Draft
Omnibus Industry-Funded Monitoring (IFM) Amendment

Summary Information about Midwater trawl Trips in Groundfish Year-Round Closed Areas

Establishing criteria and provisions for midwater trawl access to groundfish year-round closed areas – including requirements for industry-funded observer coverage in these areas – is largely a policy decision to be made by the Council.

Current Requirements for Midwater trawl Vessels in Year-Round Groundfish Closed Areas

Additional sampling and monitoring requirements became effective for midwater trawl vessels fishing in Closed Area 1 in late 2010; Amendment 5 to the Atlantic Herring FMP (March 2014) extended those requirements to all of the year-round groundfish closed areas. The following management measures apply to midwater trawl vessels fishing in the year-round groundfish closed areas:

- Midwater trawl vessels are **required to carry an observer on 100%** of trips in the groundfish year-round closed areas. If an observer cannot be provided, the midwater trawl vessel is prohibited from fishing in the year-round groundfish closed areas on that fishing trip.
- Vessels are required to **pump aboard all fish** from the net for inspection and sampling by the observer. Vessels that do not pump fish are required to bring all fish aboard the vessel for inspection and sampling by the observer. Unless specific conditions are met (see below), vessels are prohibited from releasing fish from the net, transferring fish to another vessel that is not carrying a NMFS-approved observer, or otherwise discarding fish at sea, unless the fish have first been brought aboard the vessel and made available for sampling and inspection by the observer.
- Vessels may make short **test tows** in the area to check the abundance of target and non-target species without pumping or bringing the fish on board if the net is reset without releasing the contents of the test tow. In this circumstance, catch from the test tow will remain in the net and would be available to the observer to sample when the subsequent tow is pumped out or all fish are brought aboard.
- Fish that have not been pumped or brought aboard may be released (**slippage**) if the vessel operator finds that:
  (1.) Pumping the catch or bringing all fish aboard could compromise the **Safety** of the vessel;
  (2.) **Mechanical Failure** precludes bringing some or all of the catch aboard the vessel; or
  (3.) **Spiny Dogfish** have clogged the pump and consequently prevent pumping of the rest of the catch.
- If the net is released for any of the reasons stated above, the vessel operator is required to complete and sign a **Released Catch Affidavit Form** (available from NMFS) providing information about where, when, and why the net was released, as well as a good-faith

estimate of the total weight of fish caught on the tow and weight of fish released. Released Catch Affidavit Forms are required for all slippage events and must be submitted within 48 hours of completion of the fishing trip.

- Midwater trawl vessels are required to **leave the closed area for the remainder of the fishing trip** if a slippage event occurs in the closed area for any of the three reasons (1) safety; (2) mechanical failure; or (3) spiny dogfish.
- **Operational discards are prohibited** on observed midwater trawl trips in the year-round groundfish closed areas. If fish remain in the net at the conclusion of pumping operations, those fish must be brought on board the vessel and made available for sampling and inspection by the observer, unless one of the other three slippage exemptions applies.

**Upon implementation of the omnibus habitat amendment, the above provisions would apply to the remaining year-round groundfish closed areas.*

[INSERT MAP]

Amendment 5 Analysis

The analysis in the FEIS for Amendment 5 to the Atlantic Herring FMP evaluated the proportion of Atlantic herring fishing effort that may occur in the year-round groundfish closed areas based on 2005-2010 fishery data. While somewhat dated, this information is still useful to generally characterize the proportion of the Atlantic herring fishery that may occur in the year-round groundfish closed areas, recognizing that fish availability, observer coverage requirements, and other regulations have likely affected fishing patterns in recent years to some extent.

Table 1 characterizes the spatial distribution of the midwater trawl directed Atlantic herring fishery relative to the five year-round groundfish closed areas from 2005-2010. The data in Table 1 were pulled based on midwater trawl trips landing 2,000 pounds or more Atlantic herring from 2005-2010. At that time, approximately 9-12% of Atlantic herring fishing (as measured by revenues, catch, and fishing effort) occurred in the five multispecies year-round closed areas. Vessels fished for Atlantic herring in Closed Area I the most during these years.

