



Dr. Christopher Moore  
Executive Director  
Mid-Atlantic Fishery Management Council  
800 North State Street  
Suite 201  
Dover, DE 19901

November 18, 2016

Dear Dr. Moore,

I am writing to comment on the Omnibus Industry Funded Monitoring Amendment. Back in August of 2015 I submitted comments to both the New England and Mid-Atlantic Councils regarding this Amendment. I was also present at the Philadelphia Council meeting that year where I again stated my opposition to this Amendment on the grounds of our vessels not being able to afford to pay for the additional monitoring. Back then I wrote and spoke about this Amendment in regards to our herring vessels; today I'd like to add that we are against the Amendment as a whole. Asking vessels to pay more for observers in all FMP's while those in sectors have started paying for coverage this year is a huge financial burden. We understand and appreciate that more information is wanted on various species in order to make better management decisions and we think that this would be a perfect time and reason to resurrect the Research Set-Aside Program to help pay for the additional data that needs to be gathered. Bringing the RSA program back would benefit both the fishermen and the scientists as it would provide a cost covering mechanism to make sure that fishermen are not losing money while they provide the increased information that the scientists are looking for. Looking into developing an FMP specific RSA program is something we'd like to see analyzed.

Thank you for providing us the opportunity to comment.

Sincerely,

Katie Almeida  
Fishery Policy Analyst

November 4, 2016

**Re: Comments on Industry-Funded Monitoring Omnibus Amendment Public Hearing Document**  
**September 2016**

1. **Omnibus Alternatives.**

According to the document, the purpose of this omnibus amendment is to “allow the NEFMC and MAFMC to develop industry funded monitoring programs for the collection of information in addition to SBRM”, because the “amount of available Federal funding to support additional monitoring” has been a constraint in the past and “this action is needed for the Councils to prioritize industry-funded monitoring programs across fishery management plans when available Federal funding falls short of the total needed to fully fund all monitoring programs.” (Page 5). Discussions surrounding this document have highlighted the desire by Councils and other groups for more collection of management-related and even scientific information, as well as information related to enforcement of management measures and regulations. We do not agree that programs for collection of information or monitoring/enforcement of regulations are a cost that should be financially borne by industry, particularly when the Federal government is at a loss for finances to do so.

The Magnuson Stevens Act (MSA) specifically addresses the purpose/need for the amendment as specified on page 5 of the public information document “for the collection of information in addition to SBRM”. Section 402 of the Act, “Information Collection”, reads as follows:

(a) **COLLECTION PROGRAMS.-**

- (1) **COUNCIL REQUESTS.-** If a Council determines that additional information would be beneficial for developing, implementing, or revising a fishery management plan....the Council may request that the Secretary implement an information collection program which would provide the types of information specified by the Council.....
- (2) **SECRETARIAL INITIATION.-** If the Secretary determines that additional information is necessary for developing, implementing, revising **or monitoring** a fishery management plan...the Secretary may, by regulation, **implement an information collection or observer program requiring submission of such additional information for the fishery.** (emphasis ours).

Therefore, the MSA is clear how additional Council desired information collection programs for fishery management plans, including monitoring or observer programs, are to be implemented. Section 402(d) details how the Secretary may provide grants, contracts, or other financial assistance for the purposes of carrying out information collection programs. Should the Council or NMFS wish to see observers involved in the “collection of information in addition to

SBRM” (page 5), evident considering that IFM documents prepared during the development of this amendment provided breakdowns of monitor/observer training costs sought to be shared between the agency and the industry,<sup>1</sup> the MSA also provides for sharing of observer training costs, but not with industry. Section 403 OBSERVERS reads as follows:

- (b) TRAINING.- The Secretary, in cooperation with the appropriate states and the National Sea Grant College Program, shall- ....
- (3) make use of university and any appropriate private nonprofit organization training facilities and resources, where possible, in carrying out this subsection.

Therefore, it appears that universities or nonprofit organizations concerned with specific observer data collection in an FMP may share cost responsibilities of observer training for those programs or observer information collection programs. However, the section says nothing about industry sharing these costs.

