

Atlantic States Marine Fisheries Commission

Atlantic Menhaden Management Board

February 8, 2012
9:30 a.m. – 11:30 a.m.
Alexandria, VA

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.

1. Welcome/Call to Order (*L. Daniel*) 9:30 a.m.
2. Board Consent 9:35 a.m.
 - Approval of Agenda
 - Approval of Proceedings from November 2011
3. Public Comment 9:40 a.m.
4. Technical Committee Report (*J. Brust*) 9:45 a.m.
 - Landing Scenarios to Achieve New Reference Points
5. Consider Draft Public Information Document to Amendment 2 for Public Comment (*M. Waine*) **Action** 10:15 a.m.
 - Review options in the PID
 - Advisory Panel Report (W. Windley)
6. MSTC Overview of Management Decision Analysis (*H. Townsend*) **Action** 11:05 a.m.
 - Review recommendation to adopt decision analysis framework for developing ecological based reference points
7. Review and Populate Plan Development Team Membership (*M. Waine*) **Action** 11:25 a.m.
8. Review and Populate Committee on Economics and Social Sciences Membership (*M. Waine*) **Action** 11:25 a.m.
9. Other Business/Adjourn 11:30 a.m.

The meeting will be held at the Crown Plaza, 901 North Fairfax Street, Alexandria, VA 22314; 703-683-6000

MEETING OVERVIEW

Atlantic Menhaden Management Board Meeting
Wednesday, February 8, 2012
9:30 a.m. – 11:30 a.m.
Alexandria, VA

Chair: Louis Daniel (NC) Assumed Chairmanship: 3/11	Technical Committee Chair: Jeff Brust (NJ)	Law Enforcement Committee Representative: Lloyd Ingerson (MD)
Vice Chair: Robert Boyles	Advisory Panel Chair: William Windley (MD)	Previous Board Meeting: November 9, 2011
Voting Members: ME, NH, MA, RI, CT, NY, NJ, DE, MD, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (17 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from November 9, 2011

3. Public Comment – At the beginning of the meeting public comment will be taken on items not on the agenda. Individuals that wish to speak at this time must sign-in at the beginning of the meeting. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance the Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. Technical Committee Report (9:45 a.m. -10:15 a.m.)

Background

- The Board requested the Technical Committee explore methods to account for the uncertainty in the terminal year fishing mortality estimate (F_{2008}).
- The Board requested the Technical Committee explore landing scenarios to achieve the new fishing mortality reference points.

Presentations

- Technical Committee Report by J. Brust, Chair.

5. Draft Public Information Document to Amendment 2 for Public Comment (10:15 a.m. -11:05 a.m.) Action

Background

- At its November meeting, the Board initiated an amendment to the ISFMP for Atlantic Menhaden exploring management options to achieve the new fishing mortality reference points.
- The PDT drafted a Public Information Document (PID) for Amendment 2 that details fishery management options to achieve the new fishing mortality reference points and other aspects of Atlantic menhaden management (**Briefing CD**).
- The Advisory Panel reviewed the draft PID

Presentations
<ul style="list-style-type: none"> • Overview of the Public Information Document by M. Waine • Advisory Panel report by B. Windley (Supplemental Materials).
Board actions for consideration at this meeting
<ul style="list-style-type: none"> • Approve the Public Information Document for Public Comment

6. MSTC Overview of Management Decision Analysis (11:05 a.m. – 11:25 p.m.)
Background
<ul style="list-style-type: none"> • The Board tasked the Multispecies Technical Committee to explore ecological reference points for use in managing Atlantic menhaden. • The MSTC has developed a decisional framework to pursue the development of ecological based reference points. (Briefing CD)
Presentations
<ul style="list-style-type: none"> • Overview of the MSTC Management Decision Analysis Framework by H. Townsend
Board actions for consideration at this meeting
<ul style="list-style-type: none"> • Approve further exploration of the MODA framework

7. Plan Development Team Membership (11:25 a.m.)
Background
<ul style="list-style-type: none"> • Jason McNamee (RI), Harry Rickabaugh (MD) and Joe Grist (VA) have been nominated to the Atlantic menhaden PDT.
Presentations
<ul style="list-style-type: none"> • Nominations by M. Waine
Board actions for consideration at this meeting
<ul style="list-style-type: none"> • Approve Jason McNamee (RI), Harry Rickabaugh (MD) and Joe Grist (VA) to the PDT.

