provided with any information pertinent to its participation in the fishery observer program.

(iii) An application shall be denied if NMFS determines that the information provided in the application is not complete or the evaluation criteria are not met. NMFS shall notify the applicant in writing of any deficiencies in the application or information submitted in support of the application. An applicant who receives a denial of his or her application may present additional information to rectify the deficiencies specified in the written denial, provided such information is submitted to NMFS within 30 days of the

applicant's receipt of the denial notification from NMFS. In the absence of additional information, and after 30 days from an applicant's receipt of a denial, an observer provider is required to resubmit an application containing all of the information required under the application process specified in paragraph (h)(3) of this section to be re-considered for being added to the list of approved observer service providers.

(5) Responsibilities of observer service providers. (i) An observer service provider must provide observers certified by NMFS/NEFOP pursuant to paragraph (i) of this section for deployment in a fishery when contacted and contracted by the owner, operator, or vessel manager of a fishing vessel, unless the observer service provider refuses to deploy an observer on a requesting vessel for any of the reasons specified at paragraph (h)(5)(viii) of this section.

(ii) An observer service provider must provide to each of its observers:

(A) All necessary transportation, including arrangements and logistics, of observers to the initial location of deployment, to all subsequent vessel assignments, and to any debriefing locations, if necessary;

(B) Lodging, per diem, and any other services necessary for observers assigned to a fishing vessel or to attend an appropriate NMFS/NEFOP observer training class;

(C) The required observer equipment, in accordance with equipment requirements listed on the NMFS/NEFOP Website specified in paragraph (h)(1) of this section, prior to any deployment and/or prior to NMFS observer certification training; and

(D) Individually assigned communication equipment, in working order, such as a mobile phone, for all necessary communication. An observer service provider may alternatively compensate observers for the use of the observer's personal mobile phone, or other device, for communications made in support of, or necessary for, the observer's duties.

(iii) Observer deployment logistics. Each approved observer service provider must assign an available certified observer to a vessel upon request. Each approved observer service provider must be accessible 24 hours per day, 7 days per week, to enable an owner, operator, or manager of a vessel to secure observer coverage when requested. The telephone system must be monitored a minimum of four times daily to ensure rapid response to industry requests. Observer service providers approved under paragraph (h) of this section are required to report observer deployments to NMFS daily for the purpose of determining whether the predetermined coverage levels are being achieved in the appropriate fishery.

(iv) Observer deployment limitations. (A) A candidate observer's first four deployments and the resulting data shall be immediately edited and approved after each trip by NMFS/NEFOP prior to any further deployments by that observer. If data quality is considered acceptable, the observer would be certified.

(B) Unless alternative arrangements are approved by NMFS, an observer provider must not deploy any observer on the same vessel for more than two consecutive multi-day trips, and not more than twice in any given month for multi-day deployments.

(v) Communications with observers. An observer service provider must have an employee responsible for observer activities on call 24 hours a day to handle emergencies involving observers or problems concerning observer logistics, whenever observers are at sea, stationed shoreside, in transit, or in port awaiting vessel assignment.

(vi) Observer training requirements. The following information must be submitted to NMFS/NEFOP at least 7 days prior to the beginning of the proposed training class: A list of observer candidates; observer candidate resumes; and a statement signed by the candidate, under penalty of perjury, that discloses the candidate's criminal convictions, if any. All observer trainees must complete a basic cardiopulmonary resuscitation/first aid course prior to the end of a NMFS/NEFOP Observer Training class. NMFS may reject a candidate for training if the candidate does not meet the minimum qualification requirements as outlined by NMFS/NEFOP minimum eligibility standards for observers as described on the NMFS/NEFOP Website.

(vii) Reports—(A) Observer deployment reports. The observer service provider must report to NMFS/NEFOP when, where, to whom, and to what fishery (including Open Area or Access Area for sea scallop trips) an observer has been deployed, within 24 hours of the observer's departure. The observer service provider must ensure that the observer reports back to NMFS its Observer Contract (OBSCON) data, as described in the certified observer training, within 24 hours of landing. OBSCON data are to be submitted electronically or by other means specified by NMFS. The observer service provider shall provide the raw (unedited) data collected by the observer to NMFS within 4 business days of the trip landing.

