Atlantic States Marine Fisheries Commission

Law Enforcement Committee

October 22 and 23, 2012
1:00pm – 5:00pm; 8:30am - 12:00pm
Philadelphia, Pennsylvania

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

NOTE: A portion of this meeting will be closed to the public. Only members of the Law Enforcement Committee and the LEC Coordinator can be in attendance.

DAY 1

1. Welcome/Call to Order	1:00 p.m.
2. Approval of Agenda and May 2012 Minutes	1:10 p.m.
3. Roll Call of the States	1:15 p.m.
4. Public Comment	1:20 p.m.
5. ASMFC staffing update and review of LEC committee assignments	1:25 p.m.
6. Review of management options in Atlantic menhaden draft addendum and consideration of LEC comments for input	1:40 p.m.
7. LEC meets with USFWS Chief of Law Enforcement *(tentative)*	2:10 p.m.
8. Review of federal enforcement issues and status of MOAs with states and USFWS—**NOTE: This portion of the meeting will be closed to the public.**	2:40 p.m.
9. Break	3:00 p.m.
10. Review and Discussion of NOAA Office of Law Enforcement priorities for 2013	3:15 p.m.
11. Update on JEA process, metrics, and possible impact of federal	

The meeting will be held at the Radisson Plaza-Warwick Hotel, 220 south 17th Street; Philadelphia, Pennsylvania 19103
(215) 735-6000

budget sequestration 3:45 p.m.

12. Update on federal case loads and future coordination of state/federal prosecution efforts 4:30 p.m.

Recess for the day 5:00 p.m.

DAY 2

Reconvene 8:30 a.m.

13. Discussion of LE equipment and techniques 8:40 a.m.
    - New equipment performance in marine environments
    - Ballistic vests
    - Grants or funds for obtaining new equipment
    - Safety issues

14. LEC membership, participation and travel reimbursement 9:15 a.m.

15. Review of draft LEC priorities list and 2013 Action Plan Goal 3 9:30 a.m.

16. Review of species issues, focusing on new or potential enforcement concerns 9:45 a.m.

17. Review of LE issues, Draft Addendum III for American eel (Kate Taylor) 10:00 a.m.

18. Break 10:30 a.m.

19. State issues (each state presents), focusing on success stories 10:45 a.m.

20. Federal Reports 11:30 a.m.
    National Marine Fisheries Service
    U.S. Fish and Wildlife Service
    United States Coast Guard

21. Other business/Adjourn 12:00 p.m.

The meeting will be held at the Radisson Plaza-Warwick Hotel, 220 south 17th Street; Philadelphia, Pennsylvania 19103
(215) 735-6000

Atlantic States Marine Fisheries Commission
Law Enforcement Committee
Draft Minutes
(Not official until approved)

May 1, 2012
8 a.m. – 5 p.m.
Alexandria, Virginia

Participants:
Kyle Overturf (CN DEEP, State Environmental Conservation Police)
Lloyd Ingerson (MD DNR, Natural Resource Police)
Rob Beaton (FL FWC, Division of Law Enforcement)
Doug Lewis (GA DNR, Law Enforcement Section)
Joe Fessenden (ME DMR, Maine Marine Patrol)
John Tulik (MA Environmental Police)
Jeff Marston (NH Fish & Game Department)
Dominick Fresco (NJ Division of Fish and Wildlife, Bureau of Law Enforcement)
John Rutherford (DE DNREC, Division of Fish and Wildlife Enforcement Section)
Dorothy Thumm (NY State DEC, Division of Law Enforcement
Steve Anthony (NC DMF, Marine Patrol Section)
Jeffrey Bridi (PA Fish & Boat Commission, Bureau of Law Enforcement)
Kurt Blanchard (RI DEM, Division of Law Enforcement)
Chisolm Frampton (SC DNR)
Richard Lauderman (VA MRC, Division of Law Enforcement)
Tracy Dunn (NOAA Fisheries)
Elizabeth Buendia (USCG)

Staff: Mark Robson, Committee Coordinator
Toni Kerns
Chris Vonderweidt

Invited Guest: Paul Diodati, ASMFC Chairman

1. Welcome/Call to Order
Kyle Overturf (Chairman) called the meeting to order.

2. Roll Call of the States
Mark Robson read a roll call of the states. A representative for the District of Columbia was not present.

3. Committee Consent
The agenda as revised (to reflect scheduling changes) was approved.
The minutes of the November 2011 meeting of the LEC were approved.

4. Public Comment
There was no public comment.

5. Data Relating to Seized Illegal Harvest
Toni Kerns of ASMFC staff introduced the issue, seeking information about how seized fish are documented and tallied by the individual states. She was looking for general information regarding how

illegal catch can be accounted for in stock assessments. Representatives of the states reported how their respective processes operate. Systems ranged from no recording of illegal catch to various systems of recording and allowing the sale of seized fish. There was discussion of how illegally harvested fish are considered in management. Additional information may be requested of the LEC at a later date.

6. Mechanism to provide input to NOAA Fisheries OLE

The LEC discussed coordination of issues with NOAA Fisheries Office of Law Enforcement and ways to enhance LEC input on OLE priorities, staffing and funding. There was agreement to continue actively using twice-annual LEC meetings to discuss and resolve any state/federal coordination issues. The LEC will actively engage in the NOAA OLE priority-setting process for 2013. There was general agreement on the importance of local and regional coordination down to and including the level of officers working in the field. There was additional discussion of coordination meetings between NOAA and the states to address Joint Enforcement Agreement priorities. Meetings are set for CN, NY, and RI, but it has been a while since these meetings have been held and LEC members expressed desire to see the meetings continue.

Kyle Overturf reported that there are issues with JEA coordination because regional meetings are not happening on a regular basis anymore. It was agreed that there has been opportunity to provide input to NOAA on priorities, but that local and regional needs could be enhanced. There was discussion of an LEC advisory group to NOAA, but there is already a national group with a similar purpose. Tracy Dunn expressed the desire of NOAA OLE to seek new ideas and all agreed that enhancing the regional meetings was desirable.

John Tulik stated there is a good working relationship with NOAA and raised the issue of staffing. There is still a staffing allocation plan for NOAA that needs to be approved. Tracy Dunn expressed a desire to get local input on staffing and make that a focus in the coming year. Kurt Blanchard described the individual interactions that are important to NOAA OLE and local officers working together. It works very well in some states that could serve as models for communication where there are problems. There was further discussion of NOAA uniformed officers and how they could interact with state officers. Discussion then turned to the matter of staffing in the Office of the General Counsel and the current problem with settlement of cases. LEC members described problems with compliance and enforcement due to backlogs at the federal level. Tracy Dunn responded to questions by pointing out efforts to coordinate serious cases with the Office of the General Counsel and there was discussion of engaging the USCG attorneys in additional cases. Lloyd Ingerson brought up the involvement of the U.S. Department of Justice in the striped bass investigation and suggested that might be an avenue to address some of the NOAA cases. Final discussion dealt with the need for continued involvement in JEA document preparation and coordination of those documents with state agency representatives. It was suggested that a SE representative on the matrix committee was needed. There was no further discussion of a LEC sub-committee to address federal coordination with NOAA OLE.

7. Recess for Lunch

8. Species Issues

Atlantic Striped Bass

Mark Robson and Lloyd Ingerson summarized the actions of the striped bass management board and the status of draft Addendum III. The LEC expressed its continued support for the management options being considered in the addendum.

Tautog

Chris Vonderweidt updated the LEC on the status of tautog management. He briefed the LEC on the change in harvest reduction targets and development of new draft management actions for the LEC to review and address if needed. There may be some development of federal regulations and LEC input may be valuable. Kyle Overturf reviewed some of the past ideas to address the live market, citing examples of regulatory approaches that were deemed unenforceable.

American Eel
Representatives of the United States Fish and Wildlife Service law enforcement staff updated the LEC on the status of the glass eel fishery. Because of very high market values, significant illegal harvest and sale has become an issue of concern. Coordinated enforcement efforts were discussed.

The LEC representatives to the species boards were updated as follows:

American eel/American lobster	Joe Fessenden
Atlantic herring	Jeff Marston
Coastal sharks	Chisolm Frampton
Horseshoe crab	John Rutherford
Menhaden	Lloyd Ingerson
Shad/river herring	Jeff Bridi
Spiny dogfish	John Tulik
Striped bass	Kurt Blanchard
Sturgeon	Dorothy Thumm
Weakfish	Steve Anthony
Winter flounder	Kurt Blanchard

9. Discussion of LEC web page
Kyle Overturf discussed his desire to see the LEC web page of the ASMFC website improved and updated. Mark Robson reported on work to date. LEC members will begin submitting feature stories or news items and photos that could be incorporated into the page on a regular basis. Mr. Robson will continue working with ASMFC staff to keep LEC information up to date. Mr. Overturf also discussed the use of social media such as Facebook as an alternative means of making information available via the internet.