Furthermore, management bodies are continually searching for more and better information, and public pressure can and will direct their searches both in magnitude and specificity. In fact, the initial basis for this amendment- the herring and mackerel alternatives- were created in response to various special interest groups and allegations with regards to those fisheries resulting from what was described at a Joint Observer/Herring Committee Meeting on July 1, 2015 as a “public perception problem”. At that meeting, the Joint Committees approved a motion recommending that the problem statement for the herring and mackerel components of the IFM amendment be: “The public questions the accuracy of catch (landings and discards) estimates in the fishery...”.<sup>2</sup> Private individuals should not be required to foot the bill to address a public perception problem. This is inequitable, and leaves the door open for uninformed public media campaigns to pressure Councils into forcing fishing vessels to pay for all publicly desired information in the future at personal financial loss. Public funds should be used for public purposes. However, as previously mentioned, the MSA does allow for observer training costs to be shared with universities and non-profit organizations should those organizations desire to make facilities and resources available for so doing.

Because the amendment does not address or acknowledge any of these issues, we can only support Omnibus Alternative 1, No Action.

## 2. Herring Alternatives.

Two of the major goals and objectives identified by the NEFMC for increasing monitoring in the herring fishery are “accurate catch estimates for incidental species for which catch caps apply”, and “affordable monitoring for the herring fishery”. The catch cap species being discussed with relation to small mesh bottom trawl vessels, which include our vessels, are river herring and shad. According to analysis of small mesh bottom trawl observer data (all fisheries), approximately 5%-22% coverage is needed to obtain a 30% CV for river herring and shad catch in that gear type.<sup>3</sup> These coverage levels are

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<sup>1</sup> See Industry Funded Monitoring Omnibus Amendment July 1, 2015 Discussion Document Appendix, <http://s3.amazonaws.com/nefmc.org/150701-Discussion-Document-Appendix.pdf>, page 10-11, which lists NMFS annual training costs for monitors and a cost per observed sea day of \$61 per day to industry vessels for training.

<sup>2</sup> See [http://s3.amazonaws.com/nefmc.org/7\\_July-1-final-mtg-summary-observer\\_herring.pdf](http://s3.amazonaws.com/nefmc.org/7_July-1-final-mtg-summary-observer_herring.pdf).

<sup>3</sup> Industry Funded Monitoring Omnibus Amendment Discussion Document, Mackerel Alternatives, Mid Atlantic Fishery Management Council, April 12-14, 2016. See



already being covered by SBRM<sup>4</sup> and the associated CV is already below 30%. In fact the small mesh bottom trawl herring fishery RH/S catch cap CV was 28.4% in 2014, and 24.5% in 2015.<sup>5</sup> Additionally, due to the fact that the small mesh bottom trawl fleet includes vessels with permits other than A and B permits, which are targeted by this amendment, the herring alternatives presented would never achieve a 0% CV, even at 100% coverage rates (which is why even 100% observer coverage on small mesh bottom trawl would only have a “Low Positive” on tracking catch caps)<sup>6</sup>. Even staff documents developed during this amendment process have indicated that even Alternative 2.2, up to 100% ASM coverage on small mesh bottom trawl, will have “Negligible” effect on catch tracked against catch caps.<sup>7</sup> But it will not have a negligible economic effect, on small mesh bottom trawl vessels in general but particularly Seafreeze vessels.

Coverage target considerations, according to the development of this amendment, should ensure that “Benefits of increased monitoring should equal or outweigh the costs of monitoring”.<sup>8</sup> However, the amendment does not consider the daily catch capacity of vessels in its analysis or alternatives. Small mesh bottom trawl vessels, including Seafreeze vessels, are limited in daily harvesting capacity compared to other herring fishery gear types. Therefore, the daily financial burden on smaller capacity vessels is higher than on large capacity vessels. We have repeatedly raised this issue with the Councils.<sup>9</sup> The “Negligible” benefits of potential additional catch cap tracking do not outweigh the costs of monitoring for our lesser-daily-capacity small mesh bottom trawl vessels.

None of the additional monitoring alternatives in the document provide for “affordable monitoring for the herring fishery”, especially Seafreeze vessels. Our vessels do not operate solely in the herring/mackerel fisheries; we have multiple permits. We do not always know what species will be available when we leave the dock, so we complete the regulatory call in/declaration process for all appropriate fisheries. We do not fish like other “herring” vessels. If the availability of one species changes, or is not what we had anticipated, we then have the flexibility to cover our operating costs by switching over to a different species. Because our vessels freeze at sea and have limited daily capacity, our trips are also of extended duration, so any daily at sea monitoring costs would impact us disproportionately to all other herring vessels.