(B) Safety refusals. The observer service provider must report to NMFS any trip that has been refused due to safety issues, e.g., failure to hold a valid USCG Commercial Fishing Vessel Safety Examination Decal or to meet the safety requirements of the observer's pre-trip vessel safety checklist, within 24 hours of the refusal.

(C) Biological samples. The observer service provider must ensure that biological samples, including whole marine mammals, sea turtles, and sea birds, are stored/handled properly and transported to NMFS within 7 days of landing.

(D) Observer debriefing. The observer service provider must ensure that the observer remains available to NMFS, either in-person or via phone, at NMFS' discretion, including NMFS Office for Law Enforcement, for debriefing for at least 2 weeks following any observed trip. If requested by NMFS, an observer that is at sea during the 2-week period must contact NMFS upon his or her return.

(E) Observer availability report. The observer service provider must report to NMFS any occurrence of inability to respond to an industry request for observer coverage due to the lack of available observers by 5 p.m., Eastern Time, of any day on which the provider is unable to respond to an industry request for observer coverage.

(F) Other reports. The observer service provider must report possible observer harassment, discrimination, concerns about vessel safety or marine casualty, or observer illness or injury; and any

information, allegations, or reports regarding observer conflict of interest or breach of the standards of behavior, to NMFS/NEFOP within 24 hours of the event or within 24 hours of learning of the event.

(G) Observer status report. The observer service provider must provide NMFS/NEFOP with an updated list of contact information for all observers that includes the observer identification number, observer's name, mailing address, email address, phone numbers, homeports or fisheries/trip types assigned, and must include whether or not the observer is “in service,” indicating when the observer has requested leave and/or is not currently working for an industry funded program.

(H) Vessel contract. The observer service provider must submit to NMFS/NEFOP, if requested, a copy of each type of signed and valid contract (including all attachments, appendices, addendums, and exhibits incorporated into the contract) between the observer provider and those entities requiring observer services.

(I) Observer contract. The observer service provider must submit to NMFS/NEFOP, if requested, a copy of each type of signed and valid contract (including all attachments, appendices, addendums, and exhibits incorporated into the contract) between the observer provider and specific observers.

(J) Additional information. The observer service provider must submit to NMFS/NEFOP, if requested, copies of any information developed and/or used by the observer provider and distributed to vessels, such as informational pamphlets, payment notification, description of observer duties, etc.

(viii) Refusal to deploy an observer. (A) An observer service provider may refuse to deploy an observer on a requesting scallop vessel if the observer service provider does not have an available observer within 48 hours of receiving a request for an observer from a vessel.

(B) An observer service provider may refuse to deploy an observer on a requesting fishing vessel if the observer service provider has determined that the requesting vessel is inadequate or unsafe pursuant to the reasons described at §600.746.

(C) The observer service provider may refuse to deploy an observer on a fishing vessel that is otherwise eligible to carry an observer for any other reason, including failure to pay for previous observer deployments, provided the observer service provider has received prior written confirmation from NMFS authorizing such refusal.

(6) Limitations on conflict of interest. An observer service provider:

(i) Must not have a direct or indirect interest in a fishery managed under Federal regulations, including, but not limited to, a fishing vessel, fish dealer, fishery advocacy group, and/or fishery research;

(ii) Must assign observers without regard to any preference by representatives of vessels other than when an observer will be deployed; and

(iii) Must not solicit or accept, directly or indirectly, any gratuity, gift, favor, entertainment, loan, or anything of monetary value from anyone who conducts fishing or fishing related activities that are

regulated by NMFS, or who has interests that may be substantially affected by the performance or nonperformance of the official duties of observer providers.

