

Draft Amendment 23  
To the Northeast Multispecies FMP

Including a  
Draft Environmental Impact Statement

Prepared by the  
New England Fishery Management Council  
In consultation with the  
Mid-Atlantic Fishery Management Council  
National Marine Fisheries Service

July 18, 2019

# CONTENTS

## Table of Contents

CONTENTS.....	2
Table of Contents.....	2
Purpose and Need for the Action.....	4
4.0 DRAFT ALTERNATIVES UNDER CONSIDERATION.....	5
4.1 Groundfish Monitoring.....	5
4.1.1 Groundfish Sector Monitoring Program Revisions.....	5
4.1.1.1 Sector Monitoring Standards and Monitoring Tools.....	6
4.1.1.1.1 Option 1: No Action.....	6
4.1.1.1.2 Option 2: Fixed Total At-Sea Monitoring Coverage Level Based on a Percentage of Trips.....	7
4.1.1.1.2.1 Substitute Options for Sector Monitoring Tools.....	8
4.1.1.1.2.1.1 Sub-Option A – Electronic Monitoring in place of At-Sea Monitors.....	8
4.1.1.1.2.1.2 Sub-Option B – Audit Model Electronic Monitoring Option.....	8
4.1.1.1.2.1.3 Sub-Option C - Maximized Retention Electronic Monitoring Option.....	9
4.1.1.1.2.2 Supplemental Add-On Monitoring Tools.....	9
4.1.1.1.2.2.1 Dockside Monitoring Option.....	9
4.1.1.1.3 Option 3: Coverage Level Based on a Percentage of Catch.....	9
4.1.1.1.3.1 Substitute Options for Sector Monitoring Tools.....	10
4.1.1.1.3.1.1 Sub-Option A – Electronic Monitoring in place of At-Sea Monitors.....	11
4.1.1.1.3.1.2 Sub-Option B – Audit Model Electronic Monitoring Option.....	11
4.1.1.1.3.1.3 Sub-Option C - Maximized Retention Electronic Monitoring Option.....	12
4.1.1.1.3.2 Supplemental Add-On Monitoring Tools.....	12
4.1.1.1.3.2.1 Dockside Monitoring Option.....	12
4.1.1.2 Addition to List of Framework Items – New Sector Monitoring Tools.....	12
4.1.1.3 Knowing the Total Monitoring Coverage Level at a Time Certain.....	13
4.1.1.3.1 Option 1: No Action.....	13
4.1.1.3.2 Option 2: Administrative Measure for Knowing Total Monitoring Coverage Level at a Time Certain.....	14
4.1.1.4 Review Process for Sector Monitoring Coverage.....	15
4.1.1.4.1 Option 1: No Action.....	15
4.1.1.4.2 Option 2: Administrative Measure to Establish a Review Process for Monitoring Coverage Rates.....	15
4.1.2 Groundfish Sector and Common Pool Monitoring Program Revisions.....	16
4.1.2.1 Dockside Monitoring Program.....	16

4.1.2.1.1	Option 1: No Action.....	16
4.1.2.1.2	Option 2: Dockside Monitoring Program for the Entire Groundfish Fishery (Sectors and Common Pool) .....	16
4.1.2.1.3	Option 3: Dockside Monitoring as an Optional Program for Sectors .....	16
4.1.2.1.3.1	Sub-Option 1: Dockside Monitoring Program Funding Responsibility.....	17
4.1.2.1.3.2	Sub-Option 2: Dockside Monitoring Program Administration.....	18
4.1.2.1.3.3	Sub-Option 3: Options for Reconciling Discrepancies between Dealer Reports and Dockside Monitor Reports .....	18
4.1.2.1.3.4	Sub-Option 4: Options for Lower Coverage Levels in Small, Remote Ports and for Small Vessels with Low Landings .....	19
4.1.2.1.3.5	Sub-Option 5: Options for Dockside Monitor Safety and Liability Associated with Fish Hold Inspections .....	22
4.2	Sector Reporting .....	24
4.2.1	Option 1: No Action.....	24
4.2.2	Option 2: Grant Regional Administrator the Authority to Streamline Sector Reporting Requirements .....	24
4.3	Funding/Operational Provisions of Groundfish Monitoring.....	26
4.3.1	Option 1: No Action.....	26
4.3.2	Option 2: Provisions for an Increase or Decrease in Funding for the Groundfish Monitoring Program.....	26
4.3.2.1	Sub-Option 2A: Additional NMFS Funding for Increased Monitoring if Funds Available	26
4.3.2.2	Sub-Option 2B: Waivers from Monitoring Requirements Allowed .....	27
4.4	Management Uncertainty Buffers.....	28
4.4.1	Option 1: No Action.....	28
4.4.2	Option 2: Revised Management Uncertainty Buffers .....	28
4.5	Exemptions from Groundfish Sector and Common Pool Monitoring Requirements .....	29
4.5.1	Option 1: No Action.....	29
4.5.2	Option 2: Exemption for Certain Vessels Based on Fishing Location .....	31
4.5.2.1	Sub-Option 2A: Exemption for Vessels Fishing Exclusively West of 72 Degrees 30 Minutes West Longitude.....	31
4.5.2.2	Sub-Option 2B: Exemption for Vessels Fishing Exclusively West of 71 Degrees 30 Minutes West Longitude.....	31
4.5.2.3	Review of Exemptions Based on Catch Composition .....	32
5.0	DRAFT ALTERNATIVES CONSIDERED AND REJECTED .....	33
5.1	Fishery Program Administration.....	33
5.1.1	Sector Administration Provisions .....	33
5.1.1.1	Funding for the Groundfish At-Sea Monitoring Program.....	33
5.1.1.1.1	Option 2: Additional Options for Industry-Funded Costs of Monitoring .....	33

### **Purpose and Need for the Action**

Purpose and need:

To implement measures to improve reliability and accountability of catch reporting and to ensure a precise and accurate representation of catch (landings and discards).

To improve the accuracy of collected catch data. Accurate catch data are necessary to ensure that catch limits are set at levels that prevent overfishing and to determine when catch limits are exceeded. To create fair and equitable catch reporting requirements for all commercial groundfish fishermen, while maximizing the value of collected catch data and minimizing costs for the fishing industry and the National Marine Fisheries Service.

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## **4.0 DRAFT ALTERNATIVES UNDER CONSIDERATION**

### **4.1 Groundfish Monitoring**

#### **4.1.1 Groundfish Sector Monitoring Program Revisions**

The following measures in this section apply only to the sector segment of the commercial groundfish fishery.

Sectors are responsible for developing and implementing a monitoring program, described in their operations plans, that satisfies NMFS and Council requirements for monitoring sector catch and discards (Amendment 13, Amendment 16, FW 45, FW 48, and FW 55). Sectors describe in their monitoring plans how they will achieve monitoring standards (Section 4.1.1.1) which are target coverage levels, through a selection of monitoring tools (Section 4.1.1.1). Annual funding available to cover NMFS' cost responsibilities would likely vary and dictate realized coverage levels. 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. NMFS may help offset industry cost responsibilities through reimbursement if Federal funding is available, but NMFS cannot be obligated to pay sampling costs in industry-funded sampling programs.

The primary goal of the groundfish sector at-sea monitoring program is to verify area fished, catch, and discards by species, by gear type; and meeting these primary goals should be done in the most cost effective means practicable (FW 55). All other goals and objectives of groundfish monitoring programs at §648.11(l) are considered equally-weighted secondary goals.

The goals and objectives of the groundfish monitoring program, are as follows:

#### **Goal 1: Improve documentation of catch**

Objectives:

Determine total catch and effort, for each sector and common pool, of target or regulated species.  
Achieve coverage level sufficient to minimize effects of potential monitoring bias to the extent possible while maintaining as much flexibility as possible to enhance fleet viability.

#### **Goal 2: Reduce cost of monitoring**

Objectives:

Streamline data management and eliminate redundancy.  
Explore options for cost-sharing and deferment of cost to industry.  
Recognize opportunity costs of insufficient monitoring.

#### **Goal 3: Incentivize reducing discards**

Objectives:

Determine discard rate by smallest possible strata while maintaining cost-effectiveness.  
Collect information by gear type to accurately calculate discard rates.

**Goal 4: Provide additional data streams for stock assessments**

## Objectives:

Reduce management and/or biological uncertainty.

Perform biological sampling if it may be used to enhance accuracy of mortality or recruitment calculations.

**Goal 5: Enhance safety of monitoring program****Goal 6: Perform periodic review of monitoring program for effectiveness**

The following sections describe options to adjust landing and discard monitoring for sector vessels. These options may replace existing monitoring and reporting requirements, or may be implemented in addition to existing programs to improve data collection (e.g., improved discard monitoring systems, dockside monitors for landings, etc.). The range of alternatives considered by the Council includes the current system (No Action) as well as the options proposed below.

