



CERT

**Comité d'évaluation des
ressources transfrontalières**

Ne pas citer sans
autorisation des auteurs

TRAC

**Transboundary Resource
Assessment Committee**

Reference Document 2017/xxx

Not to be cited without
permission of the authors

An Overview of the US Monitoring and Reporting Systems for the Commercial Groundfish Fishery on Georges Bank

J. Cournane¹, T. Nies¹, R. Frede¹, S. Heil², and S. Talmage²

¹New England Fishery Management Council
50 Water Street, Mill 2
Newburyport, Massachusetts, 01950, USA

²National Marine Fisheries Service
Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, Massachusetts, 01930, USA



(page intentionally left blank)

ABSTRACT

This document provides an overview of the monitoring and reporting system in the United States for the commercial groundfish fishery on Georges Bank, noting any special requirements in the United States/Canada Management Area.

Introduction

In response to a 2017 Transboundary Resources Assessment Committee (TRAC) term of reference (TOR) for Eastern Georges Bank cod, this document provides an overview of the monitoring and reporting system in the United States for the commercial groundfish fishery on Georges Bank. The specific TOR is to “describe and document the monitoring and reporting systems in the US and Canada”.

The general elements of the reporting system established for the Greater Atlantic Region apply to all fisheries. Below, we provide a brief summary for each type of monitoring or reporting system (see NOAA et. al., 2015; GARFO 2016; and Groundfish PDT 2016 for additional details), noting any special requirements in the US/CA management area (GARFO 2016). Additionally, we attach several supporting documents as appendices to the main document (see Appendix I and II). We also describe elements that are specific to the Northeast Multispecies (Groundfish) Fishery.

Monitoring Systems

Observers

The Northeast Fishery Observer Program (NEFOP) deploys fisheries observers to report independent, on-board observation of fishing activity. This information includes when the vessel fished, where and how the vessel fished, which stocks were caught and by what gear type, and how much catch was kept and how much was discarded. Observers quantify catch, collect biological samples, and monitor interactions with protected species. Table 1 displays the target and realized observer coverage levels for the groundfish fishery for fishing years 2010-2017 (GARFO 2017).

At-Sea Monitors/Electronic Monitoring

The industry-funded At-Sea Monitoring (ASM) program deploys at-sea monitors to report independent, on-board observation of fishing activity on groundfish sector vessels only. This information includes when the vessel fished, where and how the vessel fished, which stocks were caught and by what gear type, and how much catch was kept and how much was discarded. At-sea monitors focus on quantifying catch with less biological sampling. Table 1 displays the target and realized ASM coverage levels for the groundfish fishery for fishing years 2010-2017 (GARFO 2017). Electronic monitoring, while not currently approved for use in the fishery, is being tested by several groundfish sectors, and it may become an option for vessels to use to collect catch information in the coming years.

The level of observer and at-sea monitoring coverage (combined) is determined each year (e.g., GARFO 2017). Coverage levels are designed to meet standards set by the New England Fishery Management Council. Both types of coverage are provided by

independent third-party companies. Trips are selected through a structured, random assignment process.

Vessel Monitoring System

Vessel Monitoring System (VMS) is a satellite surveillance system primarily used to monitor the location and movement of certain fishing vessels that are legally required to have a VMS unit onboard. The VMS unit communicates by satellite to the National Marine Fisheries Service's (NMFS) Greater Atlantic Regional Fisheries Office (GARFO) and sends position reports from the vessel. VMS is also used to send required catch reports, such as the Multispecies Catch report, and notifications such as Multispecies Trip Start and End Hail.

Port Sampling

Port agents are NMFS staff and contractors located in the major fishing ports in the Greater Atlantic Region and are responsible for collecting biological samples of landed catch to characterize commercial landings. Biological sampling data are linked with VTR data to identify the statistical area the landed fish were caught, and with dealer data to characterize the market category of landings. Port agents also use VMS information to make certain biological samples are attributed to the correct stock area. Length and age samples are used to estimate size and age of catch, which is used in analytical stock assessment models.

Reporting Systems

Vessel Trip Reports

Vessel owners/operators of any vessel issued a valid Federal permit for any commercial or charter/party fishery, except American lobster, submit vessel trip reports (VTRs) which describe the fishing trip. This information includes when fishing occurred, where and how fishing occurred, which species were caught, and which dealer(s) bought the catch. A new VTR must be completed if the vessel changes gear type, mesh size, or statistical area during a fishing trip. For most fisheries, VTRs must be received or postmarked by the 15th of the month following the month in which the trip ended, and may be submitted either electronically or by paper.

Amendment 16 to the Northeast Multispecies fishery management plan increased the frequency to weekly reporting for all groundfish vessels. Furthermore, the Regional Administrator of GARFO may authorize individuals to submit reports electronically, by using VMS or other media. Some vessels in the groundfish fishery submit electronic

VTRs, on a voluntary basis, through the Northeast Fishery Science Center's Study Fleet Program. Electronic VTRs collect additional information, including haul-back locations.

Dealer Reports

Federally permitted seafood dealers (excluding lobster only) submit dealer reports which describe catch sale. This information includes when fish were sold, which vessel caught the fish, which species were sold, the market category of the landings (size, form, etc.), and what the catch weighed. Dealer reports are submitted electronically and on a weekly basis.

Vessel Monitoring System Reports

All sector vessels must submit VMS haul reports as frequently as required by the Regional Administrator. At present, reports for most trips must be submitted before the vessel enters port. Additional requirements for certain trips are described below.

In order to fish in the US/CA Management Area, vessels are required to declare one or more of the defined sub-areas (Eastern Area, Western Area, or Special Access Programs (SAPs)), and one or more broad stock areas (BSAs) in VMS, prior to leaving the dock (see maps in Figure 1 and Appendix II). If a vessel declares into the Eastern Area, including the Closed Area II Yellowtail/Haddock SAP or the Eastern US/CA Haddock SAP, the vessel must submit a daily catch report via VMS. If a vessel does not declare into the Eastern Area from the dock, and instead uses the sector exemption to declare the Closed Area II Yellowtail/Haddock SAP while at sea (known as flexing), the vessel is required to submit a report indicating all catch from the trip up until the time declared in the SAPs. Once declared into the SAPs, the vessel must submit daily reports for the remainder of the trip. Vessels that declare their intent to fish within and outside of the Gulf of Maine Broad Stock Area on the same trip must submit daily VMS catch reports for the duration of the trip. If a vessel declares into the Western Area only, it must submit a trip level report via VMS.

