

# **Atlantic States Marine Fisheries Commission**

## **WHITE PAPER ON ATLANTIC HERRING AREA 1A FISHERY PERFORMANCE IN 2015 AND 2016**

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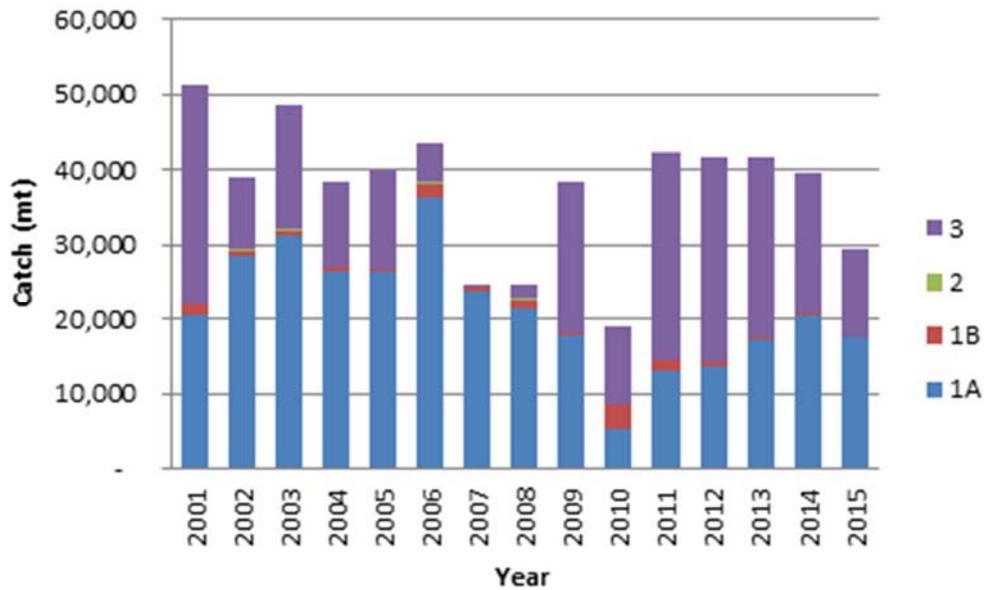
### **I. OVERVIEW**

This white paper provides an overview of Area 1A Atlantic herring management, landings and alternative management tools for consideration by the Atlantic Herring Section when it meets to discuss fishery performance in October 2016. It is being brought forward by a subset of the Section (member states of Maine, New Hampshire and Massachusetts) to elevate to the full Section issues that were identified during recent days out discussions. In particular, the accelerated pace of Area 1A Trimester 2 landings and the increasingly dynamic nature of days out measures to control Trimester 2 effort that have varied across states. The list of identified alternative management tools to address these issues is not a comprehensive list and should be viewed as topics to discuss, not pre-determined pathways.

### **II. INTRODUCTION**

The Atlantic herring summer and early fall fishery (June-September) recently has been most active in Areas 1A and 3 (Figure 1). Demand is primarily driven by lobstermen during this timeframe because herring is the preferred bait for lobster traps. Traditionally, inshore (Area 1A) and offshore (Area 3) herring landings combined with (inshore) effort controls have supplied fishermen and the bait market with adequate amounts of herring. The primary effort controls in Area 1A are landing day restrictions and seasonal quotas.

In 2015 and early in the 2016 fishing season, the Area 1A seasonal quota was harvested at an above-average rate and there were concerns about the availability of Atlantic herring bait throughout the summer and early fall months (June-September). In response, Atlantic Herring Section members from Maine, New Hampshire and Massachusetts reduced the number of landing days available to herring harvesters in Area 1A. In 2016, Maine took additional measures to restrict fishing days, weekly landings, at-sea transfers, etc. to further slow the rate of harvest.



**Figure 1. Harvest by Management Area from June through September, 2001-2015**  
**Source: NMFS**

### III. BACKGROUND

#### DESCRIPTION OF AREA 1A MANAGEMENT

The U.S. Atlantic herring fishery is currently managed through complementary fishery management plans (FMPs) by the Atlantic States Marine Fisheries Commission (ASMFC) and the New England Fishery Management Council (NEFMC). The stockwide annual catch limit (ACL) is divided amongst four distinct management areas: inshore Gulf of Maine (Area 1A), offshore Gulf of Maine (Area 1B), Southern New England/Mid-Atlantic (Area 2), and Georges Bank (Area 3). The Area 1A fishery is managed by ASMFC’s Atlantic Herring Section, which includes representatives from Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York and New Jersey.

