Omnibus Industry-Funded Monitoring (IFM) Amendment

Amendment 7 to the Atlantic Herring FMP

DRAFT

Options Under Consideration

to Establish IFM in the Atlantic Herring Fishery

(Coverage Targets, Program Requirements, Sea Day Costs)

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Industry-Funded Monitoring FMAT

DRAFT: April 16, 2015 Observer Committee Meeting

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TABLE OF CONTENTS

LIST OF TABLES

1.0 SUMMARY OF HERRING IFM OPTIONS UNDER CONSIDERATION

Table 1 summarizes the options under consideration to establish industry-funded monitoring (IFM) in the Atlantic herring fishery. The options under consideration are grouped into two categories: (1) options for industry-funded observer coverage (herring OBS options, HER OBS); and (2) options for industry-funded at-sea monitoring (herring ASM options, HER ASM). The primary difference between these options is that the herring OBS options require comprehensive sampling (catch and bycatch) to provide data that is consistent with NEFOP observer data collected to meet the requirements of the standardized bycatch reporting methodology (SBRM). The herring ASM options require comprehensive sampling of bycatch only, i.e., any catch that is not retained on board the vessel for any reason, including full and partial slippage events, operational discards, and catch that is sorted on board the vessel and then discarded. The industry (vessels/vessel owners) would pay for at-sea monitors to collect bycatch data, while NEFOP observers would continue to be deployed to collect observer data on herring vessels to meet SBRM requirements. The details of the industry-funded herring OBS and ASM options under consideration are discussed in the following subsections of this document.

The intent of considering two different kinds of industry-funded monitoring programs for the Atlantic herring fishery is to address specific monitoring needs identified by the Council while providing a basis for understanding and comparing the costs of the monitoring program, particularly those which will be borne by the fishing industry. This approach also provides a mechanism to consider options that may reduce costs for the industry. For comparison purposes, information about the current multispecies (groundfish) at-sea monitoring program (GF ASM) for sector vessels is provided throughout this document as well. Since the sea day costs of the GF ASM program are better understood and current estimates of these costs are available, the sea day costs of a herring ASM program can be estimated based on a comparison to the groundfish ASM program, with particular consideration of the factors that can drive sea day costs up (see Section 2.1, p. 5).

Under the herring OBS options, vessels would be required to hire/pay sea day costs for NMFS-approved observers on some number of trips (based on coverage targets) above those on which vessels are required to carry an observer deployed through the standardized bycatch reporting methodology (SBRM). The industry-funded observers would require NEFOP certification to collect observer data, including a high-volume certification, and they would collect comprehensive catch/bycatch data consistent with NEFOP protocols for observer data collected under the SBRM. Under the herring ASM options, vessels would be required to hire/pay sea day costs for NMFS-approved at-sea monitors on trips (based on coverage targets) other than those on which vessels are required to carry an observer deployed through the SBRM. The industry-funded at-sea monitors would require NEFOP certification for the herring ASM program (HER ASM), and they would collect bycatch (discard) data consistent with NEFOP protocols.

Each set of options in Table 1 includes sub-options to consider allowances for waivers in the event that an observer or at-sea monitor cannot be provided for a fishing trip (to allow the vessel to fish). Additional sub-options are under consideration to exempt wing vessels (in a pair trawl operation) that do not take on fish from requirements to carry observers/monitors under the industry-funded monitoring program. These vessels would be required to notify NMFS ahead of time (through the pre-trip call-in and/or VMS) and would be prohibited from fishing for or possessing herring on exempted trips.

Some of the herring IFM options under consideration in the IFM amendment would apply to all Category A/B Atlantic herring vessels (single and paired midwater trawl, purse seine, small mesh bottom trawl) on trips declared into the herring fishery, while other options would apply only to midwater trawl vessels (single and paired, all permit categories). The options that apply only to midwater trawl vessels are based on SBRM fleet divisions (gear type and area). The information about vessel activity and numbers of trips/days provided in Table 1 is based on activity during the 2013 fishing year.

Table 1 Options for Industry-Funded Monitoring in the Atlantic Herring Fishery

<table>
<tr><th colspan="3">Options for Industry-Funded Observer Coverage (Herring OBS Options)</th></tr>
<tr><th></th><th>Coverage Target</th><th>Affected Vessels and 2013 Trips/Days</th></tr>
<tr><td>Alternative 2.1</td><td>100%, no waivers</td><td rowspan="2">Category A/B Herring
(41 total vessels, 27 active in 2013)

<u>2013 Activity</u>
6 MWT (187 trips/296 days)
9 PT (267 trips/802 days)
5 PS (268 trips/230 days)
7 SMBT(113 trips/326 days)</td></tr>
<tr><td>Alternative 2.2</td><td>100%, with waivers</td></tr>
<tr><td>Alternative 2.3</td><td>51% NE MWT;
58% NE PT;
61% MA PT</td><td rowspan="3">All MWT Vessels
(19 active vessels in 2013)

<u>2013 Activity</u>
9 NE MWT (182 trips/287 days)
3 NE PT (52 trips/155 days)
1 MA PT (4 trips/12 days)
6 NE and MA PT (212 trips/638 days)</td></tr>
<tr><td>Alternative 2.4</td><td>51% NE MWT;
58% NE PT;
61% MA PT</td></tr>
<tr><td>Alternative 2.5*
*can be combined with other alternatives</td><td>100% in GF year-round closed areas, no waivers</td></tr>
<tr><th colspan="3">Options for Industry-Funded At-Sea Monitoring (Herring ASM Options)</th></tr>
<tr><th></th><th>Coverage Target</th><th>Affected Vessels and 2013 Trips/Days</th></tr>
<tr><td>Herring ASM 1.1</td><td>100% trips without SBRM observer, no waivers</td><td rowspan="6">Category A/B Herring Vessels
(41 total vessels, 27 active in 2013)

<u>2013 Activity</u>
6 MWT (187 trips/296 days)
9 PT (267 trips/802 days)
5 PS (268 trips/230 days)
7 SMBT(113 trips/326 days)</td></tr>
<tr><td>Herring ASM 1.2</td><td>100% trips without SBRM observer, with waivers</td></tr>
<tr><td>Herring ASM 2.1</td><td>75% trips without SBRM observer, no waivers</td></tr>
<tr><td>Herring ASM 2.2</td><td>75% trips without SBRM observer, with waivers</td></tr>
<tr><td>Herring ASM 3.1</td><td>50% trips without SBRM observer, no waivers</td></tr>
<tr><td>Herring ASM 3.2</td><td>50% trips without SBRM observer, with waivers</td></tr>
</table>

**Sub-options are included which would exempt wing vessels (in a pair trawl operation) that do not take on fish from requirements to carry observers/monitors under the industry-funded monitoring program. These vessels would be required to notify NMFS ahead of time and would be prohibited from fishing for or possessing herring on exempted IFM trips.*

2.0 WHAT IS A SEA DAY COST?

For the purposes of this discussion document, the *sea day cost* is amount that the participants in the fishery (vessels/vessel owners) pay to service provider companies for deploying an observer/at-sea monitor for a fishing trip to meet the requirements of an industry-funded monitoring program. As described in Section XXX of the IFM amendment, the *sea day cost* incurred by the industry generally includes travel and salary for observer training, deployment and debriefing; service provider overhead and project management costs; special equipment costs; and other expenses determined by the service provider to meet the monitoring program requirements. Sea day costs are usually estimated based on a 24-hour day but can be billed based on full days, partial days, or hours. In many cases, vessel owners will enter into contracts with service providers to negotiate and secure a specific sea day cost for an agreed-upon number of sea days. Vessels may enter into contracts with multiple service providers to meet the monitoring requirements for a fishery. There are several elements of a sea day cost that can be negotiated through these contracts.

In an industry-funded monitoring program, a primary component of a *sea day cost* (sometimes upwards of 50% of the sea day cost) is **labor**, i.e., wages/salary for observers, which can be estimated by the service provider based on the anticipated number of days per month that each observer will work in the monitoring program. **Insurance** is another significant component of the sea day cost, the annual cost of which (per observer) is spread across the estimated number of sea days. Additional costs related to observer **training** (daily stipend, travel, and lodging), employee **benefits** (health insurance, vacation), and project management and **overhead** (staff, offices) are estimated for the year and then distributed across the estimated number of sea days for the monitoring program.*

**Insurance and workers compensation expenses are higher in the Northeast Region than in west coast fisheries.*

There are currently no industry-funded monitoring programs in the Greater Atlantic Region that include contracts between service provider companies and fishing industry participants. Until now, all contracts for observer coverage and at-sea monitoring have been entered into by the Federal government and service providers, administered by NMFS/NEFOP. *Discuss sea scallops IF observer program.* The contract for NEFOP observer coverage under the SBRM requirements is signed for five years with one provider (currently MRAG Americas). Until recently, the Federal government has been covering industry sea day costs in the groundfish at-sea monitoring program through contracts with three service providers. Later in 2015, when groundfish sectors will become responsible for paying their at-sea monitoring sea day costs, there will be an opportunity for sector vessels to enter into contracts with provider companies to negotiate sea day costs. There is likely to be some reduction in sea day costs that will result from "privatizing" contracts and eliminating the Federal government as a party entering into the contract (see following discussion). Several industry-funded monitoring programs in U.S. west coast fisheries use vessel/provider contracts; reviewing these programs is helpful to understand the factors that drive sea day costs up and the ways that the monitoring program can be structured to reduce these costs (see Section 5.0 of this document for more information about industry-funded monitoring programs in other U.S. fisheries).