(7) Removal of observer service provider from the list of approved observer service providers. An observer service provider that fails to meet the requirements, conditions, and responsibilities specified in paragraphs (h)(5) and (6) of this section shall be notified by NMFS, in writing, that it is subject to removal from the list of approved observer service providers. Such notification shall specify the reasons for the pending removal. An observer service provider that has received notification that it is subject to removal from the list of approved observer service providers may submit written information to rebut the reasons for removal from the list. Such rebuttal must be submitted within 30 days of notification received by the observer service provider that the observer service provider is subject to removal and must be accompanied by written evidence rebutting the basis for removal. NMFS shall review information rebutting the pending removal and shall notify the observer service provider within 15 days of receipt of the rebuttal whether or not the removal is warranted. If no response to a pending removal is received by NMFS, the observer service provider shall be automatically removed from the list of approved observer service providers. The decision to remove the observer service provider from the list, either after reviewing a rebuttal, or if no rebuttal is submitted, shall be the final decision of NMFS and the Department of Commerce. Removal from the list of approved observer service providers does not necessarily prevent such observer service provider from obtaining an approval in the future if a new application is submitted that demonstrates that the reasons for removal are remedied. Certified observers under contract with an observer service provider that has been removed from the list of approved service providers must complete their assigned duties for any fishing trips on which the observers are deployed at the time the observer service provider is removed from the list of approved observer service providers. An observer service provider removed from the list of approved observer service providers is responsible for providing NMFS with the information required in paragraph (h)(5)(vii) of this section following completion of the trip. NMFS may consider, but is not limited to, the following in determining if an observer service provider may remain on the list of approved observer service providers:

(i) Failure to meet the requirements, conditions, and responsibilities of observer service providers specified in paragraphs (h)(5) and (h)(6) of this section;

(ii) Evidence of conflict of interest as defined under paragraph (h)(6) of this section;

(iii) Evidence of criminal convictions related to:

(A) Embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; or

(B) The commission of any other crimes of dishonesty, as defined by state law or Federal law, that would seriously and directly affect the fitness of an applicant in providing observer services under this section;

(iv) Unsatisfactory performance ratings on any Federal contracts held by the applicant; and

(v) Evidence of any history of decertification as either an observer or observer provider.

(i) Observer certification. (1) To be certified, employees or sub-contractors operating as observers for observer service providers approved under paragraph (h) of this section must meet NMFS National Minimum Eligibility Standards for observers. NMFS National Minimum Eligibility Standards are available at the National Observer Program Website:www.nmfs.noaa.gov/op/pds/categories/science_and_technology.html.

(2) Observer training. In order to be deployed on any fishing vessel, a candidate observer must have passed an appropriate NMFS/NEFOP Observer Training course. If a candidate fails training, the candidate shall be notified in writing on or before the last day of training. The notification will indicate the reasons the candidate failed the training. Observer training shall include an observer training trip, as part of the observer's training, aboard a fishing vessel with a trainer. A candidate observer's first four deployments and the resulting data shall be immediately edited and approved after each trip by NMFS/NEFOP, prior to any further deployments by that observer. If data quality is considered acceptable, the observer would be certified.

(3) Observer requirements. All observers must:

(i) Have a valid NMFS/NEFOP fisheries observer certification pursuant to paragraph (i)(1) of this section;

(ii) Be physically and mentally capable of carrying out the responsibilities of an observer on board fishing vessels, pursuant to standards established by NMFS. Such standards are available from NMFS/NEFOP Website specified in paragraph (h)(1) of this section and shall be provided to each approved observer service provider;

(iii) Have successfully completed all NMFS-required training and briefings for observers before deployment, pursuant to paragraph (i)(2) of this section; and

(iv) Hold a current Red Cross (or equivalence) CPR/First Aid certification.

(v) Accurately record their sampling data, write complete reports, and report accurately any observations relevant to conservation of marine resources or their environment.

(4) Probation and decertification. NMFS may review observer certifications and issue observer certification probation and/or decertification as described in NMFS policy found on the NMFS/NEFOP Website specified in paragraph (h)(1) of this section.

(5) Issuance of decertification. Upon determination that decertification is warranted under paragraph (i)(4) of this section, NMFS shall issue a written decision to decertify the observer to the observer and approved observer service providers via certified mail at the observer's most current address provided to NMFS. The decision shall identify whether a certification is revoked and shall identify the specific reasons for the action taken. Decertification is effective immediately as of the date of issuance, unless the decertification official notes a compelling reason for maintaining certification for a specified period

and under specified conditions. Decertification is the final decision of NMFS and the Department of Commerce and may not be appealed.

(j) In the event that a vessel is requested by the Regional Administrator to carry a NMFS-certified fisheries observer pursuant to paragraph (a) of this section and is also selected to carry an at-sea monitor as part of an approved sector at-sea monitoring program specified in §648.87(b)(1)(v) for the same trip, only the NMFS-certified fisheries observer is required to go on that particular trip.