The Section can use bi-monthly or trimester seasonal quotas to distribute the Area 1A sub-ACL to best meet the needs of the fishery. The actual splits (amounts or percentages by months or trimesters) are set as part of the annual specifications process. Since 2009 (Addendum I to Amendment 2), the Section has split the Area 1A sub-ACL into trimesters as follows:

**Table 1. Current seasonal quota allocation of the Area 1A sub-ACL**

Trimester 1	January 1 - May 31	0% <sup>1</sup>
Trimester 2	June 1 – September 30	72.8%
Trimester 3	October 1 – December 31	27.2%

<sup>1</sup> NEFMC has proposed a seasonal Area 1A sub-ACL division of 0% from January-May in the 2013-2015 and 2016-2018 specifications.

The Section also utilizes days out of the fishery to slow the rate of Area 1A catch so the seasonal quota can be spread throughout the entirety of each trimester. The phrase 'day out' originally meant one could not fish or land on a day out of the fishery. At present, it refers to a no landing day. Prior to each trimester, Section members from states adjacent to Area 1A (Maine, New Hampshire and Massachusetts), with input from stakeholders, set the number of Area 1A landings days per week via a Days Out Meeting.

At each Days Out Meeting the Atlantic Herring Technical Committee provides projected landing day scenarios based on the catch rates from the previous three years. The states adjacent to Area 1A agree to the start date, the numbers of days out of the fishery per week, as well as which consecutive days of the week a vessel can land Atlantic herring. For example, '4 days out' would be interpreted on a weekly basis, meaning 4 consecutive days out of each week will be no landings days. If states cannot agree on the specific days out then the decision will go before the full Section at the next ASMFC meeting or at a special meeting of the Section called by the Chair. Adjustment to the days out can only be made if states hold another meeting or conference call.

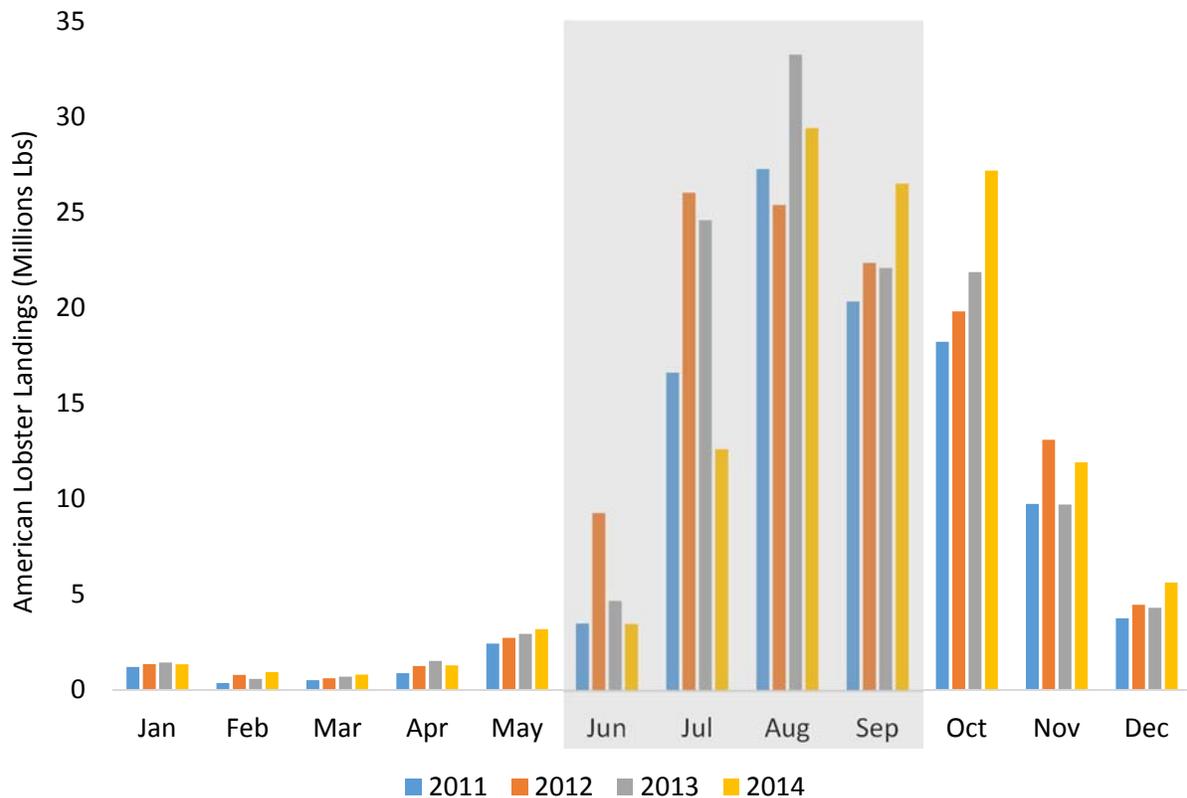
### **HISTORY OF AREA 1A EFFORT CONTROLS**