Sea day costs are determined by individual service providers based on their overhead and the estimated costs associated with deploying their employees as observers in the monitoring program. There are many elements of the sea day cost that will be unique to individual service provider companies and cannot be predicted or estimated with any certainty. In addition, sea day costs can be variable, and service providers can bid different sea day costs to different vessels under the same monitoring program, depending on the details of the individual contracts. Ultimately, it will be up to the participants in the fishing industry to negotiate sea day costs with service providers in contracts designed to better meet their individual needs. To the extent that vessels that fish out of the same ports can work together to negotiate costs with service provider companies, there may be savings by reducing observer travel costs and offering more days in total for the providers to distribute overhead costs. In addition, there may be opportunities for the industry to reduce their sea day costs by allowing some costs (travel, meals, cancellations) to be negotiated in the contracts with service providers.

A large part of the sea day cost is determined by service providers based on predictions/assumptions of how vessels participating in the monitoring program will operate over the course of a fishing year and how the fishery will respond. If service providers have adequate information to accurately predict their overhead and related costs, then they can increase their efficiency and transfer these cost savings to the industry.

2.1 WHAT DRIVES SEA DAY COSTS UP?

There are several factors that can significantly affect sea day costs in any industry-funded monitoring program. During the development of this discussion document, 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. In an effort to reduce sea day costs, the elements of the herring ASM options under consideration (described in Section 3.0 of this document) specifically address the following factors, to the extent possible. *Discussion of each of these factors with respect to the herring ASM options is provided below in italics.*

- **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.

  The herring ASM options build on existing observer data collection protocols and do not require the collection of new/different data and/or new/additional sampling equipment. The protocols for the herring ASM options focus on the sampling of bycatch and is based on existing protocols for sampling bycatch and completing a NEFOP discard log for observed herring trips (see Section 3.1 for more information).

- **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 is likely to a 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.

  The 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 in the Atlantic herring 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. A reasonable estimate of the sea day cost reduction that may occur from elimination of the SCA requirements would be $XXX-$XXX.

  **This savings is not reflected in the current estimate of sea day costs for the groundfish ASM program and should be considered when comparing costs to develop an estimate of the sea day cost for the herring ASM options – see Section 4.0 of this document for more information.*

- **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.

  The Atlantic herring fishery is a small group of vessels that fish in a relatively predictable manner. Information provided in Section 2.2 below suggests that administrative/overhead and associated costs for the herring ASM options will be lower than those for the Groundfish ASM program. Ultimately, in order to reduce costs, it will be up to industry participants to provide as much detail as possible about their fishing patterns to the service providers when they negotiate contracts for sea days.

- **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 will likely increase costs.

  The existing pre-trip notification system (PTNS) can be utilized for vessel selection under the herring ASM options. The coverage targets are relatively simple and should not create overhead/staff costs associated with vessel selection/notification and observer deployment. In addition, travel costs associated with deploying observers on Category A/B herring vessels may be less than those for other IFM programs. The Atlantic herring fishery operates with a relatively small number of boats in a limited geographical area (versus the area covered by west coast fisheries), so observers can reach a number of deployment ports across several states more easily (ex., driving vs. flying).

2.2 HOW CAN SEA DAY COSTS BE REDUCED?

Table 2 summarizes the ways that sea day costs can be in an industry-funded monitoring program. The discussion provided in Table 2 was generated from information provided by NEFOP personnel, observers, and representatives from service providers in the northeast and U.S. west coast. To the extent that the issues identified in Table 2 can be addressed through the management measures that establish/implement the industry-funded monitoring program, sea day costs borne by the fishing industry can be reduced.

Table 2 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; • *Needs NOAA GC Input**
"Grandfather in" current service providers approved for NEFOP observer coverage and GF ASM programs – approve these providers immediately for Herring 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 NEFOP certification for Herring ASM program; • Allows herring 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 in GF ASM program 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 HER ASM program; combine/overlap training and recertification whenever possible	• Cross-training and applying training courses to multiple certification 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 GF ASM 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 2 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; • Pre-trip notification and selection for Herring ASM options could be built into existing herring PTNS; 100% coverage target options (and 50% coverage target options) eliminate need for service provider to develop a plan to meet specified coverage targets for the monitoring program;
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 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 (Herring OBS options), implemented in SBRM amendment • Increases flexibility and reduces travel costs for service providers; appears to be consistent with regulations for Groundfish ASM

Table 2 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	• Are there ways to reduce/streamline insurance requirements to reduce costs for providers? • Needs more evaluation*
Combine the IFM programs for herring and mackerel fisheries	• Reduces complexity (PTNS, deployment, travel) and increases efficiency for service providers; increases number of sea days for amortizing travel/training expenses over the year; • Increases number of work days for observers/monitors and may reduce staff/overhead costs for service providers • Needs more discussion*

As noted in Table 2, one way to reduce sea day costs is to provide service provider companies with accurate, detailed information about the fishery characteristics to better predict how vessels participating in the industry-funded monitoring program will operate over the course of the upcoming year. This allows providers to more accurately estimate the staff, resources, and overhead that will be needed to meet their contractual requirements. This information also helps service providers predict any travel expenses they may incur, therefore reducing the need to over-estimate these costs to cover expenses that cannot be anticipated ahead of time. Table 3 describes the types of fishery data that can help to better predict how vessels in the fishery will operate over the upcoming fishing year. Ultimately, in order to reduce sea day costs, it will be up to industry participants to provide as much detail as possible about their fishing patterns to the service providers when they negotiate contracts for sea days.

Table 3 Types of Information/Data That Can Improve Predictability of the Fishery

<table>
<tr><td>Number of vessels and trips by gear type, area, and month</td><td rowspan="7">This information helps service providers estimate:
No. of observers are needed for the monitoring program
Number of days per month observers may work
Staff/overhead to deploy observers and maintain communications
Travel expenses and other logistics</td></tr>
<tr><td>Length of vessels, other vessel characteristics</td></tr>
<tr><td>Length of fishing trips</td></tr>
<tr><td>Percentage/proportion of back-to-back trips</td></tr>
<tr><td>Port sailed/port landed; geographical extent of fishing
Proportion of trips with different port sail/land</td></tr>
<tr><td>Total ports sailed from (by month or season)</td></tr>
<tr><td>How many boats will be out fishing at any given time?</td></tr>
<tr><td>Number of hauls per trip (per day)</td><td>This helps to determine minimum number of hours of work per sea day; some service providers may pay their observers differently, depending on the work schedule at sea.</td></tr>
</table>

Discuss predictability of Atlantic herring fishery and related logistics for observer deployment – include summary information (recent fishery data).

3.0 ELEMENTS OF HERRING OPTIONS UNDER CONSIDERATION

The following subsections describe the elements of the options under consideration in the IFM amendment to establish industry-funded monitoring (IFM) in the Atlantic herring fishery, including the options for industry-funded observer coverage (Herring OBS) and the options for industry-funded at-sea monitoring (Herring ASM). The primary focus of the discussion in this document is regarding the details of the herring ASM options, which were added to the IFM amendment by the New England Council in January 2015. (The Mid-Atlantic Council added similar options for industry-funded monitoring in the Atlantic mackerel fishery.)

To the extent possible, the herring ASM options were developed based on the current multispecies (groundfish) at-sea monitoring (GF ASM) program for sectors. However, the elements of the herring ASM options have been designed with a more explicit intent of reducing sea day costs (borne by the fishing industry) to the extent possible. For comparison purposes, and for a better understanding of the factors that can increase sea day costs, the elements of the Groundfish ASM program are discussed throughout the following subsections. Since the sea day costs of the GF ASM program are currently better understood and recent estimates of these costs are available, the sea day costs of a herring ASM program can be estimated based on a comparison to the Groundfish ASM program.

In addition to the coverage targets shown in Table 1 (p. 3), the elements of the options for industry-funded monitoring in the Atlantic herring fishery include the sampling objectives, sampling design, data to be collected, service provider requirements, training and certification requirements, sampling equipment, logistics (trip notification) and related provisions, debriefing, and data management.