8. Committee on Economics and Social Sciences Membership (11:25 a.m.)
Background
<ul style="list-style-type: none"> • The Committee on Economics and Social Sciences has recommended Dr. Peter Schuhmann be appointed as the economist representative to the Plan Development Teams and Technical Committees for Atlantic menhaden (Briefing CD).
Presentations
<ul style="list-style-type: none"> • Nominations by M. Waine
Board actions for consideration at this meeting
<ul style="list-style-type: none"> • Approve Dr. Peter Schuhmann.

9. Other Business/Adjourn

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**DRAFT PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
ATLANTIC MENHADEN MANAGEMENT BOARD**

The Langham Hotel
Boston, Massachusetts
November 9, 2011

**These minutes are draft and subject to approval by the Menhaden Management Board.
The Board will review the minutes during its next meeting.**

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1. **Approval of agenda by consent** (Page 1).
2. **Approval of proceedings of August, 2011 by consent** (Page 1).
3. **Move that the board accept Option 2, 15 percent MSP, as the new F-threshold for menhaden** (Page 18). Motion by Pat Augustine; second by John Duren. Motion carried (Page 19).
4. **Move to select Option 3, a target of 30 percent MSP consistent with scientific literature** (Page 19). Motion by Lynn Fegley; second by Rep. Peake. Motion carried (Page 26).
5. **Move to amend the 30 percent MSP motion by changing 30 to 20 percent** (Page 19). Motion by Jack Travelstead; second by Peter Himchak. Motion defeated (Page 26).
6. **Move to approve Addendum V to the ISFMP for Atlantic menhaden with selected Options** (Page 26). Motion by Pat Augustine; second by Dennis Abbott. Motion carried (Page 27).
7. **Move to eliminate consideration of limited entry, trip limits, and recreational mmanagement measures** (Page 35). Motion by Robert Boyles; second by Robert Cole. Motion withdrawn (Page 36).
8. **Motion to adopt the schedule putting together a PID for board approval for public comment at the February 2012 meeting and conduct hearings and come back to the board for the May meeting** (Page 38). Motion by Terry Stockwell; second by Bill McElroy. Motion carried (Page 39).
9. **Motion to adjourn by consent** (Page 39).

ATTENDANCE**Board Members**

Terry Stockwell, ME, proxy for P. Keliher (AA)
 Dennis Damon, ME, proxy for P. White (GA)
 Sen. Brian Langley, ME (LA)
 Dennis Abbott, NH, Legislative Proxy
 Doug Grout, NH (AA)
 G. Ritchie White, NH (GA)
 Rep. David Watters, NH (LA)
 David Pierce, MA, proxy for P. Diodati (AA)
 Bill Adler, MA (GA)
 Rep. Sarah Peake, MA (LA)
 Mark Gibson, RI, proxy for R. Ballou (AA)
 Bill McElroy, RI (GA)
 Rep. Peter Martin, RI (LA)
 Rick Bellavance, RI, Legislative Proxy
 David Simpson, CT (AA)
 Dr. Lance Stewart, CT (GA)
 Rep. Craig Miner, CT (LA)
 James Gilmore, NY (AA)
 Pat Augustine, NY (GA)
 Byron Young, NY, proxy for Sen. Johnson (LA)
 Peter Himchak, NJ, proxy for D. Chanda (AA)
 Adam Nowalsky, NJ, proxy for Asm. Albano (LA)
 Tom Fote, NJ, (GA)
 Loren Lustig, PA (GA)