The days out management measures, first implemented in 1999 via Amendment 1 to the Atlantic Herring FMP, established fixed days out of the fishery relative to harvest levels. It was called a 'day out' because a vessel could not land or fish on the designated days out. For example, Friday, Saturday and Sunday were no landing/fishing days when 75% of the total allowable catch was expected to be exceeded; at 90%, Monday also became a no landing/fishing day. Amendment 2 (2006) removed the fixed landing days and allowed Section members to decide the specific days out of the fishery, as long as they were consecutive days. Consecutive days are seen as more effective because the fishery has to wait a period of time before resuming fishing efforts.

In the 2007 and 2008 fishing years there was a bait shortage due to a reduced Area 1A quota and increased effort including an increase in the number of carrier vessels. The Section took action via Addendum I to Amendment 2 (2009) by creating seasonal quotas (bi-monthly periods or trimesters) to control effort and distribute the quota seasonally. In addition, a process to determine days out of the fishery was established, and the prohibition on fishing during a day out was removed due to jurisdictional concerns from the ASMFC Law Enforcement Committee. These days out measures and seasonal quotas are the primary effort controls in the Area 1A fishery.

### **AREA 1A EFFORT CONTROLS IN PRACTICE**

The majority (72.8%) of the Area 1A sub-ACL has been allocated during the months of June through September (Trimester 2). This time period largely overlaps with the peak months for lobster landings (Figure 2), where herring is the most widely used bait type (Dayton et al 2014).



**Figure 2. Monthly landings of American lobsters in Maine (2011-2014). The months within Trimester 2 of the Atlantic Herring Area 1A fishery are shaded in grey. Source: ACCSP**

Table 2 shows the historical landing days during Trimester 2 of the Area 1A fishery. At the start of the season, managers make planned landing day adjustments based on fishery performance from previous years. At times, managers have to make reactionary changes in-season to increase or decrease the landings days based on the amount of seasonal quota available.

In 2011, 2012 and 2014 managers gradually increased the amount of landing days such that Trimester 2 ended with seven landing days to ensure the seasonal quota was harvested. In 2013, the season opened with seven landing days and was restricted to zero landing days by the beginning of September. In 2015, managers planned to gradually increase the amount of landing days, but instead the fishery was restricted to zero landing days by the end of August. In 2016, the Section planned to gradually increase the number of landing days in June/July, however, higher than expected landings in the latter half of June resulted in landing day restrictions in mid-July and mid-September.

**Table 2. Area 1A Landing Days during Trimester 2 (2011-2016)**

Year	Trimester 2	Landing Days	Comments
2011	June 1 – June 26	2	3 in-season planned changes; 1 reactionary
2011	June 27 – July 17	3	
2011	July 18 – Aug 7	4	
2011	Aug 8 – Sept 30 ( <i>reactionary</i> )	7	
2012	June 1 - 30	2	3 in-season planned changes
2012	July 1 – 14	4	
2012	July 15 – Sept 30	7	
2013	June 1 – Sept 30	7	1 reactionary in-season change
2013	Sept 9 – 30 ( <i>reactionary</i> )	0	
2014	June 1 – July 6	5	1 reactionary in-season change
2014	July 7 – Sept 30 ( <i>reactionary</i> )	7	
2015	June 1- July 5	5	2 in-season planned changes; 1 reactionary
2015	July 6 – Aug 27	7	
2015	Aug 28 – Sept 30 ( <i>reactionary</i> )	0	
2016	June 1 – 30	3	3 in-season planned changes; 2 reactionary
2016	July 1-14	4	
2016	July 15-23	5	
2016	July 24 – Sept 17 ( <i>reactionary</i> )	2	
2016	Sept 18 – Sept 30 ( <i>reactionary</i> )	0	