**4.1.1.1 Sector Monitoring Standards and Monitoring Tools****4.1.1.1.1 Option 1: No Action**

Amendment 16 specified a coverage level standard for sectors and required industry-funded at-sea monitoring beginning in 2012. This requirement focused on the coefficient of variation (CV) of discard estimates, a measure of the precision of discard estimates, but also noted that other factors could be considered when determining coverage levels:

“For observer or at-sea monitor coverage, minimum coverage levels must meet the coefficient of variation in the Standardized Bycatch Reporting Methodology. The required levels of coverage will be set by NMFS based on information provided by the Northeast Fisheries Science Center (NEFSC) and may consider factors other than the SBRM CV standard when determining appropriate levels. Any electronic monitoring equipment or systems used to provide at-sea monitoring will be subject to the approval of NMFS through review and approval of the sector operations plan. Less than 100% electronic monitoring and at-sea observation will be required. In the event that a NMFS-sponsored observer and a third-party at-sea monitor are assigned to the same trip, only the NMFS observer must observe that trip.

Assumed discard rates will be applied to sectors unless an at-sea monitoring system (such as a sector’s independent monitoring program, a federal monitoring program, or other program that NMFS determines is adequate) provides accurate information for use of actual discard rates.”

Currently, a system for fishery performance criteria is used in setting groundfish sector coverage levels (FW 55). Application of the CV standard is filtered consistent with existing goals for the monitoring program, such that stocks that meet the performance criteria are not drivers for the annual coverage level. More information on the fishery performance criteria can be found in Background Information on the Groundfish Monitoring Program (to be incorporated in the DEIS either in the Affected Environment or as an appendix).

If Option 1/No Action is adopted, groundfish monitoring coverage level requirements would remain as defined in Amendment 16 and subsequent framework actions (FW 48 and FW 55). Currently, the target at-sea monitoring/electronic monitoring coverage level must meet the CV precision standard specified in the Standardized Bycatch Reporting Methodology (currently a 30 percent CV) for discard estimates at the

stock level for all sectors and gears combined. Additionally, sector coverage levels are based on the most recent 3-year average of the total required coverage level (based on realized stock level CVs) necessary to reach the required CV for each stock, and are set using fishery performance criteria so that stocks that meet the performance criteria (not overfished, with overfishing not occurring according to the most recent available stock assessment, and that in the previous fishing year have less than 75 percent of the sector sub-ACL harvested, and less than 10 percent of catch comprised of discards) are not drivers for the annual coverage level. The minimum coverage level based on a CV standard is only appropriate for sector monitoring purposes if there is no evidence that behavior on observed and unobserved trips is different. If there is evidence that behavior is different, then a higher coverage level may be required to ensure the accuracy of discard estimates and to minimize the potential for bias in fisheries dependent information.

#### 4.1.1.1.2 Option 2: Fixed Total At-Sea Monitoring Coverage Level Based on a Percentage of Trips

Adequate coverage (combined NEFOP, ASM and EM) is required to generate accurate discard estimates with a known level of precision. All of the options below – including requirements for coverage adequate for the accuracy and precision of estimates - would be interpreted and applied consistent with the overarching goals and objectives of the sector monitoring program.

Four levels of at-sea monitoring coverage are analyzed which, if chosen, would replace the current CV standard for deploying human observers or at-sea monitors. The Council would select one of these coverage levels, from the range of fixed target coverage levels – an annual target coverage level - of all sector trips:

- 25 percent,
- 50 percent,
- 75 percent, or
- 100 percent

By comparison, the total target coverage rate has ranged from 14 percent to 38 percent from FY2010 to FY2019, and the realized coverage rate has ranged from 14 percent to 32 percent from FY2010 to FY2017 (Table 1).

For whichever coverage rate is chosen, sectors would achieve the monitoring standard through the use of human at-sea monitors, or through the selected options for substitute sector monitoring tools in Section 4.1.1.1.4. The substitute options for sector monitoring tools are expected to achieve or exceed the monitoring standard, depending on the selected coverage rate.

This measure would not change the trip selection system or any aspect of the process for how trips are selected for coverage and deployed.<sup>1</sup>

*Rationale:* The goal is to achieve a monitoring coverage level that ensures precise and accurate catch (landings and discards) estimation and minimizes the potential for biases in the estimates.

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<sup>1</sup> See Northeast Fisheries Science Center, Fisheries Sampling Branch website for more information: <https://www.nefsc.noaa.gov/fsb/notification.html>

#### 4.1.1.1.2.1 Substitute Options for Sector Monitoring Tools

The Council could select more than one option in this section. Depending on what the Council selects, sectors would have the option to select one or more of the following options for monitoring tools to address monitoring standards, to be used as a substitute monitoring tool for human observers or at-sea monitors. The intent of this option is to create a suite of monitoring options that are considered to be equivalent in their ability to accurately monitor total catch. The substitute options for sector monitoring tools would be expected to achieve or exceed the monitoring standard in Option 2 (Section 4.1.1.1.2), depending on the selected coverage rate. Vessels would be given the flexibility to choose the monitoring option that best meets their practical and operational needs. Through their sector operations plans, sectors would develop monitoring plans that describe how the chosen substitute monitoring tools would achieve the selected monitoring standard.

The options below are monitoring tools that sectors could choose to fulfill the monitoring standard in Option 2 (Section 4.1.1.1.2), as a substitute to human observers or at-sea monitors.

##### 4.1.1.1.2.1.1 Sub-Option A – Electronic Monitoring in place of At-Sea Monitors

Amendment 16 specified that electronic monitoring (EM) may be used in place of actual observers or at-sea monitors if the technology is deemed sufficient by NMFS for a specific trip based on gear type and area fished.

This option would allow sectors to choose EM to monitor catch in place of at-sea monitors. EM would be run only on trips that are selected for coverage under the specified coverage rate.

Vessel operators would be required to submit for review by NMFS an individual Vessel Monitoring Plan (VMP) that would document the installation of the EM system on the vessel and the vessel's specific plans and procedures for operations, catch handling, and maintenance.

This option addresses monitoring at-sea and focuses on discard estimation.

*Rationale:* The goal is to provide sectors with tools to monitor catch that ensure precise and accurate catch (landings and discards) estimation and minimize the potential for biases in the estimates, and to provide sectors with more flexibility in monitoring.

##### 4.1.1.1.2.1.2 Sub-Option B – Audit Model Electronic Monitoring Option

This option would approve the use of the audit model electronic monitoring in place of at-sea monitors, in which EM runs on 100 percent of trips and a subset of hauls or trips is reviewed to verify vessel trip report (VTR)-reported discards. The video review rate would be selected to ensure accurate VTR reporting, and could be further reduced in the future through evaluations of the data by NMFS staff, particularly for vessels that report accurately.

Vessel operators would be required to submit for review by NMFS an individual Vessel Monitoring Plan (VMP) that would document the installation of the EM system on the vessel and the vessel's specific plans and procedures for operations, catch handling, and maintenance.

This option addresses monitoring at-sea and focuses on discard estimation.

*Rationale:* The goal is to provide sectors with tools to monitor catch that ensure precise and accurate



catch (landings and discards) estimation and minimize the potential for biases in the estimates.

#### 4.1.1.1.2.1.3 Sub-Option C - Maximized Retention Electronic Monitoring Option

This option would approve the use of the maximized retention model electronic monitoring for sectors to use in place of at-sea monitors, in which EM runs on 100 percent of trips and verifies that all groundfish are landed, paired with dockside monitoring to sample catch. For this approach, vessels would be required to land all groundfish of all sizes, i.e. no discarding of non-prohibited fish, and so this would eliminate the need to monitor allocated groundfish discards, as these would be retained and accounted for through dockside monitoring. Discards of prohibited groundfish stocks would still need to be monitored and accounted for.

To ensure compliance and full catch accountability, this option would include 100 percent dockside monitoring and 100 percent electronic monitoring of all trips. Similar to the audit model option, video review rates could be much lower than 100 percent when vessels are shown to be complying with relevant protocols.

Vessel operators would be required to submit for review by NMFS an individual Vessel Monitoring Plan (VMP) that would document the installation of the EM system on the vessel and the vessel's specific plans and procedures for operations, catch handling, and maintenance.

*Rationale:* The goal is to provide sectors with a tool to monitor catch that ensures precise and accurate catch (landings and discards) estimation while simultaneously reducing regulatory discards.

#### 4.1.1.1.2.2 Supplemental Add-On Monitoring Tools

##### 4.1.1.1.2.2.1 Dockside Monitoring Option

This measure would allow sectors to develop a dockside monitoring program as an option for an additional monitoring tool to monitor landings as a part of their sector monitoring plans. This option is a supplemental add-on monitoring tool that sectors could choose, in addition to the monitoring tools selected in Section 4.1.1.1.2.1 to fulfill the monitoring standard in Option 2 (Section 4.1.1.1.2). Sectors would develop and implement an independent third-party dockside monitoring system that is satisfactory to NMFS for monitoring landings.

See Sections 4.1.2.1.3.1 through 4.1.2.1.3.5 for program design considerations. If this option were chosen, the Council would need to also select Option 3: Dockside Monitoring as an Optional Program for Sectors (Section 4.1.2.1.3).