Under all of the herring at-sea monitoring options (HER ASM), to reduce sea day costs for vessels that are subject to the industry-funded monitoring requirements, the following provisions would apply:

- Existing service providers approved for observer coverage (NEFOP) and groundfish at-sea monitoring (GF ASM) would be "grandfathered in" as approved service providers for Herring ASM (observers working for these companies would still require certification for Herring ASM – see Section 3.2 for more information). Re-approval of the Herring ASM service providers after Year 1 would be consistent with the process for re-approving Groundfish ASM service providers.
- Cross-certification of observers from NEFOP and GF ASM programs would be allowed to certify observers for Herring ASM (see Section 3.2 for more information). Any training that is completed for a NEFOP and/or GF ASM certification could be applied to a Herring ASM certification during the same year. Training, certification, debriefing, and re-certification would be streamlined and combined with the NEFOP and GF ASM programs to the extent possible.

3.1 SAMPLING OBJECTIVES, SAMPLING DESIGN, DATA COLLECTED

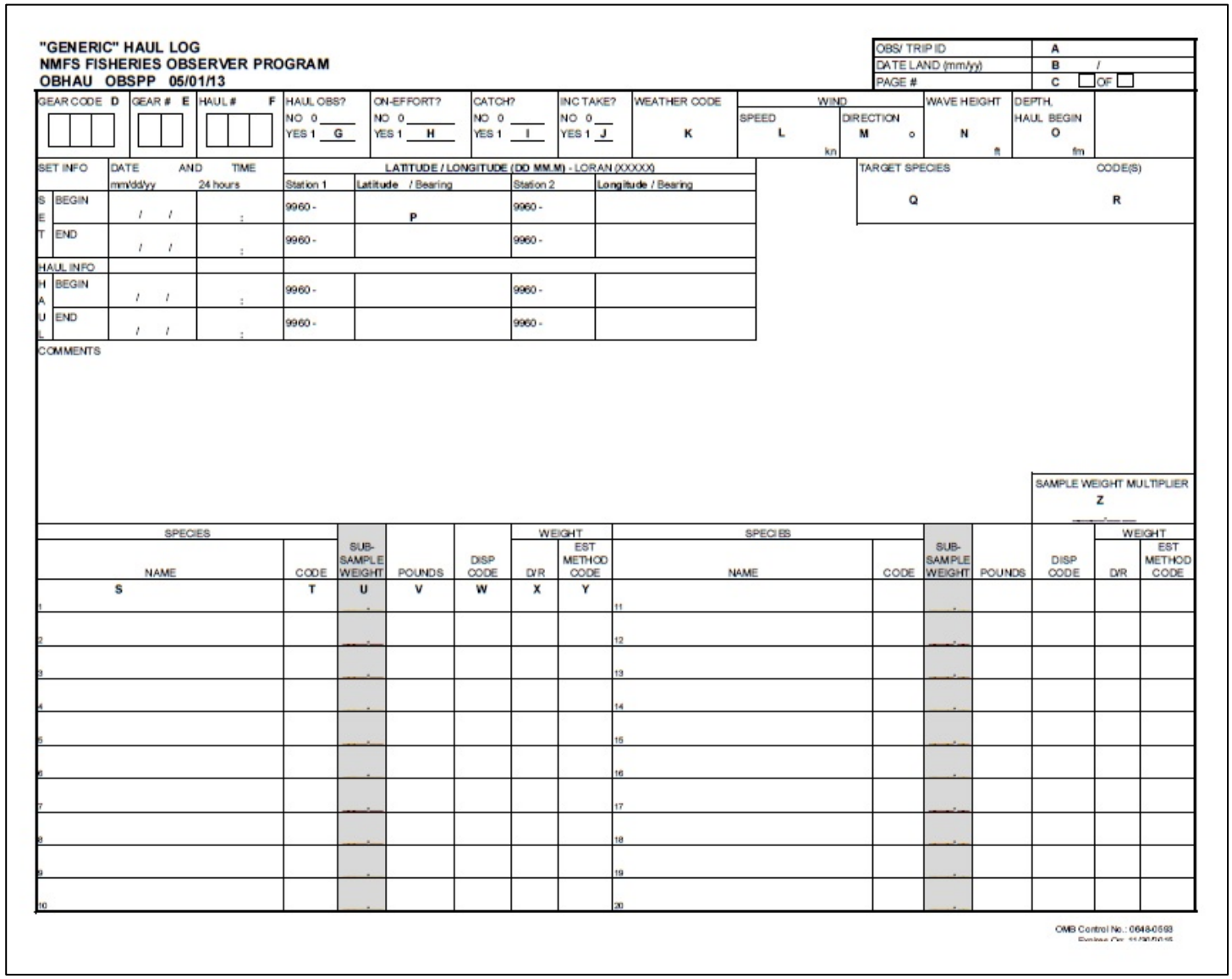
The herring OBS options under consideration in the IFM amendment focus on the collection of comprehensive catch and bycatch data, along with other environmental and economic information, consistent with the NEFOP sampling protocols for high-volume fisheries. The herring ASM options focus on the collection of bycatch data, including documentation of full and partial slippage events, operational discards, and catch that is discarded after being brought on board the vessel, i.e., any catch that is not kept/landed by the vessel. The intent of focusing the herring ASM options on the collection of bycatch (discard) data only is to reduce some of the training and equipment expenses associated with the monitoring program, thereby reducing sea day costs for the industry. The herring ASM options also represent one component of a comprehensive long-term catch monitoring program for the Atlantic herring fishery, which will also incorporate portside sampling and electronic monitoring (EM).

There would be no new or different data collection requirements under the herring ASM options; rather, the ASM options would require that a subset of the catch data that is currently collected by NEFOP observers on a limited number of herring trips (determined by the SBRM) be collected on more trips,. i.e., trips with an industry-funded at-sea monitor. The sampling protocols for the ASM options would be developed by NEFOP based on information needed to document catch that is not kept/landed by the vessels, including slippage events and operational discards. In order to streamline training and equipment costs, the bycatch data (data elements and sampling protocols) collected by herring at-sea monitors would be consistent with bycatch data collected by groundfish at-sea monitors.

*(*The objectives of the at-sea sampling program Herring ASM options should be discussed further at the April 16, 2015 Observer Committee meeting.)*

In general, data elements collected under the Herring ASM options would be identified based on existing NEFOP haul logs and the NEFOP discard log that was developed in 2010 specifically for vessels that pump fish. Table 4 represents a generic NEFOP haul log, and Table 5 represents a NEFOP discard log, which was developed by the NEFOP in 2010 specifically to meet the monitoring needs of the herring fishery. The discard log is currently required to be completed by observers on all hauls in which fish are pumped, as well as any significant discard events on vessels that do not pump fish. Under the herring ASM options, the discard log would be required to be completed by at-sea monitors on all observer hauls, regardless of gear type or fishing method. Basing the Herring ASM sampling design on the NEFOP discard log allows data collected by herring at-sea monitors to be compared to observer data since the discard log was created in 2010.

Table 4 NEFOP Generic Haul Log (Example)



"GENERIC" HAUL LOG
NMFS FISHERIES OBSERVER PROGRAM
OBHAU OBSPP 05/01/13

OBS/ TRIP ID	A	
DATE LAND (mm/yy)	B	/
PAGE #	C	OF

GEAR CODE D	GEAR # E	HAUL # F	HAUL OBS?	ON-EFFORT?	CATCH?	INC TAKE?	WEATHER CODE	WIND SPEED L kn	WIND DIRECTION M o	WAVE HEIGHT N ft	DEPTH, HAUL BEGIN O fm
			NO 0 / YES 1 G	NO 0 / YES 1 H	NO 0 / YES 1 I	NO 0 / YES 1 J	K				

SET INFO	DATE mm/dd/yy	AND TIME 24 hours	LATITUDE / LONGITUDE (DD MM.M) - LORAN (XXXXX) Station 1	Latitude / Bearing	Station 2	Longitude / Bearing
SET BEGIN	/ /	:	9960 -	P	9960 -	
SET END	/ /	:	9960 -		9960 -	
HAUL INFO						
HAUL BEGIN	/ /	:	9960 -		9960 -	
HAUL END	/ /	:	9960 -		9960 -	