To demonstrate this dynamic, several trips are highlighted below. Pre-trip declaration combined with length of trip is what will determine coverage and cost, not herring landed.

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[https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/56fec92c04426225f77234f4/1459538223368/Tab02\\_MSB-RHS-Committees.pdf](https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/56fec92c04426225f77234f4/1459538223368/Tab02_MSB-RHS-Committees.pdf), page 28.

<sup>4</sup> According to the Herring PDT Meeting Summary Dec 10, 2015, revised Jan 15, 2016, in 2014 observers covered 26.2% of all small mesh bottom trawl trips targeting herring, and preliminary estimates indicated 31% coverage on trips from January-June 2015. See <http://s3.amazonaws.com/nefmc.org/3.151210-Herring-PDT-mtg-summary-REVISED.pdf>.

<sup>5</sup> Industry Funded Monitoring Amendment Document, Mid Atlantic Fishery Management Council, May 2016. See [https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/57504cae746fb9ccc234ba75/1464880308912/Tab09\\_IFM-Amendment.pdf](https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/57504cae746fb9ccc234ba75/1464880308912/Tab09_IFM-Amendment.pdf), page 88.

<sup>6</sup> See [http://s3.amazonaws.com/nefmc.org/3D\\_Staff-Presentation-on-Herring-Alternatives.pdf](http://s3.amazonaws.com/nefmc.org/3D_Staff-Presentation-on-Herring-Alternatives.pdf), slide 35.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid, slide 38.

<sup>9</sup> See for example, our letter to the Councils at

[https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/551edc4ae4b0576112dc4bf3/1428085834669/Tab+06\\_Industry+Funded+Observer+Amendment.pdf](https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/551edc4ae4b0576112dc4bf3/1428085834669/Tab+06_Industry+Funded+Observer+Amendment.pdf) and <http://s3.amazonaws.com/nefmc.org/5.-Council-Letter-Observer-Concerns.Seafreeze.pdf>.

For example, on this 10 day trip below, our primary pre-trip declaration was herring, but the trip consists of no herring and is primarily loligo squid. A per day monitoring cost would be very expensive on a trip of that length. And all of the cost would be borne by squid revenue. This is not unusual. The following 5 day trip was also a declared "herring" trip, but landed no herring. These types of "herring" trips, if they were to incur an at sea monitoring cost would have to be paid for not by herring revenue, but other revenue:

1/15/14-1/24/14; 10 Days

Bluefish - .03%

Butterfish - .36%

Loligo - 97.67%

Illex - 1.45%

12/20/14-12/24/14; 5 Days (Shortened trip because of Christmas)

Butterfish - 88.92%

Loligo - 11.08%

Conversely, we have trips where we expect to find other species but do not, therefore relying on the flexibility to catch herring as a way to cover our costs. For example, these two trips, during which the primary pre-trip declaration was squid, herring was the primary species landed:

12/11/14-12/18/14; 8 Days

Herring - 100%

12/27/14-1/3/15; 8 Days

Butterfish - 1.2%

Mackerel - .26%

Herring - 98.1%

Loligo - .44%

Sub Option 5 would exempt trips landing less than 25 mt from industry funded monitoring requirements, and has been suggested at meetings of a way to address this issue. However, that option will still not account for the fact that the decision whether or not to catch more significant amounts herring will still need to be made prior to leaving the dock. As the information above demonstrates, our primary declaration/intent is not always what determines what species our vessels land, which is why we ensure that we appropriately declare into all possible fisheries in order to maintain flexibility of operations. If that flexibility were taken away, not only would our entire style of fishing would be nullified, but could result in the above trips losing rather than making money. A 25 mt landing will not cover the cost of an 8 day trip.