Summary

In summary, we provide an overview of the monitoring and reporting system in the US for the commercial groundfish fishery on Georges Bank and note special requirements in the US/CA Management Area.

Literature Cited

Greater Atlantic Regional Fisheries Office (GARFO), 2016. Sector Guide Fishing Year 2016. NOAA Fisheries, available at: <https://www.greateratlantic.fisheries.noaa.gov/sustainable/species/multispecies/sector/sectorguide2016.pdf>

GARFO, 2017. Summary of analyses conducted to determine at-sea monitoring requirement for multispecies sectors FY 2017. NOAA Fisheries, available at: https://www.greateratlantic.fisheries.noaa.gov/ro/fso/reports/Sectors/ASM/FY2017_Multispecies_Sector_ASM_Requirements_Summary.pdf

Groundfish Plan Development Team, 2016. Memorandum to the Groundfish Committee on progress on white paper on groundfish monitoring strategies, dated September 7, 2016. New England Fishery Management Council, available at: http://s3.amazonaws.com/nefmc.org/4c_160907_PDT-memo-to-Committee-re-white-paper-on-monitoring-with-attachments.pdf

NOAA Fisheries, Mid-Atlantic Fishery Management Council and New England Fishery Management Council, 2015. An omnibus amendment to the fishery management plans of the Mid-Atlantic and New England Regional Fishery Management Council, including a Final Environmental Assessment, a Regulatory Flexibility Act Assessment, and a Regulatory Impact Review. Final version as of March 2015, available at: <https://www.greateratlantic.fisheries.noaa.gov/reg/2015/June/15sbrmomnibusamendea.pdf>

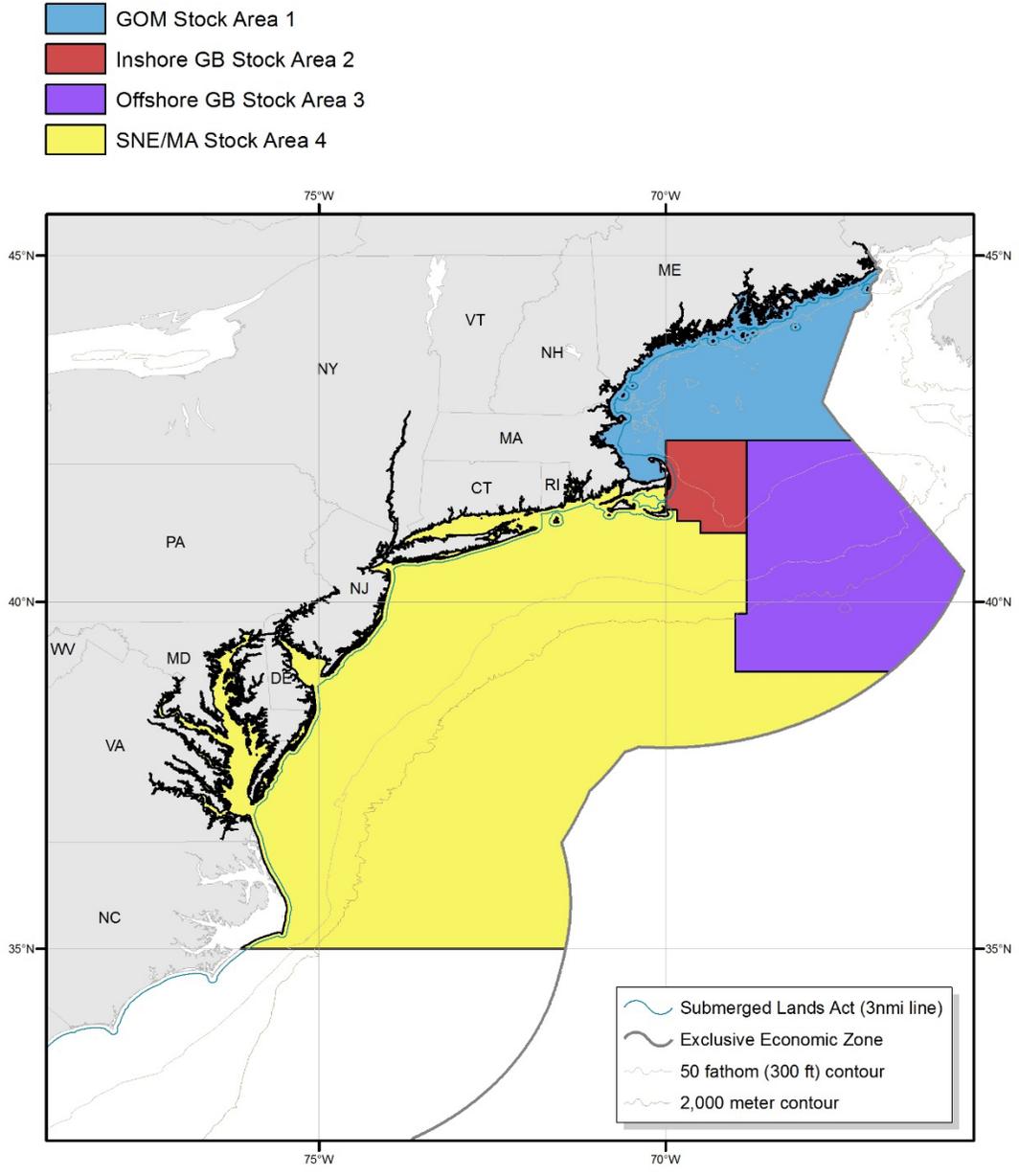
Table

Table 1 – Target and realized observer (NEFOP and ASM) coverage levels for the groundfish fishery for Fishing Years 2010-2017 (GARFO 2017). ASM coverage levels apply to groundfish sector vessels only. “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
FY 2010	8%	30%	38%	32%
FY 2011	8%	30%	38%	27%
FY 2012	8%	17%	25%	22%
FY 2013	8%	14%	22%	20%
FY 2014	8%	18%	26%	25.7%
FY 2015	4%	20%	24%	19.8%
FY 2016	4%	10%	14%	n/a
FY 2017	8%	8%	16%	n/a

Figure

Figure 1- Northeast Multispecies Broad Stock Areas, (obtained from GARFO website, posted March 15, 2015).



Appendix I

Standardized Bycatch Reporting Methodology

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

March 2015



well as detailed capture information on key species of concern. Information about rare or species of concern provided by a fishery survey could be used to prioritize fishery dependent monitoring within the same spatial or temporal areas to better understand potential interactions of these particular species as bycatch in commercial fishery operations.