*Rationale:* The goal is to provide sectors with an additional monitoring tool to monitor the landings component of catch that ensures precise and accurate catch (landings and discards) estimation and increases compliance.

#### 4.1.1.1.3 Option 3: Coverage Level Based on a Percentage of Catch

This option would consider an alternative methodology to using a precision standard for determining target coverage levels for human observers or at-sea monitors. The current CV standard for determining the annual coverage level target focuses on precision of discard estimates. The options below would

instead focus on ensuring accurate and precise estimation of total catch (landings and discards) through higher levels of independent verification.

Four levels of coverage of total catch to be independently verified are analyzed which, if chosen, would replace the current CV standard. The Council would select one of these coverage levels, from the range of target coverage levels of total catch to be independently verified:

- 25 percent,
- 50 percent,
- 75 percent, or
- 100 percent

For illustrative purposes, the following compares the above options (which target total catch verification) to recent landings data from the sector fishery. When examining the proportion of landings on observed trips relative to unobserved (i.e. the proportion that have been independently verified) by stock for each allocated groundfish stock from FY2010 to preliminary FY2018, no stocks achieve 50 percent, 75 percent, or 100 percent, and many do not achieve 25 percent, as a percentage of the total landings that is independently verified.<sup>2</sup>

For whichever coverage level is chosen, sectors collectively would be required to meet the coverage level of total catch to be independently verified for each allocated groundfish stock, targeted at the total sector sub-ACL level. Independent verification of catch can be achieved through a combination of monitoring tools, including at-sea monitoring, dockside monitoring, or electronic monitoring. Sectors would describe in their monitoring plans how the selected target coverage level of total catch for each allocated groundfish stock, targeted at the total sector sub-ACL level, would be achieved through a combination of monitoring tools. The portion would be representative of all gear types, sectors, and seasons. [Further analysis is needed to develop this option.]

The standard monitoring tool includes human at-sea monitors, along with options for substitute sector monitoring tools in Section 4.1.1.1.4. The substitute options for sector monitoring tools are expected to achieve or exceed the monitoring standard, depending on the selected coverage rate.

It should be noted that the sub-ACL for a given stock may not be fully utilized, which may result in some challenges with using the sector sub-ACL as the level targeted for coverage. This option also has the potential to result in a single stock driving the coverage level. This option is most applicable at 100 percent coverage level – coverage levels less than 100 percent may make implementation challenging.

*Rationale:* The goal is to achieve a monitoring coverage level that ensures precise and accurate catch (landings and discards) estimation and minimizes the potential for biases in the estimates. Specifically, the goal of this alternative is to ensure an accurate estimate of total catch, by requiring a greater percentage of total catch to be independently verified.

#### 4.1.1.1.3.1 Substitute Options for Sector Monitoring Tools

The Council could select more than one option in this section. Depending on what the Council selects, sectors would have the option to select one or more of the following options for monitoring tools to address monitoring standards, to be used as a substitute monitoring tool for human observers or at-sea

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<sup>2</sup> See draft Groundfish PDT meeting summary May 29, 2019, Table 1: <https://s3.amazonaws.com/nefmc.org/4e-190529-Groundfish-PDT-meeting-summary-DRAFT-for-Council.pdf>

monitors. The intent of this option is to create a suite of monitoring options that are considered to be equivalent in their ability to accurately monitor total catch. The substitute options for sector monitoring tools would be expected to achieve or exceed the monitoring standard in Option 3 (Section 4.1.1.1.3), depending on the selected coverage rate. Vessels would be given the flexibility to choose the monitoring option that best meets their practical and operational needs. Through their sector operations plans, sectors would develop monitoring plans that describe how the chosen substitute monitoring tools would achieve the selected monitoring standard.

The options below are monitoring tools that sectors could choose to fulfill the monitoring standard in Option 3 (Section 4.1.1.1.3), as a substitute to human observers or at-sea monitors.

#### 4.1.1.1.3.1.1 Sub-Option A – Electronic Monitoring in place of At-Sea Monitors

Amendment 16 specified that electronic monitoring (EM) may be used in place of actual observers or at-sea monitors if the technology is deemed sufficient by NMFS for a specific trip based on gear type and area fished.

This option would allow sectors to choose EM to monitor catch in place of at-sea monitors. EM would be run only on trips that are selected for coverage under the specified coverage rate.

Vessel operators would be required to submit for review by NMFS an individual Vessel Monitoring Plan (VMP) that would document the installation of the EM system on the vessel and the vessel's specific plans and procedures for operations, catch handling, and maintenance.

This option addresses monitoring at-sea and focuses on discard estimation.

*Rationale:* The goal is to provide sectors with tools to monitor catch that ensure precise and accurate catch (landings and discards) estimation and minimize the potential for biases in the estimates, and to provide sectors with more flexibility in monitoring.

#### 4.1.1.1.3.1.2 Sub-Option B – Audit Model Electronic Monitoring Option

This option would approve the use of the audit model electronic monitoring in place of at-sea monitors, in which EM runs on 100 percent of trips and a subset of hauls or trips is reviewed to verify vessel trip report (VTR)-reported discards. The video review rate would be selected to ensure accurate VTR reporting, and could be further reduced in the future through evaluations of the data by NMFS staff, particularly for vessels that report accurately.

Vessel operators would be required to submit for review by NMFS an individual Vessel Monitoring Plan (VMP) that would document the installation of the EM system on the vessel and the vessel's specific plans and procedures for operations, catch handling, and maintenance.

This option addresses monitoring at-sea and focuses on discard estimation.

*Rationale:* The goal is to provide sectors with tools to monitor catch that ensure precise and accurate catch (landings and discards) estimation and minimize the potential for biases in the estimates.

#### 4.1.1.1.3.1.3 Sub-Option C - Maximized Retention Electronic Monitoring Option

This option would approve the use of the maximized retention model electronic monitoring for sectors to use in place of at-sea monitors, in which EM runs on 100 percent of trips and verifies that all groundfish are landed, paired with dockside monitoring to sample catch. For this approach, vessels would be required to land all groundfish of all sizes, i.e. no discarding of non-prohibited fish, and so this would eliminate the need to monitor allocated groundfish discards, as these would now be retained and accounted for through dockside monitoring. Discards of prohibited groundfish stocks would still need to be monitored and accounted for.

To ensure compliance and full catch accountability, this option would include 100 percent dockside monitoring and 100 percent electronic monitoring of all trips. Similar to the audit model option, video review rates could be much lower than 100 percent when vessels are shown to be complying with relevant protocols.

Vessel operators would be required to submit for review by NMFS an individual Vessel Monitoring Plan (VMP) that would document the installation of the EM system on the vessel and the vessel's specific plans and procedures for operations, catch handling, and maintenance.

*Rationale:* The goal is to provide sectors with a tool to monitor catch that ensures precise and accurate catch (landings and discards) estimation while simultaneously reducing regulatory discards.

#### 4.1.1.1.3.2 Supplemental Add-On Monitoring Tools

##### 4.1.1.1.3.2.1 Dockside Monitoring Option

This measure would allow sectors to develop a dockside monitoring program as an option for an additional monitoring tool to monitor landings as a part of their sector monitoring plans. This option is a supplemental add-on monitoring tool that sectors could choose, in addition to the monitoring tools selected in Section 4.1.1.1.3.1 to fulfill the monitoring standard in Option 3 (Section 4.1.1.1.3). Sectors would develop and implement an independent third-party dockside monitoring system that is satisfactory to NMFS for monitoring landings.

See Sections 4.1.2.1.3.1 through 4.1.2.1.3.5 for program design considerations. If this option were chosen, the Council would need to also select Option 3: Dockside Monitoring as an Optional Program for Sectors (Section 4.1.2.1.3).

*Rationale:* The goal is to provide sectors with an additional monitoring tool to monitor the landings component of catch that ensures precise and accurate catch (landings and discards) estimation and increases compliance.

#### 4.1.1.2 Addition to List of Framework Items – New Sector Monitoring Tools

Many management measures can be adjusted through a framework action. This alternative would add the following to the list of measures that can be adjusted in the future:

- Addition of new sector monitoring tools that meet the Council's selected monitoring standard.

*Rationale:* The intent through Amendment 23 is to identify a range of monitoring tools that the Council would select and NMFS would approve for use by sectors to achieve the selected monitoring standard. Should new monitoring tools become available in the future, allowing these to be considered for use by sectors through a framework adjustment facilitates more efficient incorporation of new monitoring tools into the groundfish monitoring program.

#### 4.1.1.3 Knowing the Total Monitoring Coverage Level at a Time Certain

##### 4.1.1.3.1 Option 1: No Action

The timeline for when total monitoring coverage level information is available has varied over time (Table 1). Currently, NMFS publishes the total monitoring coverage level once the necessary analysis is completed. Typically, analysis to determine the at-sea monitoring (ASM) coverage level is available sooner than the Standardized Bycatch Reporting Methodology (SBRM) analysis used to determine the Northeast Fisheries Observer Program (NEFOP) coverage level.