Pages 301-302 of the EA (attached) illustrate this dynamic. Out of declared herring days in 2014 that did not land herring, 111 are attributed to small mesh bottom trawl, as compared to only 6 single midwater trawl and 4 paired midwater trawl. That would be 111 days of industry funded monitoring on small mesh bottom trawl vessels that would have to be covered by income from other fisheries. Small mesh bottom trawl costs for declared herring trips not landing herring range from \$90,586 compared to \$3,212 at paired midwater trawl and \$5,217 at single midwater trawl for the same monitoring option. This is a function of the type of fishing style described above. Industry funded monitoring costs in this amendment are significantly heavier on small mesh bottom trawl vessels than other vessel types. This is



combined with the fact that even on declared herring trips landing herring, small mesh bottom trawl (i.e. "squid" vessels), have a 7% RTO compared to typical "herring and mackerel" vessels, which have a 15% RTO (page 299 of the EA ,attached). This is also a function of what has been previously mentioned due to daily capacity. Even at 25% ASM coverage, the cheapest cost estimate for small mesh bottom trawl, there is still a \$19,657 annual cost burden for trips that do not even land herring. This amendment is about the erosion of profitability for our vessels.

The herring and mackerel alternatives in the IFM amendment were primarily initiated to address low observer coverage in the midwater trawl herring fishery due to changes with SBRM. It was not to make an entire style of fishing economically or operationally nonviable. It is also not equitable that revenue from other fisheries be siphoned to pay for herring/mackerel monitoring. If our vessels are required to pay for a per day monitoring cost, we could be required to raise the prices on all our products to cover that expenditure. Compounding that, we compete on and against a world market with all of our products, including herring. All of our products are food grade, which means that we have developed and rely on markets that solicit international competition. We are also competing price-wise with companies and vessels from nations where the fishing industry is subsidized by their national government. If forced to raise our prices to pay for an IFM cost, Seafreeze, as well as the United States, will be put at a competitive disadvantage internationally. If we do not increase our prices and the cost were to be paid for by the vessels and crew, the per day monitoring cost may outweigh daily crew compensation, and crews would be forced to pay for "benefits (vacation and sick leave)"<sup>10</sup> afforded to observers that crew themselves do not receive, all while receiving a smaller paycheck. This is inequitable.

Regardless, the industry funded monitoring amendment saddles Seafreeze vessels in particular with more economic harm than any other "herring" vessels due to the nature of our operations. This is unacceptable. Therefore, the only alternatives that we can support would be Alternative 1, No Action, or Alternatives 2.4-2.6, which would keep our vessels at SBRM coverage.

### 3. Mackerel Alternatives.

All of the comments above pertaining to the herring alternatives also apply to the mackerel alternatives. However, mackerel itself deserves special comment. The current state of the mackerel fishery is less of a directed fishery than in years past. Requiring an industry funded monitoring requirement for mackerel will discourage any directed fishing, including looking for mackerel on any part of a trip fishing for other species. The cost for monitors would without a doubt outweigh the benefits of any coverage in this fishery at this time. Many vessels at this time catch mackerel as an incidental species in the herring fishery, and herring fishery coverage would therefore cover these trips. However, Seafreeze vessels occasionally target mackerel on trips of squid or butterfish. See for example, the composition of these trips:

2/17/14-2/27/14; 11 Days  
Butterfish- 72.55%  
Mackerel - 27.32%  
Loligo - .13%

3/4/14-3/12/14; 9 Days

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<sup>10</sup> See <http://s3.amazonaws.com/nefmc.org/150701-Discussion-Document-Appendix.pdf>, page 11.

Butterfish- 8.72%  
Mackerel - 23.03%  
Loligo - 67.97%  
Illex - .25%

The trips are of extended duration, which would require considerable cost to the vessels, and the monitoring cost would undoubtedly need to be covered from revenue other than mackerel. Due to the sporadic/diminished state of the mackerel fishery, a requirement to pay for monitoring would discourage trips like these, and would therefore essentially reduce the mackerel fishery to a bycatch fishery in the herring fishery only. This cannot be consistent with the requirement to achieve optimum yield.

Therefore, for the reasons above as well as those detailed for the herring alternatives, we can only support Mackerel Alternative 1, No Action.