4.3 Fishing Vessel Trip Reports/Logbooks

4.3.1 Description

The vessel owner or operator of any vessel issued a valid Federal permit for any commercial or charter/party fishery except American lobster must maintain on board the vessel, and submit to NMFS, an accurate FVTR for each fishing trip. FVTRs must be submitted regardless of species caught or area fished. This requirement is fully described at 50 CFR 648.7(b) and has been in place since 1994. A listing of the data collected by the FVTR is provided in Table 31.

<u>Vessel, crew, operator</u>	<u>Gear</u>	<u>Commercial Catch</u>
Vessel name	Gear type	Pounds kept (by species)
USCG documentation number <i>or</i> State registration number	Quantity and size	Pounds discarded (by species)
Federal permit number	Mesh/ring size	Sea turtle incidental take
Number of crew		Skates by size category
Number of anglers (charter/party)	<u>Location</u>	<u>Charter/Party Catch</u>
Vessel operator's name	Chart area (statistical area)	Number kept (by species)
Signature of vessel operator	Average depth	Number discarded (by species)
	Latitude/longitude <i>or</i>	
	Loran station and bearings	
<u>Trip Information</u>	<u>Effort</u>	<u>Sale/Landing</u>
Date/time sailed	Number of hauls	Dealer permit number
Date/time landed	Tow/soak time duration	Dealer name
Commercial <i>or</i> charter/party trip		Date sold
		Port and state landed

Table 31. Information collected on Greater Atlantic Region FVTRs, by data type.

Because the FVTR is a standardized form designed to capture data from numerous fisheries, the number of logbooks that must be maintained and submitted by a vessel owner or operator that participate in more than one fishery and utilizes more than one fishing permit is minimized. A new FVTR must be completed if the vessel changes gear type, mesh size, or statistical area during a fishing trip. The presence of an onboard observer during a trip does not relieve the vessel of the requirement to submit an FVTR.

FVTRs must be received or postmarked by the 15th of the month following the month in which the trip ended. Amendment 16 to the Northeast Multispecies FMP increased the reporting frequency to weekly for groundfish vessels. The Regional Administrator may authorize individuals to submit reports electronically, by using a VMS or other media. Submitted FVTRs are checked for completeness and then entered into a database. Incomplete, illegible, or inaccurate FVTRs are returned to the submitter for correction. Vessel owner/operators with missing, incomplete, illegible, or inaccurate

FVTRs may not be allowed to renew their Federal fishing permits until the problem(s) are corrected. Copies of FVTRs are required to be maintained onboard the vessel by the vessel owner/operator for one year and retained by the owner/operator for a total of three years.

All discards are required to be reported on Greater Atlantic Region FVTRs (NMFS 2004). Thus, given the mandatory reporting requirement applied to all federally permitted vessels (with the exception of vessels holding only a Greater Atlantic Region lobster permit), FVTR data represent a comprehensive source of information on total fishing effort, location, catch, and bycatch. In addition to the requirement to submit FVTRs, some FMPs require catch information to be reported also through an interactive voice response system or through a VMS.

Owners or operators of commercial groundfish vessels with federal permits now have the option to submit their FVTRs electronically (eVTR). Electronic reporting will make the collection of important data on fishing vessel activity more efficient, convenient, and timely for the fishing industry, fishery managers, and other data users. Vessels choosing to use eVTR must complete the report prior to landing and can either submit it immediately or upon landing. The option to use eVTR may be expanded to other fisheries in the Greater Atlantic Region.

4.3.2 Evaluation and Applicability

FVTRs provide an extensive set of data regarding fishing location, effort, catch, and bycatch. However, FVTR data are self-reported by the individual vessel operator and there are several challenges and limitations associated with the use of self-reported catch and discard data that have been well documented (NEFSC 1996; Walsh et al. 2002; NMFS 2004). The challenges and limitations include low compliance with mandatory reporting requirements, misidentification of species, errors in estimating the amount of catch in large volume fisheries (e.g., Atlantic mackerel and Atlantic herring), under-reporting (particularly of discards), and data entry errors on FVTR forms. It should be noted that FVTRs are not systematically inaccurate—a comparison of total groundfish landings from FVTR to dealer records for calendar years 2003 and 2004 shows close agreement between the two data sources (Rago et al. 2005). However, many fishermen have expressed concern about disclosing detailed information about primary fishing grounds for target species or providing information on discards in FVTRs for fear that the information may be used in a future management action that would negatively impact their operations.

With caution, the data provided in FVTRs can be utilized to provide the basis for stratum-specific expansion factors to raise the observed portion of the commercial fishing fleet's trips to the entire fleet. While FVTR data can be compared to other fishery dependent data sources such as dealer reports, vessel monitoring systems (VMS), and DAS to ensure the information provided is both complete and accurate, only observer data can be used to confirm the completeness and accuracy of FVTR bycatch and discard data. Additional information on the effective use of FVTRs as a bycatch and discard monitoring tool can be found in chapter 5.

New technologies such as electronic monitoring systems (described in section 4.10) could be used to verify FVTR logbook catch and discard data in hook and line fishery modes as is done with the comprehensive catch accounting system in British Columbia. It should be noted that a rigorous regulatory environment, requiring total retention of key species and documentation of all discards is in place to support British Columbia program. If a similar program were developed for the Greater Atlantic Region, a comprehensive regulatory structure, with considerable technological support and personnel, would need to be established.

4.4 Dealer Purchase Reports

4.4.1 Description

Since May 1, 2004, all federally permitted seafood dealers (excluding lobster only) have been required to submit electronic reports of all fish purchased on a weekly basis.¹⁸ This requirement is fully described at 50 CFR 648.7. Dealer purchase reports are compiled and submitted to NMFS through one of two approved software packages specifically developed for this purpose or through a file upload process.

Dealer reports must include the following information for each purchase made from a fishing vessel: Dealer identification information; vessel identification information from which fish were purchased; a trip identifier; dates purchased; amount of species landed; price paid for each species; and disposition of the fish. Dealer reports are assumed to be the best source for comprehensive estimates of total landings and the resulting revenue generated. They can be used by the dealers for tax preparation purposes and as legal documentation of the purchase and sale of the landed catch.