TARGET SPECIES	CODE(S)
Q	R

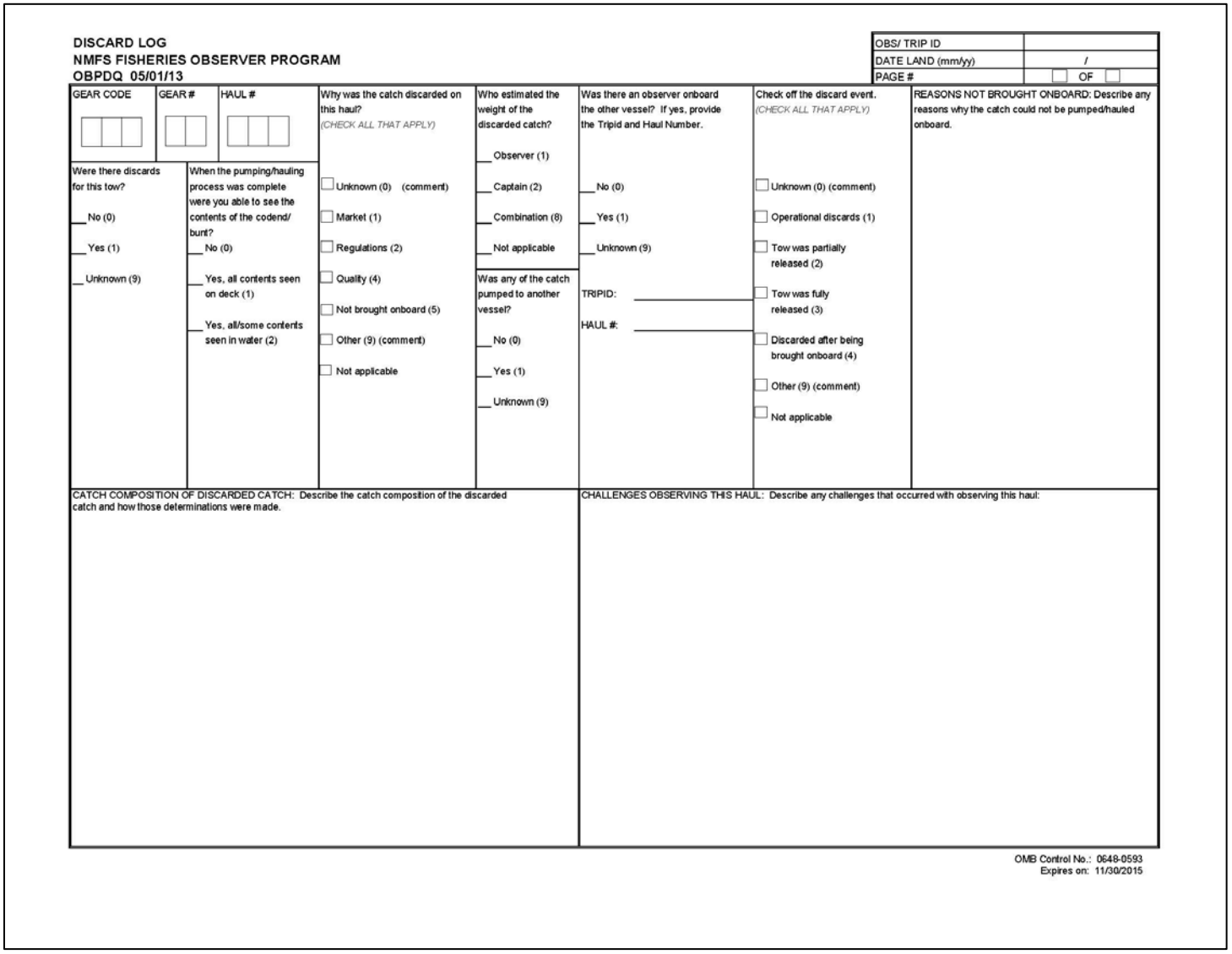
COMMENTS

SAMPLE WEIGHT MULTIPLIER Z

SPECIES NAME	CODE	SUB-SAMPLE WEIGHT	POUNDS	DISP CODE	WEIGHT DIR	WEIGHT EST METHOD CODE	SPECIES NAME	CODE	SUB-SAMPLE WEIGHT	POUNDS	DISP CODE	WEIGHT DIR	WEIGHT EST METHOD CODE
S	T	U	V	W	X	Y							
1							11						
2							12						
3							13						
4							14						
5							15						
6							16						
7							17						
8							18						
9							19						
10							20						

OMB Control No.: 0648-0593

Table 5 NEFOP Discard Log (Example)



DISCARD LOG
NMFS FISHERIES OBSERVER PROGRAM
OBPDQ 05/01/13

OBS/ TRIP ID	
DATE LAND (mm/yy)	/
PAGE #	☐ OF ☐

GEAR CODE ☐☐☐ | **GEAR #** ☐☐ | **HAUL #** ☐☐☐

Were there discards for this tow?
__ No (0)
__ Yes (1)
__ Unknown (9)

When the pumping/hauling process was complete were you able to see the contents of the codend/ bunt?
__ No (0)
__ Yes, all contents seen on deck (1)
__ Yes, all/some contents seen in water (2)

Why was the catch discarded on this haul? *(CHECK ALL THAT APPLY)*
☐ Unknown (0) (comment)
☐ Market (1)
☐ Regulations (2)
☐ Quality (4)
☐ Not brought onboard (5)
☐ Other (9) (comment)
☐ Not applicable

Who estimated the weight of the discarded catch?
__ Observer (1)
__ Captain (2)
__ Combination (8)
__ Not applicable

Was any of the catch pumped to another vessel?
__ No (0)
__ Yes (1)
__ Unknown (9)

Was there an observer onboard the other vessel? If yes, provide the Tripid and Haul Number.
__ No (0)
__ Yes (1)
__ Unknown (9)

TRIPID: _____

HAUL #: _____

Check off the discard event. *(CHECK ALL THAT APPLY)*
☐ Unknown (0) (comment)
☐ Operational discards (1)
☐ Tow was partially released (2)
☐ Tow was fully released (3)
☐ Discarded after being brought onboard (4)
☐ Other (9) (comment)
☐ Not applicable

REASONS NOT BROUGHT ONBOARD: Describe any reasons why the catch could not be pumped/hauled onboard.

CATCH COMPOSITION OF DISCARDED CATCH: Describe the catch composition of the discarded catch and how those determinations were made.

CHALLENGES OBSERVING THIS HAUL: Describe any challenges that occurred with observing this haul:

OMB Control No.: 0648-0593
Expires on: 11/30/2015

Different kinds of reporting and/or monitoring can provide different kinds of information with varying levels of verification, as illustrated for the Atlantic herring and mackerel fisheries in Table 6 and Table 7. These tables were developed by the IFM FMAT based on similar tables provided in the 2013 Fisheries Monitoring Roadmap Report (Lowman et al, 2013).

For landings, vessel trip reporting and dealer landings reporting provide dual records of reported landings with the general location coming from the vessel trip report. If specific location of catch is important, VMS, observers, and monitors can provide independent verification of location. Portside monitoring can provide independent verification of total landings amounts but no information on location of catch. If small amounts of incidentally-caught species are typically mixed in and retained with the target species, portside sampling may be the best way to estimate/document those landings.

For discards (of targeted or incidental species), vessel trip reporting provides reported discards, but independent verification of discards is often desired. Observers and monitors can provide detailed location-specific discard information, though monitors may or may not collect species composition and may limit their data collection to confirming retention and generally documenting discarding frequency. Cameras (electronic monitoring) can also confirm retention. If retention is confirmed (by whatever means), then portside monitoring can provide full catch verification. Affidavits of discard/slippage events can provide details of why discard/slippage events occur. If retention is not confirmed, then portside sampling can provide independent verification of landings composition but uncertainty regarding discards will persist (assuming observer coverage is not complete).

Biological information (age/length data) must generally be collected by observers/monitors at sea or dockside samplers/port agents on land.

Depending on the level of detail desired for tracking landings and/or discards, some combination of the above monitoring and reporting requirements should address Council needs (the costs of the various requirements are described in Section 4.0 of this document). If independent verifications of both landings and discards are desired, then having either a high level of observer/monitor coverage that subsamples catch or verification of retention (by monitors or cameras) coupled with portside sampling should address that objective.