#### 4. Outstanding Issues.

There are still several outstanding issues associated with this amendment:

- A. ASM: At its June 2015 meeting, the NEFMC voted 13/2/2 to “evaluate the ASM program for its effectiveness in support of stock assessments, its total costs to the groundfish fishery (e.g. returns to owner vs ASM costs), data precision and accuracy, and whether it is actually ensuring catch accountability.”<sup>11</sup> This was due to concerns raised at both the Groundfish Committee and Council levels of the cost/benefit of the program, the quality of the data produced, the utility and effectiveness of the program.<sup>12</sup> While these motions pertained to the groundfish ASM program, this is all the industry has to compare any future ASM programs to. This evaluation has never been completed, but the Councils are seeking to expand the program to other fisheries. All evaluations should be completed prior to a future action concerning ASM.
- B. Unforeseen circumstances/Industry Profitability: The IFM amendment does not take into account any changes in fishery profitability over time, and industry’s future ability to afford IFM. Sub Option 4 allows the Councils to examine the results of increased herring/mackerel coverage two years after implementation, and allows adjustments via framework or amendment. However, it does not specifically state that industry’s ability to pay should be a driving factor in industry funded monitoring programs. Although costs to industry as a result of the groundfish ASM program represented a large portion of total revenue of the fishery, causing significant numbers of vessels to become unprofitable or face bankruptcy,<sup>13</sup> and although the Council voted subsequently to request emergency action of NMFS to suspend the groundfish ASM program,<sup>14</sup> this request was rejected by the agency. There is no safeguard for industry in the IFM amendment document to ensure a similar situation would not occur with future industry funded monitoring programs. There is only assurance that the programs would not be activated if the agency did not have the finances for its administration costs. This is unacceptable. It is also something that would not occur should the Councils follow the Magnuson Stevens Act requirements for Information Collection Programs.

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<sup>11</sup> See [http://s3.amazonaws.com/nefmc.org/150615-18\\_final\\_motions2.pdf](http://s3.amazonaws.com/nefmc.org/150615-18_final_motions2.pdf).

<sup>12</sup> See [http://s3.amazonaws.com/nefmc.org/11\\_150604\\_GF\\_CTE\\_Draft\\_Summary-2.pdf](http://s3.amazonaws.com/nefmc.org/11_150604_GF_CTE_Draft_Summary-2.pdf).

<sup>13</sup> Ibid.

<sup>14</sup> See [http://s3.amazonaws.com/nefmc.org/150615-18\\_final\\_motions2.pdf](http://s3.amazonaws.com/nefmc.org/150615-18_final_motions2.pdf)



- C. Equality of Trip Selection: The IFM document contains no provisions to ensure equal allocation of observer or monitoring coverage among vessels. This would result in certain vessels being required to individually pay for monitoring costs for the whole fleet's coverage target. For example, below is a log detailing how one Seafreeze vessel received 50% observer coverage for the herring/mackerel fishing year, while the fleet as a whole had a much lower average of coverage:

**Observer Coverage for Herring/Mackerel Season, Nov. 2014-April 2015, F/V Relentless**

Trip 655 11/21/14-11/25/14; Observer (forced to come in in middle of trip for weather/mechanical problems, but did not offload; counts as one trip for dealer report; counts as two trips for NEFOP purposes)  
Trip 656 11/28/14-12/8/14; Observer  
Trip 657 12/12/14-12/18/14; No Observer  
Trip 658 12/21/14-12/24/14; Observer  
Trip 659 12/27/14- 1/3/15; No Observer  
Trip 660 (660 A) 1/10/15-1/13/15; Observer (For trip 660, weather problems, had to come to dock, but did not offload; counts as one trip for dealer report; counts as multiple trips for NEFOP purposes)  
Trip (660 B) 1/19/15-1/24/15; Observer  
Trip (660 C) 1/28/15-2/8/15; No Observer  
Trip 661 2/16/15-2/24/15; No Observer  
Trip 662 3/6/15-3/17/15; No Observer  
Trip 663 3/21/15-3/30/15; No Observer  
Trip 664 4/4/15-4/15/15; Observer

Should this occur under an industry funded monitoring program, our vessel would have been significantly and unfairly burdened with costs that other vessels were not.