4.4.2 Evaluation and Applicability

Federally permitted dealers are required to report all purchases of species governed by a Federal FMP. Dealers are not required to collect or report information on bycatch or discards. Dealer reports of landings may or may not specify the market category¹⁹ which could, in turn, be used to categorize the general size of animals comprising the landed catch. Landings-related size information would not yield any specific application for quantifying bycatch or discards, even if discards of the same species landed were listed as discards on a FVTR. Dealer reports would not supply any

¹⁸ May 1, 2004, was the effective date of a rule requiring all federally permitted seafood dealers in the Northeast except those handling lobster only to report fish purchases electronically via computer. Prior to this rule, all dealers were required to report all fish purchases on paper forms, submitted monthly, and dealers that purchase certain species were required to provide additional summary information on a weekly basis through an automated telephone call-in system. The May 1, 2004, rule consolidated the two reporting requirements, eliminated both the telephone call-in system and the paper reports, and implemented an on-line reporting program known as the Standard Atlantic Fisheries Information System (SAFIS).

¹⁹ “Market category” is a term used to describe the various forms or sizes of fish products sold to dealers and for which different prices may be paid (for example, dealers will pay fishing vessels different prices per lb for “whale” cod, “market” cod, and “scrod” (small) cod).

information about species not brought to market. Therefore, dealer reports have limited applicability towards documenting discards.

Dealer reports are primarily used as a census of landings in a fishery. In turn, dealer data are important for expanding the catch and discard rates reported by at-sea observers to the entire fishing fleet. This information is used to optimize observer coverage and to developing estimates of total fishing effort and total discards (see Chapter 5 and Appendix A for more information).

4.5 At-Sea Observers

4.5.1 Description

At-sea fisheries observers are generally biologists trained to collect information onboard fishing vessels. Observers may be deployed for various reasons including monitoring interactions with protected species, measuring catch composition and disposition (including discards), validating or adjusting self-reported data, tracking in-season quotas (including bycatch quotas), or a variety of other reasons (NMFS 2004). In addition to the observer program that operates out of the NEFSC, several states employ observers either through a formal observer program or on an ad-hoc basis. In most cases, state observer programs are intended to provide information on fisheries not covered by the Federal observer program (such as the American lobster fishery).

4.5.1.1 Federal Observer Program

Bycatch in Greater Atlantic Region fisheries is monitored primarily through the NEFOP, which is coordinated through the NEFSC and has been in operation since 1989. The quality of observer information is ensured through several aspects of the program: Observers participate in a comprehensive training program that includes proficiency and testing standards; a standardized set of on-board data collection protocols are utilized in training and are available at-sea in written reference documents; and finally, significant auditing and quality assurance of the data collected occurs before it is used in stock assessment and management decisions (NMFS 2006a).

To allow extrapolation of the sample data to the fleet as a whole for the purposes of total bycatch estimation, the NEFOP employs a rigorous statistical sampling design. The procedure includes: Definition of a sampling frame across all relevant fisheries; and identification of sampling strata based on observable properties. A detailed discussion of the precision and accuracy of observer bycatch estimates is provided in chapter 5. Information on the data flow related to quality assurance and control for the NEFOP can be found in Appendix D.

Observers are trained to collect a variety of information, including the amount of all catch and bycatch, the disposition of the catch (i.e., kept or discarded), biological samples (i.e., for age and size distribution studies), effort data (e.g., number of tows, haul duration, vessel horsepower), gear characteristics, and economic information (NMFS 2006a). Observers record everything caught in the net (both living and non-living) and

identify all organisms caught (including finfish, crustaceans, shellfish, corals, sponges, etc.) to the lowest taxonomic level possible (NMFS 2006a).

Current regulations require any vessel issued a Federal permit to carry an observer aboard a particular fishing trip, if requested to do so. Vessel owners or operators who refuse to carry an observer or that leave dock prior to the observer embarking are referred to the NMFS Office of Law Enforcement and may be prosecuted. Upon embarking, an observer will ensure the vessel has a current U.S. Coast Guard safety decal. Should the vessel not have an inspection decal or other unreasonable safety issues arise, the unsafe vessels will be observed at a later time. The NEFOP continues to work with non-compliant vessels to ensure compliance with safety and requirements (Amy Martins, pers. comm., NMFS).

The NEFOP allocates observer coverage (“sea days”) to monitor bycatch (fish, invertebrates, and protected species) in the commercial fisheries in the Northeast. Available funding and the average cost of an observer sea day determine the number of potential sea days in the program for a given period of time. With the exception of some observer coverage funded through industry set-asides in the sea scallop fleet, the costs of observers in the Northeast fisheries are entirely borne by the Federal Government, using funds appropriated to NMFS by Congress. While NMFS requests funding for the NEFOP that it has determined necessary to meet the needs of the fishery and to comply with statutory mandates, the actual levels of future funding cannot be entirely predicted, and are uncertain until Congress approves the budget. Some of these annual funds are ‘earmarked’ to ensure that the required levels of sea days are available to satisfy mandated levels of coverage required for some fishery management plans or for fisheries that occur specific areas (e.g., funding directed to support observers and at-sea monitors in the Northeast multispecies catch share program). The remaining funds and subsequent sea days are divided amongst the remaining fisheries in the northeast. Within this remaining pool of sea days, it is necessary to maximize the utility of the available days to ensure that resulting bycatch estimates are accurate and precise for each fishery mode. Chapter 5 and Appendix A describe the detailed methods used to optimize available observer coverage throughout certain Greater Atlantic Region commercial fisheries prior to the 2007 SBRM Omnibus Amendment. A description of the methods currently used can be found in Wigley et al. 2012a.

4.5.1.2 State Observer Programs

State fisheries agencies often administer at-sea observer programs for fisheries that occur within their jurisdiction. State observer programs generally occur in fisheries that target species that are not federally managed or target federally managed species in state waters. All of the states within the Greater Atlantic Region have conducted some level of at-sea observations. Excluding lobster observation programs, North Carolina, Maryland, Rhode Island, and Massachusetts have formal programs for one or more areas and/or target species.

Standards for state observer programs are established by the Atlantic Coastal Cooperative Statistics Program (ACCSP) and NMFS. Therefore, much of the

information previously described in section 4.5.1.1 also applies to the state administered observer programs.