#### IV. RECENT CONCERNS ABOUT AREA 1A FISHERY PERFORMANCE

##### **2015 FISHING SEASON**

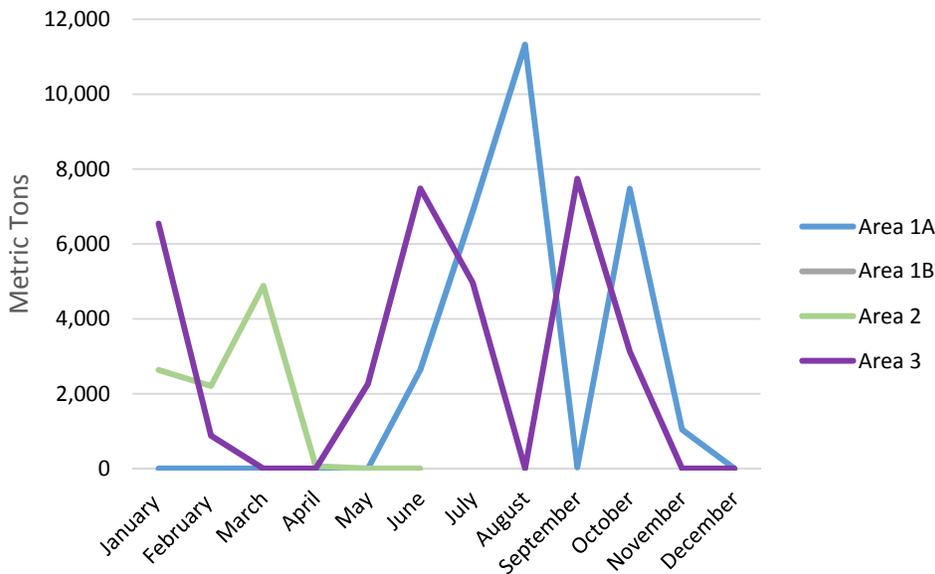
*Concern: In Area 1A the rate of landings accelerated in August such that the seasonal quota was exceeded on August 28; triggering a zero landing day scenario for all of September.*

During June – September, the focal months of the white paper, the source of Atlantic herring landings were from Area 1A and Area 3. Figure 3 provides a monthly overview of Atlantic herring landings in 2015. Figure 4 shows a July/August increase in Area 1A landings as Area 3 landings became stagnant, likely due to Georges Bank haddock catch cap concerns<sup>2</sup>. Based on preliminary haddock data, 63% of the Georges Bank haddock catch cap had been used by the midwater trawl fleet at the end of July (Table 3)—Area 3 landings decreased sharply in August. This lack of Area 3 landings in August disrupted the flow of herring supply to markets and put more pressure on Area 1A.

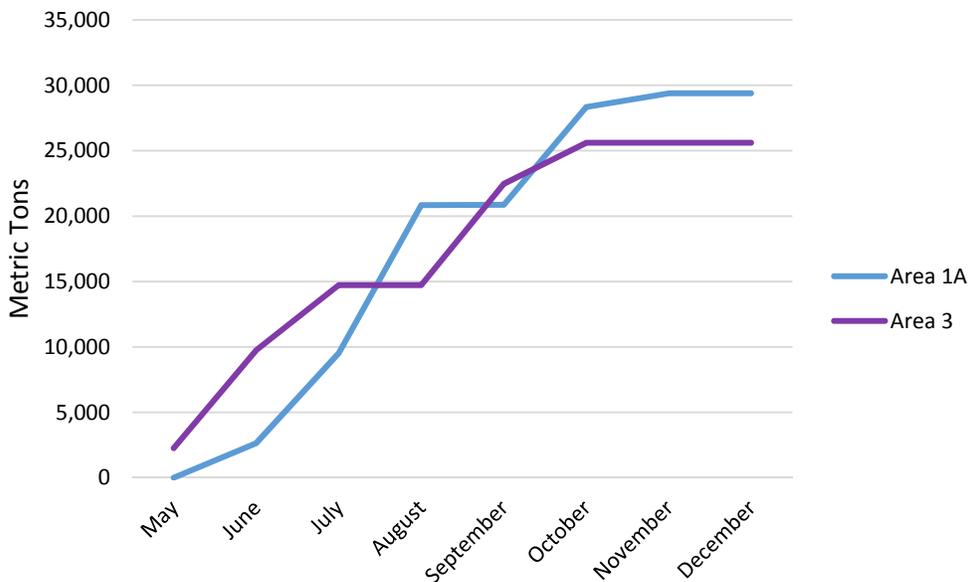
On August 26, the Commission scheduled an emergency days out call to discuss the increase in Area 1A landings. Some harvesters agreed to stop fishing until the next landings report was

<sup>2</sup> Haddock comprises the largest component of groundfish bycatch by midwater trawl vessels directing on herring, and the catch of haddock by these vessels is managed by the New England Fishery Management Council (NEFMC) through a catch cap and increased monitoring/sampling (Amendment 5 to the NEFMC Atlantic Herring FMP).

released. Ultimately, the sudden increase in effort in August could not be diminished by decreasing the number of landing days, rather the Area 1A fishery moved to zero landing days on August 28. As a result, Atlantic herring vessels could not fish in Area 1A during the month of September, when demand for herring is strong. Area 1A re-opened for Trimester 3 on October 5, 2015 with three landing days and closed on November 9, 2015.