- D. Discrepancies in Coverage Calculation: The IFM document does not detail how coverage would be calculated. After observing discrepancies in various Council documents as to the level of observer coverage on catch cap trips in 2014 on small mesh bottom trawl vessels,<sup>15</sup> we discovered that coverage levels can be calculated in multiple ways. The amendment does not specify how IFM coverage would be calculated, and therefore we have not been given the opportunity to comment effectively, and the Council has not been given the opportunity to effectively discuss or weigh the options presented.
- E. Limited Public Input: Due to the fact that the initial focus of this amendment was herring and mackerel, the majority of public input has only been through those venues. No other Council Advisory Panels, which are bodies designed to give industry input to the Councils and Committees, were given opportunities to discuss the Omnibus portions of the amendment, and public hearings were not held south of New Jersey, although the Omnibus has the potential to apply to every FMP in the Greater Atlantic Region.

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<sup>15</sup> According to the Herring PDT Meeting Summary Dec 10, 2015, revised Jan 15, 2016, in 2014 observers covered approximately 26 % of herring catch cap trips; see <http://s3.amazonaws.com/nefmc.org/3.151210-Herring-PDT-mtg-summary-REVISED.pdf>. However, similar analysis in the MAFMC Supplement to IFM Draft Environmental Assessment document, the same coverage was calculated to be approximately 17%; see [https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/57504cae746fb9ccc234ba75/1464880308912/Tab09\\_IFM-Amendment.pdf](https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/57504cae746fb9ccc234ba75/1464880308912/Tab09_IFM-Amendment.pdf), page 88. Upon further investigation, this was discovered to be due to differences in calculation parameters.



Thank you for the opportunity to comment.

Sincerely,  
Meghan Lapp  
Fisheries Liaison, Seafreeze Ltd.

**TABLE 95. SUMMARY OF TOTAL TRIP COSTS FOR HERRING AND MACKEREL VESSELS IN 2014**

<b>Cost Category</b>	<b>Description</b>	<b>Average Percent of 2014 Gross Revenue for Herring and Mackerel Vessels</b>	<b>Average Percent of 2014 Gross Revenue for Squid Vessels</b>
<b>Variable Costs</b>	Annual fuel, oil, food, water, ice, carrier vessel, communication, fishing supplies, crew supplies, and catch handling costs	25%	35%
<b>Crew Share</b>	Total annual payments to crew	28%	26%
<b>Repair, Maintenance, Upgrades, Haulout (RMUH)</b>	Annual cost of repairs to engines, deck equipment, machinery, hull, fishing gear, electronics, processing equipment, refrigeration, safety equipment, upgrades and haulout. Because these costs vary considerably from year to year and are typically spread out over several years, only a portion of these costs were applied to 2014 revenue	13%	11%
<b>Fixed Costs</b>	Annual mooring, dockage, permits and licenses, insurance, quota and DAS lease, crew benefits, vessel monitoring, workshop and storage, office, vehicle, travel, association, professional, interest, taxes, and non-crew labor costs Note: depreciation expense of the vessel is not included in fixed costs.	19%	21%
<b>Return to Owner</b>	Gross revenue less variable, crew share, RMUH, and fixed costs	15%	7%

The NEFMC is considering four types of industry-funded monitoring for the herring fishery, including NEFOP-level observers, at-sea monitors, EM, and portside sampling coverage. NEFOP-level and at-sea monitoring coverage would function independently, but EM and portside are intended to be used together.



Selecting Herring Alternative 2.5 rather than Herring Alternative 2.1 reduces total industry monitoring costs from \$811,000 to \$75,000 – a 91% reduction. However, Herring Alternative 2.5 only provides increased monitoring in the Groundfish Closed Areas.

Initial industry cost assumptions for Herring Alternative 2.4 estimated \$325 per sea day for electronic monitoring (cameras on every midwater trawl vessel, video collected for the duration of the trip, 100% video review) and \$5.12 per mt for portside sampling (administration and sampling cost) on close to 100% of trips. Revised industry cost assumptions for Herring Alternative 2.4 estimated \$187 per sea day for electronic monitoring (cameras on every midwater trawl vessel, video collected around haulback, 50% video review) and \$3.84 per mt for portside sampling (only sampling costs) on close to 50% of trips. Using the revised cost assumptions rather than the initial cost assumption for Herring Alternative 2.4 reduces total industry monitoring costs by 51% (\$457,595 to \$222,958) in Year 2 for paired midwater trawl vessels and reduces costs by 54% (\$134,165 to \$61,067) in Year 2 for single midwater trawl vessels.