Table 1 Herring Fishing Effort and Revenues in the Groundfish Closed Areas 2005-2010

	Cashes Ledge	Closed Area I	Closed Area II	NLSCA	Western GOM	Subtotal Closed Areas	Open Areas	Grand Total
Fishing Time (hours)	1.5%	3.8%	1.2%	0.5%	2.2%	9.2%	90.8%	100%
Atlantic Herring Catch	1.7%	3.8%	1.4%	1.8%	2.8%	11.5%	88.5%	100%
Atlantic Herring Revenue	2.1%	4.6%	1.8%	0.8%	3.1%	12.4%	87.6%	100%

Updated Observer Data from Groundfish Closed Areas

Increased monitoring requirements for midwater trawl vessels in groundfish closed areas have been effective in Closed Area 1 since 2010 and in all other year-round groundfish closed areas since the implementation of Amendment 5 in March 2014. To evaluate the need for additional monitoring (industry-funded) in the year-round groundfish closed areas, observer data from Atlantic herring trips in these areas from 2010-2014 were queried and are summarized below.

Figure 1 summarizes observed Atlantic herring catch on midwater trawl trips targeting Atlantic herring from 2010-2014 for any trips with a begin or end haul location within a groundfish closed area (any haul starting or ending in a groundfish closed area during the trip). From 2010-2014, there were 149 observed midwater trawl trips with at least one haul starting or ending in a groundfish closed area. With the exception of 2012, the Atlantic herring catch observed on these trips represented less than 10% of the total Atlantic herring catch for the year (19% of the total Atlantic herring catch in 2012 was observed on these trips).

Figure 1 Observed Atlantic Herring Catch on Midwater Trawl Trips in Groundfish Closed Areas (2010-2014)