**Figure 3. 2015 Monthly Atlantic Herring Landings by Management Area**  
**Source: NMFS. This is preliminary landings data, confidential data has been omitted**



**Figure 4. Cumulative Atlantic Herring Landings from May through December in 2015**  
**Source: NMFS. This is preliminary landings data, confidential data has been omitted**

**Table 3. Georges Bank Haddock Catch by Herring Midwater Trawl Vessels, May 2015 – August 2016. Source: NMFS, preliminary data**

Month	Monthly Estimated Haddock Catch (mt)	Cumulative Estimated Haddock Catch (mt)	Cumulative Percent of Quota	
May	43.09	43.09	18.98%	
June	54.51	97.59	42.99%	
July	45.7	143.29	63.12%	
August	0.25	143.54	63.23%	
September	66.32	209.87	92.45%	
October	25.68	235.54	103.76%	
November	0	235.54	103.76%	
December	0	235.54	103.76%	
January	0	235.54	103.76%	
February	0	235.54	103.76%	
March	0	235.54	103.76%	
April	0	235.54	103.76%	
<hr/>				
<b>FY2016</b>	May	23.6	23.6	4.50%
	June	3	26.6	5.10%
	July	0.1	26.7	5.10%
	August	0.8	27.5	5.30%

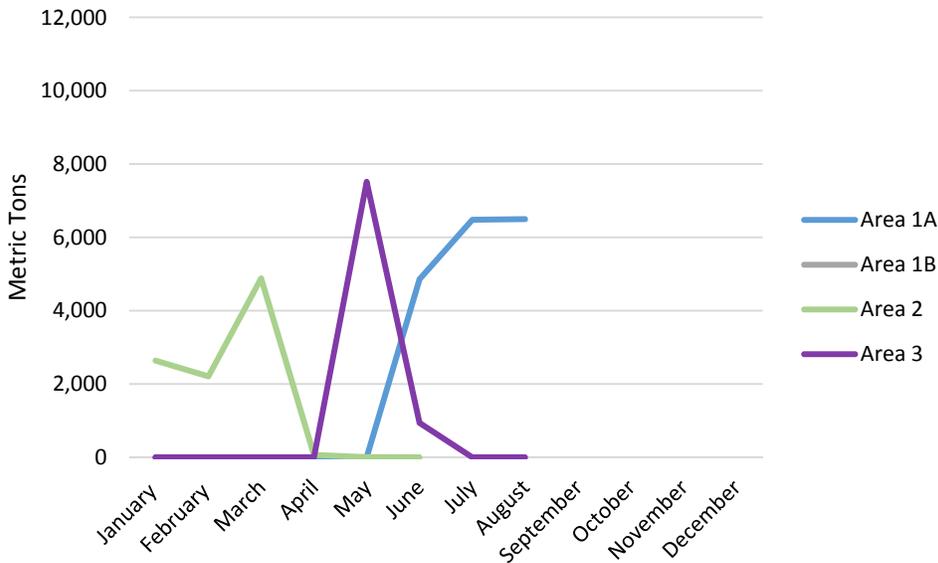
**2016 FISHING SEASON**

*Concern: Above-average landings at the start of the season, and thereafter, led to emergency restrictions for vessels landing in Maine (on behalf of Maine DMR), which were more restrictive than those of the Commission.*