Many of the vessels that would be impacted by industry-funded monitoring costs in the herring fishery would also be impacted by industry-funded monitoring costs in the mackerel fishery. For example, all the vessels impacted by Herring Alternative 2.1 would also be impacted by Mackerel Alternative 2.1.

A trip must be a declared herring trip in order to land 1 lb or more of herring. The economic analysis focused on trips that landed 1 lb or more of herring because those are the trips that would be subject to industry-funded monitoring. However, industry participants also requested consideration of the economic impacts associated with declared herring trips that did not land any herring.

In 2014, there were 121 sea days for 22 trips that had no herring landings. If 100% NEFOP-level observer coverage was required on those trips, then \$98,978 would have been spent monitoring those trips. If 100% at-sea monitoring coverage was required on those trips, then \$85,910 would have been spent monitoring those trips. The breakdowns of these costs by gear type as well as other coverage levels and monitoring types are provided in Table 96.

**TABLE 96. MONITORING COSTS ASSOCIATED WITH DECLARED HERRING TRIPS THAT DID NOT LAND HERRING IN 2014.**

	Small Mesh Bottom Trawl	Single Midwater Trawl	Paired Midwater Trawl	Total
<b>Permit Category</b>	A	A	A	
<b>Total Number of Days</b>	111	6	4	121
<b>Total NEFOP Cost – 100% Coverage</b>	\$90,586	\$5,217	\$3,212	\$99,015
<b>Total ASM Cost –</b>	\$78,626	\$4,528	\$2,788	\$85,943

<b>100% Coverage</b>				
<b>Total ASM Cost – 75% Coverage</b>	<b>\$58,970</b>	\$3,396	\$2,091	\$64,457
<b>Total ASM Cost – 50% Coverage</b>	<b>\$39,313</b>	\$2,264	\$1,394	\$42,971
<b>Total ASM Cost – 25% Coverage</b>	<b>\$19,657</b>	\$1,132	\$697	\$21,486
<b>Total EM Cost, Year 2 – \$325 per day</b>		\$2,073	\$1,276	\$3,349
<b>Total EM Cost, Year 2 – \$187 per day</b>		\$1,193	\$734	\$1,927

The tables and box plots on the following pages provide summarized economic data for each of the herring coverage target alternatives. The economic impact on vessels associated with paying for monitoring coverage is described as a percentage of RTO for each herring coverage target alternative in the following figures. The tables provide the mean and median number of sea days per vessel that would result from each of the alternatives, as well as the mean and median RTO that would ultimately be reduced by the industry-funded monitoring costs. Additionally, fleet level effort, revenue, and monitoring cost information for each herring coverage target alternative are also provided. Additional economic analysis is available in Appendix 8.

**4.2.5.1 Impacts of Herring Alternatives 1 and 2 on Fishery-Related Businesses**

Herring Alternative 1 would not specify a coverage target for an industry-funded monitoring program in the Herring FMP. Monitoring for herring vessels would be allocated according to SBRM. If there was Federal funding available after SBRM coverage requirements were met, additional monitoring for the herring fishery would be evaluated on a case-by-case basis. Under Herring Alternative 1, additional costs to vessels participating in the herring fishery associated with monitoring coverage, if there were any, would be evaluated on a case-by-case basis.

In recent years, observer coverage for the herring fishery has largely been allocated as part of the SBRM. The SBRM is the combination of sampling design, data collection procedures, and analyses used to estimate bycatch in multiple fisheries. The SBRM provides a structured approach for evaluating the effectiveness of the allocation of fisheries observer effort across multiple fisheries to monitor a large number of species. Although management measures are typically developed and implemented on an FMP-by-FMP basis, from the perspective of developing a bycatch reporting system, there is overlap among the FMPs and the fisheries that occur in New England and the Mid-Atlantic that could result in redundant and wasteful requirements if each FMP is addressed independently.

Currently, the herring resource is not overfished, and overfishing is not occurring. Additionally, in recent years, the fleet has had the ability to fully harvest the stock-wide ACL and the sub-ACLs. Selection of Herring Alternative 1 will not likely affect the setting of