10. State Issues
Representatives from the states provided updates on equipment purchases, possible agency restructuring actions, reductions in staffing, budgets, training academies, the lack of qualified applicants for jobs, and training opportunities for officers. Some specific items of interest included:
Virginia: recent interest in allowing spear fishing for striped bass; Use of a Port Security Grant to obtain needed equipment.
Maryland: Reported a big year for oyster harvest; New license suspension mechanism has resulted in 20 individuals with suspensions through spring 2014 for oyster and striped bass violations.
Delaware: Discovering some similar cases with striped bass harvest that Maryland found.
New Jersey: Sought information from other LEC members regarding regulatory control of party boat illegal harvest and accountability of captains.
New York: Reported growing interest in aquaculture of native species such as fluke and striped bass and possible live sale of these aquaculture species.
Pennsylvania: The Chief of Law Enforcement, Tom Kamerzel, has retired effective April 2, 2012; they are experiencing an increase in internal invasive species issues and there seem to be markets for importation and exotics in their state.
Rhode Island: Reported positive feedback on a NASBLA sponsored boat-operators course that staff attended.
Massachusetts: Seeking legislative approval for 25 officer positions to restore lost staffing.
New Hampshire: Recent effort in the state to remove inspection powers of their officers, which is being discussed in the legislature.

Maine: Reported on a valuable meeting held at the National Conservation Leadership Institute and discussions of creating an executive-level training course for chiefs; State agency is working on succession training and sees this as a major issue for the future.

11. Discussion of ASMFC priorities and opportunities for enhancing LEC coordination with ASMFC Chair

ASMFC chairman Paul Diodati visited the LEC and shared his thoughts about the role of the LEC and enforcement in general in the fishery management process.

12. Break

13. Discussion of LEC Priorities and Action Planning

Mark Robson provided some background information to the LEC regarding the committee's charge and responsibilities. The LEC will begin the process of evaluating issues important to the committee. LEC members reviewed some examples of draft priorities and tasks for short and long-term planning. Mark Robson will return with a list of potential priority issues at a later meeting.

14. Federal Reports

United States Coast Guard

Elizabeth Buendia presented a written report summarizing vessel boardings and cases. Notably they report a 96% compliance rate. The cutter fleet is being reduced but for the Atlantic coast area smaller vessel platforms are being geared up for coastal fisheries work. Committee members asked about the activities of the Cape Cod Training Center and whether states could get updates on possible courses there. That information will be provided to committee members along with information about similar training opportunities at the Charleston training center.

NOAA

Tracy Dunn reported that the Asset Forfeiture Fund is no longer available and their base budget has also been reduced. There is no longer an inspection training program available. There were follow-up questions regarding communications between NOAA uniformed officers and state officers. The LEC encouraged development of good communication channels with NOAA uniformed officers, including possible access to state radio systems.

United States Fish and Wildlife Service

Law enforcement staffing is currently close to 100 percent. They have just hired 5 new agents (1 in ME, 2 in NY, 1 in MD and 1 in NJ). They reported concerns about loss of enforcement authority via the Lacey Act. Loss of this authority would significantly reduce their law enforcement capabilities.

15. Other Business/Adjourn

The issue of interstate commerce and tracking of harvest was raised by a member of the ASMFC. There was discussion of dealer standards for reporting and how to track fish that are trucked across state lines. This issue extends also to exportation of seafood products. The ASMFC has not focused much on this issue or dealer standards. This may be an item for future discussion.

Rob Beaton asked what the process was for getting LEC input on species management board issues. There was some concern expressed that the process of getting LEC input is not consistent. Mark Robson will work on communication with ASMFC staff to ensure early involvement of the LEC.

Joe Fessenden raised a concern that the increasing complexity of ASMFC regulations is hurting enforceability of regulations, and ultimately leading to higher non-compliance. It is important to have LEC input and continued efforts to ensure that regulations being approved are enforceable.

The meeting was adjourned at 5:00 p.m.

Law Enforcement Committee Representatives
To
Species Management Boards
Updated September 20, 2012

American eel/American lobster	Joe Fessenden
Atlantic herring	Jeff Marston
Coastal sharks	Chisolm Frampton
Horseshoe crab	John Rutherford
Menhaden	Lloyd Ingerson
Shad/river herring	Jeff Bridi
Spiny dogfish	John Tulik
Striped bass	Kurt Blanchard
Sturgeon	Dorothy Thumm
Tautog	Dominick Fresco
Weakfish	Steve Anthony
Winter flounder	Kurt Blanchard

The LEC is being asked to review and provide input on draft measures for Atlantic Menhaden Amendment 2. The Executive Summary of the Amendment is attached. The Plan Development Team members for this amendment are looking for feedback from the LEC on the following sections:

Section 3.6.1.2 Quota Monitoring
-If the Board implements mandatory weekly reporting, is this measure enforceable to ensure late reporting does not become an issue. Is this done for other species that are management with a quota and have timely data reporting requirements?

Section 4.2 Commercial Fishery Management Measures
This section contains several subsections (4.2.1.1 through 4.2.1.9) that specify the a Total Allowable Catch (TAC) management option.
A majority of these sections are procedural, but the following may be most applicable to the LEC

Section 4.2.1.3 TAC Allocation
-If the TAC is allocated by region or state, how will that TAC be enforced on the water. For example, can a boat registered in a specific state land its catch in any state?

Section 4.2.1.7 Bycatch Allowance
What enforcement challenges does this create? Is there an LEC preference for pound based or percent based or both for a bycatch allowance?

Section 4.2.1.8 TAC Set Aside for Small Scale Fisheries
Noting the Board still needs to define a “traditional small scale fishery” does the LEC see enforcement issues with this option?

Section 4.2.1.9 TAC Set Aside for Episodic Events
Does the LEC see enforcement issues with this option?

DRAFT AMENDMENT 2 FOR PUBLIC COMMENT

EXECUTIVE SUMMARY

The executive summary highlights all the sections of Draft Amendment 2 that contain a management decision. The summary is intended to be a shortened version of the document distributed at public hearings.

1.0 INTRODUCTION

The Atlantic States Marine Fisheries Commission (ASMFC) is developing an amendment to its Interstate Fishery Management Plan (FMP) for Atlantic Menhaden (*Brevoortia tyrannus)* under the authority of the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA). The Commission, through the coastal states of Maine through Florida, is responsible for managing Atlantic menhaden. ASMFC has coordinated interstate management of Atlantic menhaden in state waters (0-3 miles) since 1981. Atlantic menhaden is currently managed under Amendment 1 and Addenda I-V to the Fishery Management Plan (FMP). Amendment 2 to the Interstate Fishery Management Plan for Atlantic menhaden would replace Amendment 1 if adopted. This document contains all applicable management options still in implementation from Amendment 1 and all five addenda. Management authority in the exclusive economic zone (EEZ, 3-200 miles from shore) lies with NOAA Fisheries.

1.1 BACKGROUND INFORMATION

1.1.1 Statement of the Problem

The 2010 Atlantic menhaden benchmark stock assessment Peer Review Panel noted that menhaden population abundance had declined steadily and recruitment had been low since the last peak observed in the early 1980s. Fishing at the fishing mortality (F) threshold reference point in the terminal year (2008) has resulted in approximately 8% of the maximum spawning potential (MSP)[1]. Therefore, the Panel recommended alternative reference points be considered that provide greater protection for spawning stock biomass (SSB) or population fecundity relative to the unfished level. In November 2011, the Atlantic Menhaden Management Board responded to that recommendation and adopted new F reference points via Addendum V. The new reference points are more conservative than the previous to account for the following: (1) while menhaden are not overfished the number of fish in the population has been declining, (2) while menhaden are important for many fisheries they also provide important ecological services, (3) strong recruitment classes may be dependent on favorable environmental conditions, and (4) recent science suggests conserving a larger percentage of the spawning stock is an important consideration for forage species such as menhaden. The new F threshold is $F_{15\%MSP}$, and the new F target is $F_{30\%MSP}$.

A stock assessment update was completed in July 2012, full $F/F_{15\%MSP}$ for the terminal year (2011) was greater than 1, and therefore, overfishing is occurring. Addendum V states that when overfishing is occurring the Board will take steps to reduce F to the target level. In order to end overfishing and reduce F to the target, the Board needs to consider changes in the management tools used to regulate the fishery.

[1] *Natural mortality is a contributing factor to current estimates of %MSP (e.g., environmental conditions affecting recruitment success, predation).*

The new F reference points adopted by the Board through Addendum V are intended to be interim reference points while the Commission's Multispecies Technical Committee develops ecological-based reference points (ERP). The ERPs will take some time to develop because of the complexity of modeling predator-prey relationship in marine species that rely on menhaden for forage (e.g., striped bass, bluefish, weakfish). In either case (biological or ecological reference points) the intent is to manage Atlantic menhaden at sustainable levels to support fisheries and meet predator demands through sufficient SSB to prevent stock depletion and protect against recruitment failure.