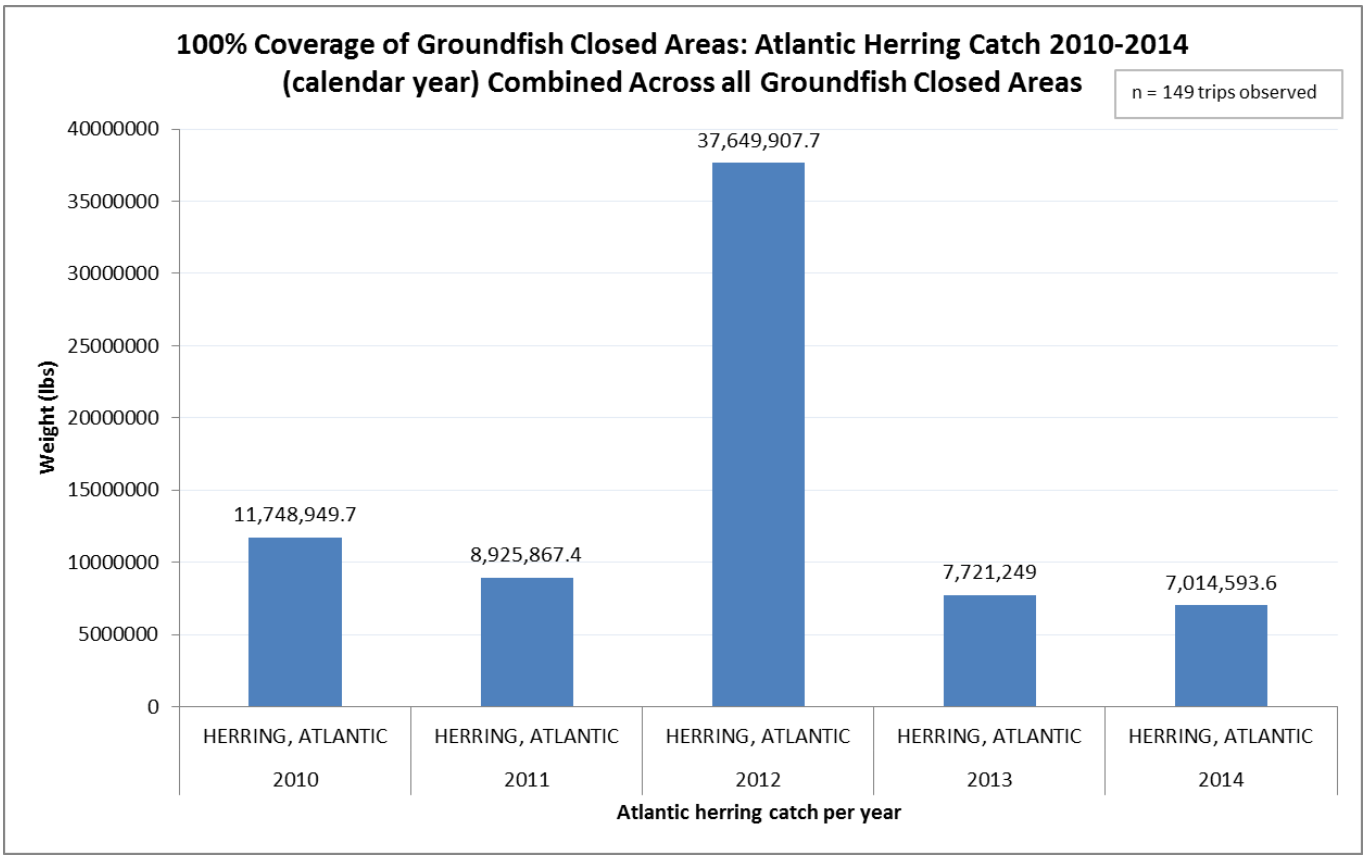
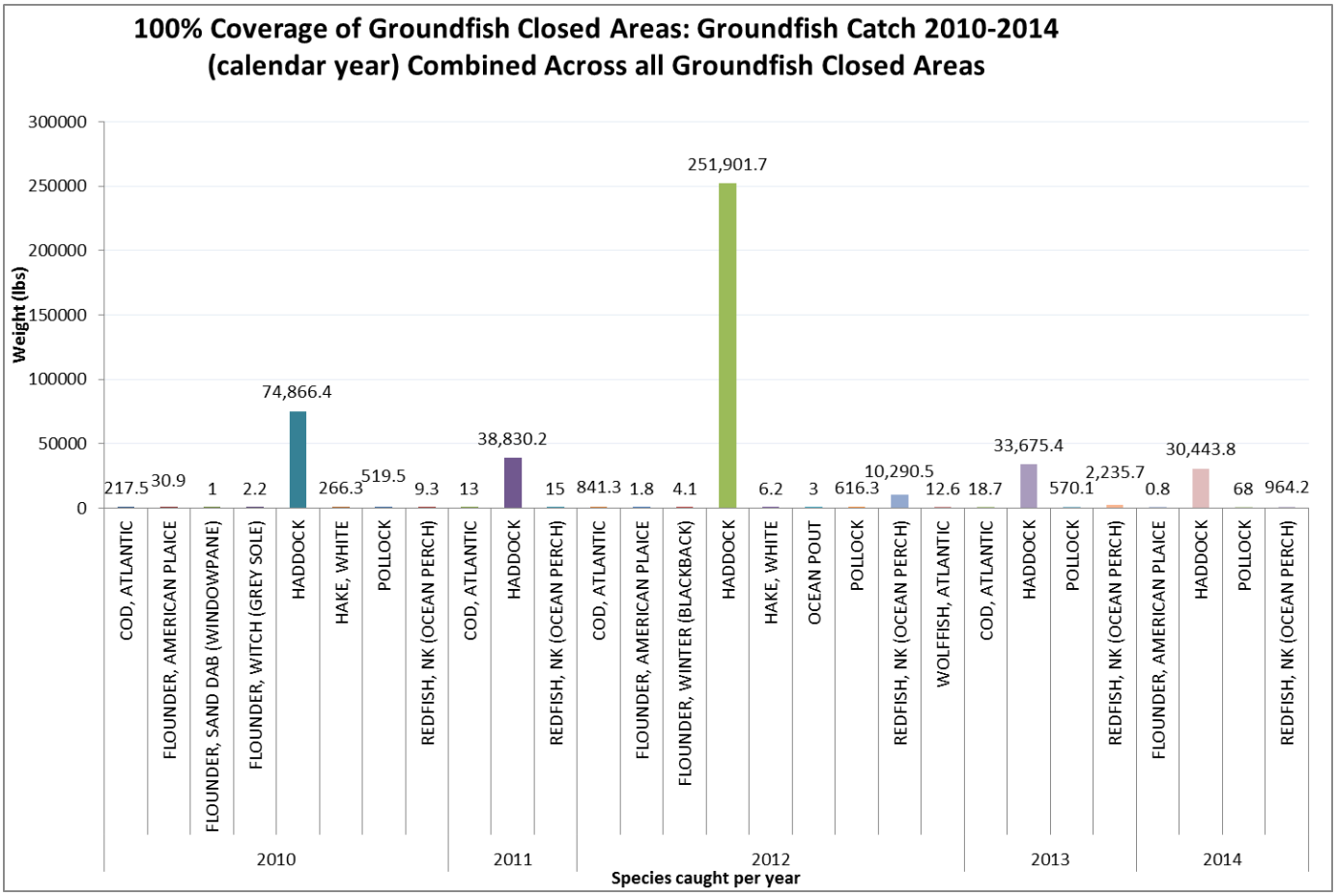