Current regulations set December 1 as the deadline for sectors to submit preliminary rosters, but grant NMFS flexibility to set a different date. For example, in FY 2013, managers asked for a later date, and they agreed on March 29, 2013. Beginning in FY 2014, NMFS established a standard deadline of four weeks after potential sector contribution (PSC) letters are sent out, although in several years, there have been agreed-upon extensions. There have been several years throughout FY2010 to FY2019 in which the date sector rosters were due occurred before the date the total monitoring coverage rate was announced (Table 1) which can complicate groundfish fishery participant's business planning as the decision of whether or not to participate in sectors for the upcoming fishing year may be influenced by the monitoring coverage rate for a given year.

**Table 1 - Target and realized observer (NEFOP and ASM) coverage levels for the groundfish fishery and dates when analyses to determine coverage rates available for Fishing Years 2010-2019 (GARFO 2017). “n/a” indicates that the information is not available.**

Fishing Year	NEFOP target coverage level	ASM target coverage level	Total target coverage level	Realized coverage level	Date analysis posted by GARFO to determine total coverage rate	Date total coverage rate announced	Date sector rosters were due
FY 2010	8 %	30 %	38 %	32 %			
FY 2011	8 %	30 %	38 %	27 %			12/1/2010
FY 2012	8 %	17 %	25 %	22 %			12/1/2011
FY 2013	8 %	14 %	22 %	20 %	4/12/2013	3/14/2013	3/29/2013
FY 2014	8 %	18 %	26 %	25.7%	2/21/2014	2/18/2014	3/6/2014
FY 2015	4 %	20 %	24 %	19.8%	3/2/2015	2/26/2015	2/25/2015
FY 2016	4 %	10 %	14 %	14.8%	5/6/2016	3/22/2016	3/15/2016
FY 2017	8 %	8 %	16 %	14.1%	3/15/2017	3/15/2017	3/16/2017
FY 2018	5 %	10 %	15 %	n/a	1/25/2018	1/25/2018	3/26/2018
FY 2019	n/a	n/a	31 %	n/a*	3/28/2019	3/28/2019	3/8/2019

\*Realized coverage not available; fishing year still underway.

Source: Summary of analyses conducted to determine at-sea monitoring requirements for multispecies sectors, FY2019, GARFO; and personal communication with GARFO staff

Option 1/No Action would continue the current process of making the total monitoring coverage level available once the necessary analysis is completed.

#### 4.1.1.3.2 Option 2: Administrative Measure for Knowing Total Monitoring Coverage Level at a Time Certain

This measure identifies knowing the target monitoring coverage level at a specific date in advance of the start of the fishing year to facilitate business planning by permit holders and sectors. The feasibility of setting a fixed date is related to the method used for setting coverage rates and the desired timeliness of the underlying data used in the analysis.

Certain alternatives for determining target monitoring coverage levels may not require extensive analysis to determine target coverage levels for the upcoming fishing year. For example, alternatives for fixed target coverage levels would provide sectors a clear understanding of the target monitoring coverage level for upcoming years. However, alternatives that base the coverage rate on an analysis of past years' data, such as the current coefficient of variation (CV) method for determining total coverage levels (Section 4.1.1.1.1 Option 1/No Action), must trade off timeliness of the data available with completion of the analysis by the deadline. A desire to know the total monitoring coverage level at an earlier date will require the use of less recent data in order to complete the analysis by the earlier deadline.

This measure would consider a time certain for knowing the total monitoring coverage level as a target date of three weeks prior to the annual sector enrollment deadline set by NMFS. This option would only apply to the current coefficient of variation (CV) method for determining total coverage levels under the No Action (Section 4.1.1.1.1 Option 1/No Action).

*Rationale:* Knowing the target total monitoring coverage level at a specific date in advance of the start of the fishing year would provide flexibility to groundfish fishery participants by making the necessary information available for participants to decide whether to participate in sectors for the upcoming year, to finalize their business planning, and to negotiate with at-sea monitoring providers prior to the start of the upcoming fishing year.

#### 4.1.1.4 Review Process for Sector Monitoring Coverage

##### 4.1.1.4.1 Option 1: No Action

Under Option 1/No Action, the efficacy of sector monitoring coverage rates would not be reviewed on a prescribed basis. The groundfish monitoring program would continue to be reviewed as part of the goals and objectives of the groundfish sector monitoring program through Goal 6: Perform periodic review of monitoring program for effectiveness (see Section 4.1.1 for the complete list of goals and objectives of the groundfish monitoring program).

##### 4.1.1.4.2 Option 2: Administrative Measure to Establish a Review Process for Monitoring Coverage Rates

This measure would establish a review process to evaluate the efficacy of sector monitoring coverage rates, to occur once two full fishing years of data is available. The review process would include establishing metrics and indicators of how well the monitoring program improved accuracy while maximizing value and minimizing costs. The review process will be further developed, including a determination of which agency would be responsible for the review, when the Council selects its preferred alternative for the sector monitoring standards that set coverage levels (Section 4.1.1.1). Establishment of a review process for monitoring coverage rates may result in an adjustment to the goals and objectives of the groundfish monitoring program (see Section 4.1.1).

*Rationale:* Periodic review of the monitoring coverage rates will allow for an evaluation of whether the monitoring program is meeting the goal of improved accuracy of catch data, while maximizing value and minimizing costs of the program.

#### 4.1.2 Groundfish Sector and Common Pool Monitoring Program Revisions

The following measures in this section apply to both the sector and common pool segments of the commercial groundfish fishery.

##### 4.1.2.1 Dockside Monitoring Program

###### 4.1.2.1.1 Option 1: No Action

There is currently no requirement for dockside monitoring for the groundfish monitoring program. Amendment 16 established a dockside monitoring program in the groundfish fishery, in order to verify landings of a vessel at the time it is weighed by a dealer and to certify the landing weights are accurate as reported on the dealer report. The dockside monitoring requirement was later eliminated (FW 48). More information on the previous dockside monitoring program can be found in the Groundfish Plan Development Team Dockside Monitoring Discussion Paper (to be included as an appendix in the DEIS)<sup>3</sup>.

Option 1/No Action would continue to maintain no requirement for dockside monitoring for the groundfish fishery.

###### 4.1.2.1.2 Option 2: Dockside Monitoring Program for the Entire Groundfish Fishery (Sectors and Common Pool)

The following measures will consider changes to how landings are monitored in the groundfish fishery. The goal is to improve the reliability and accountability of landings.

The following measures would create a dockside monitoring (DSM) program for the groundfish fishery that would focus on monitoring landings by independently verifying that landed catch is weighed and accurately reported by dealers. The goal of the DSM program is to verify landings (species and weights) by providing an independent landings data stream that may be compared to dealer-reported landings in order to ensure accurate accounting of landings.

This measure would develop a mandatory dockside monitoring program for the commercial groundfish fishery (sectors and common pool) at 100 percent coverage of all trips.

*Rationale:* The goal is to establish a dockside monitoring program that allows for independent verification of landings for the entire commercial groundfish fishery, which will ensure accurate reporting by dealers, ensure species are reported correctly, improve the fair market value for landed fish, and add unique value to current enforcement activities.

###### 4.1.2.1.3 Option 3: Dockside Monitoring as an Optional Program for Sectors

The following measures will consider changes to how landings are monitored in the groundfish fishery.

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<sup>3</sup> Groundfish Plan Development Team Dockside Monitoring Discussion Paper, December 20, 2018: [https://s3.amazonaws.com/nefmc.org/181220\\_Dockside-Monitoring-Discussion-Paper\\_Groundfish-PDT\\_V2\\_with-appendices.pdf](https://s3.amazonaws.com/nefmc.org/181220_Dockside-Monitoring-Discussion-Paper_Groundfish-PDT_V2_with-appendices.pdf)



The goal is to improve the reliability and accountability of landings.

The following measures would create an optional dockside monitoring (DSM) program for only the sector component of the groundfish fishery that sectors could choose for their sector monitoring plans. The goal of the DSM program is to verify landings (species and weights) by providing an independent landings data stream that may be compared to dealer-reported landings in order to ensure accurate accounting of landings.

This measure would develop a voluntary dockside monitoring program for the sector component of the groundfish fishery that sectors could use as an additional monitoring tool in their sector monitoring plans. If this option is chosen, the Council would also select the Dockside Monitoring Option in Section 4.1.1.1.2.2.1 (or Section 4.1.1.1.3.2.1, depending on the selected monitoring standard) to allow sectors to use dockside monitoring as an additional monitoring tool that sectors could choose, in addition to the monitoring tools selected to fulfill the selected monitoring standard.

*Rationale:* The goal is to establish an optional dockside monitoring program that allows for independent verification of landings for the sector component of the groundfish fishery, and to provide sectors with a tool to monitor landings that ensures precise and accurate catch (landings and discards) estimation.