2.5 BIOLOGICAL REFERENCE POINTS

Threshold reference points are the basis for determining stock status (i.e., whether overfishing is occurring or a stock is overfished). When the fishing mortality rate (*F*) exceeds the *F*-threshold, then overfishing is occurring; the rate of removal of fish by the fishery exceeds the ability of the stock to replenish itself. When the reproductive output (measured as spawning stock biomass or population fecundity) falls below the biomass-threshold, then the stock is overfished, meaning there is insufficient mature female biomass (SSB) or egg production (population fecundity) to replenish the stock.

Current Overfishing, Overfished/Depleted Definitions

The current overfishing definition is a fecundity-per-recruit threshold of $F_{15\%MSP}$ and a target of $F_{30\%MSP}$. The current fecundity-based overfished definition is a target of SSB_{MED} and a threshold of $SSB_{MED.T}$ (half of SSB_{MED}). Benchmarks are calculated using all years, 1955-2011. Reference points are recalculated during an update and benchmark stock assessment, see the latest stock assessment for point estimates of reference points and stock status determination (ASMFC, 2012).

Uncertainty in 2012 Stock Assessment Update

As noted, an Atlantic menhaden stock assessment update was completed in July 2012. However, the results of the assessment are uncertain because the model fit the data poorly for the following reasons,

- Overweighting of the age composition data.
- Lack of spatial modeling to address changes in the fishery over time.
- Lack of a coastwide adult abundance index.
- Poor fit to the PRFC index.
- Strong retrospective pattern.

Although the Technical Committee could not come to consensus on the utility of the terminal year (2011) point estimates of F and SSB for management advice, there was consensus that the status determinations, overfishing is occurring and the stock is not overfished, were likely correct. However, the extent of overfishing could not be determined. This statement is supported both quantitatively and qualitatively. Quantitatively, results of the sensitivity analyses did not appreciably alter stock status. Qualitatively, the 2009 benchmark stock assessment also concluded that overfishing was occurring, and Addendum V reference points significantly reduced the overfishing threshold (from approximately $F_{8\%MSP}$ to $F_{15\%MSP}$). As harvest levels

have increased since 2008 and there has been no significant increase in stock size, overfishing is still likely occurring.

Given the stated uncertainty in the most recent stock assessment update (ASMFC 2012), the projection analysis that explored constant landing scenarios with a probability and timeframe to achieve the target F, is not usable. Without a usable projection analysis, the only way to assess the progress towards achieving the target F is through future stock assessments.

SSB Reference Points

In 2011, the Atlantic Menhaden Management Board adopted $F_{15\%MSP}$ as an overfishing threshold with the goal of increasing spawning potential of the stock through reduced fishing mortality. The current overfished threshold definition, 50% of SSB_{MED}, was not changed at that time. This means that the current set of overfishing and overfished stock status definitions are derived from two different types of calculations (maximum spawning potential vs. medians) and are based on two different sets of goals and assumptions about the stock. The current difference between these stock status declarations for menhaden is largely a function of how the fishing mortality and biomass reference points are calculated, not an inherent characteristic of the stock and how it is being fished.

The Technical Committee has warned of a mismatch between these overfishing and overfished definitions because their methods of calculation and underlying assumptions differ, making the link between them atypical. Traditionally, when overfishing reference points are calculated, an assumption is made that the overfishing threshold (in this case $F_{15\%MSP}$) is a reasonable proxy for F_{MSY}, the fishing mortality rate that would achieve maximum sustainable yield. Likewise, an assumption is made that the spawning stock biomass target (in this case SSB_{MED}) is a reasonable proxy for B_{msy}, the stock biomass level at which maximum sustainable yield is achieved. In theory, fishing at F_{msy} should result in a stock biomass of B_{msy}. However, in the current case of Atlantic menhaden, the overfishing and overfished reference points are calculated using two different methodologies and there is no theoretical justification for assuming that fishing at $F_{15\%MSP}$ will achieve $SSB_{MED.}$ The TC has suggested that consistent methodologies be used for both *F*-based and *SSB*-based calculations so that managers can more reasonably make the assumption that fishing at the threshold F should result in target biomass.

Given $F_{15\%MSP}$ is the interim reference point that has been adopted by the Board, the TC suggests that an SSB reference point of $SSB_{15\%MSP}$ also be adopted.

The Board may consider a change to the SSB biological reference points through Amendment 2. If the Board Selects Option B, the stock would be in an overfished condition based on the most recent estimate of SSB_{2011}. If the SSB reference points remain unchanged (Option A), the stock is not overfished.

Option A: Status Quo. The current fecundity-based overfished definition is a target of SSB_{MED} and a threshold of $SSB_{MED.T}$ (half of SSB_{MED}).

Option B: The fecundity-based overfished definition is a target of $SSB_{30\%MSP}$ and a threshold of $SSB_{15\%MSP}$.

2.6.2 Stock Rebuilding and F Reduction Schedules

SSB Rebuilding Schedule
The Board shall take action to rebuild the Atlantic menhaden stock to at least the target SSB level in a time frame that shall be no longer than 10 years.

F Reduction Schedule

Ending Overfishing (Reducing F to the threshold)
Through implementation of Amendment 2, the Board will take immediate action to end overfishing.

Timeframe to Achieve the F Target
Because achieving the target F requires more substantial harvest reductions than achieving the threshold F, the board is considering a range of timeframes for reducing F to the target level. Depending on the schedule for reducing F, a time stepped approach may be used in which F would be reduced in increments until the target is reached. If the target F is to be achieved on a shorter time frame, annual reductions in landings will be more substantial than if the target F was achieved over a longer time period.

Given the uncertainty in the most recent stock assessment update (ASMFC 2012), the projection analysis that explored constant landing scenarios with a probability and timeframe to achieve the target F, is not usable. This means that the level at which the Board needs to reduce landings to achieve the target F over a set time frame is unknown. Therefore, the only way to assess the progress towards achieving the target F is through future stock assessments.

The Board is considering the following timeframes as a goal to achieve the target F. Until the next stock assessment is completed, the Board will not have an updated estimate of fishing mortality to assess progress toward achieving the target F. Note that the next benchmark stock assessment (peer review) for Atlantic menhaden is currently scheduled for 2015.

Option A: The Board is not required to specify a time frame to reduce the current F to at least the target $F_{30\%MSP.}$

Option B: The Board shall take action to reduce the current F to at least the target $F_{30\%MSP}$ in a time frame that shall be no longer than 3 years.

Option C: The Board shall take action to reduce the current F to at least the target $F_{30\%MSP}$ in a time frame that shall be no longer than 5 years.

Option D: The Board shall take action to reduce the current F to at least the target $F_{30\%MSP}$ in a time frame that shall be no longer than 10 years.

Option E: Upon receipt of results from a new benchmark peer-reviewed assessment, the Board shall specify a timeframe and take action to reduce F to at least the target $F_{30\%MSP}$.

3.6 SUMMARY OF MONITORING PROGRAMS

In order to achieve the goals and objectives of Amendment 2, the collection and maintenance of quality data is necessary.

3.6.1 Catch and Landings Information

The reporting requirements for the Atlantic menhaden fishery are based in part on Captains Daily Fishing Reports (CDFRs). The ASMFC, NMFS, US Fish & Wildlife Service, the New England, Mid-Atlantic, and South Atlantic Fishery Management Councils, and all the Atlantic coastal states have developed a coastwide fisheries statistics program (Atlantic Coastal Cooperative Statistics Program). A minimum set of reporting requirements based on a trip-level for fishermen and dealers has been developed as the minimum standard for data collection on the Atlantic coast. Nothing in the proposed program would prohibit a state/agency from requiring more detailed information on a trip basis if so desired.

3.6.1.1 Commercial Catch and Effort Data Collection Program(s)

Reporting requirements for Bait and Reduction Fishery
All menhaden purse seine and bait seine vessels (or snapper rigs) shall be required to submit the Captain's Daily Fishing Reports (CDFRs) through the Standard Atlantic Fisheries Information System (eTrips), an ACCSP standards compliant electronic reporting system.
The PDT notes that outside of the snapper rig and purse seine vessels that harvest bait, there are no standardized reporting requirements for the bait fishery in the ASMFC FMP for Atlantic menhaden.