David Saveikis, DE (AA)
 Jeff Tinsman, DE, Administrative Proxy
 Roy Miller, DE (GA)
 Bernie Pankowski, DE, proxy for Sen. Venables (LA)
 Lynn Fegley, MD, proxy for T. O'Connell (AA)
 Bill Goldsborough, MD (GA)
 Russell Dize, MD, proxy for Sen. Colburn (LA)
 Steve Bowman, VA (AA)
 Jack Travelstead, VA, Administrative Proxy
 Catherine Davenport, VA (GA)
 James Kellum, VA, proxy for Sen. Stuart (LA)
 Louis Daniel, NC (AA)
 Bill Cole, NC (GA)
 Mike Johnson, NC, proxy for Sen. Wainwright (LA)
 John Frampton, SC (AA)
 Malcolm Rhodes, SC (GA)
 Robert Boyles, Jr., SC (LA)
 Spud Woodward, GA (AA)
 John Duren, GA (GA)
 Aaron Podey, FL, proxy for J. McCawley (AA)
 Steve Meyers, NMFS
 Jaime Geiger, USFWS
 A.C. Carpenter, PRFC

(AA = Administrative Appointee; GA = Governor Appointee; LA = Legislative Appointee)

Ex-Officio Members

Jeff Brust, Technical Committee Chair
 William Windley, Advisory Panel Chair

Lloyd Ingerson, Law Enforcement Committee Chair

Staff

Vince O'Shea
 Robert Beal

Toni Kerns
 Danielle Chesky

Guests

Wesley Patrick, NMFS
 Joe Smith, NOAA
 Jay O'Dell, Nature Conservancy
 Alison Bowden, Nature Conserv.
 Seth Dennis, Herring Alliance
 Duane Harris SAFMC
 Stew Michels, DE DFW
 Kyle Schick PRFC
 Bob Bowes, PRFC
 Dennis Fleming, PRFC
 Jeff Kaelin, Lund's Fisheries

Michelle Duval, NC DMF
 Paul Kennedy, RISAA
 Roland Grenier, RISAA
 Stephen Medeiros, RISAA
 Edward Kearney, RISAA
 E. Russell Grady, RISAA
 Gary Persham, RISAA
 Mike Bucko, RISAA
 Harold Mears, NMFS
 Micah Dean, MA DMF
 Nichola Meserve, MA DMF

Vito Calomo, Ofc. Sen Brown
 Jud Crawford, Pew Trust
 Theresa Labriola, Pew Env. Grp.
 Joe Cowic, Pew Env. Grp.
 Sharon McBreen, Pew Env. Grp.
 Roger Fleming, Herring Alliance
 Peter Baker, Herring Alliance
 Erica Fuller, Herring Alliance
 Monty Diehl, Omega Protein
 Ben Landry, Omega Protein
 Ron Lukens, Omega Protein

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Dick Brame, CCA
James Sulikowski, Univ. NE
Monty Diehl, Omega Protein
Ben Landry, Omega Protein
Ron Lukens, Omega Protein
Janice Plante, Commercial Fisheries News
Alex Uzgin, Halex LLC Press
Abby Goodnough, NY Times
Gene Bernard, MSBA
Pamela Kearney, MSBA
Clem Hastentler, MSBA
Bill Kill, MSBA
Lawrence Manning, MSBA
Norman Cedarstrom, MSBA
Jon Joyal, MSBA
Dale Tripp, Chatham, MA

Patrick Paquette, MSBA
Shaun Gehen, KellyDrye Warren, DC
Drew Minkiewicz, KDW, DC
A.J. Erskine, Bevans Oyster, VA
Garry Libby, Port Clyde, ME
Steve Weiner, CHOIR
Pat Young, Natick, MA
Rick Buss, Winthrop, MA
Kevin O'Reilly, Plymouth, MA
Don Swanson, CCANH
Nathan Murray, Arlington, MA
Ray Hartenstine, Buckeye Brook Coalition
Marcia Pena, Buckeye Brook Coalition
Philip Chase Lofgren, Wey Herring Run
Ben Duff, VA Beach, VA
Capt. Paul Eidman, Menhaden Defenders

The Atlantic Menhaden Management Board of the Atlantic States Marine Fisheries Commission convened in the Wilson Ballroom of the Langham Hotel, Boston, Massachusetts, Wednesday morning, November 9, 2011, and was called to order at 10:55 o'clock a.m. by Chairman Louis Daniel.