*If Option 2 or Options 3 is selected, the Council would choose from the following sub-options to determine the responsibility of DSM program costs and how the DSM program will be structured, and to specify details of the DSM program.*

#### 4.1.2.1.3.1 Sub-Option 1: Dockside Monitoring Program Funding Responsibility

*Two different options for the responsibility of the costs of dockside monitoring, either as a dealer-funded program or a vessel-funded program, are outlined below as Sub-Option 1A and Sub-Option 1B. The Council would choose one of these options.*

For either sub-option, dockside monitoring would follow cost sharing responsibilities for industry-funded monitoring programs, in which “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...” If a fixed rate of coverage is required, then fishing effort would need to be reduced to match the level of monitoring that can be covered by available funding for shoreside costs. Alternatively, the program would have to address how the fishery would operate if NMFS is unable to fund its shoreside costs for coverage at the specified level (see section 4.3.2.2).

##### Sub-Option 1A - Dockside Monitoring as a Dealer Responsibility:

If this option is chosen, groundfish dealers (dealers receiving >1 pound of groundfish) would be responsible for the costs of dockside monitoring. Dealers would be required to implement an independent third-party dockside monitoring system for monitoring landings. The details of the dockside monitoring system must be provided in the dealer’s dockside monitoring plan. Each dealer would prepare a monitoring plan that covers the specifics of how the required dockside monitoring program will be implemented at their location (e.g., site plan, safety plan) and how to ensure all landings of groundfish are

monitored, that must be reviewed and approved annually by NMFS.

*Rationale:* The goal of the dockside monitoring program is to verify landings (species and weights) by providing an independent landings data stream that may be compared to dealer-reported landings in order to ensure accurate accounting of landings for the entire commercial groundfish fishery.

Sub-Option 1B - Dockside Monitoring as a Vessel Responsibility:

Vessels would be responsible for the costs of dockside monitoring. Sectors would be required to develop and implement an independent third-party dockside monitoring system that is satisfactory to NMFS for monitoring landings. For common pool vessels, there would need to be detailed dockside monitoring program standards for these vessels to follow, as opposed to individual dockside monitoring plans for each common pool vessel.

*Rationale:* The goal of the dockside monitoring program is to verify landings (species and weights) by providing an independent landings data stream that may be compared to dealer-reported landings in order to ensure accurate accounting of landings for the entire commercial groundfish fishery.

#### 4.1.2.1.3.2 Sub-Option 2: Dockside Monitoring Program Administration

*Two different options for how a dockside monitoring program would be administered are outlined below as Sub-Option 2A and Sub-Option 2B. The Council would choose one of these options.*

Sub-Option 2A – Individual contracts with dockside monitor providers:

Individual dealers or vessels (depending on the option selected above) would contract with third-party dockside monitor providers. Vessels enrolled in sectors would be covered by a monitoring plan included in their sector's operations plans. Common pool vessels would need to contract directly with providers.

*Rationale:* The ability for dealers or sectors/vessels to directly contract with third-party dockside monitors provides increased flexibility. Sectors currently contract directly with third-party providers for at-sea monitors.

Sub-Option 2B – NMFS-administered dockside monitoring program:

This measure would create a single dockside monitoring program for all dealers or sectors/vessels to use, contracting through an independent third-party dockside monitor provider. Unlike other regions, NMFS does not have authority to collect funds for monitoring. If this approach was pursued, NMFS would set up and administer the program, but dealers or sectors/vessels would be directly billed by the provider.

*Rationale:* A single, NMFS-administered dockside monitoring program for all dealers or vessels would simplify program implementation compared to having individual dealer or sector/common vessel contracts with dockside monitor providers.

#### 4.1.2.1.3.3 Sub-Option 3: Options for Reconciling Discrepancies between Dealer Reports and Dockside Monitor Reports

*Two different options for how to reconcile discrepancies between a dealer and dockside monitor report*

*and to determine which is the “official record” are outlined below as Sub-Option 3A and Sub-Option 3B. The Council could choose one of these options.*

Sub-Option 3A – Whichever record is higher is the official record:

In the case of a discrepancy between dealer and dockside monitor report of vessel landings, this measure would allow for whichever record reports the higher value by species to be considered the official record. For trips not covered by a dockside monitor (if the option for a “spot check approach” for a subset of the fleet is selected), this measure would allow for a default to the dealer data as the official landings record for these trips. These measures would include requirements for reporting in a format usable by existing data systems be a contract requirement for dockside monitor providers to meet, so that dockside monitoring data could be considered in place of dealer data. [One consideration is whether the higher value should be used for ACE accounting, for assessments, or for both. There are pros and cons to each approach, and additional work needs to be done, which could be analyzed as part of the DEIS]

*Rationale:* On the West Coast, both the dealer and the dockside monitor submit landings weights electronically to the Pacific States Marine Fisheries Commission (PSMFC). An attempt is made to reconcile any differences, but if they cannot be resolved, the higher value by species is used to be conservative. A similar model could be used to handle discrepancies between the dealer and dockside monitor report for the dockside monitoring program developed through this action. Should there be discrepancies between a dealer report and dockside monitor report that are unable to be reconciled, using whichever record with the higher value by species as the official landings record is an attempt to be conservative in landings estimates and may help to incentivize accurate reporting.

Sub-Option 3B – Dealer reports remain the official record, with comparison to dockside monitor reports:

This measure would allow for the dealer report to still be the official record, both for trips covered by dockside monitoring and those not covered (if the option for a “spot check approach” for a subset of the fleet is selected). This measure could include recommendation of enforcement of the NOAA Office of Law Enforcement (OLE) penalty structure in place to incentivize accurate reporting of landings, such that if there is a discrepancy between the dealer and DSM report, for example, the dealer may face a penalty. These measures could include requirements for reporting in a format usable by existing data systems be a contract requirement for dockside monitor providers to meet, so that dockside monitoring data could be easily tracked and compared to dealer data. [Additional work would need to be done, including working with NOAA OLE to further develop options for recommending enforcement of a penalty structure for discrepancies between dealer reports and dockside monitor reports.]

*Rationale:* Maintaining dealer reports as the official landings record would make program implementation simpler as it would not require extensive changes to the current data management system. A penalty structure for discrepancies between the dealer and dockside monitor report may help to incentivize accurate reporting and would give the dockside monitor reports increased utility as an independent verification tool.

#### 4.1.2.1.3.4 Sub-Option 4: Options for Lower Coverage Levels in Small, Remote Ports and for Small Vessels with Low Landings

These measures would include options for lower levels of monitoring in either small, remote ports or for smaller vessels with low harvest capacities.

[For instances in which landings are offloaded to a truck before weighout at a dealer, further analysis is needed to determine whether the dockside monitor will monitor landings at the point of offload (e.g. offloads to a truck) or at the dealer where weighout occurs, because the goal of the DSM program is to ensure the accuracy of dealer reports.]

*Two options for lower levels of monitoring in either smaller, less used ports or for smaller vessels with low landings, are outlined as options below as Sub-Option 4A and Sub-Option 4B. The Council could choose one or both of these options.*

**Sub-Option 4A – Lower coverage levels for small, remote ports:**

This option would allow for lower levels of dockside monitoring for smaller, less used ports to act as a “spot check”. Dockside monitors would be randomly assigned to these ports at a lower coverage level. This measure would allow for periodic re-evaluation of what constitutes a “small port” based on landings volumes.

[Major landings ports include New Bedford, Gloucester, Boston, Chatham, Point Judith, and Portland<sup>4</sup>, and dealers in these ports would be subject to 100 percent dockside monitoring coverage. All other ports would be considered “small and/or remote” as characterized by lower landings volumes, and dealers in these ports, or vessel landing in those ports, would receive lower coverage levels (for example, “spot check” coverage at 20 percent). Further work will be done to analyze landings data and verify major ports versus small ports. Alternatively, different landings volume thresholds could be examined to further categorize major ports versus small ports to determine which ports would receive “spot check” coverage and which would be subject to 100 percent coverage.]

This option could also include measures to incentivize accurate reporting of landings. For dealers located in small, remote ports that are subject to lower dockside monitoring coverage, their dockside monitoring coverage rate could increase if their dealer reports are not similar to the dockside monitor reports. For vessels landing in remote ports that are subject to lower dockside monitoring coverage, their dockside monitoring coverage rate could increase if their vessel hail-in reports are not similar to the dockside monitor reports. Comparisons could be done for each trip subject to coverage. [Additional work would need to be done to determine a threshold for differences in landings weights that would trigger an increase in coverage.]

[This measure would also consider the logistics of getting dockside monitors to remote ports at the correct time to meet an offload. The system would involve coordination between the dockside monitor providers and dealers based on hails from groundfish vessels. Alternatively, this could involve the dealer setting times to have groundfish offloads occur, or staffing a dockside monitor at all times the dealer is open. One possibility to address the issue of staffing dockside monitors in remote ports would be to periodically have unannounced dockside monitoring events, similar to a traffic checkpoint, where dockside monitors are temporarily stationed in the vicinity of one or more remote ports and monitor every offload of groundfish in nearby remote ports for a period of time. Further work would need to be done to develop the logistics of assigning dockside monitors for coverage.]