Figure 2 summarizes the groundfish catch observed on the 149 midwater trawl trips with at least one haul starting or ending in a groundfish closed area from 2010-2014. The vast majority of observed groundfish catch by midwater trawl vessels in the groundfish closed areas is haddock. Aside from haddock, pollock, redfish, and small amounts of other multispecies were caught by midwater trawl vessels in the groundfish closed areas.

Figure 2 Observed Groundfish Catch on Midwater Trawl Trips in Groundfish Closed Areas (2010-2014)



Haddock comprises the largest component of groundfish bycatch by midwater trawl vessels, and the catch of haddock by these vessels is managed by the Council through a catch cap (Framework 46 to the Multispecies FMP) and increased sampling/monitoring (Amendment 5 to the Atlantic Herring FMP). Vessels issued a Category A/B Atlantic herring permit and on a declared herring trip, regardless of gear or area fished, and or a vessel issued a Category C permit and/or an Category D permit (open access) that fishes with midwater trawl gear in Areas 1A, 1B, and 3 are **prohibited from discarding haddock at-sea**. These vessels are limited to possessing/landing up to 100 lb. of other NE multispecies. Atlantic herring **processors and dealers are required to separate out, and retain** such haddock for at least 12 hours for inspection by authorized NMFS officers. However, haddock or other NE multispecies separated from the herring catch may not be sold, purchased, received, traded, bartered, or transferred, or attempted to be sold, purchased, received, traded, bartered, or transferred for, or intended for, human consumption.

Further investigation of the 18 observed midwater trawl trips (single and paired) that entered the year-round groundfish closed areas during 2014 (all trips in the groundfish closed areas occurred June – September 2014) showed that these vessels are generating almost 100% of their revenues

on these trips from the catch of Atlantic herring. Single midwater trawl vessels generated a small fraction (less than 2%) of revenues on these trips from whiting, redfish, and illex squid; pair trawl vessels generated 100% of their revenues on these trips from Atlantic herring.

Haddock Catch Cap in the Atlantic Herring Fishery

Table 2 summarizes haddock catch in the Atlantic herring fishery by herring vessels subject to the haddock catch caps during the 2006 – 2010 groundfish fishing years (May 1 – April 30). The catch cap was not applied by gear type and haddock stock area during this time period, and data from observed tows only were counted against the cap for those years. The catch in the GOM and GB areas was combined for the report/data for these years (2006-2010). With the implementation of Framework 46 to the Multispecies FMP in the 2011 fishing year, the haddock catch cap was split into two areas (GOM and GB) and applied to herring midwater trawl vessels.