CALL TO ORDER

CHAIRMAN LOUIS DANIEL: All right, welcome to the Atlantic Menhaden Management Board. We've got a lot folks here today for this meeting. I'm going to try to maintain as much order as I possibly can. We do have some folks here that are recording the proceedings, both video and audio, so it's very likely that your demeanor and decorum will go further than the meeting room, so be aware of that.

APPROVAL OF AGENDA AND PROCEEDINGS OF AUGUST 2, 2011

A lot of times that is not the case for our meetings. I am Louis Daniel. I am the director of Marine Fisheries and I'm the chairman of this board. The first item on our agenda is we've got our agenda and we've also got our proceedings from the August 2nd meeting. Are there any corrections or additions to the agenda or the minutes from our previous meeting? Seeing none, I will accept those as approved by consent.

PUBLIC COMMENT

At the beginning of most of our board meetings, for those of you new to the process, we do provide an opportunity for the public to speak on items that are not on the agenda. I have a list of folks that would like to speak on items that are not on the agenda. I'm going to go through and I'm going to ask for you to be brief in your comments. I'm going to limit you to three minutes maximum.

If you begin to speak on an item that is on the agenda, in fairness to the folks that are in the audience, I'm going to cut you off, I'm going to cut off your microphone, and that's going to be my call. Please don't speak on any items that are on the agenda in this first round of public comment. I still haven't decided how to handle public comment when we get to the motions on the management actions, so you'll know when I know. With that said, the first speaker that has asked to address the board on items not on the agenda is Jeff Kaelin.

MR. JEFF KAELIN: Thank you, Mr. Chairman and members of the board. I'm Jeff Kaelin with Lund's Fisheries in Cape May, New Jersey. We're active in

the menhaden bait fishery as are a number of other ports in New Jersey. Mr. Chairman, I wanted to make a comment about something that I thought was missing in the AP summary. I guess I'm now the vice-chair.

Therefore, I didn't think it was on the agenda, and that is the National Standard 1 reference that is in the Addendum V document. We talked about it at the AP as that being not accurate and that it should come out of the addendum for that reason. The specific percentages of unfished stock size that allegedly National Standard 1 uses; that is not accurate, that is not what National Standard 1 says. That's along what I wanted to raise.

CHAIRMAN DANIEL: I believe that's an issue on the agenda. That is an issue for the agenda.

MR. KAELIN: Okay, and it missed being addressed in the AP discussion so should I hold my comments until that time, Mr. Chairman?

CHAIRMAN DANIEL: If your concerns aren't addressed during the AP report.

MR. KAELIN: Okay, thank you very much.

CHAIRMAN DANIEL: Yes, sir, thank you. Next is Dale Tripp.

MR. DALE TRIPP: Dale Tripp, commercial fisherman in Chatham and also a charter captain. I just wanted to say that I've been fishing with menhaden – we call them pogies – for a long, long time, since probably 1984. At that point in time you could – many, many days you could walk on them; last year being the lowest that I've seen.

We seldom – in fact, only once had – 30 pogies was enough for a good charter and we had that once during the season and the rest time we struggled a lot of times to get 10, 12, 15 pogies. These are not just for strippers. As everybody knows, it's not the just bass that are going to suffer because of the lack of pogies. It's going to be tuna fish; it's going to be whales; it's going to be a lot of fish that people don't even know that the pogies eat. Certainly, I'd like to see the 40 percent shot and –

CHAIRMAN DANIEL: That's on the agenda; that's an item on the agenda.

MR. TRIPP: Oh, I'm sorry. All right, I just wanted to say that is what we've seen, myself and all the fellas that fish with pogies for bass. It's a huge reduction over the years. Thank you very much.