[One consideration is how options for dockside monitoring coverage less than 100 percent would fit in with the goal of accurate landings information, but additional work needs to be done. Reducing the

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<sup>4</sup> Determined from a preliminary analysis of groundfish landings in the Groundfish Plan Development Team Dockside Monitoring Discussion Paper, December 20, 2018: [https://s3.amazonaws.com/nefmc.org/181220\\_Dockside-Monitoring-Discussion-Paper\\_Groundfish-PDT\\_V2\\_with-appendices.pdf](https://s3.amazonaws.com/nefmc.org/181220_Dockside-Monitoring-Discussion-Paper_Groundfish-PDT_V2_with-appendices.pdf)

number of landings subject to dockside monitoring in remote areas may increase the cost/landings as economies of scale are further reduced. This could also further complicate the issue of staffing remote ports.]

*Rationale:* There are operational challenges with conducting dockside monitoring in small remote ports where landings volumes may be low and infrequent, including logistical difficulties with timely notice to a provider that a dockside monitor is needed. Lower coverage levels for these remote ports may provide some relief from dockside monitoring coverage. Monitoring levels are assigned in proportion to the risk of potential catch misreporting (by volume). Increasing the coverage rate should dealer reports or vessel hail-in reports not be similar to the dockside monitor reports would help to incentivize accurate reporting of landings.

Sub-Option 4B – Lower coverage for low volume vessels:

This option would allow for lower levels of dockside monitoring for smaller vessels to act as a “spot check”. Dockside monitors would be randomly assigned to these vessels at lower coverage level. This measure would allow for periodic re-evaluation of what constitutes a “low volume vessel” based on landings volume.

[For example, vessels with landings volumes of 5,000lbs or less would receive “spot check” coverage of 20 percent. Vessels with landings volumes higher than 5,000lbs would be subject to 100 percent coverage. Further work will be done to analyze landings data to determine an appropriate threshold of landings volume to determine what constitutes a low volume vessel.]

This option could also include measures to incentivize accurate reporting of landings. For smaller vessels that are subject to lower dockside monitoring coverage, their dockside monitoring coverage rate could increase if their vessel hail-in reports are not similar to the dockside monitor reports. For dealers receiving offloads from smaller vessels that are subject to lower dockside monitoring coverage, their dockside monitoring coverage rate could increase if their dealer reports are not similar to the dockside monitor reports. Comparisons could be done for each trip subject to coverage. [Additional work would need to be done to determine a threshold for differences in landings weights that would trigger an increase in coverage.]

[One consideration is how options for dockside monitoring coverage less than 100 percent would fit in with the goal of accurate landings information, but additional work needs to be done. For low-volume vessels reducing the number of trips that are subject to dockside monitoring may increase the cost/landings as economies of scale are further reduced.]

*Rationale:* There are operational challenges with conducting dockside monitoring for smaller vessels with low landings volumes, many of which may land in small remote ports, including logistical difficulties with notifying a provider that a dockside monitor is needed with sufficient notice. Lower coverage levels for these small vessels with low landings may provide some relief from dockside monitoring coverage. Monitoring levels are assigned in proportion to the risk of potential catch misreporting (by volume). Increasing the coverage rate should dealer reports or vessel hail-in reports not be similar to the dockside monitor reports would help to incentivize accurate reporting of landings.

#### 4.1.2.1.3.5 Sub-Option 5: Options for Dockside Monitor Safety and Liability Associated with Fish Hold Inspections

These measures address concerns with dockside monitor safety and liability associated with fish hold inspections at the conclusion of offloads.

*Three options for dockside monitor safety and liability associated with fish hold inspections, are outlined as options below as Sub-Option 5A, Sub-Option 5B, and Sub-Option 5C. The Council could choose one of these options.*

##### Sub-Option 5A – Dockside monitor fish hold inspections required:

This measure would require that monitors be allowed to access the fish hold of vessels directly to verify that all of the retained catch is offloaded and accounted for at the conclusion of an offload. This option would require that the dockside monitoring service provider is responsible for providing insurance liability associated with having monitors inspect the fish hold of the vessel, similar to how at-sea monitor and observer providers are responsible for providing insurance liability for at-sea observers on board vessels. Due to safety reasons, dockside monitors would only enter fish holds that have been emptied and therefore would be unlikely to have captured gases. This measure would also allow dockside monitors to forego a fish hold inspection due to safety concerns, and would require the dockside monitor to document the reason why a fish hold inspection could not be conducted.

*Rationale:* Fish hold inspections at the conclusion of an offload are an important component to dockside monitoring in order to ensure that all landings have been accounted for and independently verified. Requiring dockside monitor providers to carry insurance liability for dockside monitors inspecting fish holds may address liability concerns with having dockside monitors directly inspect fish holds (although there may be additional individual vessel insurance concerns). Specifying that dockside monitors only enter fish holds that have been emptied and allowing dockside monitors to forego a fish hold inspection due to safety concerns would address safety concerns.

##### Sub-Option 5B – Alternative methods for inspecting fish holds:

This measure would consider options for fish hold inspections that would allow for alternatives to dockside monitors directly accessing the fish hold, such as the use of cameras, to verify that all of the retained catch is offloaded and accounted for. This option may be particularly well suited for use on vessels with EM systems.

*Rationale:* Fish hold inspections at the conclusion of an offload are an important component to dockside monitoring in order to ensure that all landings have been accounted for and independently verified, however, there are safety and liability concerns with having dockside monitors inspect fish holds. Alternatives to having dockside monitors directly inspect fish holds, such as the use of cameras, ensure that fish hold inspections still occur as part of dockside monitoring while mitigating safety and liability concerns associated with dockside monitors inspecting fish holds.

##### Sub-Option 5C – No fish hold inspection required, captain signs affidavit:

This option would not require inspections of fish holds at the conclusion of an offload as a part of dockside monitoring, and instead would require captains to sign an affidavit, subject to the penalties of perjury, certifying that all catch has been removed from the fish hold concluding the offload, or an estimate of retained catch. [Note: All catch (landings and discards) and disposition of catch, is required to be reported on VTRs that are signed under the penalties of perjury].

*Rationale:* There are safety and liability concerns with having dockside monitors inspect fish holds. An alternative model to having dockside monitors inspect fish holds is to require captains to sign an affidavit, subject to the penalties of perjury, certifying that all catch has been removed from the fish hold concluding the offload, or an estimate of retained catch.

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## 4.2 Sector Reporting

The alternatives in this section will consider changes to the administration of the groundfish sector reporting system.

### 4.2.1 Option 1: No Action

Sectors are required to report all landings and discards by sector vessels to NMFS on a weekly basis. Additionally, sectors are required to submit annual year-end reports (Amendment 13 and Amendment 16). Current regulations require that approved sectors must submit an annual year-end report to NMFS and the Council, within 60 days of the end of the fishing year, that summarizes the fishing activities of its members, including harvest levels of all species by sector vessels (landings and discards by gear type), enforcement actions, and other relevant information required to evaluate the performance of the sector. More information on sector reporting requirements and the NMFS year-end report guidance can be found in Background Information on the Groundfish Monitoring Program (to be incorporated in the DEIS either in the Affected Environment or as an appendix).

Option 1/No Action would continue to require sectors to report all landings and discards to NMFS on a weekly or daily basis, and would continue to require that sectors submit annual year-end reports to NMFS and the Council.

### 4.2.2 Option 2: Grant Regional Administrator the Authority to Streamline Sector Reporting Requirements

This measure would grant the Regional Administrator authority to revise the sector monitoring and reporting requirements currently prescribed in the regulations [648.87(b)(1)(v) and (vi)] to streamline the sector reporting process. For example, this could include eliminating the requirement for sectors to submit weekly and daily reports in lieu of the agency providing monitoring summaries for the sectors to use while continuing reconciliation to confirm accuracy.

In Amendment 16, the Council required sectors to report all landings and discards by sector vessels to NMFS on a weekly basis. At the time this was developed, the expectation was that sectors would use real-time information from their vessels to monitor catch. In practice, NMFS provides sector managers with a weekly download of official trip data (dealer and VTR landings data, observer discard data, and calculated discard rates for unobserved trips), which most sectors use to update their sector accounting and then submit a weekly report to NMFS. Some sectors use data collected directly from vessels in their reports. Data reconciliation occurs regularly between the sectors and NMFS to improve monitoring accuracy by identifying and resolving any data errors in either the sector's or NMFS' information.

A more efficient process might be developed that would still involve timely monitoring and reconciliation of data sources between sectors and NMFS. If deemed sufficient by the Regional Administrator, an alternative to the process currently prescribed in the regulations may satisfy the need to:

- Summarize trips validated by dealer reports;
- Oversee the use of electronic monitoring equipment and review of associated data;
- Maintain a database of VTR, dealer, observer, and electronic monitoring reports;
- Determine all species landings by stock areas;
- Apply discard estimates to landings;
- Deduct catch from ACEs allocated to sectors; and



- Determine sector catch and ACE balances.