Table 6 Monitoring Approaches for the Atlantic Herring Fishery Based on Data Needs

		Self-Reporting			Independent monitoring					
Data Need		Vessel	Dealer	Affidavits	VMS	NEFOP Observers	Cameras	Portside	At-sea monitors	At-sea monitors
									With sampling for species comp	w/o sampling for species comp
Total herring catch accounting [ACL monitoring]	Verifying retained	Vessels report by species	Dealer reports by species		Can verify location fishing activity	Verifying location of fishing activity	Not quantifying, but confirming retention	Not useful for vessels fishing in more than one area	Verifying location of fishing activity	Not quantifying, but confirming retention
	Quantifying discards	Vessels report by species			Can verify location fishing activity	Species composition data Estimates amount of discards	Not quantifying, but confirming retention		Species composition data	Not quantifying, but confirming retention
Non-target catch accounting	Haddock catch cap monitoring [ACL monitoring]	Used for total retained		Can help with details of why slippage occurs	Can verify location fishing activity	Species composition data Estimates amount of discards	Not quantifying, but confirming retention	Not useful for vessels fishing in more than one area	Species comp and estimates of discarded catch	Not quantifying, but confirming retention
	River herring and shad catch cap monitoring	Used for total retained		Can help with details of why slippage occurs	Can verify location fishing activity	Species composition data Estimates amount of discards	Not quantifying, but confirming retention	Not useful for vessels fishing in more than one area	Species comp and estimates of discarded catch	Not quantifying, but confirming retention
Scientific information	Stock assessments for herring	VTR only				Collect age, length data		Collect age, length data	Collect age, length data for discards only	
	Stock assessments for non-target species	VTR only				Collect age, length data		Collect age, length data	Collect age, length data for discards only	
	Spawning information					Collect age, length data		Collect age, length data	Collect age, length data for discards only	

Table 7 Monitoring Approaches for the Atlantic Mackerel Fishery Based on Data Needs

		Self-Reporting			Independent monitoring					
Data Need		**Vessel**	**Dealer**	**Affidavits**	**VMS**	**NEFOP Observers**	**Cameras**	**Portside**	**At-sea monitors**	**At-sea monitors**
									With sampling for species comp	Without sampling for species comp
Total mackerel catch accounting [ACL monitoring]	Verifying retained	Vessels report by species	Dealer reports by species		Can verify location fishing activity	Verifying location of fishing activity	Not quantifying, but confirming retention	Not useful for vessels fishing in more than one area	Verifying location of fishing activity	Not quantifying, but confirming retention
	Quantifying discards	Vessels report by species			Can verify location fishing activity	Species comp data Estimates amount of discards	Not quantifying, but confirming retention		Species comp data	Not quantifying, but confirming retention
Non-target catch accounting	River herring and shad catch cap monitoring	Used for total retained		Can help with details of why slippage occurs	Can verify location fishing activity	Species comp data Estimates amount of discards	Not quantifying, but confirming retention	Not useful for vessels fishing in more than one area	Species comp and estimates of discarded catch	Not quantifying, but confirming retention
Scientific information	Stock assessments for mackerel	VTR only				Collect age, length data		Collect age, length data	Collect age, length data for discards only	
	Stock assessments for non-target species	VTR only				Collect age, length data		Collect age, length data	Collect age, length data for discards only	

Table 8 summarizes the sampling objectives, the primary elements of the sampling design, and the data to be collected under the options for industry-funded monitoring in the Atlantic herring fishery (herring OBS and herring ASM options – see Table 1 on p. 3); the elements of the current groundfish ASM program are also provided in the table for comparison purposes. Under all of the options, the details of the sampling protocols and logs to be completed would be determined by NEFOP upon implementation of the IFM amendment.

The Observer Committee should discuss/clarify the sampling objectives for the Herring ASM options.

Table 8 Herring IFM Options: Sampling Objectives, Sampling Design, Data Collected

	Industry-Funded Observer Coverage Options (OBS)	***NE GROUNDFISH ASM PROGRAM***	**Industry-Funded Herring ASM Options (Herring ASM)**
Sampling Objectives	SBRM, MMPA, MSA, ESA Stock Assessment, Discard Estimation	MSA Catch monitoring; discard estimation	*Bycatch documentation* - catch that is not kept/landed on Herring Category A/B herring vessels, including full and partial slippage events and operational discards; also including catch that may be brought aboard, sorted, and then discarded *Elements of data collection based on GF ASM; Herring ASM program is intended to complement portside sampling/EM for comprehensive catch monitoring program (landings + discards)*
Sampling Design	Comprehensive catch and bycatch data collection program; protected species documentation; biological sampling; environmental parameters; economic information	Catch monitoring to ensure that ACLs are not exceeded; data on catch composition to estimate total discards by sectors and common pool vessels, by gear type and stock area	Sampling protocols based on NEFOP Haul Log ("modified" - discards); Discard Log; Documentation of bycatch (discards); Protected species interactions; *(in addition to pre-trip safety checklist and other logs/reports as determined by NEFOP)*
Data Collected	Comprehensive catch/bycatch catch/bycatch; biological samples; protected species; fishery information; environmental parameters	Catch/Bycatch	Catch not brought on board the vessel for any reason; Slippage events; Operational discards; Discards brought on board *No subsampling for kept catch estimation*

**The elements of the Groundfish ASM program are provided in the table above for comparison purposes.*

3.2 SERVICE PROVIDER REQUIREMENTS

Under the herring OBS options, the requirements for approving service providers and certifying observers for observer coverage (HER OBS) are proposed to be consistent with those implemented recently through the SBRM amendment (CFR 648.11(h)). Under the herring ASM options, the requirements for approving service providers and certifying observers for the herring at-sea monitoring program (HER ASM) are proposed to be consistent with those for the groundfish sector ASM program, implemented through Amendment 16 to the Multispecies FMP (CFR 648.47(b)(4) and (b)(5)). This approach is consistent with the January 2015 Council motion regarding the addition of the Herring ASM options.

Appendix I of this document provides a detailed comparison of the service provider regulatory requirements for approval/certification under the herring observer coverage options (HER OBS) and the herring at-sea monitoring options (HER ASM). As previously noted, the HER ASM service provider requirements are based on the current requirements for the groundfish ASM program. The major elements of the options as well as the differences between the herring OBS options and herring ASM options are discussed below.

Under the Herring OBS Options:

- Service provider requirements for industry-funded observer coverage would be consistent with those recently implemented through the SBRM amendment (CFR 648.11(h), Table 9, see details in Appendix I).
- Certified observers would be required to qualify/receive and additional NEFOP high-volume certification to work on herring OBS trips. MRAG Americas is currently the only service provider with high-volume certified observers because this is the company that has the existing (five-year) contract with NMFS for observer coverage under the SBRM amendment. Under the herring OBS options, additional service provider companies would need to apply and be approved by NMFS for observer coverage and train/certify their observers through NEFOP for observer coverage in high-volume fisheries.

Under the Herring ASM Options:

- Service provider requirements for industry-funded herring at-sea monitoring would be consistent with those for the multispecies (groundfish) sector at-sea monitoring program, implemented in Amendment 16 to the Northeast Multispecies FMP (CFR 648.47(b)(4) and (b)(5), Table 9, see details in Appendix I).
- Existing service providers approved for observer coverage and the groundfish ASM program would be "grandfathered in," i.e., automatically approved for the herring ASM program, when the omnibus IFM amendment becomes effective. This increases negotiating opportunities for participants in the fishery by providing competition between companies at the onset of the industry-funded monitoring program (versus having only one service provider available at the program onset).

- Observers working for HER ASM-approved service providers would be required to obtain a Herring ASM certification before being deployed for at-sea monitoring trips on herring vessels. Re-approval of the herring ASM service providers after Year 1 would be consistent with the process for re-approving groundfish ASM service providers.
- Cross-certification for existing providers/observers across multiple monitoring programs would be allowed and encouraged to minimize additional training for a HER ASM certification. Observers employed by the service provider companies that are approved for NEFOP observer coverage and/or groundfish ASM could apply their training for these certifications to a herring ASM certification during the same year. An abbreviated herring ASM training program would be developed to certify new (HER ASM only) observers who are not already certified/certifying for observer coverage or groundfish ASM. This is discussed more in Section 3.3 of this document.
- Provisions for re-certification of herring ASM observers would be consistent with those for Groundfish ASM, but the time needed for re-certification would likely be shorter (see Section 3.3).

The primary differences between the service provider requirements proposed under the HER OBS options and the HER ASM options is that there is no requirement for observers to have a college degree for HER ASM, and there is no prohibition on deploying observers on back-to-back multi-day trips or multiple multi-day trips on the same vessel in the same month (Table 9). Eliminating the college degree requirement and prohibition on multiple trips should reduce sea day costs by increasing the potential pool of observers for-hire and reducing logistics and travel expenses associated with deploying observers on multiple fishing trips. However, concerns about observer retention and data quality have been expressed regarding the elimination of the college degree requirement; these concerns should be considered carefully under the HER ASM options.

Another difference between the options is that the regulations regarding service provider approval and responsibilities under the herring ASM options do not include requirements for service providers to meet SCA/FLSA and Department of Labor (DOL) wage/overtime standards. While it is expected that service provider companies will continue to adhere to DOL and other applicable Federal labor laws, the proposed regulations for the HER ASM options would not further address these requirements, which is also consistent with the current service provider requirements for the Groundfish ASM program. As previously discussed (see Sections 2.1 and 2.2), there is likely to be a sea day cost savings by eliminating these requirements.