4.5.1.3 At-Sea Monitors

The At-Sea Monitor Program was implemented starting in fishing year 2010 to support the Northeast multispecies sector management program, and collects data to verify fishing vessel catch (landings and discards), by species, gear type and area, for the purpose of monitoring sector catch of each stock for which a sector receives Annual Catch Entitlement. Although the programs function similarly, the NEFOP and At-Sea Monitor Program are each tailored to meet specific monitoring objectives. NEFOP observers collect the same fishing vessel catch information, but with an additional focus on biological sampling of catch, including any incidental take of a marine mammal, seabird, or sea turtle. The target coverage rates for at-sea monitors are determined through a separate process apart from NEFOP observer coverage rates. Although at-sea monitors are not specifically deployed as part of the SBRM, the catch and discard data they collect may be used to supplement SBRM data, for example when computing the precision of discard estimates. NEFOP observer coverage assigned under the SBRM for some fishing modes may fulfill a portion of the target coverage rate for at-sea monitors under the At-Sea Monitor Program. The potential effect of SBRM coverage on at-sea monitoring for a particular groundfish sector in a given year would depend on the mix of fishing modes within the sector, the SBRM target coverage, and the available SBRM funding among other factors.

4.5.2 Evaluation and Applicability

Observer-gathered discard information is generally considered the most accurate and objective in recording bycatch and discard information. Observer programs often collect detailed biological information on both catch and discards for all aspects of commercial catch; fish, invertebrates, marine mammals, birds, and protected species. Observers produce quantitative assessments of bycatch and discards. As such, it is often the primary source of bycatch and discard reporting and is the foundation for bycatch and discard estimation. Observer data are utilized extensively in both stock assessment and management actions.

Observer data are preferred over other data sources including FVTR data for a few reasons. Unlike fishermen, who may be performing or managing many fishing-related tasks at once so that reporting bycatch and discards becomes a lower priority than culling retainable catches or navigating their vessel, observers are solely focused on data collection while deployed at sea. In addition, observers are highly trained in their independent functions of data collection and are unlikely to be distracted by other priorities or influenced to misreport information. However, there are different sampling protocols for fishery resources and for marine mammals, and an observer assigned to a vessel primarily as a marine mammal observer may not conduct complete sampling of vessel catch and discards.

Managing an observer program requires dealing with numerous practical and fiscal constraints. Observers must be carefully trained, work under sometimes hazardous conditions, and deal with a variety of circumstances that can arise while at sea on a fishing vessel. Logistical issues, such as having an adequate number of observers available to cover a wide geographic area, numerous ports, and a variety of fisheries; and getting the observers aboard vessels within relatively short windows of time before they intend to sail further add to the complexity and costs of observer programs. Finally, safety issues must be considered in deploying observers. Observers are not deployed aboard vessels that present unsafe or unhealthy conditions. Vessels that may otherwise be safe may not have space or appropriate accommodations to carry observers. Even on a vessel that is determined to be safe and appropriate to accommodate an observer, weather, sea conditions, and the very nature of the commercial fishing business present some risk. As a result, recruitment and retention of observers is challenging.

While observer programs are one of the best ways to collect bycatch and discard information, they are also one of the most expensive means of doing so, due to the costs of rigorous training, recruitment of observers, salaries and benefits (including premium pay while at sea and on-call pay while waiting for a vessel to depart), contractor profit, travel costs, gear and equipment, and insurance (NMFS 2004). Indirect costs include salaries and benefits of NMFS employees that oversee the observer program, sampling design and analytical support, data entry, and database design and maintenance.

State observer programs may be used to provide the same types of discard and bycatch information provided by the Federal observer program. In many instances, the fisheries observed may not involve vessels with Federal fishing permits or may occur on vessels operating exclusively within the jurisdictional waters of a particular state. The data available from state programs may have value in providing information on non-FMP species or about locations not often sampled by the Federal program. Data collected by state programs are coordinated by the ACCSP and available to Federal stock assessment scientists through data sharing agreements.

4.6 Port Sampling (Commercial)

4.6.1 Description

Port agents are NMFS staff and contractors located in the major fishing ports in the Greater Atlantic Region. Port agents are responsible for collecting biological samples of landed catch to characterize commercial landings following standardized sampling protocols. Biological sampling data are linked with FVTR data to identify the statistical area the landed fish were harvested. Length and age samples are used to translate landed weight into numbers of fish landed at age. Landings-at-age data are then grouped with discard-at-age data to develop a total catch-at-age matrix used in analytical stock assessment models.

4.6.2 Evaluation and Applicability

Biological sampling conducted by port agents contributes to the assessment of total catch of species in the Northeast and provides important biological information on FMP species for use in stock assessment and management actions. Port agents do not collect specific information on bycatch or discards. They may receive anecdotal information occasionally during sampling or conversations with fishermen. The length and age data collected by port agents, along with other fishery dependent data sources, are a key component in estimating size and age of catch and, to some extent, are applicable to discard estimates by providing a size distribution for comparison against observer data.

Port agents also facilitate outreach with the fishing industry and dealers regarding reporting issues, new regulations, data quality concerns, and compliance with regulations. Port agents also work with industry to properly identify species through the use of outreach materials such as the skate and protected resources identification guides. Port agents assist in answering industry questions pertaining to data entry on FVTRs and dealer weigh-out reports. As outreach representatives of the agency, port agents help to increase the accuracy and reliability of the fishery-dependent data sources.