The following is a description of current reduction fishery reporting process.
Daily vessel unloads (in thousands of standard fish) are emailed daily to the NMFS. Captains Daily Fishing Reports (CDFRs) from the Reedville menhaden fleet are used to estimate in-season removals from Chesapeake Bay (Chesapeake Bay Cap). CDRFs are deck logbooks maintained by the Virginia reduction purse-seine vessels. Total removals by area are calculated at the end of the fishing season. At-sea catches from the CDFRs are summed by vessel, and compared to total vessel unloads from company catch records. Individual at-sea sets are then multiplied by an adjustment factor (company records/ at-sea estimates). Adjusted catches by set are converted to metric tons, and accumulated by fishing area. Catch totals are reported by ocean fishing areas (New Jersey, Delaware, and Maryland in the EEZ, Virginia and North Carolina), while catches inside and outside Chesapeake Bay are delineated by the Chesapeake Bay Bridge Tunnel.

NMFS port agent samples purse-seine catches at dockside in Reedville, VA, throughout the fishing season (May through December), providing data for age composition determination.

The following is a description of current bait fishery reporting process.
The summary of the current reporting requirements, by state, are provided in Table 12.

3.6.1.2 Quota Monitoring

Quota monitoring, whether coastal, or state-by-state, is dependent upon the strength of state specific monitoring programs, as described in *Section 3.6.1*. The current catch reporting requirements for the Atlantic menhaden bait fishery does not provide timely or complete data for

use by managers and scientists.

The ACCSP commercial data collection program is a mandatory, trip-based system with all fishermen and dealers required to report a minimum set of standard data elements.

Required data elements for Atlantic menhaden (see Table 13 and Table 14 for details)
(1) trip start date (2) vessel identifier (3) individual fisherman identifier (4) dealer identification (5) trip number (6) species (7) quantity (8) units of measurement (9) disposition (10) county or port landed (11) gear (12) quantity of gear (13) number of sets (14) fishing time (15) days/hours at sea (16) number of crew (17) area fished

The quota monitoring options below are based on the ACCSP commercial data collection program with the required data elements listed above.

Option A. Status Quo
- All menhaden purse seine and bait seine vessels (or snapper rigs) shall be required to submit the Captain's Daily Fishing Reports (CDFRs) through the Standard Atlantic Fisheries Information System (eTrips), an ACCSP standards compliant electronic reporting system.
- *PDT notes this does not improve timeliness or completeness of data collection.*

Option B. Approved State Methodology for Monitoring
- Must be approved by the Board as a valid method for monitoring (high probability of success)
- Program must have the ability to monitor fishery landings within 7 days of actual landing date.
- Required ACCSP data elements listed above

Option C. Require SAFIS dealer weekly reporting system
- Due Tuesday by midnight, available by 6am Wednesday consolidated (lag 1-10 days)
- Required ACCSP data elements listed above
  PDT Notes
- *Consistent with NE dealers reporting requirements*
- *Difficult to implement in states with established harvester-dependent reporting, not dealer-dependent reporting.*
- *Not difficult to implement in states that use ACCSP eTrips.*

Option D. Require SAFIS eTrips fisherman daily reporting system
- Due by 10pm, available by 6am next day for consolidation
- Required ACCSP data elements listed above
  PDT Notes
- *Limiting factor, computer access and familiarity of fisherman*

Option E. SAFIS weekly with trigger to SAFIS eTrips when approaching quota maximum (85% trigger)
- Utilize weekly system until it is projected that 85% of the quota will be attained, then

require daily reporting system until close of fishery (or end of season), whichever comes first.

- Required ACCSP data elements listed above

3.6.2 Fishery-Dependent Data

3.6.2.1 Biological Data

The Beaufort Laboratory of the Southeast Fisheries Science Center (NMFS) conducts biostatistical sampling of the Atlantic menhaden reduction fishery (Smith 1991). The program began preliminary sampling in the Mid-Atlantic and Chesapeake Bay areas during 1952-1954 and has continued uninterrupted since 1955, sampling the entire range of the Atlantic menhaden purse-seine reduction fishery. Detailed descriptions of the sampling procedures and estimates gathered through the program are cited in Smith (1991).

The biostatistical data, or port samples, for length- and weight-at-age are available from 1955 through 2011, and represent one of the longest and most complete time series of fishery data sets in the nation. The NMFS employs a full-time port agent at Reedville, VA to sample catches at dockside throughout the fishing season for age and size composition of the reduction catch (Table 1).

Table 1. Number of ten fish samples from the reduction fishery landings at Reedville, VA from 2007-2011.

Year	2007	2008	2009	2010	2011
Number of ten-fish samples acquired in VA Reduction Fishery	379	277	283	327	323

Biological sampling of the Atlantic menhaden bait harvest for size was initially scrutinized by the Atlantic Menhaden Advisory Committee (AMAC; predecessor of the Atlantic Menhaden Technical Committee) in the early 1990s. Target sample sizes from the menhaden bait fisheries by state and gear were established by the AMAC in 1994 (Table 2). Table 3 presents recent bait harvest sampled by year, state and gear during 2007-2011. All age samples are processed by the NMFS Beaufort Laboratory.

Table 2. Target number of ten fish samples as established in 1994 for the bait harvest.

State	Target # of 10-fish samples
Massachusetts & Maine Combined (RI*)	37
New Jersey	50
Virginia	41
North Carolina	14
Total	142

*Bait purse-seine crews at the time were fishing in Naragansett Bay (RI), but landing catch in Swansea, MA.

Table 3. Number of ten fish samples by year, state, and gear, sampled from the bait harvest from 2007-2011.

	VA		PRFC		NJ		RI/MA		ME		Total	
Year	purse seine	pound net	purse seine	pound net	purse seine	pound net	purse seine	pound net	purse seine	pound net	Purse seine	pound net
2007	47	8	0	0	61	1	17	19	0	0	125	28
2008	37	8	0	0	73	5	12	14	16	0	138	27
2009	57	11	0	0	44	1	3	4	0	0	104	16
2010	36	12	0	3	55	0	0	7	0	0	91	22
2011	37	17	0	9	51	0	0	0	0	0	88	26

The Board may consider mandatory biological sampling requirements to meet the data needs of Atlantic menhaden stock assessments.

Option A. Status quo. Biological sampling requirements are not a mandatory element of the FMP.

Option B. The TC will review and recommend the targeted number of ten fish samples to be collected by state, and based on the TC's recommendation the Board may select specific biological monitoring requirements for Amendment 2.

3.6.2.2 Adult Survey Index

PRFC Pound Net Index

Pound net landings collected by the Potomac River Fisheries Commission (PRFC) are used to develop a fishery-dependent index of relative abundance for adult menhaden. Pound nets are a stationary, and presumably nonselective, fishing gear. PRFC pound nets are set in the Potomac River adjacent the Chesapeake Bay; among other fishes, they catch menhaden primarily age-1 through age-3. Other than the reduction landings, these data represent the only other available information that can be used to infer changes in relative abundance of adult menhaden along the east coast of the U.S.

The index (1976-2011) is based on annual ratios of pounds of fish landed to total pound net days fished. Raw catch and effort data are available for 1976-1980 and 1988-2011. Recently, the PRFC was able to obtain and computerize more detailed data on pound net landings and effort, which allowed index values to be calculated for 1964-1975 and 1981-1987.

The Board may consider mandatory fishery-dependent sampling requirements to meet the data needs of Atlantic menhaden stock assessments.

Option A. Status quo. Fishery-dependent sampling requirements for an adult survey index are not a mandatory element of the FMP.

Option B. Require all states with stationary gears that encounter menhaden collect catch and effort data (e.g., pounds landed, number of nets fished, number of days fished per net) for potential development of a CPUE index of adults across the range of Atlantic menhaden. Additional biological data would be required including age and length samples to determine the selectivity of those fisheries.

4.2 COMMERCIAL FISHERY MANAGEMENT MEASURES

4.2.1 Total Allowable Catch (TAC)

Option A. Status quo. Harvest will not be restricted through the use of a TAC.

Option B. Harvest will be restricted through the use of a TAC. (*If selected see Sections 4.2.1.1 through 4.2.1.7*).

4.2.1.1 TAC Specification

The Atlantic Menhaden Management Board will set an annual or multi-year TAC based on the following procedure.

The Atlantic Menhaden TC will annually review the best available data including, but not limited to, commercial and recreational catch/landing statistics, current estimates of fishing mortality, stock status, survey indices, assessment modeling results, and target mortality levels. The TC will calculate TAC options based on the Board selected method of setting a TAC (see *Section 4.2.1.2*). The Board will set an annual TAC through Board action with the option of setting a multi-year TAC, reviewed annually.

The directed fishery for Atlantic menhaden will be closed when the Plan Development Team Chair projects the catch will exceed a percentage of the TAC (see options below). States have the responsibility to close the Atlantic menhaden commercial fishery in their state once the TAC (or a percentage thereof) has been reached.

Acknowledging that any changes selected in reporting requirements (Section 3.6.1.2) may take time to implement completely, the Board may select a lower closing percentage to account for incomplete and late reports at the time of season closure.