Additional changes to streamline sector reporting could include such items as<sup>5</sup>:

- Using NMFS reconciled data to determine when the trigger for sector daily catch reporting has been reached (required when 90 percent of any ACE has been caught), rather than using sector self-reported data. As described above, sector data is not any timelier and the reconciled data is more accurate, so using NMFS reconciled data would be more efficient and reliable than relying solely on sector reports.
- Modifying trip end hauls to accommodate catch reporting and to eliminate redundancy.

*Rationale:* Granting the Regional Administrator the authority to streamline the sector reporting process would help to reduce reporting redundancies, provide flexibility to sectors and sector managers, and improve timeliness of data processing.

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<sup>5</sup> These items were initially included in a letter from NMFS to the Council: “Bullard to NEFMC re sector reporting streamlining”, dated August 14, 2013.

### 4.3 Funding/Operational Provisions of Groundfish Monitoring

#### 4.3.1 Option 1: No Action

Beginning in 2012, Amendment 16 required that the at-sea monitoring program would be industry funded. However, since then NMFS has had sufficient funding to be able to pay for all or some of industry's sampling costs of the groundfish at-sea monitoring program. From FY 2012 through FY 2014, NMFS fully covered the sampling costs for the at-sea monitoring program. In FY 2015, NMFS fully covered sampling costs for the at-sea monitoring program until funds were expended in March 2016, at which point industry became responsible for the cost of at-sea monitoring. From July 2016 through April 2018, NMFS partially reimbursed sector participants for at-sea monitoring costs through a grant with the Atlantic States Marine Fisheries Commission (ASMFC).

Since May 1, 2018, NMFS has reimbursed industry for 100 percent of its at-sea monitoring costs through a grant with the ASMFC. It is anticipated that once these appropriated funds are used, sampling costs of at-sea monitoring would be fully paid for by industry, unless additional NMFS funds are available.

Option 1/No Action would continue to require industry to fund at-sea monitoring costs. Additionally, under Option 1/No Action, if a fixed rate of target monitoring coverage is required, then vessels would be required to reduce fishing effort to match the available level of monitoring that can be covered by available funding for NMFS' shoreside costs.

#### 4.3.2 Option 2: Provisions for an Increase or Decrease in Funding for the Groundfish Monitoring Program

##### 4.3.2.1 Sub-Option 2A: Additional NMFS Funding for Increased Monitoring if Funds Available

This measure, if chosen, would allow for at-sea monitoring at higher coverage levels than the target coverage required (see Section 4.1.1.1), up to 100 percent, provided that NMFS has determined funding is available to cover the additional administrative costs to NMFS and sampling costs to industry in a given year. The higher monitoring coverage levels would be determined by the amount of available additional funding from NMFS in a given year, and would be announced once NMFS has determined the amount of additional funding available. Available funding in regard to this alternative refers to funds appropriated specifically for groundfish monitoring costs and not to the prioritization of funds described in the Industry Funded Monitoring (IFM) Omnibus Amendment. If this option is selected, but Federal funding is not available to increase the coverage beyond the target set in Section 4.1.1.1, then industry must meet the target coverage and pay for its monitoring costs. The No Action for industry-funded at-sea monitoring costs at the selected minimum target coverage level would remain in place in years in which additional funds to cover industry costs are not available.

*Rationale:* Monitoring coverage at 100 percent, or as close to 100 percent, increases the accuracy of catch estimates and reduces the potential for bias. Higher coverage levels, even for a limited time, may inform understanding of the magnitude of bias, and inform future actions on the value of higher monitoring coverage levels. Coverage of 100 percent of trips is the only way to completely remove bias. However, it may be impracticable for industry or NMFS to fund their portions of the costs associated with complete coverage, resulting in a lower coverage level. Higher levels of coverage require a substantial increase in costs, and given that industry is responsible for monitoring costs, would create an added burden to both industry and NMFS. However, increased monitoring supported by additional funding from NMFS for a

limited term could improve cost-effectiveness of the current and future monitoring system by providing a baseline to evaluate bias. This evaluation could inform future monitoring program design to increase efficiency and reduce bias when coverage is at a level lower than 100 percent.

#### 4.3.2.2 Sub-Option 2B: Waivers from Monitoring Requirements Allowed

This measure would allow vessels to be issued waivers to exempt them from industry-funded monitoring requirements, for either a trip or the fishing year, if coverage was unavailable due to insufficient funding for NMFS shoreside costs for the specified target coverage level. This would include coverage for at-sea monitoring, electronic monitoring, and dockside monitoring. Selection of this option preserves the Council's intent for additional monitoring in the groundfish fishery, but would not prevent vessels from participating in the groundfish fishery if monitoring coverage was not available.

*Rationale:* In the absence of waivers from monitoring requirements, vessels would be required to reduce fishing effort to match the available level of monitoring (i.e., the fleet would not fish if NMFS does not have funding for the program). Reducing fishing effort to match available monitoring may lack sufficient justification and may be inconsistent with National Standards. Additionally, years in which fishing effort is reduced to match available funds would not be representative of other years, and so statistical comparisons of effort and catch between years would be difficult.

#### **4.4 Management Uncertainty Buffers**

##### 4.4.1 Option 1: No Action

*To be developed.*

##### 4.4.2 Option 2: Revised Management Uncertainty Buffers

*To be developed.*

[*Council motion* - An alternative that addresses the potential for bias in fisheries dependent data under current coverage rates by increasing the management uncertainty buffers as appropriate for each allocated stock by subcomponent. Buffers should be focused on enforceability of management measures and adequacy of catch monitoring, and may differ for sectors and the common pool. Coverage levels may be achieved through any combination of approved tools, including at-sea monitoring, dockside monitoring, and electronic monitoring.]

*Rationale:* While evidence of observer bias may warrant increased monitoring coverage, it will come at an increased cost that may reduce viability of the commercial groundfish fleet. An alternative method of minimizing the potential effect of that bias and accounting for potential undocumented catch is to couple existing or moderately increased monitoring coverage rates with an increase in the management uncertainty buffers for each allocated stock. This alternative could prove to be a more cost-effective solution to addressing concerns with accuracy of catch estimates and as such, would achieve multiple goals of the groundfish monitoring plan and the amendment.

## **4.5 Exemptions from Groundfish Sector and Common Pool Monitoring Requirements**

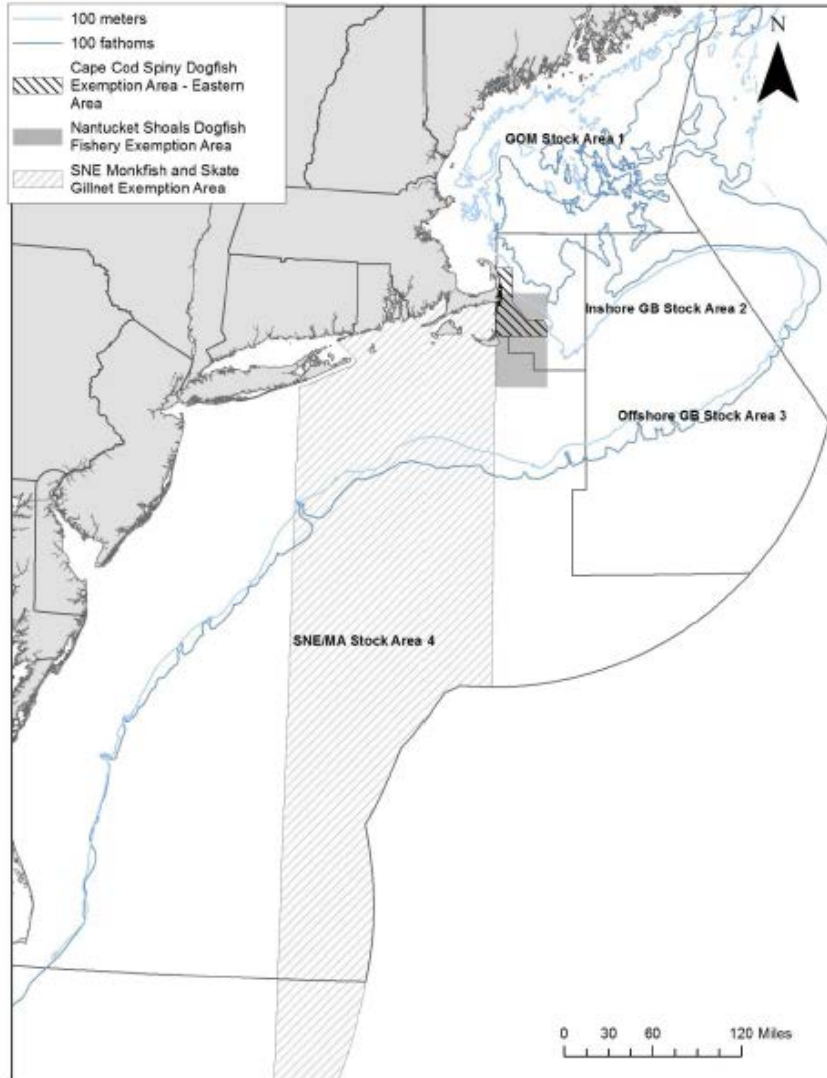
The measures in the following section apply to both the sector and common pool segments of the commercial groundfish fishery.