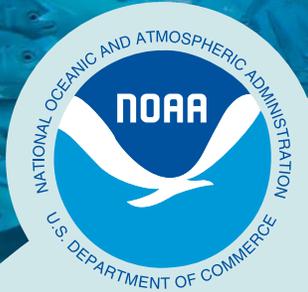
4.7 Recreational Fishery Sampling

4.7.1 Background

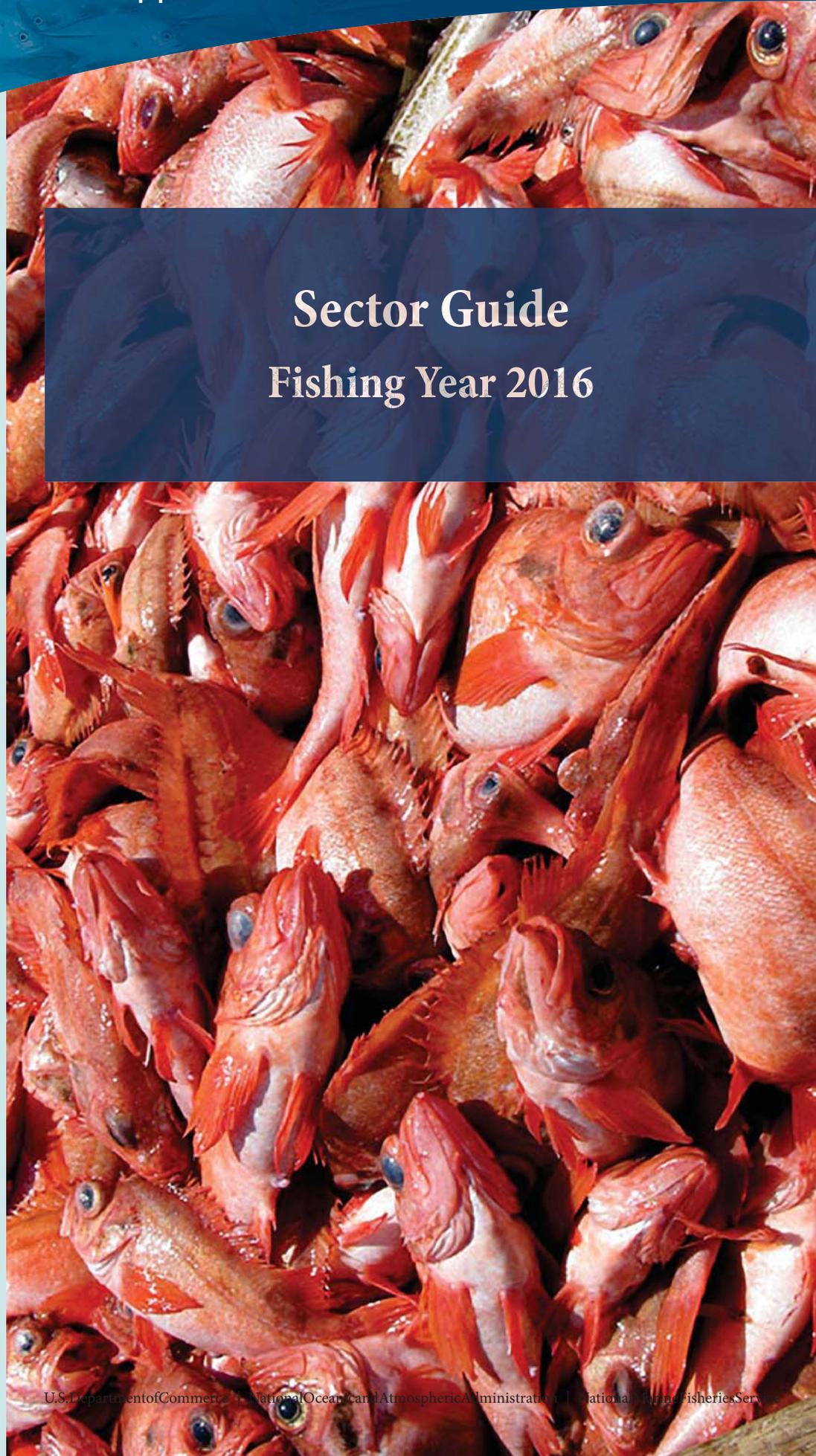
For many fish stocks, catch and discards associated with recreational angling are an increasingly important component of overall fishing mortality. NMFS estimates that in 2011 over 10 million anglers made more than 69 million fishing trips nationwide and caught more than 345 million fish, 60 percent of which were released alive (NMFS 2012). The total weight of recreational catch equates to about 2 percent of the total U.S. commercial harvest (in the states participating in MRIP), but because anglers tend to target relatively few species, the proportion of total catch attributed to recreational fishing on a stock-by-stock basis may be substantially higher. In Atlantic bluefish, for example, the total annual allocation and catch for recreational fishing exceeds the commercial allocation and catch. Accordingly, fishery managers need data on recreational fishing to ensure management actions are informed by estimates of the total impact of the recreational component.

Recreational angling presents NMFS with especially difficult data collection challenges. Angling may occur throughout the EEZ and coastal zone, including estuaries. Effort is broadly dispersed; anglers may work from bridges, piers, public and private beaches, other coastal properties, private docks and boats, and charter and head/party boats.²⁰ Also, recreational catch may not be sold, so aggregation points, such as dealers for commercial fisheries, are not available as data collection nodes.

²⁰The terms “head boat” and “party boat” refer to same thing: boats that take large groups of anglers on a fishing trip. Generally, the anglers purchase individual tickets to fish, and the vessels may carry up to 100



NOAA FISHERIES



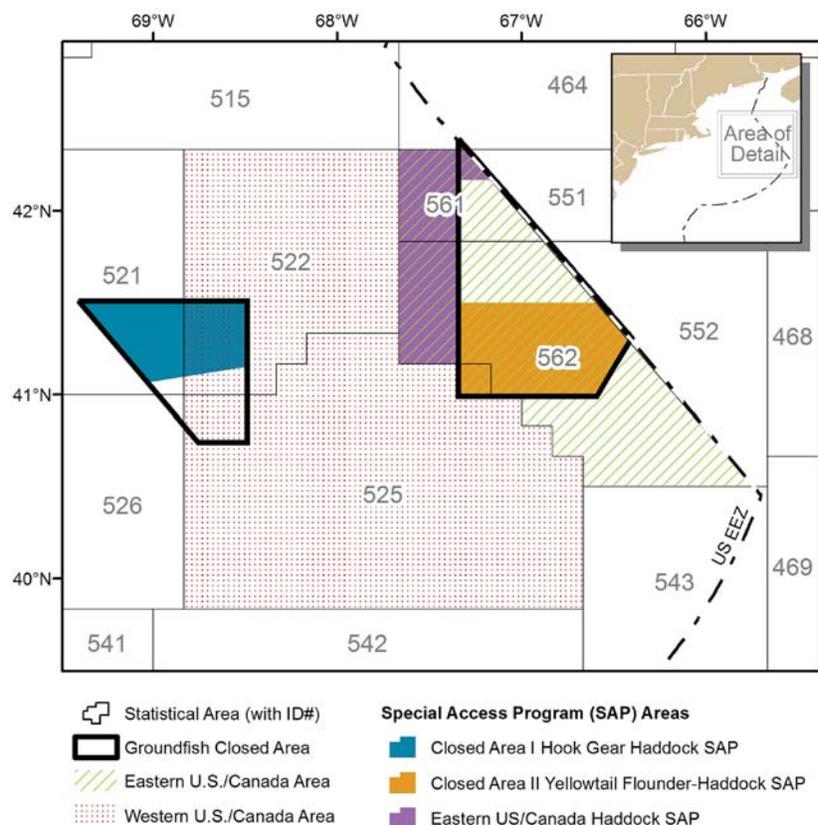
Sector Guide Fishing Year 2016

GARFO Contact Information, by Fishery	1-5
Monitoring and Reporting Flowchart	6-7
Catch Reporting Guidance	8-9
Catch Reporting Flowchart	10
PTNS Instructions	11-13
PTNS FAQ's	14-17
ASM Duties	18-19
VTR Overview	20-22
VTR FAQ's	23-24
Sector Vessel Requirements	25
US/Canada Management Areas & SAP	26-30
Skate	31-33
Spiny Dogfish	34-37
Monkfish	38-44
FOL Instructions	45-46
Reporting Requirement Notes	47
Closed Area Regulations	48-63