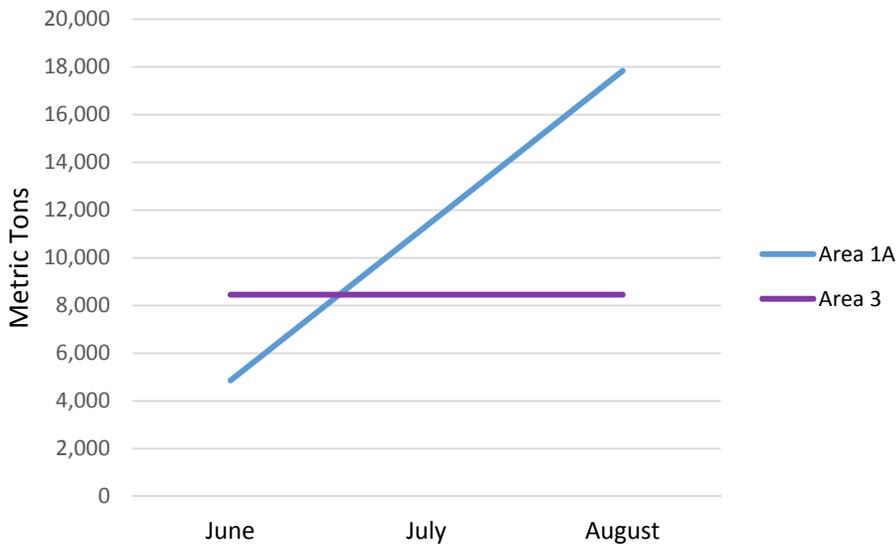
The 2016 Area 1A Atlantic herring fishing season opened in June to almost double the projected landings. For example, three weeks into June the fishery was projected to have harvested 1,300 mt, however 2,837 mt<sup>3</sup> had been harvested. Figure 5 provides a monthly overview of Atlantic herring landings in 2016. During June – August, the primary source of Atlantic herring landings was from Area 1A. Similar to 2015 but earlier in the season, Area 3 landings became stagnant and Area 1A landings increased (Figure 6). Area 3 herring fishermen reported finding some Atlantic herring schools, but in deep waters and intermixed with haddock schools. Utilizing the more than half of the Georges Bank haddock catch cap (Table 3) so early in the 2015 fishing season prompted a small number of midwater trawl vessels to shift effort to Area 1A to operate as purse seiners<sup>4</sup>.

<sup>3</sup> Preliminary landings data

<sup>4</sup> In 2007, federal regulations prohibited midwater trawlers from fishing in Area 1A from June 1-September 30.



**Figure 5. 2016 Monthly Atlantic Herring Landings by Management Area**  
**Source: NMFS. This is preliminary landings data, confidential data has been omitted**



**Figure 6. Cumulative Atlantic Herring Landings from June through August in 2016**  
**Source: NMFS. This is preliminary landings data, confidential data has been omitted**

Adding to the increased effort in Area 1A were the effects from other fisheries, specifically the New Jersey menhaden purse seine fishery closed on June 25, 2016 which reportedly prompted a southern vessel to re-locate to Massachusetts to harvest Atlantic herring.

In an attempt to extend the Trimester 2 quota into September, Maine’s Department of Marine Resources (DMR) implemented a series of emergency rules that were more restrictive than ASMFC regulations (states can implement measures that are more restrictive than that of the

Commission, but not less so). DMR’s measures only applied to vessels landing in Maine. The final measures, effective July 9, 2016, included:

1. Weekly landing limit of 600,000 pounds (15 trucks)
2. 3 consecutive fishing days
3. 2 consecutive landing days
4. Harvester vessels are limited to making one landing per 24-hour period
5. Harvester vessels are limited to making at-sea transfers to only one carrier per week.
6. All carrier vessels landing herring are limited to receiving at-sea transfers from one vessels per week.

A days out call was scheduled on July 20 to discuss the current landing day scenario and Maine’s emergency rules. The states of Maine, New Hampshire and Massachusetts agreed to decrease the landing days from five to two days per week, but did not adopt the rest of the restrictions. Maine DMR kept the emergency restrictions in place throughout Trimester 2. The Area 1A fishery moved to zero landing days on September 18, 2016.

#### V. MANAGEMENT ALTERNATIVES

The following alternative management measures, which seek to acknowledge current fishing practices and provide equitable fishing opportunities for all fishermen and regions, have been suggested by Commissioners for Section consideration and discussion. They are grouped by the complexity of the action(s), specifically whether it would require an amendment, addendum or specification adjustment (Table 4). Individual action(s) can be selected or modified for future inclusion in a draft management document if agreed upon by the Section.

**Table 4. Management document associated with management alternatives**

Potential Action	Addendum	Amendment	Specifications	Requires complementary action by NMFS
Landing days do not have to be consecutive	X			
Small Mesh Bottom Trawl Days Out	X			
Restrict fishing days	X			X - maybe
Weekly landing limit and restrict transfers at sea	X			
Clarify Days Out procedure	X			
Restrict vessels from midseason gear changes	X			X
SMBT set-aside	X			X

Modify in-season allocation			X	
Small Mesh Bottom Trawl sub-ACL		X		X

The following management action could be adjusted under annual specifications at the Annual Meeting. This is the only adjustment that would impact the 2017 fishing season. The other options require multiple Section meetings to review and possibly approve.