§ 648.87(b) -- Groundfish Sector At-Sea and Electronic Monitoring Requirements

(4) Independent third-party monitoring provider standards. Any service provider intending to provide at-sea/electronic monitoring services described in paragraph (b)(1)(v) of this section must apply to and be approved/certified by NMFS in a manner consistent with the Administrative Procedure Act. NMFS shall approve/certify service providers and/or at-sea monitors as eligible to provide sector monitoring services specified in this part and can disapprove/decertify service providers and/or individual monitors through notice in writing to individual service providers/monitors if the following criteria are no longer being met:

(i) Service provider information. As part of the application for service provider approval/certification, potential service providers must include at least the following information:

(A) Identification of corporate structure, including the names and duties of controlling interests in the company such as owners, board members, authorized agents, and staff; and articles of incorporation, or a partnership agreement, as appropriate;

(B) Contact information for official correspondence and communication with any other office;

(C) A statement, signed under penalty of perjury, from each owner, board member, and officer that they are free from a conflict of interest with fishing-related parties including, but not limited to, vessels, dealers, shipping companies, sectors, sector managers, advocacy groups, or research institutions and will not accept, directly or indirectly, any gratuity, gift, favor, entertainment, loan, or anything of monetary value from such parties;

(D) A statement, signed under penalty of perjury, from each owner, board member, and officer describing any criminal convictions, Federal contracts they have had, and the performance rating they received on the contract, and previous decertification action while working as an observer or observer service provider;

(E) A description of any prior experience the applicant may have in placing individuals in remote field and/or marine work environments including, but not limited to, recruiting, hiring, deployment, and personnel administration;

(F) A description of the applicant's ability to carry out the responsibilities and duties of a sector monitoring/reporting service provider and the arrangements to be used, including whether the service provider is able to offer at-sea monitoring services;

(G) Evidence of adequate insurance (copies of which shall be provided to the vessel owner, operator, or vessel manager, when requested) to cover injury, liability, and accidental death to cover at-sea monitors (including during training); vessel owner; and service provider;

(H) Proof of benefits and personnel services provided in accordance with the terms of each monitor's contract or employment status;

(I) Proof that the service provider's at-sea monitors have passed an adequate training course sponsored by the service providers to the extent not funded by NMFS that is consistent with the curriculum used in the current yearly NEFOP training course, unless otherwise specified by NMFS;

(J) An Emergency Action Plan describing the provider's response to an emergency with an at-sea monitor, including, but not limited to, personal injury, death, harassment, or intimidation; and

(K) Evidence that the company is in good financial standing;

(ii) Service provider performance requirements. At-sea monitoring service providers must be able to document compliance with the following criteria and requirements:

(A) A service provider must establish and carry out a comprehensive plan to deploy NMFS-certified at-sea monitors, or other at-sea monitoring mechanism, such as electronic monitoring equipment that is approved by NMFS, according to a prescribed coverage level (or level of precision for catch estimation), as specified by NMFS, including all of the necessary vessel reporting/notice requirements to facilitate such deployment, as follows:

(1) A service provider must be available to industry 24 hr per day, 7 days per week, with the telephone system monitored a minimum of four times daily to ensure rapid response to industry requests;

(2) A service provider must be able to deploy at-sea monitors, or other approved at-sea monitoring mechanism to all ports in which service is required by sectors, or a subset of ports as part of a contract with a particular sector;

(3) A service provider must report at-sea monitors and other approved at-sea monitoring mechanism deployments to NMFS and the sector manager in a timely manner to determine whether the predetermined coverage levels are being achieved for the appropriate sector;

(4) A service provider must assign at-sea monitors and other approved at-sea monitoring mechanisms without regard to any preference by the sector manager or representatives of vessels other than when the service is needed and the availability of approved/certified monitors and other at-sea monitoring mechanisms;

(5) A service provider's at-sea monitor assignment must be fair, equitable, representative of fishing activities within each sector, and able to monitor fishing activity throughout the fishing year;

(6) For service providers offering catch estimation or at-sea monitoring services, a service provider must be able to determine an estimate of discards for each trip and provide such information to the sector manager and NMFS, as appropriate and as required by this section;