Table 9 Herring IFM Options: Service Provider Requirements

	Industry-Funded Observer Coverage Options (HER OBS)	*NE GROUNDFISH ASM PROGRAM*	Industry-Funded Herring ASM Options (HER ASM)
Service Provider Requirements	***Implemented through SBRM Amendment***	***Implemented through Am 16 Multispecies FMP***	***Same as Groundfish ASM Program***
	CFR 648.11(h) Observer Service Provider Approval/Responsibilities	CFR 648.47(b)(4) and (b)(5)	*No requirement for providers to meet SCA/FLSA/DOL wage/overtime standards*
	Bachelor's Degree required	High School Diploma or equivalency	*High School Diploma or equivalency*
		No prohibition on observer deployment on back-to-back trips or multiple multi-day trips	*No prohibition on observer deployment on back-to-back trips or multiple multi-day trips*
Current NMFS-Approved Providers	MRAG Americas	MRAG Americas East West Technical Services AIS, Inc. ACD USA Ltd.* Fathom Research, LLC*	MRAG Americas East West Technical Services AIS, Inc. ACD USA Ltd.* Fathom Research, LLC*

**Service provider companies with an asterisk by their names have been approved for Groundfish ASM but are not currently providing sea day coverage.*

The elements of the Groundfish ASM program are provided in the table above for comparison purposes.

3.3 OBSERVER TRAINING, CERTIFICATION, AND SAMPLING EQUIPMENT

General provisions related to observer training, certification, and sampling equipment under the herring OBS and ASM options are summarized in Table 10 and Table 11. Training and certification of industry-funded observers under the HER OBS and HER ASM options would be administered/managed through NEFOP, consistent with training and certification for the groundfish ASM program (GF ASM). Approved service providers for would be responsible for covering the costs associated with providing their employees with a daily stipend, meals, hotel/lodging, and covering other related expenses associated with attending training/certification courses at NEFOP (Falmouth, MA). This can include lodging, meals, and a daily stipend over weekends if training courses more than one week.

Cross-certification of observers and carryover of overlapping training/equipment from NEFOP and GF ASM programs would be allowed to certify observers under the herring ASM options. Any training courses that are completed for a NEFOP observer coverage certification and/or GF ASM certification could be applied to a herring ASM certification during the same year. Training, certification, debriefing, and re-certification would be streamlined (ex., provided remotely) and combined with the NEFOP and GF ASM programs to the extent possible. Because the herring ASM program focuses only on the collection of discard data on Category A/B herring vessels, training requirements and equipment needs for a HER ASM only certification (observers not certified for other programs) would be less than those for the industry-funded observer coverage (OBS options) or the GF ASM program. Therefore, the costs paid by service providers to certify observers for the HER ASM program are expected to be less than those for observer coverage (OBS options) and the GF ASM program, which is likely to reduce the sea day costs for the HER ASM options. Any newly-approved service providers that do not have observers currently certified for either NEFOP observer coverage or GF ASM would incur the largest training/certification/equipment costs under the HER ASM options.

Under the Herring OBS Options:

- Observers (employed by approved service providers) would need to attend 15 training days to obtain a NEFOP certification for observer coverage (Table 10). Newly certified observers would be required to work four training trips, including one trip with a veteran observer. Additional experience (sea days) is necessary prior to qualifying for a high-volume certification, which would then require one additional training day.
- Current GF ASM-certified observers could obtain a NEFOP certification for observer coverage under the Herring OBS options with additional training days and a high-volume certification.

Under the Herring ASM Options:

- Any training that is completed for a NEFOP observer coverage and/or GF ASM certification by observers working for approved service providers could be applied to a HER ASM certification during the same year. Observers already certified for NEFOP and/or GF ASM would not require training trips with a veteran observer to certify for HER ASM. This should significantly reduce costs for existing service providers that may want to "dual certify" their observers for multiple monitoring programs, including herring ASM. Many costs associated with training/certifying observers under the herring ASM options would be incurred only by service provider companies that are certifying their observers for HER ASM only.
- Current NEFOP-certified observers with high-volume certification would not require additional training days to certify for HER ASM, but would likely require some overview/instruction regarding the protocols for HER ASM trips (possibly conducted remotely/online).
- Current groundfish ASM-certified observer would likely require 1-2 additional training days to learn more about herring fishing operations (midwater trawl, purse seine, and small mesh bottom trawl gear) and sampling protocols in high-volume fisheries. Based on cost information provided by service provider companies (*see below), the cost of certifying GF ASM observers for HER ASM would be about $320-$640 (1-2 training days), or about 10-20% of the cost of certifying observers for the GF ASM program (11 training days).
- New observers certifying for HER ASM-only (employed by approved service providers) would likely require 4-5 training days, which includes two days of safety training plus 2-3 days or training for the HER ASM program (herring fishing operations, sampling protocols, data entry, species identification). To obtain a HER ASM certification, new observers would be required to work four training trips, including one trip with a veteran observer. Based on the cost information provided by service provider companies (*see below), the cost of certifying new observers for HER ASM only would be about $1,500-$2,000 per observer (4-5 training days), or about 50% of the cost of certifying observers for the GF ASM program (11 training days).
- Annual recertification would be required for the HER ASM program, but the recertification process could likely be reduced to one day. The GF ASM program recertification currently lasts three days. The costs to service providers for recertifying observers under the herring ASM options, therefore, is expected to be 1/3 of the cost for recertifying observers for Groundfish ASM. To the extent possible, the recertification courses for these programs would be combined and/or provided remotely.

**The cost for training/certifying one observer for the Groundfish ASM program is estimated by participating service providers to be $3,000-$4,000. This includes travel, meals, lodging, and a daily stipend for 11 training days at the NEFOP training center in Falmouth, MA. This results in an average estimate of about $320 per training day per observer.*

Under the herring ASM options, expenses for sampling equipment would be shared between the Federal government and the service providers in a manner that is similar to the current groundfish ASM program. Because of the focus on bycatch/discards only, less sampling equipment would likely be needed for the herring ASM options versus the herring OBS options (Table 11). Personal safety equipment (immersion suit, inflatable vest, etc.) would continue to be paid for by the service providers; existing observers certified observer coverage and the GF ASM program already possess personal safety equipment and would not need to purchase it again to certify for HER ASM. Other personal issue and off-the-shelf gear such as small scales, gloves, bags, measuring tapes, knives, clipboards, etc. would be covered by the service provider. Additional costs for this equipment would be incurred primarily by newly-approved service providers that do not have observers currently certified for either NEFOP observer coverage or GF ASM. Special prints, special electronics, and not-off-the-shelf gear would continue to be funded by the Federal government, although the availability of future funding is unknown. This includes manuals, field guides, tablets, logs, laptops, and other electronics. The costs of any sampling equipment not provided by the Federal government must be covered by the service providers and is therefore transferred to the industry in the sea day cost.

Overall, because of the need for less sampling equipment and the ability for current NEFOP and GF ASM observers to utilize existing equipment for a herring ASM program, the equipment costs associated with the herring ASM options are expected to be less than those for the herring OBS options. The equipment costs for the herring ASM options will also be lower for service providers with observers who are already certified for groundfish ASM.*

**Information provided by NMFS indicates that the estimated sea day cost incurred by the service provider for equipment in the Groundfish ASM program is $17.50 per observer (based on the observer working 150 sea days in a year).*

Table 10 Herring IFM Options: Observer Training and Certification

	Industry-Funded Observer Coverage Options (OBS)	*NE GROUNDFISH ASM PROGRAM*	Industry-Funded Herring ASM Options (Herring ASM)
Training and Certification	15 days (3 working weeks) comprehensive training, plus high-volume certification for qualified observers (one extra day); **Current Groundfish ASM-certified Observers** - can certify for OBS with additional training days and high-volume certificaiton	11 days (covers multiple gear types - gillnet, longline, otter trawl, handline - catch estimation procedures, protected species)	**NEFOP-Certified Observers with Current High-Volume Certification** - no extra training days, but possibly some instruction on protocols for ASM trips; **GF ASM-Certified Observers** - 1-2 training days for herring/high-volume; **New HER ASM Observers** - 4-5 training days for HER ASM only certification (2 days safety, plus herring/high-volume training); *Providers pay for travel/lodging, and daily pay to observers for attending training;* *Est. provider cost for Gfish ASM training (11 days) - $3000-$4000 per observer ($325/day)*
Training Courses			
Certification/Shadow Trips	Yes, 4 trips incl. 1 with trainer	Yes, 4 trips incl. 1 with trainer	Not required for existing NEFOP and GF ASM-certified observers (already certified); New HER ASM only observers - one shadow trip with trainer; first four trips would be training trips
Re-certification	No	Yes, Annual	Yes, annual - one day (Gfish ASM - 3 days; cost reduced by 2/3)
Safety Refresher (two days)	Yes, every 18 months	Yes, every 18 months	Yes; cross-certify; additional cost only for HER ASM-only observers
CPR/First Aid Certification	Annual	Annual	Annual; cross-certify; additional cost only for HER ASM-only observers

Table 11 Herring IFM Options: Observer Equipment

	Industry-Funded Observer Coverage Options (Herring OBS)	*NE GROUNDFISH ASM PROGRAM*	Industry-Funded Herring ASM Options (Herring ASM)
Equipment	Comprehensive - 83 items	Limited - 44 items	Limited - Similar to Groundfish ASM; any equipment necessary for discard sampling/documentation
Personal Safety Equipment- Immersion suit, PLB, Inflattable Vest	Yes	Yes, covered by provider	Yes, covered by provider; Equipment for NEFOP and GFASM can be used; Additional cost only for HER ASM-only observers
Personal Issue and Off-the-Shelf Gear	*(baskets, small scales, gloves, bags, measuring tapes, disposable cameras, knives, clipboards)*	Yes, covered by provider	Yes, covered by provider; Est. total cost for new observer ($2,600 amortized for life of equipment); Est. sea day cost (service provider) per observer (150 days) - $17.50
Special Prints, Electronics, Not Off-the-Shelf Gear	*(manuals, guides, Marel scales, tablets, logs, electronics)*	Yes, covered by NMFS	Yes, covered by NMFS; *future funding unknown*

The elements of the Groundfish ASM program are provided in the tables above for comparison purposes.