1. *Modify the Area 1A in-season allocation.*
  - Traditionally the Section has opted to separate the Area 1A sub-ACL into trimesters (Table 1). Amendment 2 included other trimester and bi-monthly quota allocations to consider (Table 5a and 5b). Alternative allocations would be designated in the annual specifications. A bi-monthly quota allocation would require significant increased Technical Committee effort to track. Changing when the quota can be taken may not address the increase in effort that carrier vessels provide to smaller vessels.

**Table 5a. Bi-monthly quota percent allocations. Percentages were calculated using vessel trip reports from 2000 – 2007**

Bi-Monthly Quotas								
January – December			No Landings Prior to June 1 (with June as a one-month period)			No Landings Prior to June 1 (with December as a one-month period)		
Period	Months	%	Period	Months	%	Period	Months	%
1	Jan/Feb	1.5%	1	June	16.4%	1	June/July	36.8%
2	Mar/Apr	2.3%	2	July/Aug	40.1%	2	Aug/Sep	36.0%
3	May/June	24.0%	3	Sep/Oct	34.0%	3	Oct/Nov	27.1%
4	July/Aug	34.6%	4	Nov/Dec	9.5%	4	Dec	0.2%
5	Sep/Oct	29.4%						
6	Nov/Dec	8.2%						

**Table 5b. Trimester and seasonal quota percent allocations. Percentages were calculated using vessel trip reports from 2000 – 2007**

Trimesters			Seasonal Quotas					
January – December			January - December			No Landings Prior to June 1		
Trimester	Months	%	Season	Months	%	Season	Season	%
1	Jan - May	13.7%	1	Jan - Sep	76.5%	1	Jun - Sep	72.8%

2	Jun - Sept	62.8%	2	Oct - Dec	23.5%	2	Oct - Dec	27.2%
3	Oct - Dec	23.5%						

The following management measures would need to be considered through the addendum process and, in some cases, require a complementary effort by the National Marine Fisheries Service (NMFS). If Draft Addendum I to Amendment 3 is initiated at the Annual Meeting the management measure(s) may be implemented prior to the 2018 Area 1A fishing season (Table 6).

1. *Modify the Days Out program such that landing days are no longer consecutive days.*
  - Consecutive days out of the fishery has been deemed more effective because the fishery has to wait a longer period of time in between landing days. The Days Out program has always incorporated the use of consecutive landing days, typically starting on Sunday/Monday. However, landing days could be dispersed through the week to accommodate various needs within the fishery. For example, in Maine herring is landed on Sunday evening so it is ready for the bait market on Monday. In New Hampshire fishermen prefer to harvest herring on Friday when the whiting (silver hake) market is not active. In this scenario, states want non-consecutive landing days which may include a Sunday/Monday landing day and a Friday landing day, but not a Saturday landing day due to worker related overtime costs.
2. *Modify the Days Out program such that the small-mesh bottom trawl fleet (SMBT) could have a different allocation of landings days and times that are separate from the purse seine and mid-water trawl fleet landing days. This measure was previously considered in Addendum III to Amendment 2 but was not adopted.*
  - Currently SMBT vessels follow the same landing days as the rest of the fishery. However, SMBT vessels land about 1% of the herring taken in Area 1A, therefore, limiting these vessels does very little in terms of spreading out the catch. A small day boat that uses SMBT gear does not have the ability to fish prior to a landing day like other gears, they fish and land on the same day. The option would allow SMBT fleet to harvest herring on days that are closed to landing for purse seine and mid-water trawl fleets. If this option were adopted there could be a scenario where purse seine and midwater trawl vessels were limited to 3 landing days and SMBT vessels were allowed 5 to 7 landing days. Some herring vessels use multiple gear types during the fishing year so there is potential for a vessel to switch to SMBT to have more landing days, this could be restricted if it applied to SMBT vessels with a C or D permit.
3. *Modify the Days Out program to restrict fishing days, in addition to landing days.*
  - A restriction on fishing days was included in the original Days Out program, but removed via Amendment 2 because the Law Enforcement Committee (LEC) said they could not effectively enforce the provision. As stated in a 2009 LEC memo, the vast majority of fishing takes place in federal waters where state officers have no authority to enforce ASMFC regulations. If NMFS adopted the Days Out

provisions then the states would be able to enforce the provisions through a Joint Enforcement Agreement. This regulation would then need to be adopted by all states in order to be effective.