Sector US/Canada Management Areas and Special Access Program

Within the U.S./Canada Management Area, Georges Bank cod, Georges Bank haddock, and Georges Bank yellowtail flounder are managed under Total Allowable Catches (TACs), which are developed with Canada. The U.S./Canada Management Area is divided into the Western Area and the Eastern Area. The Eastern Area encompasses the U.S. portion of the U.S./Canada shared stock of Georges Bank cod and Georges Bank haddock, as well as a portion of Georges Bank yellowtail flounder stock. The Western Area encompasses the remaining area of the U.S./Canada Georges Bank yellowtail flounder stock. Within the Eastern Area, there are two special access programs (SAPs), and a third SAP that sits partially within the Western Area.

In fishing year (FY) 2016, sectors have been granted several exemptions that can be used in the U.S./Canada Management Area, including an exemption from trawl gear restrictions. You should review each section of information to determine how it applies to your vessel.



General Requirements of the U.S./Canada Management Area

What are the coordinates of the areas?

The Western and Eastern U.S./Canada Management Areas are defined by the lines connecting the following points:

Western U.S./Canada Area		
Point	N. lat.	W. long.
USCA 1	42° 20'	68° 50'
USCA 2	39° 50'	68° 50'
USCA 3	39° 50'	66° 40'
USCA 4	40° 40'	66° 40'
USCA 5	40° 40'	66° 50'
USCA 6	40° 50'	66° 50'
USCA 7	40° 50'	67° 00'
USCA 8	41° 00'	67° 00'
USCA 9	41° 00'	67° 20'
USCA 10	41° 10'	67° 20'
USCA 11	41° 10'	67° 40'
USCA 12	42° 20'	67° 40'
USCA 1	42° 20'	68° 50'

Eastern U.S./Canada Area		
Point	N. lat.	W. long.
USCA 12	42° 20'	67° 40'
USCA 11	41° 10'	67° 40'
USCA 10	41° 10'	67° 20'
USCA 9	41° 00'	67° 20'
USCA 8	41° 00'	67° 00'
USCA 7	40° 50'	67° 00'
USCA 6	40° 50'	66° 50'
USCA 5	40° 40'	66° 50'
USCA 4	40° 40'	66° 40'
USCA 15	40° 30'	66° 40'
USCA 14	40° 30'	65° 44.3'
USCA 13	42° 20'	67° 18.4'
USCA 12	42° 20'	67° 40'

What is the FY 2016 season?

The portions of the Western and Eastern U.S./Canada Areas that are outside of Closed Areas I and II, are open year-round.

How do I declare a U.S./Canada trip?

Under the groundfish sector declaration screen on your vessel monitoring system (VMS) unit, you must declare one or more of the defined sub-areas (Eastern Area, Western Area, or SAPs) of the U.S./Canada Management Area in Step 4, and one or more broad stock areas (BSAs) in Step 5, prior to leaving the dock. If necessary, call our VMS team at 978-281-9213 for assistance with your VMS declaration.

Can I flex at-sea into any areas?

Yes, a flex is allowed once per trip by adding areas to the initial declaration while you're out fishing and away from the dock. Meaning, your new declaration must include the initial program area(s) and BSA(s) you declared from the dock, in addition to the other information (e.g., gear, DAS type) that was in your initial declaration. Most areas are available to flex into with a few exceptions.

- 1) You're not allowed to flex into the Eastern Area (outside of the SAPs) if your initial declaration didn't include the CA-2 Yellowtail/Haddock SAP or the Eastern U.S./Canada Haddock SAP. Meaning, if your initial declaration is only an Open Area, or an Open Area + Western Area, you can't flex into the Eastern Area. However, you can start in an Open Area and/or the Western Area and flex into any of the three SAPs.
- 2) The same exception applies to the Western Area. You're not allowed to flex into the Western Area if your initial declaration didn't include any of the three SAPs or the Eastern Area. Meaning, if your initial declaration is only an Open Area, you can't flex into the Western Area. However, you can start in an Open Area and flex into any of the three SAPs.

What are the VMS reporting requirements after I declare into the Eastern Area?

If you're declared into the Eastern Area, including the CA-2 Yellowtail/Haddock SAP or the Eastern U.S./Canada Haddock SAP, you must submit a **daily catch report** via VMS. The report must be submitted by 9AM the following day and include all fields. You must enter each chart area fished under Step 4 on the form, and report all groundfish and non-groundfish kept.

If you do not declare the Eastern Area from the dock, and instead use the sector exemption to declare the CA-2 Yellowtail/Haddock SAP or the Eastern U.S./Canada Haddock SAP while at sea (known as flexing), you are required to submit a report indicating all of your catch from that trip up until the time you declared into the SAPs. Once you've declared into either of these SAPs, you must submit **daily reports for the remainder of the trip. Vessels that declare their intent to fish within and outside of the Gulf of Maine Broad Stock Area on the same trip must submit daily VMS catch reports for the duration of the trip.**

What are the VMS reporting requirements if I do NOT declare into the Eastern Area?

If you're declared into the Western Area only and do not flex at sea into either of the Eastern Area SAPs, you must submit a trip level report via VMS. If you only fish in a single broad stock area, only fill out Steps 1 and 2. If you fish in more than one broad stock area, you must fill out all fields, including Step 4 for each chart area fished.

What are my Vessel trip report (VTR) requirements?

If your fishing activity occurs in more than one chart area, you must submit a VTR for each chart area where you started to haul back or retrieve gear. If your tow or the placement of your fixed gear (for example, gillnets) crosses chart area boundaries, the area you report must be the area you were in when you started to retrieve or haul back your gear.

How are my VTRs and VMS catch reports used for catch attribution?

We use the chart areas reported on VMS catch reports and VTRs to apportion catch to specific stock allocations. For example, cod caught in chart area 562 is attributed to Eastern Area cod, while cod caught from chart area 515 is attributed to Gulf of Maine cod.

Do I have groundfish landing limits?

You remain exempt from trip limits for most groundfish species, however, you are allowed one halibut per trip, and may not possess Atlantic wolffish, ocean pout, or windowpane flounder.

What are my gear restrictions this year?