### **4.5.1 Option 1: No Action**

FW55 removed the at-sea monitoring coverage requirement for sector vessels fishing exclusively with extra-large mesh (ELM) gillnets of 10 inches (25.4 cm) or greater on a sector trip fishing exclusively in the Southern New England/Mid-Atlantic (SNE/MA) Broad Stock Area (BSA) and Inshore Georges Bank (GB) BSA (Figure 1). Vessels making an ELM declaration in the SNE/MA and/or Inshore GB Broad Stock Areas are not subject to at-sea monitoring coverage. The majority of catch on sector trips using ELM gear is of non-groundfish stocks, such as skates, monkfish, and dogfish, with minimal groundfish catch.

Sector vessels fishing on these non-ASM sector trips and fishing exclusively within the footprint and season of either the Nantucket Shoals Dogfish Exemption Area, the Eastern Area of the Cape Cod Spiny Dogfish Exemption Area, and SNE Dogfish Gillnet Fishery Exemption Area are exempt from the requirement to only use 10+ inch mesh on these excluded trips in order to target dogfish with 6.5 inch mesh on the same trip, and are thus also excluded from the at-sea monitoring coverage requirement. Groundfish catch is very low within the area and season of dogfish exempted fisheries. However, these exemptions are handled through sector operations plans.

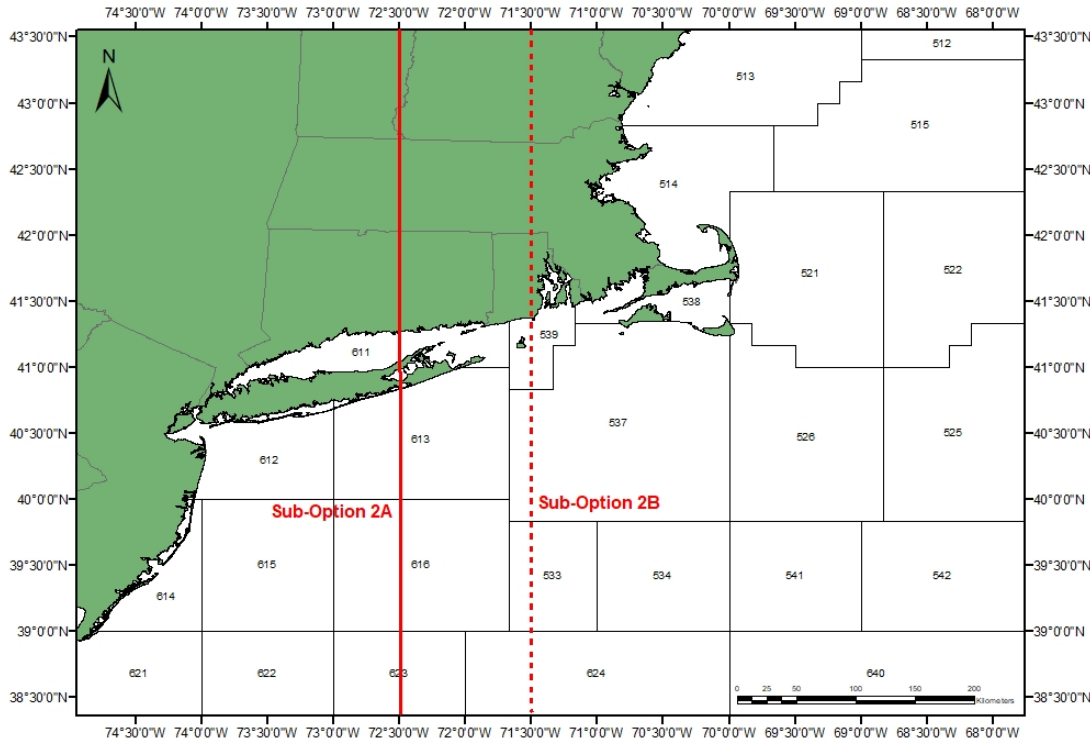
Option 1/No Action would maintain the existing exemptions from groundfish monitoring program requirements. Sector vessels fishing exclusively with extra-large mesh (ELM) gillnets of 10 inches (25.4 cm) or greater on a sector trip fishing exclusively in the SNE/MA and Inshore GB Broad Stock Areas would continue to be exempt from the at-sea monitoring coverage requirement.



**Figure 1 – Groundfish Broad Stock Areas (BSAs) – sector trips fishing exclusively with extra-large mesh (ELM) gillnets fishing exclusively in the SNE/MA and/or Inshore GB BSA are exempt from the at-sea monitoring coverage requirement.**

### 4.5.2 Option 2: Exemption for Certain Vessels Based on Fishing Location

In addition to the options for exemptions below, if Option 2 is selected, the existing exemptions described in the No Action would remain in place.



**Figure 2 – 72 degrees 30 minutes west longitude boundary (Sub-Option 2A) and 71 degrees 30 minutes west longitude boundary (Sub-Option 2B).**

#### 4.5.2.1 Sub-Option 2A: Exemption for Vessels Fishing Exclusively West of 72 Degrees 30 Minutes West Longitude

This alternative would exempt vessels fishing exclusively west of 72 degrees 30 minutes west longitude on a trip from at-sea monitoring and/or dockside monitoring (if implemented) (Figure 2).

*Rationale:* For vessels fishing exclusively west of 72 degrees 30 minutes west longitude, the catch composition includes little to no groundfish species.

#### 4.5.2.2 Sub-Option 2B: Exemption for Vessels Fishing Exclusively West of 71 Degrees 30 Minutes West Longitude

This alternative would exempt vessels fishing exclusively west of 71 degrees 30 minutes west longitude on a trip from at-sea monitoring and/or dockside monitoring (if implemented) (Figure 2).

*Rationale:* The Council is interested in considering an additional option for potential exemptions from at-sea monitoring and/or dockside monitoring, in which it is expected for vessels fishing exclusively west of 71 degrees 30 minutes west longitude, the catch composition includes little to no groundfish species. [The PDT has yet not conducted analysis on catch composition of vessels fishing exclusively west of 71 degrees 30 minutes west longitude.]

#### 4.5.2.3 Review of Exemptions Based on Catch Composition

This option, if selected, would establish a process for review of exemptions for vessels from monitoring requirements that are based on catch composition, should the Council select these exemptions, to occur after two years of fishing data is available and every three years after that.

*Rationale:* Periodic review of exemptions for vessels from monitoring requirements that are based on catch composition will help to verify if the intent of the exemptions (e.g. that the catch composition has little to no groundfish) is still being met.

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## 5.0 DRAFT ALTERNATIVES CONSIDERED AND REJECTED

### 5.1 Fishery Program Administration

#### 5.1.1 Sector Administration Provisions

##### 5.1.1.1 Funding for the Groundfish At-Sea Monitoring Program

##### 5.1.1.1.1 Option 2: Additional Options for Industry-Funded Costs of Monitoring

Under Amendment 16, sectors must develop and fund their own monitoring programs. Sectors are still expected to bear the costs of the monitoring program changes adopted in Amendment 23.<sup>6</sup>

#### *Funding source ideas*

The costs of additional monitoring can be considerable. This action will consider regulatory changes that will help offset the cost of monitoring for sectors. Ideas to offset monitoring costs include:

- Quota auctions and quota set-asides, where a portion of the ACL for key stocks could be auctioned off annually to fund monitoring. This is done in some Fishery Management Plans (FMPs), where a portion of the quota is reserved as a set-aside and auctioned off annually to provide additional catch opportunity and a source of funding for management priorities like research. Section 208 of the Magnuson-Stevens Act (MSA) 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.

This measure will establish the necessary infrastructure for a quota auction.<sup>7</sup>

*Rationale:* Quota auctions may offset the cost of monitoring for sectors. This measure would consider regulatory changes to establish a quota auction.

*Rationale for not including 5.1.1.1.1:* After reviewing the work to date, the Groundfish Committee had concerns that an option to set up a quota auction or quota set-aside would further reduce available quota at a time while the groundfish fishery continues to operate under historically low annual catch limits. Therefore, the Committee did not recommend this action for further development.

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<sup>6</sup> The Council recently adopted the IFM Amendment. The IFM Amendment discusses that the existing groundfish monitoring program is excluded from the newly adopted IFM approach. The PDT is aware that there are provisions in the IFM Amendment that will need to be considered for determining how the adjusted groundfish monitoring program in Amendment 23 fits into the IFM approach, and plans to explore this concept further. At present, the PDT does not expect that the IFM approach would apply to the adjusted groundfish monitoring program.

<sup>7</sup> The PDT is exploring potential limitations to setting up a quota auction for the groundfish sector program. One question is whether the Council can provide a quota auction system outside of Limited Access Privilege Programs (LAPPs). Additionally, even if it is determined the Council can establish a quota auction system for the groundfish sector program, the funds collected would go into the Limited Access System Administration Fund established by section 305(h)(5)(B) of the MSA and would be subject to annual appropriations.