Option A. 85%
Option B. 90%
Option C. 95%
Option D. The Board will specify annually or for multiple years, a percentage of the TAC to base closures on.

4.2.1.2 TAC Setting Method

Ending overfishing and reducing F to the target will require the implementation of management measures that lower landing levels compared to recent years.

Given the uncertainty in the most recent stock assessment update (ASMFC 2012), the projection analysis that explored constant landing scenarios with a probability and timeframe to achieve the target F, are not usable for setting a TAC. This means that the level at which the Board needs to reduce landings to achieve the target F over a set time frame is unknown. However, because overfishing is occurring, the Board will take steps to reduce F to the target level. The first step in that process is to end overfishing immediately.

Option A. Ad-hoc approach to setting TACs.

As an alternative to using projections to set TACs, ad hoc approaches are used by several regional Fishery Management Councils for species with poor assessment data or uncertain stock assessment results. Typically, in these situations, most Councils use their landings/catch data as the only reliable means of setting harvest limits. A document entitled "Calculating Acceptable Biological Catch for Stocks that have reliable Catch Data Only (Only Reliable Catch Stocks – ORCS)" was recently published, and serves as guidance to set interim removal levels under these conditions (ORCS 2011).

To summarize the ORCS report; generally an average of the last 3-5 years of landings are used as this reflects recent history. A precautionary multiplier is then applied to decrement the average landings and set a harvest limit. Decision of the appropriate multiplier is cautiously decided based on factors such as life history, ecological function, stock status, and an understanding of exploitation. Typically this multiplier can range from 0.85 to 0.25 (Table 4).

Table 4. Summary of ad-hoc approaches used by Fishery Management Councils to set harvest limits in data poor situations.

Council	Species group	Multiplier	Comments
New England	Atlantic herring	1	Not OF, OF not occurring
New England	Red crab	1	Based on stock status
Carribean		0.85	Used to set ABC and ACL
New England	Groundfish	0.75	
Pacific		0.75	Used to set ABC
Pacific	Groundfish	0.5	Used to set OY
Pacific	Coastal pelagics	0.25	Used to set ABC

In the New England approach, the multiplier was chosen at 1.0 suggesting catch be maintained at current levels. The rationale was that the stock was not overfished and overfishing was not likely to be occurring. Other evidence, such as size at age, also indicated that the overall stock status was good. Further, landings were well monitored and discards of the target stock were low. In the case of the Pacific Fishery Management Council the multiplier was set at 0.25. This number reflected the importance of herring as forage for stellar Sea Lions and other endangered mammals, the high level of exploitation, and the fact that Pacific Herring spawn in discreet and vulnerable aggregations (when they are targeted by the fishery).

It should be noted that the multiplier is never set at a value greater than 1.0; indicating that catch should not be allowed to increase in these uncertain situations. Table 5 provides some additional decision making framework information that goes into the choice of a multiplier.

Table 5. The method table showing possible actions for determining ABC based on different fishery impact categories and expert opinion. Taken from the workshop report of the 2nd National SSC meeting (From ORCS, 2011).

Historical Catch	Expert Judgment	Possible Action
Nil, not targeted	Inconceivable that catch could be affecting stock	Not in fishery; Ecosystem Component; SDC not required
Small	Catch is enough to warrant including stock in the fishery and tracking, but not enough to be of concern	Set ABC and ACL above historical catch; Set ACT at historical catch level. Allow increase in ACT if accompanied by cooperative research and close monitoring.
Moderate	Possible that any increase in catch could be overfishing	ABC/ACL = f(catch, vulnerability) So caps current fishery
Moderately high	Overfishing or overfished may already be occurring, but no assessment to quantify	Set provisional OFL = f(catch, vulnerability); Set ABC/ACL below OFL to begin stock rebuilding

ABC = Acceptable Biological Catch ACL = Annual Catch Limit
ACT = Annual Catch Target OFL = Overfishing Level

For Atlantic menhaden; the stock is likely experiencing overfishing given the recent changes in reference points (ASMFC 2012). Overall, Atlantic menhaden have low vulnerability given their short life history, age at spawning, rapid growth, and fecundity. However, menhaden also serve as forage for other valuable commercial and recreationally important species. While landings history data are good, some significant uncertainties remain in recruitment due to natural variability. As such, Table 6 outlines some possible options using a 3 or 5 year average of the catch, with the addition of potential multipliers to be used on those catch values. Typically Councils and their SSC's dictate the multipliers in 0.25 increments, given the other uncertainties involved.

Table 6. Estimated harvest levels (thousand MT) for a range of uncertainty correction factors. Probability of reducing overfishing decreases moving towards a multiplier of 1.

Sub-options	Average	Multipliers			Multipliers	
		1	0.9	0.8	0.75	0.5
Sub-options A	3-year	213.5	192.2	170.8	160.2	106.8
Sub-options B	5-year	209.5	188.5	167.6	157.1	104.7

The first step in the ad hoc approach to set a TAC is choosing a recent range of years to average the catch. The Board is considering a recent 3-year and 5-year average of the catch. The second step is the choice of a precautionary multiplier. As noted, the precautionary multiplier adjusts the average catch to arrive at a final TAC. The Board is considering multipliers between 1 and 0.5, meaning a range of reductions from 0% to 50%, respectively (Table 6).

Sub-options A. Use a 3 year average of the catch to set an ad hoc TAC. Selecting this option also includes the choice of a multiplier (Sub-options A.1-A.5, below) that adjusts the average catch for a final TAC.

Sub-option A.1. Multiplier = 1, means a 0% reduction from the recent 3 year average

Sub-option A.2. Multiplier = 0.90, means a 10% reduction from the recent 3 year average

Sub-option A.3. Multiplier = 0.80, means a 20% reduction from the recent 3 year average

Sub-option A.4. Multiplier = 0.75, means a 25% reduction from the recent 3 year average

Sub-option A.5. Multiplier = 0.50, means a 50% reduction from the recent 3 year average

Sub-option B. Use a 5 year average of the catch to set an ad hoc TAC. Selecting this option also includes the choice of a multiplier (Sub-options B.1-B.5, below) that adjusts the average catch for a final TAC.Sub-option B.1. Multiplier = 1, means a 0% reduction from the recent 5 year average

Sub-option B.2. Multiplier = 0.90, means a 10% reduction from the recent 5 year average

Sub-option B.3. Multiplier = 0.80, means a 20% reduction from the recent 5 year average

Sub-option B.4. Multiplier = 0.75, means a 25% reduction from the recent 5 year average

Sub-option B.5. Multiplier = 0.50, means a 50% reduction from the recent 5 year average

Option B. Projections or Ad-hoc approach
The Board will set the TAC based on the best available science (e.g., projection analysis), but if the projections are not recommended for use by the TC, the Board will set a quota based on the ad-hoc approaches used by the Regional Councils and detailed in Option A.

If the Board selects Option B, they must use the ad hoc approach to set a TAC for 2013 because the projection analysis is currently not usable.

4.2.1.3 TAC Allocation

If a TAC management approach is selected, it may be allocated to the bait and reduction fisheries separately, or it may be allocated based on total landings (bait and reduction fisheries combined). The following allocation options A, B, and C have additional options that consider sub-allocations.

OPTION A. Menhaden commercial TAC to be managed on a coastwide basis.
(if chosen, go to sub-options A)

OPTION B. Menhaden commercial TAC to be managed on a regional basis.
(if chosen, go to sub-options B)
Regions

New England Region (ME-CT)
Mid-Atlantic Region (NY-MD Coast)
Chesapeake Bay Region (VA, PRFC, MD Bay)
South Atlantic Region (NC-FL)

OPTION C. Menhaden commercial TAC to be managed on a state-by-state basis.
(if chosen, go to sub-options C)
States
ME-FL

SUBOPTIONS A: Menhaden commercial TAC to be managed on coastwide basis.

SUBOPTION A.1: Menhaden coastal commercial TAC not to be allocated by fishery.
(if chosen, TAC allocation section complete)

SUBOPTION A.2: Menhaden coastal commercial TAC to be allocated by fishery; bait and reduction.
(if chosen, go to suboptions A.2)

SUBOPTIONS A.2: Menhaden coastal commercial TAC to be allocated by fishery; bait and reduction.

Suboptions	Bait	Reduction
A.2.1: Average 3 years (2009-2011)	0.2155	0.7845
A.2.2: Average 5 years (2007-2011)	0.2194	0.7806
A.2.3: Average 7 years (2005-2011)	0.1962	0.8038
A.2.4: Highest 3 years (2005-2011)	0.2163	0.7837
A.2.5: 30% bait and 70% reduction split	0.30	0.70
A.2.6: 40% bait and 60% reduction split	0.40	0.60
A.2.7: 50% bait and 50% reduction split	0.50	0.50

For options A.2.1.-A.2.4, these time frames are reflective of the most recent improvements to the bait fishery landing reporting systems. Since 2005, only one reduction fishery plant was in operation.