Table 2 Haddock Catch by Midwater Trawl Vessels Subject to Haddock Catch Cap (2006-2010)

FY	2006	2007	2008	2009	2010
Areas	**Gulf of Maine and Georges Bank Combined**				
Haddock Cap in Lbs.	161,377 (73 mt)	404,991 (184 mt)	541,925 (246 mt)	316,218 (143 mt)	189,597 (86 mt)
Haddock Catch in Lbs.	18,067 (8 mt)	13,496 (6 mt)	37,126 (17 mt)	52,382 (24 mt)	153,382 (70 mt)
% of Cap	11.2	3.3	6.8	16.5	81

Catch Caps are based on groundfish fishing year (May 1 – April 30).
Source: NOAA/NMFS (http://www.nero.noaa.gov/ro/fso/reports/reports_frame.htm)

Under Framework 46, the midwater trawl fleet (which includes both single and paired midwater trawl vessels) is subject to a stock-specific cap on haddock catch that is equal to 1% of the GB haddock ABC and 1% of the GOM haddock ABC. Haddock catch estimates are calculated by expanding NEFOP sea sampling observations to the entire fleet by haddock stock area. The method for estimating haddock catch by midwater trawl herring vessels matches the method used for estimating catch and discards in the multispecies fisheries. This method replaces estimated pounds with observed pounds where available. The cumulative method uses catch from the entire year to estimate a haddock catch ratio for each herring stock area. The haddock bycatch ratio is calculated for a stock area by dividing observed haddock catch for the year by the observed kept-all (total amount of all species) for the year. Haddock catch on unobserved trips is then estimated by multiplying the catch ratio by the kept all from all unobserved herring midwater trawl vessels fishing within that haddock stock area.

Table 3 summarizes haddock catch by the herring midwater trawl vessels from 2011-2014. Starting in 2011, data used to estimate/monitor the cap include observer data, vessel trip reports (VTR), and dealer reports. During the 2012 groundfish fishing year, the haddock catch cap was fully utilized in the GB area. The 2013 Georges Bank cap was slightly exceeded. As a result, the 2014 catch cap was adjusted downward from 179 mt to 162 mt to account for the overage.

There remains very little catch of Gulf of Maine haddock by midwater trawl vessels in the Atlantic herring fishery.

Table 3 Haddock Catch by Midwater Trawl Vessels Subject to Haddock Catch Cap (2011-2014)

FY	2011		2012		2013		2014	
Areas	**GB**	**GOM**	**GB**	**GOM**	**GB**	**GOM**	**GB**	**GOM**
Haddock Cap in Lbs.	701,063 (318 mt)	24,251 (11mt)	630,516 (286 mt)	19,841 (9 mt)	601,862 (273 mt)	6,613 (3 mt)	394,627 (162 mt)	6,613 (3 mt)
Haddock Catch in Lbs.	223,546 (101 mt)	5,544 (3 mt)	628,317 (285 mt)	0 (0 mt)	628,317 (285 mt)	220 (0.1 mt)	251,503 (114 mt)	0 (0 mt)
% of Cap	**32%**	**23%**	**100%**	**0%**	**105%**	**2%**	**70%**	**0%**

Catch Caps are based on groundfish fishing year (May 1 – April 30).
Source: NOAA/NMFS (http://www.nero.noaa.gov/ro/fso/reports/reports_frame.htm)

The haddock catch caps for FY2015 (May 1, 2015 – April 30, 2016) are 227 mt for the Georges Bank stock and 14 mt for the Gulf of Maine stock. Based on data reported through August 12, 2015, almost 8% of the GB catch cap and none of the GOM catch cap has been utilized by the midwater trawl fleet.