3.4 PRE-TRIP NOTIFICATION, DEBRIEFING, AND DATA MANAGEMENT

Provisions related to vessel selection (through pre-trip call-in/notification), debriefing, and data management for the herring OBS and ASM options are summarized in Table 12. Under all of the herring OBS and ASM options, vessel selection/notification for industry-funded coverage would occur through the existing pre-trip call-in system for Atlantic herring vessels (Amendment 5). The Atlantic herring notification process differs from the Groundfish Pre-Trip Notification System.

The existing notification system for observer deployment on Atlantic herring vessels requires all limited access herring vessels (as well as Category D vessels fishing with midwater trawl gear in Areas 1A, 1B, and/or 3) and all Atlantic herring carrier vessels to notify NMFS/NEFOP at least 48 or 72 hours (depending on permit category) prior to the beginning of any trip where the vessel may harvest, possess, or land Atlantic herring. Vessels/representatives must provide information including the vessel name, permit number/permit category, contact person name and contact phone number, date sail, time sail, port of departure, gear type, and area intending to fish (i.e., herring management area, closed area, etc., consistent with regulatory requirements), as well as target species (target species is helpful to identify directed herring versus directed mackerel trips). Notification is through a telephone number. Vessels can provide pre-trip notification for multiple trips at one time. If a trip is cancelled, a vessel representative must notify NMFS of the cancelled trip, even if the vessel is not selected to carry an observer. All waivers or observer selection notices for observer coverage are issued to the vessel by VMS so as to have on-board verification of the waiver or selection.

The existing pre-trip notification system (PTNS) for observer deployment on groundfish and longfin vessels requires all vessels fishing on PTNS-eligible groundfish trips or PTNS-eligible longfin trips to notify NMFS/NEFOP at least 48 hours prior to the beginning of any trip. Groundfish sector vessels with category A, C, D, E, F, and HA multispecies permits must notify for all multispecies trips. Common pool vessels with categories A, D, E, and F permits, as well as those fishing monkfish or multispecies using A DAS must notify for their groundfish trips. Vessels with a longfin/butterfish moratorium (SMB 1) permit must notify for all trips on which they plan on landing greater than 2500 pounds of longfin squid. Vessels/representatives must provide information including the vessel name, permit number, contact person name and contact phone number, date sail, time sail, port of departure, estimated length of trip, gear type, and area intending to fish. There are several methods available for the pre-trip notification: internet, email, and telephone. Vessels can provide pre-trip notification for multiple trips at one time and may enter their own trips directly into the PTNS without contacting FSB staff. Trips are entered into the PTNS and go through a programmed algorithm to determine which trips get selected for observer coverage. Trips are cancelled by FSB staff based on automated sail reports. All waivers or observer selection notices for observer coverage are issued to the vessel via VMS so as to have on-board verification of the waiver or selection. The PTNS system in all its complexity requires a full time contractor to oversee the system on a daily basis. The NEFOP also contracts with an afterhours phone service to provide access 24 hours a day, 7 days a week to allow for notifications or troubleshooting.

Under the Herring OBS and ASM Options, vessels would be notified via VMS if they are selected for industry-funded coverage. The 100% coverage target options simplify vessel selection, as all vessels that are not selected for observer coverage under the SBRM provisions would be required to obtain an industry-funded observer employed by one of the service providers approved for the monitoring program.

Debriefing is an important component of any monitoring program, as it helps to resolve data issues expeditiously and ultimately enhances data quality. It also provides an opportunity to review observer performance and address any problems with data collection and data entry. Provisions for debriefing under the Herring ASM options would be consistent with those for the Groundfish ASM program. To the extent possible, debriefing will be streamlined (for example, conducted remotely) to reduce travel and other related costs. The most successful debriefings are conducted soon after the vessel lands and after the preliminary data are uploaded to the NEFOP program. Preliminary data can be reviewed by staff and follow-up questions answered in a timely manner. Information is then edited near real-time and is therefore more accurate. Sampling in the high volume fisheries can be challenging and direct communication with observers after trips land is key to understanding the data, especially slippage information.

Responsibilities and provisions for **data management** under the Herring ASM options would be the same as those for observer data and data collected for Groundfish ASM. The NEFOP would manage the data. A summary of preliminary data would be uploaded electronically, by observers and reviewed by the NEFOP staff. Once verified the data are available for use by GARFO and other end users. Data are stored in master tables in the Observer database, and fully audited data are available 90 days after date landed.

Table 12 Herring IFM Options: Logistics (Notification), Debriefing, and Data Management

	Industry-Funded Observer Coverage Options (HER OBS)	*NE GROUNDFISH ASM PROGRAM*	Industry-Funded Herring ASM Options (HER ASM)
Logistics and Related Provisions	PTNS	Gfish PTNS	Build into existing pre-trip notification system for Herring A/B vessels (different from GFish) *No need to develop strategy for vessel selection under 100% coverage options (or possibly 50%)*
Debriefing	Yes	Yes	Yes; Pre-trip and post-trip briefing important for discard logs; *Streamline/combine debriefing to the extent possible*
Data Management	NEFSC/NEFOP	NEFSC/NEFOP	Data submitted to NEFOP for use by all users (NEFSC, GARFO, NEFMC) under a separate program code
	Upload OB PRELIM record 48 hours from landing	Upload OB PRELIM record 48 hours from landing	OBPRELIM upload - a) Delivery of paper log data shall be received within 5 calendar days (120 hours) of the vessel landing (b) Delivery of electronic data shall be received within 2 calendar days (48 hours) of the vessel landing
	Paper logs due 5-7 business days	Paper logs due 5-7 business days	Paper logs due 5-7 business days

**The elements of the Groundfish ASM program are provided in the table above for comparison purposes.*

3.5 SUMMARY: COMPARISON OF HERRING OBS AND ASM OPTIONS

Table 13 provides a qualitative comparison of the pros/cons associated with the options under consideration in the IFM amendment to establish industry-funded monitoring in the Atlantic herring fishery. A summary of the options and associated coverage targets is provided in Table 1 of this document (p. 3).

Table 13 Qualitative Comparison of Options for Industry-Funded Monitoring in the Atlantic Herring Fishery (Herring OBS Options vs. Herring ASM Options)

	Pros	**Cons**
Observer Coverage Options (HER OBS)	Comprehensive catch sampling (kept and discarded)	Higher sea day cost
	Biological samples collected	Limited ability to reduce industry/sea day costs
	More applications/uses for data (stock assessment, catch monitoring, etc.)	Industry-funded observer data not collected consistently with SBRM strata (gear type, area) not utilized for bycatch estimation and stock assessment
		Limited to only one service provider at onset of industry-fund program; higher costs for other providers to certify observers
At-Sea Monitoring Options (HER ASM)	**Pros**	**Cons**
	Reduces sea day costs for industry	Discard data only; more limited applications of data
	Builds on existing discard data collected by observers (provides basis for comparison to observer data)	Loss of opportunity to collect other important data while paying for an observer
	Focuses on at-sea component of comprehensive long-term catch monitoring program that will likely include portside sampling and EM	
	Multiple service providers available at onset of industry-funded program; increases flexibility and negotiating ability for industry; competition reduces costs	
	Discard data collected by at-sea monitors can help to inform decisions about maximized retention provisions for the portside sampling/EM components of the IFM program	

4.0 ESTIMATED SEA DAY COSTS FOR THE HERRING ASM OPTIONS

For the purposes of the omnibus IFM Amendment, an estimate of the sea day cost that may be expected under the Herring ASM options will be developed by the IFM FMAT based on estimates of sea day costs for NEFOP observer coverage (currently estimated at $806 in the Draft IFM Amendment) and the Groundfish ASM program. This sea day cost can be used in the economic analysis for a comparison of the impacts of the Herring ASM options to the Herring OBS options.