Suboptions A.2.1, A.2.2., and A.2.3 are based on the average historical landings for the time frame specified.

Suboption A.2.4 is based on an average of the highest 3 years of landings, by fishery, since 2005.

Suboptions A.2.5, A.2.6 and A.2.7 are not based on landings history, but are being considered by the Board.

SUBOPTIONS B: Menhaden commercial TAC to be managed on a regional basis.

SUBOPTION B.1: Menhaden coastal commercial TAC not to be allocated by fishery, only by region.
(if chosen, go to suboptions B.1)

SUBOPTION B.2: Menhaden coastal commercial TAC to be allocated by fishery, and by region.
(if chosen, go to suboptions B.2)

SUBOPTIONS B.1: Menhaden coastal commercial TAC not to be allocated by fishery, only by region

Suboptions	New England (ME-CT)	Mid-Atlantic (NY-MD Coast)	Chesapeake Bay (VA, PRFC, MD-Bay)	South Atlantic (NC-FL)
B.1.1: Average 3 years (2009-2011)	1%	11%	87%	1%
B.1.2: Average 5 years (2007-2011)	2%	10%	88%	0%
B.1.3: Average 7 years (2005-2011)	1%	9%	89%	0%
B.1.4: Highest 3 years (2005-2011)	2%	11%	87%	0%

These time frames are reflective of the most recent improvements to the bait fishery landing reporting systems. Since 2005, only one reduction fishery plant was in operation in Virginia, so the Chesapeake Bay region would receive the 100% of the reduction fishery allocation.

Suboptions B.1.1, B.1.2., and B.1.3. are based on the average historical landings for the time frame specified.

Suboption B.1.4 is based on an average of the highest 3 years of landings, by fishery, since 2005.

SUBOPTIONS B.2: Menhaden coastal commercial TAC to be allocated by fishery, and then the bait portion of the quota by region (two parts)

Part 1: Fishery Suboptions	Bait	Reduction
B.2.1.1: Average 3 years (2009-2011)	0.2155	0.7845
B.2.1.2: Average 5 years (2007-2011)	0.2194	0.7806
B.2.1.3: Average 7 years (2005-2011)	0.1962	0.8038
B.2.1.4: Highest 3 years (2005-2011)	0.2163	0.7837
B.2.1.5: 30% bait and 70% reduction split	0.30	0.70
B.2.1.6: 40% bait and 60% reduction split	0.40	0.60
B.2.1.7: 50% bait and 50% reduction split	0.50	0.50

For options B2.1.1-B2.1.4, these time frames are reflective of the most recent improvements to the bait fishery landing reporting systems. Since 2005, only one reduction fishery plant was in operation in Virginia.

Suboptions B.2.1.1, B.2.1.2., and B.2.1.3. are based on the average historical landings for the time frame specified.

Suboption B.2.1.4 is based on an average of the highest 3 years of landings, by fishery, since 2005.

Suboptions B.2.1.5, B.2.1.6 and B.2.1.7 are not based on landings history, but are being considered by the Board because these allocation options would allow the bait industry to grow or expand according to market demands.

Part 2: Regional Bait Allocation Suboptions	New England (ME-CT)	Mid-Atlantic (NY-MD Coast)	Chesapeake Bay (VA, PRFC, MD-Bay)	South Atlantic (NC-FL)
B.2.2.1: Average 3 years (2009-2011)	4%	53%	41%	2%
B.2.2.2: Average 5 years (2007-2011)	7%	47%	44%	2%
B.2.2.3: Average 7 years (2005-2011)	7%	43%	49%	2%
B.2.2.4: Highest 3 years (2005-2011)	9%	45%	44%	2%

These time frames are reflective of the most recent improvements to the bait fishery landing reporting systems. Since 2005, only one reduction fishery plant was in operation in Virginia.

Suboptions B.2.2.1, B.2.2.2., and B.2.2.3. are based on the average historical landings for the time frame specified.

Suboption B.2.2.4 is based on an average of the highest 3 years of landings, by fishery, since 2005.

SUBOPTIONS C: Menhaden commercial TAC to be managed on a state-by-state basis.

SUBOPTION C.1: Menhaden coastal commercial TAC not to be allocated by fishery, only state-by-state.
(if chosen, go to suboptions C.1)

SUBOPTION C.2: Menhaden coastal commercial TAC to be allocated by fishery, and state-by-state.
(if chosen, go to suboptions C.2)

SUBOPTIONS C.1: Menhaden coastal commercial TAC not to be allocated by fishery, only state-by-state.

State-by-State Suboptions (values are percentages)	C.1.1 Average 3 years (2009-2011)	C.1.2 Average 5 years (2007-2011)	C.1.3 Average 7 years (2005-2011)	C.1.4 Highest 3 years (2005-2011)
Maine	0.04	0.21	0.16	0.31
New Hampshire	0	0	0	0
Massachusetts	0.84	1.33	1.14	1.69
Rhode Island	0.02	0.02	0.02	0.03

Connecticut	0.02	0.02	0.04	0.08
New York	0.06	0.04	0.04	0.05
New Jersey	11.19	10.12	8.72	10.76
Delaware	0.01	0.01	0.02	0.02
Maryland	1.37	1.48	1.56	1.74
PRFC	0.62	0.81	0.86	0.88
Virginia	85.32	85.55	87.06	83.94
North Carolina	0.49	0.38	0.36	0.47
South Carolina	0	0	0	0
Georgia	0	0	0	0
Florida	0.02	0.02	0.02	0.02

These time frames are reflective of the most recent improvements to the bait fishery landing reporting systems. Since 2005, only one reduction fishery plant was in operation in Virginia.

Suboptions C.1.1, C.1.2., and C.1.3. are based on the average historical landings for the time frame specified.

Suboption C.1.4 is based on an average of the highest 3 years of landings, by fishery, since 2005.

SUBOPTIONS C.2: Menhaden coastal commercial TAC to be allocated by fishery, and then the bait portion of the quota by state (two parts).

Part 1: Fishery Suboptions	Bait	Reduction
C.2.1.1: Average 3 years (2009-2011)	0.2155	0.7845
C.2.1.2: Average 5 years (2007-2011)	0.2194	0.7806
C.2.1.3: Average 7 years (2005-2011)	0.1962	0.8038
C.2.1.4: Highest 3 years (2005-2011)	0.2163	0.7837
C.2.1.5: 30% bait and 70% reduction split	0.30	0.70
C.2.1.6: 40% bait and 60% reduction split	0.40	0.60
C.2.1.7: 50% bait and 50% reduction split	0.50	0.50

For options C2.1.1-C2.1.4, these time frames are reflective of the most recent improvements to the bait fishery landing reporting systems. Since 2005, only one reduction fishery plant was in operation in Virginia.

Suboptions C.2.1.1, C.2.1.2., and C.2.1.3. are based on the average historical landings for the time frame specified.

Suboption C.2.1.4 is based on an average of the highest 3 years of landings, by fishery, since 2005.

Suboptions C.2.1.5, C.2.1.6 and C.2.1.7 are not based on landings history, but are being considered by the Board because these allocation options would allow the bait industry to grow or expand according to market demands.

Part 2: State-by-State Bait Allocation Suboptions (values are percentages)	C.2.2.1 Average 3years (2009-2011)	C.2.2.2 Average 5 years (2007-2011)	C.2.2.3 Average 7 years (2005-2011)	C.2.2.4 Highest 3 years (2005-2011)
Maine	0.182	0.965	0.761	1.302

New Hampshire	0	0	0	0
Massachusetts	3.885	6.119	5.485	7.037
Rhode Island	0.083	0.106	0.087	0.122
Connecticut	0.081	0.088	0.207	0.314
New York	0.257	0.202	0.191	0.216
New Jersey	51.851	46.407	42.097	44.754
Delaware	0.061	0.068	0.089	0.086
Maryland	6.359	6.781	7.550	7.244
PRFC	2.876	3.704	4.145	3.643
Virginia	31.998	33.751	37.569	33.219
North Carolina	2.283	1.736	1.732	1.961
South Carolina	0	0	0	0
Georgia	0	0	0	0
Florida	0.083	0.073	0.087	0.101

These time frames are reflective of the most recent improvements to the bait fishery landing reporting systems. Since 2005, only one reduction fishery plant was in operation in Virginia, so Virginia would receive the 100% of the reduction fishery allocation.

Suboptions C.2.2.1, C.2.2.2., and C.2.2.3. are based on the average historical landings for the time frame specified.

Suboption C.2.2.4 is based on an average of the highest 3 years of landings, by fishery, since 2005.