Slippage by Midwater Trawl Vessels

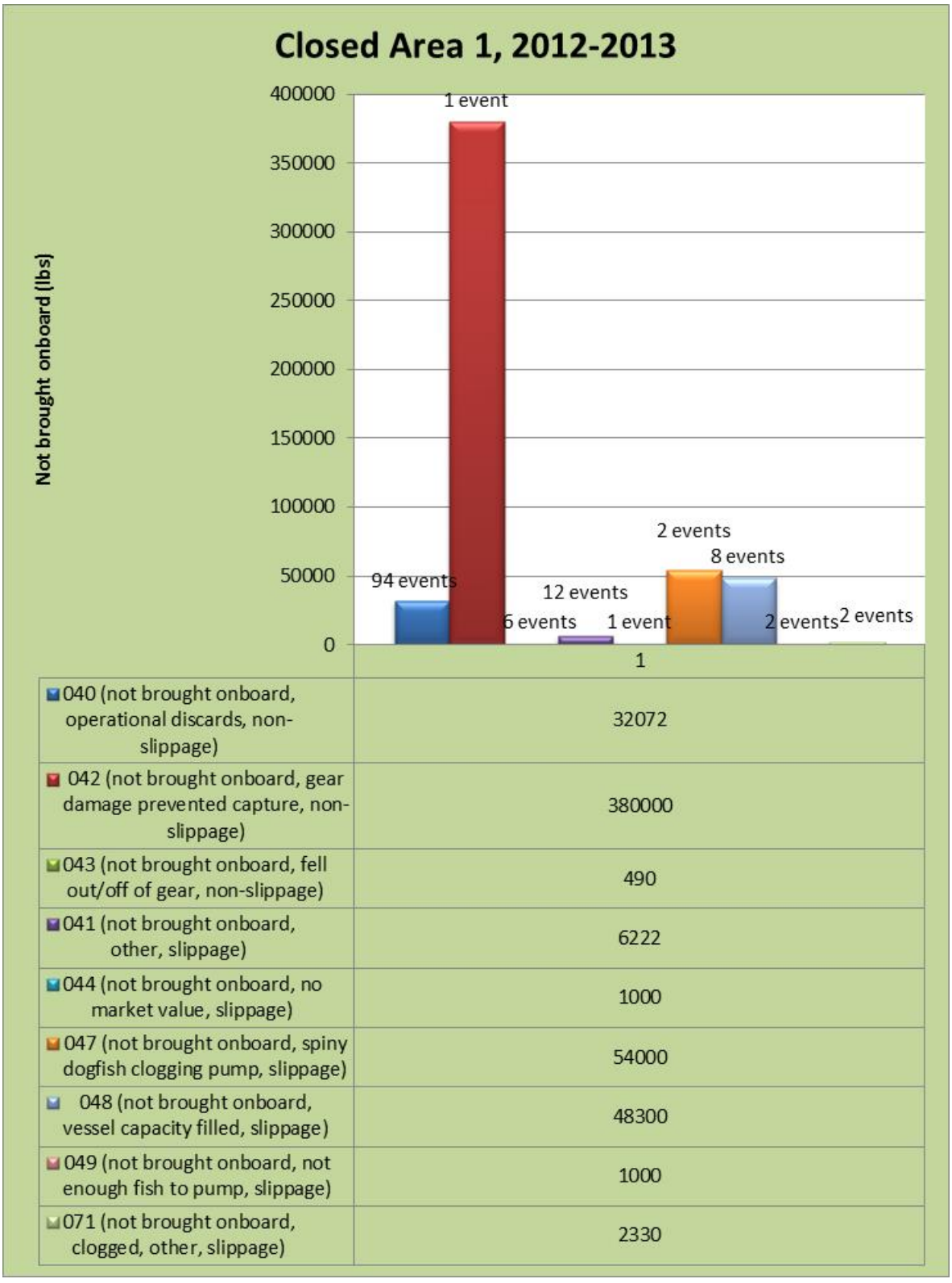
An important consideration related to observer coverage and industry-funded monitoring requirements in the year-round groundfish closed areas relates to the need to document slippage events in the Atlantic herring fishery. Observer data for 2012, 2013, and 2014 were queried for additional information about slippage that may have been observed in the year-round groundfish closed areas. Most of the observer data is for Closed Area 1, as the requirement for 100% observer coverage in the other groundfish closed areas was not implemented until 2014. Information from 2012 and 2013 is summarized in a combined manner below; preliminary observer data for slippage events in the closed areas during 2014 is summarized separately.