(B) The service provider must ensure that at-sea monitors remain available to NMFS, including NMFS Office for Law Enforcement, for debriefing for at least 2 weeks following any monitored trip/offload;

(C) The service provider must report possible at-sea monitor harassment; discrimination; concerns about vessel safety or marine casualty; injury; and any information, allegations, or reports regarding at-sea monitor conflict of interest or breach of the standards of behavior to NMFS and/or the sector manager, as specified by NMFS;

(D) The service provider must submit to NMFS, if requested, a copy of each signed and valid contract (including all attachments, appendices, addendums, and exhibits incorporated into the contract) between the service provider and those entities requiring services (i.e., sectors and participating vessels) and between the service provider and specific dockside, roving, or at-sea monitors;

(E) The service provider must submit to NMFS, if requested, copies of any information developed and used by the service providers distributed to vessels, such as informational pamphlets, payment notification, description of duties, etc.;

(F) A service provider may refuse to deploy an at-sea monitor or other approved at-sea monitoring mechanism on a requesting fishing vessel for any reason including, but not limited to, the following:

(1) If the service provider does not have an available at-sea monitor or other at-sea monitoring mechanism approved by NMFS within the advanced notice requirements established by the service provider;

(2) If the service provider is not given adequate notice of vessel departure or landing from the sector manager or participating vessels, as specified by the service provider;

(3) For the purposes of at-sea monitoring, if the service provider has determined that the requesting vessel is inadequate or unsafe pursuant to the reasons described in §600.746; and

(4) Failure to pay for previous deployments of at-sea monitors, or other approved at-sea monitoring mechanism.

(G) With the exception of a service provider offering reporting, dockside, and/or at-sea monitoring services to participants of another fishery managed under Federal regulations, a service provider must not have a direct or indirect interest in a fishery managed under Federal regulations, including, but not limited to, fishing vessels, dealers, shipping companies, sectors, sector managers, advocacy groups, or research institutions and may not solicit or accept, directly or indirectly, any gratuity, gift, favor, entertainment, loan, or anything of monetary value from anyone who conducts fishing or fishing-related activities that are regulated by NMFS, or who has interests that may be substantially affected by the performance or nonperformance of the official duties of service providers;

(H) A system to record, retain, and distribute the following information to NMFS, as requested, for a period specified by NMFS, including:

(1) At-sea monitor and other approved monitoring equipment deployment levels, including the number of refusals and reasons for such refusals;

(2) Incident/non-compliance reports (e.g., failure to offload catch); and

(3) Hail reports, landings records, and other associated interactions with vessels and dealers.

(I) A means to protect the confidentiality and privacy of data submitted by vessels, as required by the Magnuson-Stevens Act; and

(J) A service provider must be able to supply at-sea monitors with sufficient safety and data-gathering equipment, as specified by NMFS.

(iii) Standards for individual at-sea monitors. For an individual to be approved/certified as an at-sea monitor, the service provider must demonstrate that each potential monitor meets the following criteria:

(A) A high school diploma or legal equivalent;

(B) Successful completion of all NMFS-required training and briefings before deployment;

(C) Physical and mental capacity for carrying out the responsibilities of an at-sea monitor on board fishing vessels, pursuant to standards established by NMFS such as being certified by a physician to be physically fit to work as an at-sea monitor after consideration of at least the following work-related issues:

(1) Susceptibility to chronic motion sickness;

(2) Ability to live in confined quarters;

(3) Ability to tolerate stress;

(4) Ability to lift and carry heavy objects up to 50 lb (22.7 kg);

(5) Ability to drag heavy objects up to 200 lb (90.7 kg); and

(6) Ability to climb a ladder.

(D) A current Red Cross (or equivalent) CPR/first aid certification;

(E) Absence of fisheries-related convictions, based upon a thorough background check; and

(F) Independence from fishing-related parties including, but not limited to, vessels, dealers, shipping companies, sectors, sector managers, advocacy groups, or research institutions to prevent conflicts of interest.