Allocation Revisit Provision

Any TAC allocation by fishery, state, or region adopted will be revisited, and may be modified by the Atlantic Menhaden Board through adaptive management (*Section 4.6).*

Option A. 3 years from Amendment 2 implementation
Option B. 5 years from Amendment 2 implementation

4.2.1.4 Quota Tranfers

The following options apply if the Board selects regional or state quotas (see *Section 4.2.1.3*)

Option A: No transfer of regional or state quotas
Regions or states may not transfer quota under this option.

Option B: Allow Transfer of Quotas
Two or more regions or states, under mutual agreement, may transfer or combine their Atlantic menhaden quota. These transfers do not permanently affect the region or state-specific shares of the coastwide quota, i.e., the region or state-specific shares remain fixed. Regions or states have the responsibility to close the Atlantic menhaden commercial fishery in their jurisdiction once the quota (or a percentage thereof) is reached. The Executive Director or designated ASMFC staff will review all transfer requests before the quota transfer is finalized. Such agreements for region or state transfers of quota should be forwarded to the Board through Commission staff.

Once quota has been transferred to a region or state, the region or state receiving quota becomes responsible for any overages of transferred quota. That is, the amount over the final quota (that

region or state's quota plus any quota transferred to that region or state) for a region or state will be deducted from the corresponding state's quota the following fishing season.

4.2.1.5 Quota Rollover

The quota rollover option only applies if the stock status is not overfished and overfishing is not occurring. Any quota that is rolled over must be used in the subsequent fishing year, if it is not used the quota cannot carry into a second fishing year.

Option A: Quotas May Not Be Rolled Over
Unused quota may not be rolled over from one fishing year to the next.

Option B. 100% Quota Rollover
Any unused portion of a TAC may be rolled over to the subsequent fishing year only. This would apply to a coastwide TAC or any allocated portion of that TAC by fishery (bait and reduction), region, or state. This rollover option would apply to all final allocations (including transferred quota if applicable).

Option C: Maximum Percent Quota Rollover as Specified by Board
A specified maximum percentage of an unused portion of a TAC may be rolled over to the subsequent fishing year only. The maximum total rollover percentage may be specified by the Board during the annual specification process. This would apply to a coastwide TAC or any allocated portion of that TAC by fishery (bait and reduction), region, or state. This rollover option would apply to all final allocations (including transferred quota if applicable).

4.2.1.6 Quota Payback

Option A: No Payback of Overharvest of Quota

Option B: 100% Payback of Quota Overages
Any overage of a TAC is subtracted from that specific TAC the subsequent fishing year. This would apply to a coastwide TAC or any allocated portion of that TAC by fishery (bait and reduction), region, or state. Overage determination is based on final allocations (including overages after transferred quota if applicable).

4.2.1.7 Bycatch Allowance

An incidental bycatch allowance is strictly for non-directed fisheries. States are not eligible to submit alternative state management regimes (*Section 4.5*) in lieu of any selected bycatch allowance option.

The Board may select a single option, or the two options in combination (e.g., pound and percent bycatch allowance). A hypothetical example of a combination option would be a 10 percent bycatch allowance (meaning 90% of landed pounds must be from species other than Atlantic menhaden) and the bycatch amount of Atlantic menhaden may not exceed 2,000 pounds.

Option A. No bycatch allowance when the fishing season is closed.

Option B. Pound based bycatch allowance

No directed fisheries for Atlantic menhaden shall be allowed when the fishing season is closed. An incidental bycatch allowance of up to OPTION pounds of Atlantic menhaden per trip for non-directed fisheries shall be in place during a season closure. The amount of Atlantic menhaden landed by one vessel in a day, as a bycatch allowance, shall not exceed OPTION pounds (this prohibits a vessel from making multiple trips in one day to land more than the bycatch allowance). A trip shall be based on a calendar day basis.

Option 1. 1,000 pound bycatch allowance
Option 2. 2,000 pound bycatch allowance
Option 3. 5,000 pound bycatch allowance
Option 4. 10,000 pound bycatch allowance

Option C. Percent based bycatch allowance
No directed fisheries for Atlantic menhaden shall be allowed when the fishing season is closed. An incidental bycatch allowance of up to OPTION% of Atlantic menhaden relative to the total catch per trip for non-directed fisheries shall be in place during a season closure. The amount of Atlantic menhaden landed by one vessel in a day, as a bycatch allowance, shall not exceed OPTION% of the total landings for one trip (this prohibits a vessel from making multiple trips in one day to land more than the bycatch allowance). A trip shall be based on a calendar day basis.

Option 1. 2 percent bycatch allowance
Option 2. 5 percent bycatch allowance
Option 3. 10 percent bycatch allowance
Option 4. 20 percent bycatch allowance

4.2.1.8 TAC Set Aside for Small Scale Fisheries

This option only applies if the Board selects a Coastwide TAC Allocation for Section 4.2.1.3. If the Board selects to include a set aside (Option B) a traditional small scale fishery will need to be defined.

Option A. No allowance of a quota set aside

Option B. A specific percentage or poundage of the TAC may be set aside for small scale traditional fisheries. The set aside amount will be determined by the Board during annual specifications, and is subject to a technical analysis of the fishery receiving a set aside. This option would only be available if adequate monitoring exists in the fishery receiving the set aside.

4.2.1.9 TAC Set Aside for Episodic Events

This option only applies if the Board selects a State TAC Allocation for Section 4.2.1.3.

Option A. No quota set aside option for episodic events

Option B. One percent (1%) of the overall TAC as determined in *Section 4.2.1.2* may be set aside for episodic events. Episodic events are times and areas where Atlantic menhaden are available in more abundance than they normally occur. Given the historical allocation options being considered in *Section 4.2.1.3* do not account for the potential harvest that can occur during

these episodic events, a set aside is designed to provide flexibility to states that experience episodic events to harvest menhaden in lieu of their original state by state bait allocation percentages (*Option C2 in Section 4.2.1.3)*. However, the 30/70%, 40/60% and 50/50% bait/reduction allocation options may preclude the need for a TAC set aside because the allocation to states that have episodic events would increase.

To qualify for the episodic event set aside, a state's allocation must be less than 2% for the state by state bait allocation scenario (*Option C2 in Section 4.2.1.3*). A qualified state has the choice to opt into the episodic event set aside, giving that state the ability to harvest from the set aside amount as opposed to their allocated quota. Note the set aside amount will not be allocated to states opting in. Furthermore, if a state opts in, they forfeit their originally allocated quota to the remaining states that do not qualify or opted out of the set aside. The forfeited quota amount would be distributed to states that do not qualify or opted out of the set aside using an allocation table that is recalculated without the states that opted into the set aside.

Additionally the set aside has the following provisions for states that opt in,

- Specify that any unused set aside will be rolled over into the overall quota after July 1, unless another date is selected by the Board after public comment.
- Specify that the Board will require states and or regions to implement effort controls to scale the fishery appropriate to the set-aside quota level. For example the State of Maine currently restricts harvester vessels >50', restricts all vessels/carriers to land no more than 250,000 pounds per day and restricts carriers greater than 90'. Gear, time, season,trip limits and triggers etc are other options for different jurisdictions to consider.
- Require that reporting meet or exceeds requirements as specified in *Section 3.6.1.2*.
- Require that if the set aside is exceeded, any overages are reduced from the next season's episodic event set-aside

4.2.2 Atlantic Menhaden Chesapeake Bay Reduction Fishery Harvest Cap

The Board may consider changes to the Atlantic menhaden harvest cap, a current management measure that will expire in 2013. The current management language is below the list of options.

Option A: Status quo. 2013 is the final year for the Chesapeake Bay (CB) cap.
Option B: Extend the CB cap to any specified time frame
Option C: Adjust the CB cap as it relates to any quota management approach selected.

The annual total allowable harvest from the Chesapeake Bay by the reduction fishery is limited to no more than 109,020 metric tons (the average landings from 2001-2005). Harvest for reduction purposes shall be prohibited within the Chesapeake Bay when 100% of the cap is harvested from Chesapeake Bay. This cap is in place for the fishing seasons starting in 2011 and going through 2013. Over-harvest in any given year will be deducted from the next year's allowable harvest.

Annual Credit for Harvest Underages

The annual Chesapeake Bay harvest cap under Addendum IV is not based on a scientifically quantified harvest threshold, fishery health index, or fishery population level study. Due to data limitations, it is unknown if exceeding the 109,020 metric-ton limit will negatively affect the health of the menhaden population. The cap is designed to prevent the Chesapeake Bay reduction fishery harvest of Atlantic menhaden from expanding while the necessary scientific studies are being conducted to explore the potential for localized depletion in the Chesapeake Bay.

Assuming a cap of 109,020 metric tons had been in place over the 2001-2005 reference period, the maximum underage that would have occurred during that time period is 13,720 metric tons. The maximum rollover of unlanded fish is 13,720 metric tons. Adding that underage to the 109,020 metric ton cap results in a cap of 122,740 metric tons.