Across the entire Atlantic herring fishery, 64 slippage events and 231 operational discard events were observed on 348 midwater trawl trips during 2012 and 2013. Twenty seven (27) of these events were observed to have occurred on tows that either started or ended in Closed Area I. One very large released catch event was observed in Area 3 and recorded to be due to gear damage (380,000 pounds); in this instance, the net tore and released a large catch before it could be brought on board. This event actually occurred in Closed Area I (see Table 4 and Figure 3). The amount of fish estimated to be released during this event (380,000 pounds) totaled almost as much as the estimated slipped catch on all 64 observed slippage events on midwater trawl vessels over the two year time period (473,982 pounds). Of the 473,982 pounds estimated by observers to be slipped by midwater trawl vessels during 2012 and 2013, 29% of these fish was slipped on events that were due to spiny dogfish clogging the pump. Of the 112,852 pounds estimated by observers to be released in Closed Area I during 2012 and 2013, 48% was slipped on events that were due to spiny dogfish clogging the pump.

Table 4 Summary of NEFOP Observer Data for Catch Not Brought on Board, 2012-2013 Observed Midwater Trawl Trips (Single and Paired) *in Closed Area I*

CLOSED AREA 1: Midwater trawl, paired & single			
	NOT BROUGHT ONBOARD		
AREA 3: CLOSED AREA 1	**SLIPPAGE EVENTS**		**NON-SLIPPAGE EVENTS**
			Other
Closed Area 1	**27**		94: Operational Discards 1: Gear damage 6: Fell from gear
Total Trips 91	**Total Kept Atl. Herring 34,939,236 lbs**	**Total Slipped Catch 112,852 lbs**	**Total Non-slipped Catch 412,562 lbs**
Total Slippage (or non-slippage)/Total Kept	**N/A**	**0.3%**	**1%**
TOTAL SLIPPED CATCH		**112,852 lbs**	
% dogfish		**48%**	
% safety		**0%**	
% mechanical failure		**0%**	

Figure 3 Number of Events and Estimated Weight of Catch Not Brought on Board by Disposition Code, 2012-2013 Observed Midwater Trawl Trips *in Closed Area I*