This section TBD once updated estimates of Groundfish ASM sea day costs are available.

Estimated Sea Day Costs for NE Groundfish ASM Program

TBD

Estimated Sea Day Costs for Herring ASM Options

TBD

5.0 BACKGROUND INFORMATION: SEA DAY COSTS IN OTHER IFM PROGRAMS

TBD

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Omnibus Industry-Funded Monitoring (IFM) Amendment

Amendment 7 to the Atlantic Herring FMP

DRAFT APPENDIX I:
SERVICE PROVIDER REQUIREMENTS

Proposed Regulations for Herring Industry-Funded Observer Coverage (OBS) and Herring Industry-Funded At-Sea Monitoring (ASM)

Regulations for Service Provider Approval

	Industry-Funded Observer Coverage (OBS) Options Service Provider Requirements *Consistent with SBRM Amendment*	**Proposed Atlantic Herring At-Sea Monitoring (ASM) Service Provider Requirements** *Consistent with NE Groundfish ASM Requirements*
At-Sea Sampler/Observer Coverage (CFR 648.11) **CFR 648.11(h) Observer Service Provider Approval/Responsibilities**		**Independent Third-Party Monitoring Provider Standards** **CFR 648.47(b)(4) and (b)(5)**
3. Contents of Application	*Corporate structure, contact information, confict-of-interest and other statements*	*Same requirements (b)(4)*
	Summary of prior experience, monitoring services provided	*Same requirements (b)(4)*
	Proof of Insurance - Workers Compensation and Maritime Employer's Liability Insurance $5M min)	*Addressed in i(G) Evidence of adequate insurance to cover in jury, liability, and accidental death*
	Proof that salaries meet/exceed DOL Guidelines, compensation for FLSA non-exempt employees, information about benefits and personnel services provided	*Addressed in (b)(4)(i)(H) Proof of benefits and personnel services, but no reference to DOL Guidelines or FLSA requirements*
	Names of NMFS-certified observers and trainees	*Addressed in (b)(4)(i)(I) Proof that monitors have passed adequate training course to the extent not funded by NMFS, consistent with NEFOP*
	Emergency Action Plan	*(b)(4)(i)(J) Same*
		(b)(4)(i)(K) Evidence that the company is in good financial standing

Regulations for Service Provider Responsibilities

	Industry-Funded Observer Coverage (OBS) Options **Service Provider Requirements** *Consistent with SBRM Amendment*	**Proposed Atlantic Herring At-Sea Monitoring (ASM)** **Service Provider Requirements** *Consistent with NE Groundfish ASM Requirements*
At-Sea Sampler/Observer Coverage (CFR 648.11) **CFR 648.11(h) Observer Service Provider Approval/Responsibilities**		**Independent Third-Party Monitoring Provider Standards** **CFR 648.47(b)(4) and (b)(5)**
5. Responsibilities of Observer Service Providers	*Provide observers with transportation to initial location of deployment, subsequent vessel assignments, and debriefing locations*	*(b)(4)(ii)(A) Must establish and carry out a comprehensive plan to deploy NMFS-certified at-sea monitors, or other at-sea monitoring mechanism (ex., NMFS-approved EM equipment) to meet specified coverage levels;* *(b)(4)(ii)(A)(1)-(A)(6) include specific requirements for groundfish sector monitoring*
	Lodging, per diem, and any other services for observers to attend training classes	
	Required observer equipment prior to training or deployment	*Addressed in (b)(4)(ii)(J); and* *(b)(5)(i) - providers are responsible for cost of gear to the extent not funded by NMFS*
	Individually-assigned communication equipment (cell phones, other devices)	
iii. Logistics	*Must be able to deploy observers based on comprehensive plan (24/7) with phone system to secure coverage, must access all ports, report deployments to NMFS, fair/equitable assignment of observers*	*Addressed in (b)(4)(ii)(A)*
iv. Limitations	*Review/edit/approve data from first four deployments by candidate observer before certifying*	
	Observers cannot be deployed on the same vessel for more than two consecutive multi-day trips; observers cannot be deployed on the same vessel more than twice in any given month for multi-day deployments	*Not addressed in Groundfish ASM Provider Requirements*
v. Communications with Observers	*Must have employee on call 24/7 to handle issues*	
vi. Observer Training Requirements	*Must submit information about trainees at least 7 days prior to training*	
vii. Reports	*Observer deployment reports w/in 24 hours; reports back in OBSCON data w/in 24 hours of landing; raw data w/in four days of landing*	
	Safety refusals within 24 hours; Return biological samples within 7 days; Debriefing availability for up to 2 weeks following trip; Observer availbaility report to NMFS by 5 p.m.; other reports (harassment, discrimination, injury, etc.) within 24 hours of event	*(b)(4)(ii)(B) Monitors must remain available to NMFS for debriefing at least two weeks following trip; (b)(4)(ii)(C) similar requirements for other reports in this section*
	Requirements for observer status reports, vessel contracts, observer contracts and additional information that may be distributed to vessels	*(b)(4)(ii)(D) contracts and (b)(4)(ii)(E) other paperwork distributed to vessels*
viii. Refusal to Deploy Observer	*If provider does not have observer available within 48 hours of request; if the vessel is determined unsafe; other reasons including failure to pay for previous deployments (if authorized in writing by NMFS)*	*(b)(4)(ii)(F); also includes refusal for inadequate notice for departure or landing*
6. Limitations on Conflict of Interest	*No direct/indirect interest in fishery/vessels/dealers/research/advocacy; must assign observers without preference; must not soliciy or accept gifts, favors, loans, etc.*	*Addressed in (b)(4)(ii)(G)*
7. Removal of Service Provider	*Process for removal if provider does not meet requirements/conditions of service, conflict of interest, criminal convictions, embezzlement, theft, etc., crimes of dishonesty, unsatisfactory performance ratings on Federal contracts, evidence of de-certification*	*(b)(4)(ii)(I) A means to protect the confidentiality and privacy of data submitted by vessels, as required under the MSA*

Regulations for Observer Certification

	Industry-Funded Observer Coverage (OBS) Options **Service Provider Requirements** *Consistent with SBRM Amendment*	**Proposed Atlantic Herring At-Sea Monitoring (ASM)** **Service Provider Requirements** *Consistent with NE Groundfish ASM Requirements*
648.11(i) Observer Certification		**Independent Third-Party Monitoring Provider Standards**
(1) Eligibility Standards	*Observers must meet NMFS National Minimum Eligibility Standards (National Observer Program), Provided Below*	**CFR 648.47(b)(4) and (b)(5)**
Education/Experience	*Unless waived by the RA, must possess Bachelor's Degree with a major in one of the sciences; must have had at least one undergad course on math/stats; must have experience with data entry on computers; these requirements can be waived by RA or NEFSC Directors if skills have been acquired through alternative training program (observing fishing activities, research cruises, marine mammal data recording, collecting biological samples, entering data, completing NMFS biological training program*	*(b)(4)(iii)(A) High school diploma or legal equivalent*
Training Requirement	*Must pass tests 80% or greater for program; must complete acknowledgement of risk*	*(b)(4)(iii)(B) Successful completion of NMFS-required training and briefings before deployment*
Conflict of Interest	*No direct financial interest, ownership, etc. in catching, taking, harvesting, processing fish; may not solicit or accept gifts; may not observe on vessels previously employed in another capacity; must not work for other vessels/processors while hired as observer*	*Addressed in (b)(4)(ii)(G)*
Physical/Mental Confition	*Documentation of physician certification within 12 months of completing training*	*Addressed in (b)(4)(iii)(C)*
Communication Skills	*Must be able to communicate verbally and written in English*	
Citizenship/Ability to Work Legally in US	*Must be a U.S. citizen, non-citizen with green card, TN authorization, H1 visa, or valid work visa, and social security card*	
(2) Observer Training	*Must pass NMFS/NEFOP course(s); one training trip with another observer; data from first four trips reviewed/approved for certification*	*Addresssed in (b)(4)(iii)(B)*
(3) Observer Requirements	*Must be NMFS/NEFOP certified; completed all required training and briefings for observers*	
	Physically and mentally capable fo carrying out responsibilities	
	Red Cross/CPR certification	*Addressed in (b)(4)(iii)(D)*
	Must accurately record sampling data, write complete reports, report observations accurately	
(4) and (5) Probation/Decertification	*Process for NMFS to review certifications and written issuance of de-certification*	
	Automatic background check when observers are issued a "CAC" card	*(b)(4)(iii)(E) Absence of fisheries-related convictions, based upon a thorough background check*
		(b)(4)(iii)(F) Independence from fishing-related parties
		(b)(5)(ii) includes requirements for groundfish vessel selection protocols