4. *Modify the Days Out program to create a weekly landing limit (pounds & trucks). In addition, harvester vessels are limited to making at-sea transfers to only one carrier per week. All carrier vessels landing herring are limited to receiving at-sea transfers from one vessel per week.*
  - Currently the Days Out program is specific to landing day restrictions. The increase in the number of carrier vessels has rendered days out less effective in controlling effort because vessels can transfer catch to large carrier vessels at-sea, allowing harvesters additional days of fishing beyond the days that are open to landings. The state of Maine implemented a 600,000 pound weekly landing limit in 2016 and restricted at-sea transfers. This measure may be more difficult to implement if a state does not have its own monitoring system or access to VMS reports.
5. *Clarify what it means for states to “agree” on the numbers of days out in the fishery, does this mean consensus or vote? If states cannot agree then what is the default landing day scenario, 7 landing days?*
  - As stated in the Days Out procedural language, if Section members from Maine, New Hampshire, and Massachusetts cannot agree on the specific ‘days out’, then the matter will go before the full Section for review at the next ASMFC meeting week or at a special meeting of the Section called by the Chairman. States have been selecting landing days by voting. Default landing days are currently interpreted as seven landing days if no decision is made.
6. *Restrict a vessel from operating a vessel using a different gear mid-season in Area 1A.*
  - At the start of the fishing season a vessel would have to designate their Area 1A gear type and switching mid-season would not be allowed. ASMFC and NMFS would have to adopt similar regulations for this to be enforceable.
7. *Set-aside a percentage or value of the Area 1A sub-ACL for the SMBT. This measure was previously considered in Addendum III to Amendment 2 but was not adopted.*
  - A research set-aside (3%) and a fixed-gear set-aside (295 metric tons) are deducted annual from the Area 1A sub-ACL. If approved by ASMFC and NMFS, a SMBT set-aside would be in addition. Weekly reporting would be necessary to effectively monitor a SMBT set-aside. Federal IVR is an existing reporting system that could be used to monitor SMBT landings weekly, but IVR reports do not include gear type. In order to successfully manage a SMBT set-aside, the NMFS would need to adjust IVR reporting requirements to include gear type, including mesh size. If a vessel with a limited access permit switches to SMBT then VMS monitoring reporting is required. During Area 1A Trimester 2, SMBT vessels have landed less than 100 MT since at least 2013. This measure may be more difficult if a state does not have its own monitoring system. In addition, it is different than a fixed gear set aside because SMBT vessels can easily switch to operate as a midwater trawl vessel.

**Table 6. Draft timeline if an addendum is initiated at the Annual Meeting**

<b>October 2016</b>	Atlantic Herring Section initiates Addendum I to Amendment 3
<b>May 2017</b>	Section reviews Draft Addendum I and considers its approval for public comment
<b>May–July 2017</b>	Section solicits public comment and states conduct public hearings
<b>August 2017</b>	Section reviews public comment, selects management options and considers final approval of Addendum I
<b>May 2018</b>	Provisions of Addendum I are implemented by states

*The following management measures would need to be considered the amendment process and would require joint cooperation with NMFS. If Draft Amendment 4 is initiated at the Annual Meeting, the management measures could be implemented prior to the 2019 Area 1A fishing season. A draft Public Information Document would be presented at the May 2017 meeting.*

1. *Allocate a sub-ACL for the small-mesh bottom trawl fleet.*
  - Currently there are four management areas for Atlantic herring with respective sub-ACLs. If approved by ASMFC and NMFS this would create a 5th sub-ACL for the SMBT fleet. Weekly reporting would be necessary to effectively monitor a SMBT sub-ACL. Federal IVR is an existing reporting system for open access permits that could be used to monitor SMBT landings weekly, but IVR reports do not include gear type. In order to successfully manage a SMBT sub-ACL, the NMFS would need to adjust IVR reporting requirements to include gear type, including mesh size. If a vessel with a limited access permit switches to SMBT than VMS monitoring reporting is required. During Area 1A Trimester 2, SMBT vessels have landed less than 100 MT since at least 2013.

## **VI. LITERATURE CITED**

- Dayton A, Sun JC & Larabee J. (2014). Understanding Opportunities and Barriers to Profitability in the New England Lobster Industry. Portland, ME: Gulf of Maine Research Institute. 15-16 p.
- NEFMC. (2012). Final Amendment 5 to the Atlantic Herring Fishery Management Plan, Incorporating the Environmental Impact Statement. Vol. I and II. Newburyport, MA: M New England Fishery Management Council in consultation with the ASMFC, and NMFS.