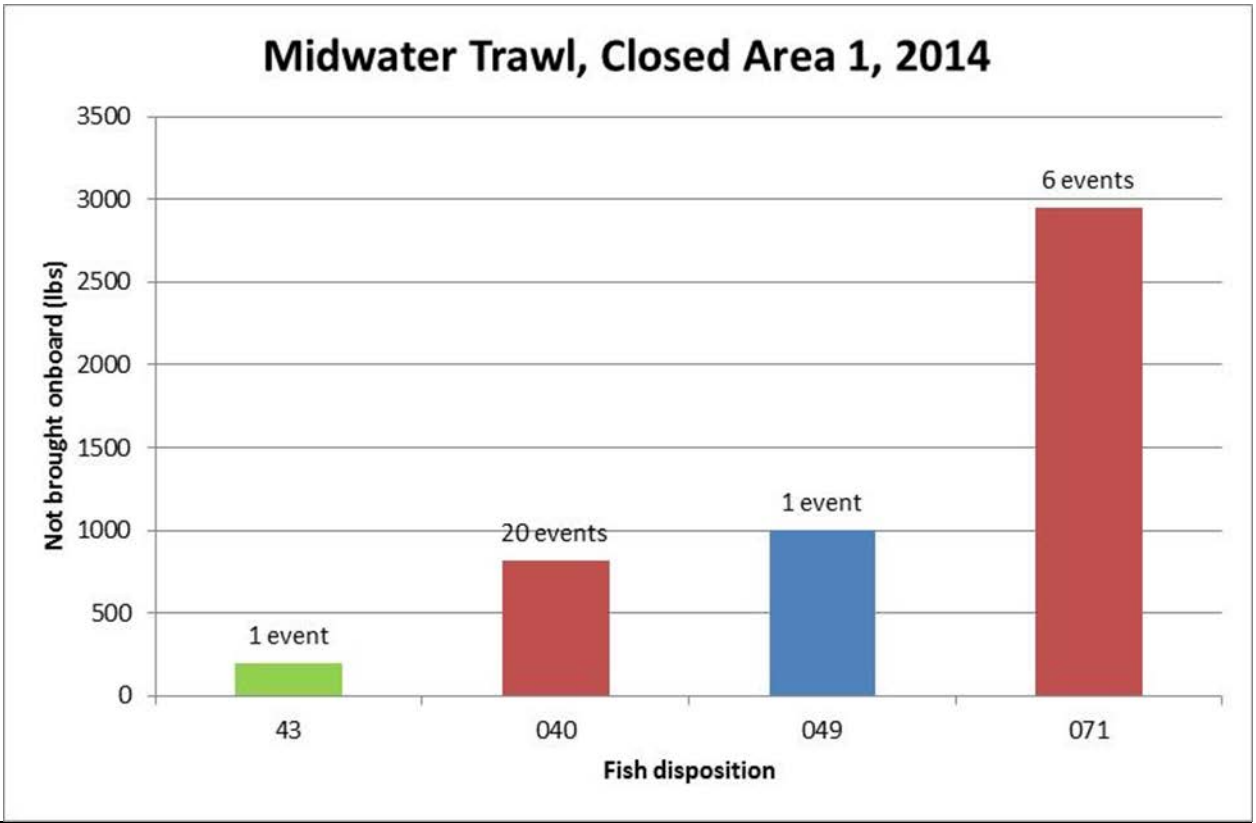
	1
040 (not brought onboard, operational discards, non-slippage)	32072
042 (not brought onboard, gear damage prevented capture, non-slippage)	380000
043 (not brought onboard, fell out/off of gear, non-slippage)	490
041 (not brought onboard, other, slippage)	6222
044 (not brought onboard, no market value, slippage)	1000
047 (not brought onboard, spiny dogfish clogging pump, slippage)	54000
048 (not brought onboard, vessel capacity filled, slippage)	48300
049 (not brought onboard, not enough fish to pump, slippage)	1000
071 (not brought onboard, clogged, other, slippage)	2330

In 2014, seven slippage events were observed to have occurred on midwater trawl tows that either started or ended in Closed Area I (see Table 5 and Figure 4). There were also two observed operational discard events by midwater trawl vessels on trips that fished in the western Gulf of Maine closed area during 2014, totaling an estimated 60 pounds.

Table 5 Summary of NEFOP Observer Data for Catch Not Brought on Board, 2014 Observed Midwater Trawl Trips (Single and Paired) *in Closed Area I*

CLOSED AREA 1: Midwater trawl, paired & single			
	NOT BROUGHT ONBOARD		
AREA 3: CLOSED AREA 1	**SLIPPAGE EVENTS**		**NON-SLIPPAGE EVENTS**
			Other
Closed Area 1	**7**		20: Operational Discards 1: Not brought onboard, fell out/off of gear
Total Trips 23	**Total Kept Atl. Herring 10,469,157 lbs**	**Total Slipped Catch 3,950 lbs**	**Total Non-slipped Catch 1,016 lbs**
Total Slippage (or non-slippage)/Total Kept	**N/A**	**0.3%**	**1%**
TOTAL SLIPPED CATCH		**3,950 lbs**	
% dogfish		**0%**	
% safety		**0%**	
% mechanical failure		**0%**	

Figure 4 Number of Events and Estimated Weight of Catch Not Brought on Board by Disposition Code, 2014 Observed Midwater Trawl Trips *in Closed Area I*



Fish disposition	Hailweight
043 (not brought onboard, fell out/off of gear, non-slippage)	200 lbs
040 (not brought onboard, operational discards, non-slippage)	816 lbs
049 (not brought onboard, not enough fish to pump, slippage)	1,000 lbs
071 (not brought onboard, clogged other, slippage)	2,950 lbs