Because of a sector exemption, you may use all approved gear types that are allowed in the GB Regulated Mesh Area (RMA). None of the windowpane flounder AM areas are in effect in FY 2016.

Do I get a DAS credit for fishing only in the Eastern Area?

Yes, if you declare and fish exclusively in the Eastern Area, your DAS are charged only for the time inside the area. If you fish inside and outside of the Eastern Area on the same trip, DAS are charged normal.

Eastern U.S./Canada Area Haddock SAP:

What are the coordinates of the areas?

The Eastern U.S./Canada Haddock SAP Area is defined by lines connecting the following points, in order:

Point	N. lat.	W. long.
1	42° 22'	67° 20'
2	42° 20'	67° 20'
3	42° 20'	67° 40'
4	41° 10'	67° 40'
5	41° 10'	67° 20'
6	42° 10'	67° 20'
7	42° 10'	67° 10'
1	42° 22'	67° 20'

What is the FY 2016 season?

The Eastern U.S./Canada Haddock SAP is open May 1 through December 31.

What are my gear restrictions this year?

You may use all approved gear types that are allowed in the GB RMA.

Closed Area II Yellowtail Flounder/Haddock SAP:

What are the coordinates of the areas?

The CA II Yellowtail Flounder/Haddock SAP is defined by lines connecting the following points in the order listed:

Point	N. lat.	W. long.
1	41° 30'	67° 20'
2	41° 30'	66° 34.8'
3	41° 18.6'	66° 24.8'
4	41° 00'	66° 35.8'
5	41° 00'	67° 20'
1	41° 30'	67° 20'

What is the FY 2016 season?

The CA II Yellowtail Flounder/Haddock SAP is open May 1 through January 31.

What are my gear restrictions this year?

With the exception of a flounder trawl, you may use all approved gear types that are allowed in the GB RMA.

Closed Area I Hook Gear Haddock SAP:

What are the coordinates of the area?

The CA I HGH Access Area is defined by lines connecting the following points, in order:

Point	N. lat.	W. long.
1	41° 09'	68° 30' 68° 30'
2	41° 30'	68° 30' 68° 30'
3	41° 30'	69° 23' 69° 23'
4	41° 04'	69° 01' 69° 01'
1	41° 09'	68° 30' 68° 30'

What are my gear restrictions this year?

If you are declared into and fishing in this SAP, you may only possess on board and fish with demersal longline gear or tub trawl gear.

What is the overall haddock TAC?

For FY 2016, there is a shared Sector and common pool haddock TAC of 6,526 mt for this SAP. Once this TAC is caught, the SAP shall be closed to all NE multispecies vessels

What are my VMS reporting requirements?

You must submit a daily catch report for each day fished in the CA I HGH SAP Area in 24-hr intervals, measured from 0000 hr to 2400 hr. If your sector does not have an exemption from the daily reporting requirement, then the report must be sent to your sector manager. If your sector has an exemption from this requirement, you must submit your daily catch report to us. **Vessels that declare their intent to fish within and outside of the Gulf of Maine Broad Stock Area on the same trip must submit daily VMS catch reports for the duration of the trip.**

What are my sector's reporting requirements?

The sector manager must submit daily reports to us summarizing the sector's: Total pounds of haddock, cod, yellowtail flounder, winter flounder, witch flounder, American plaice, and white hake kept; total pounds of haddock, cod, yellowtail flounder, winter flounder, witch flounder, American plaice, and white hake discarded; date fish were caught; and VTR serial numbers of each trip. Some sectors have an exemption from this requirement, so refer to your operation's plan.

Gear Definitions

Haddock separator trawl: A haddock separator trawl is defined as a groundfish trawl modified to a vertically oriented trouser trawl configuration, with two extensions arranged one over the other, where a codend is attached only to the upper extension, and the bottom extension is left open and does not have a codend attached. A horizontal large-mesh separating panel constructed with a minimum of 6.0-inch diamond mesh must be installed between the selvages joining the upper and lower panels, extending forward from the front of the trouser junction to the aft edge of the first belly behind the fishing circle. **Effective October 31, 2016, the horizontal large-mesh separating panel must be constructed with mesh of a contrasting color to the upper and bottom extensions of the net that it separates.**

Either a two-seam or a four-seam bottom trawl net may be used, provided they meet the requirements below.

- **Two-seam bottom trawl nets:** For two-seam nets, the separator panel must be constructed such that the width of the forward edge of the panel is 80-85 percent of the width of the after edge of the first belly of the net where the panel is attached. For example, if the belly is 200 meshes wide (from selvedge to selvedge), the separator panel must be no wider than 160-170 meshes wide.
- **Four-seam bottom trawl nets:** For four-seam nets, the separator panel must be constructed such that the width of the forward edge of the panel is 90-95 percent of the width of the after edge of the first belly of the net where the panel is attached. For example, if the belly is 200 meshes wide (from selvedge to selvedge), the separator panel must be no wider than 180-190 meshes. The separator panel must be attached to both of the side panels of the net along the midpoint of the side panels. For example, if the side panel is 100 meshes tall, the separator panel must be attached at the 50th mesh.

Ruhle trawl: A Ruhle trawl is defined as a four-seam bottom groundfish trawl with large meshes in the forward panels, reducing in size toward the trawl's codend. All meshes in the forward panels, except for the square and square side panels, must measure at least 7.9 ft. The square and square side panel meshes, and those panel meshes immediately aft of the fishing circle, must measure at least 31.5 inches. The first bottom belly must contain meshes measuring at least 7.9 ft. The second bottom belly meshes must measure at least 31.5 inches. All remaining panels must contain meshes measuring at least 7.9-inches. For complete construction parameters, including fishing circle, sweep, and kite requirements, please see § 648.85(b)(6)(iv)(J)(3).

Flounder trawl: A flounder trawl net is defined as bottom trawl gear meeting one of the following net descriptions:

- A two-seam, low-rise net constructed with 6-inch diamond mesh or 6.5-inch square mesh, where the maximum footrope length is not greater than 105 ft and the headrope is at least 30 percent longer than the footrope. The footrope and headrope lengths shall be measured from the forward wing end. The codend must be either 6.5-inch diamond or 6.5-inch square mesh.
- A two-seam, low-rise net constructed with 6-inch diamond mesh or 6.5-inch square mesh, with the exception that the top panel of the net contains a section of mesh at least 10 ft long and stretching from selvedge to selvedge, composed of at least 12-inch mesh that is inserted no farther than 4.5 meshes behind the headrope. The codend must be either 6.5-inch diamond or 6.5-inch square mesh.