In years when annual menhaden harvest in the Chesapeake Bay for reduction purposes is below the 109,020 metric-ton cap, the underage amount shall be credited to the following year's allowable harvest. Under no circumstances can allowable harvest in any given year from 2011 through 2013 exceed 122,740 metric tons. Such credit can only be applied to the following calendar year's harvest cap and cannot be reserved for future years or spread over multiple years.

Further, if no more than the underage amount in one year is credited to the next year's allowable harvest, the annual average harvest for 2011 through 2013 cannot exceed 109,020 metric tons.

4.5.3 *De minimis* Fishery Guidelines

Option A. Status Quo, *de minimis* criteria is not established through Amendment 2.

Option B. Define *de minimis* for States without a Reduction Fishery. If Option B is selected, the Board must select both the Criteria for *De Minimis* Consideration (*Section 4.5.3.1*) and the plan requirements if *de minimis* is granted (*Section 4.5.3.2*).

4.5.3.1 Criteria for De Minimis Consideration

A state can apply annually for *de minimis* status if a state does not have a reduction fishery.

Option 1. To be eligible for *de minimis* consideration in the bait fishery, a state must prove that its commercial bait landings in the most recent two years for which data are available did not exceed 1% of the coastwide bait landings.

Option 2. To be eligible for *de minimis* consideration in the bait fishery, a state must prove that its commercial bait landings in the most recent two years for which data are available did not exceed 2% of the coastwide bait landings.

4.5.3.2 Plan Requirements if De Minimis Status is Granted

If *de minimis* status is granted, the *de minimis* state is required to implement, at a minimum, the coastwide requirements contained in *Section 3.6* of Amendment 2. Any additional components of the FMP, which the Board determines necessary for a *de minimis* state to implement, can be defined at the time *de minimis* status is granted. For all other required components of the plan, the Board will specify by motion which measures a *de minimis* state must adopt.

Option 3: *De minimis* criteria exempts a state from biological monitoring (e.g., age data), but the state must adhere to timely quota monitoring requirements (as specified in Section 3.1) and may not exceed their allocated quota. If the fishery is closed for any reason, *de minimis* states must close their fisheries as well.

Option 4: *De minimis* criteria exempts a state from both biological monitoring (e.g., age data), and timely quota monitoring requirements (as specified in Section 3.1), but states must still submit annual landings, and may not exceed their allocated quota. If the fishery is closed for any reason, *de minimis* states must close their fisheries as well.

4.6.2 Measures Subject to Change

The following measures are subject to change under adaptive management upon approval by the Atlantic Menhaden Management Board:

(1) Fishing seasons including season closures
(2) Trip limits
(3) Limited entry
(4) Area closures
(5) Annual specifications, including maximum sustainable yield (MSY), allowable biological catch (ABC), optimum yield (OY), internal waters processing (IWP) allocations, etc.;
(6) Overfishing definition
(7) Rebuilding targets and schedules
(8) Catch controls
(9) Effort controls
(10) Reporting requirements
(11) Gear restrictions including mesh sizes
(12) Measures to reduce or monitor bycatch
(13) Observer requirements
(14) Management areas
(15) Recommendations to the Secretaries for complementary actions in federal jurisdictions;
(16) Research or monitoring requirements
(17) TAC allocation
(18) Harvest caps on other inland bodies of water
(19) Any other management measures currently included in Amendment 2.

4.9 RECOMMENDATIONS TO THE SECRETARY FOR COMPLEMENTARY ACTIONS IN FEDERAL WATERS

The Atlantic States Marine Fisheries Commission believes that the measures contained in Amendment 2 are necessary to prevent the overfishing of the Atlantic menhaden resource. If any of the above options are adopted through the Amendment process, the Board should consider recommending the adopted measures to the National Marine Fisheries Service for implementation in the EEZ.

ACKNOWLEDGEMENTS

Completed in final version

GOAL 3 IMPROVE STAKEHOLDER COMPLIANCE WITH COMMISSION FISHERY MANAGEMENT PLANS.

This goal recognizes that fisheries managers, law enforcement personnel, and stakeholders have a shared responsibility to promote compliance with fisheries management measures. Stakeholder support and compliance is vital to successful management plans. Activities under this goal seek to increase and improve the extent to which states coordinate their law enforcement efforts with each other and with federal agencies. Commission members recognize that adequate and consistent enforcement of fisheries rules must keep pace with increasingly complex management activity, including thorough reviews of proposed management measures for enforceability. Achieving this goal will improve the effectiveness of the Commission's fishery management plans.

Strategies to Achieve Goal

3.1 Develop practical compliance requirements recognizing fiscal limitations.

Task 3.1.1 – Identify compliance requirements that the states are unable to implement due to fiscal limitations in the annual FMP Reviews.

Task 3.1.2 – Review effectiveness of the "Guidelines for Resource Managers" to evaluate its ability to inform fishery managers and affect their decisions in the regulatory process. Work with ~~new~~ LEC Coordinator to ensure the input of the Law Enforcement Committee is received ~~early in~~ **throughout** the management process.

Task 3.1.3 – Evaluate enforceability of management options proposed in FMPs, amendments, addenda and conservation equivalency proposals.

3.2 Evaluate effectiveness of enforcement and compliance measures of fisheries management programs.

Task 3.2.1 – Report on the enforceability of existing FMPs as part of the annual compliance review for each species.

Task 3.2.2 – Engage and support ~~new~~ NMFS Office of Law Enforcement and **US Fish and Wildlife Service** Chiefs to improve communication and coordination between states and federal enforcement agencies.

Task 3.2.3 – Report on enforcement issues associated with differing federal, interstate, and state regulations.

~~Task 3.2.4 – Review draft addendum to ensure cancer crab fishery does not impact enforceability of lobster regulations.~~

Task 3.2.4 – Evaluate and report on states ability to effectively close (communicate and enforce) recreational fisheries in-season through emergency or other actions.

Task 3.2.5 – Evaluate the implementation and effectiveness of the Addendum III to the Atlantic Striped Bass Fishery Management Plan (commercial fishery tagging requirements).

3.3 Enhance communication of enforcement and compliance issues to Atlantic state agencies and other law enforcement programs.

Task 3.3.1 – Provide a forum to promote interjurisdictional enforcement operations targeting specific fishery resources (e.g. Atlantic striped bass, tautog, American eel).

Task 3.3.2 – Expand efforts to reach out to the law enforcement advisory committees of the regional fishery management councils and interstate commissions to seek opportunities for collaboration and ensure consistent law enforcement strategies.

Task 3.3.3 – Continue to evaluate the states' use of vessel monitoring system (VMS) data with increased access provided to the states. Determine if current level of access is adequate for state use of VMS data. Provide training opportunities, if necessary and resources permit, for state officers to ensure timely and efficient access to VMS data.

Task 3.3.4 – Provide ASMFC representative to serve on the Association of Fish and Wildlife Agencies' Law Enforcement Committee. Monitor the Conservation Law Enforcement Chiefs Association and exchange information as appropriate.

Task 3.3.5 – Exchange information on record keeping of violations, dispatching, and use of real time data to enhance conservation enforcement efforts.

Task 3.3.6 – Exchange information and best practices related to the enforcement of protected and endangered species regulations (See Task 1.9.3).

Task 3.3.7 – Continue to monitor compliance with newly implemented state and federal recreational registry requirements.

Task 3.3.8 – Develop strategies to improve communications among state and federal enforcement agencies prior to regional enforcement activities.

Task 3.3.9 – Review **2013** law enforcement efforts, results, and interagency cooperation regarding the illegal harvest of striped bass in state and federal waters. Use results of review for planning **2014** priorities and strategies.

Task 3.3.10 – Engage in annual review of NMFS enforcement priorities to ensure state enforcement needs are included. Review and provide feedback to NMFS on the new federal penalty structure.

3.4 Promote and expand existing partnerships with state and federal natural resource law enforcement agencies.

Task 3.4.1 – Provide forum for enforcement agencies to display successful development and use of enforcement technologies.

Task 3.4.2 – Conduct semi-annual presentations, by state and federal agencies, of enforcement actions and facilitate discussions on joint efforts that can assist in fisheries enforcement.

Task 3.4.3 – Share enforcement techniques and law enforcement success stories and provide regional training sessions (if resources allow) to enhance law enforcement efficiency along the Atlantic coast.

Task 3.4.4 – Evaluate the merits of establishing more timely communication among state and federal law enforcement entities to facilitate more frequent information exchange.

Task 3.4.5 – Explore the addition of a US Department of Justice representative to the Law Enforcement Committee.

3.5 Develop and implement fishery management measures that include compliance incentives and foster stakeholder buy-in.

Task 3.5.1 – Identify and explore fishery management measures that maximize stakeholder buy-in.