(5) At-sea/electronic monitoring operational standards. In addition to the independent third-party monitoring provider standards specified in paragraph (b)(4) of this section, any at-sea/electronic monitoring program developed as part of a sector's yearly operations plan pursuant to paragraph (b)(1)(v)(B) of this section must meet the following operational standards to be approved by NMFS:

(i) Gear. Each at-sea monitor must be provided with all of the equipment specified by the Northeast Fisheries At-sea Monitoring Program. A list of such equipment is available from the Northeast Fisheries Science Center upon request. At-sea/electronic monitoring service providers are responsible for the cost of providing such gear to at-sea monitors to the extent not funded by NMFS. This gear shall be inspected by NMFS upon the completion of training required pursuant to paragraph (b)(4)(i)(I) of this section.

(ii) Vessel selection protocol. An at-sea/electronic monitoring program service provider must develop a formal vessel-selection protocol to deploy at-sea monitors and electronic monitoring equipment in a statistically random manner consistent with the coverage levels required pursuant to paragraph (b)(1)(v)(B)(1) of this section. This protocol must include a method to allow for waivers in specific circumstances, including how waivers would be requested, assessed, and recorded.

(iii) Reporting/recordkeeping requirements—(A) Vessel requirements. In addition to all other reporting/recordkeeping requirements specified in this part, to facilitate the deployment of at-sea monitors and electronic monitoring equipment pursuant to paragraph (b)(1)(v)(B)(1) of this section, the operator of a vessel fishing on a sector trip must provide at-sea/electronic monitoring service providers with at least the following information: The vessel name, permit number, trip ID number in the form of the VTR serial number of the first VTR page for that trip or another trip identifier specified by NMFS, whether a monkfish DAS will be used, and an estimate of the date/time of departure in advance of each trip. The timing of such notice shall be sufficient to allow ample time for the service provider to determine whether an at-sea monitor or electronic monitoring equipment will be deployed on each trip and allow the at-sea monitor or electronic monitoring equipment to prepare for the trip and get to port, or to be installed on the vessel, respectively. The details of the timing, method (e.g., phone, email, etc.), and information needed for such pre-trip notifications shall be included as part of a sector's yearly operations plan. If a vessel has been informed by a service provider that an at-sea monitor or electronic monitoring equipment has been assigned to a particular trip pursuant to paragraph (b)(5)(iii)(B)(1) of this section, the vessel may not leave port to begin that trip until the at-sea monitor has arrived and boarded the vessel, or the electronic monitoring equipment has been properly installed.

(B) At-sea/electronic monitoring service provider requirements—(1) Confirmation of pre-trip notification. Upon receipt of a pre-trip notification pursuant to paragraph (b)(5)(iii)(A) of this section, the service provider shall inform the vessel operator whether the vessel will be monitored by an at-sea observer or electronic monitoring equipment for that trip, or will be issued an at-sea/electronic monitoring waiver for that trip based upon the vessel selection protocol specified in paragraph (b)(5)(ii) of this section.

(2) At-sea/electronic monitoring report. A report detailing area fished and the amount of each species kept and discarded shall be submitted electronically in a standard acceptable form to the appropriate

sector and NMFS within 48 hr of the completion of the trip, as instructed by the Regional Administrator. The data elements to be collected and the format for submission shall be specified by NMFS and distributed to all approved at-sea/electronic monitoring service providers and sectors. At-sea/electronic monitoring data shall not be accepted until such data pass automated NMFS data quality checks.

(iv) Safety hazards—(A) Vessel requirements. The operator of a sector vessel must detail and identify any safety hazards to any at-sea monitor assigned pursuant to paragraph (b)(5)(iii)(B)(1) of this section prior to leaving port. A vessel cannot begin a trip if it has failed a review of safety issues pursuant to paragraph (b)(5)(iv)(B) of this section, until the identified safety deficiency has been resolved, pursuant to §600.746(i).

(B) At-sea/electronic monitoring service provider requirements. An at-sea monitor must complete a pre-trip vessel safety checklist provided by NMFS before an at-sea monitor can leave port onboard a vessel on a sector trip. If the vessel fails a review of safety issues pursuant to this paragraph (b)(5)(iv)(B), an at-sea monitor cannot be deployed on that vessel for that trip.

(v) Adjustment to operational standards. The at-sea/electronic monitoring operational standards specified in paragraph (b)(5) of this section may be revised by the Regional Administrator in a manner consistent with the Administrative Procedure Act.