CHAIRMAN DANIEL: Thank you. Next is Darin from MCSBA, and I can't make out the last name. You're good! The next one is Patrick Paquette from Massachusetts Striped Bass.

MR. PATRICK PAQUETTE: Thank you, Mr. Chairman. My name is Patrick Paquette. I'm a recreational fishing community organizer for Massachusetts and past president of the Massachusetts Striped Bass Association. I'm a member of the board of RFA New England. I just wanted to bring to the board's attention that the recreational bait supply industry that is made of very small, at least here in New England and in many places to our south – that's made up of thousands of small business operators.

In the future, as you go down whatever are the next steps in management of the menhaden fishery, we are very concerned about migration of the existing industrial herring fishery into this fishery in federal waters, specifically off the state of New Jersey as reported in the Massachusetts compliance report.

We urge the management board and the ASMFC as a whole to please look to the future and seriously consider that all of these many thousands of small jobs that primarily supply the recreational fishing industry with bait locally, with fresh bait locally, that we don't threaten those jobs as big business migrates into this fishery from a different place. Thank you.

CHAIRMAN DANIEL: Thank you. The last person I have to speak is Captain Paul Eidman.

CAPTAIN PAUL EIDMAN: Captain Paul Eidman, Menhaden Defenders. I'm based out of Sandy Hook, New Jersey, and I've been spending the last few months going around and talking to recreational anglers and listening to them voice their concerns about the future of the recreational fishing that they're experiencing.

Their recreational fishing is directly related to the quantity of menhaden in the water. While we have quite a few menhaden in Jersey waters, the fishermen that I speak with to the north and to the south are just simply saying that they're all gone. I'd just like the ASMFC to consider that there are literally thousands of people that rely on this resource that depend to

make a living like myself. Without these bunker in the water, I won't have a job. Thank you.

CHAIRMAN DANIEL: Thank you. That is all the folks that I had signed up to speak. No, that's it, so thank you all very much. I can't stand it; Vito, I just can't not give him the opportunity; I've got to do it. I'm sorry, he is the last one, but I've got hear from Vito.

MR. VITO CALOMO: Thank you, Mr. Chairman, I appreciate the opportunity to speak. I've been fishing menhaden since 1958, but I'm not here to talk about my fishing experience. I'm here to talk about the jobs it creates for the Commonwealth of Massachusetts up and down the coast. It's a very important fishery.

I represent U.S. Senator Scott Brown, and he is interested in the fishing industry as a whole. Whether you fish with a hook or a net, it doesn't make any difference. We need this fishery. We had a lot of fish, I heard a gentleman speak years, like I said '58, and we know that this fish has kind a seasonal time that it comes here.

I've watched it disappear for years and come back like locusts in years. We're very interested in what the science has to say, but we support the fishing industry and we support the jobs that it does create. Thank you very much.

CHAIRMAN DANIEL: You're welcome, Vito. All right, that's it. I wouldn't have done that for anybody else, Vito. With all the issues swirling around menhaden management and menhaden issues, there is a lot of emotion involved, and we'll talk about 93 or 94,000 comments that we've received on this issue later in the presentations, but there is some misinformation out there.

That always concerns me because it happens a lot in North Carolina as well when folks make comments that they're just simply not aware of the facts of the matter. I wanted the person that I have the greatest amount of respect for on this issue to come before the board and discuss an overview of the fishery, and that's Joe Smith from the Beaufort Lab in North Carolina, a very highly thought of and a good friend. I'm going to turn it over to Joe to give us an overview of the 2010/2011 fishery.

OVERVIEW OF THE 2010/2011 FISHERY

MR. JOE SMITH: For the record, Joe Smith, National Marine Fisheries Service, Beaufort Lab. Thank you, Louis, for the invite to speak before the board. I think it has been two and maybe three years since I've given a fishery overview or summary to the board, and I appreciate the opportunity.

As Louis said, the chairman asked for a review of the 2010 fishery and what has transpired in the 2011 fishery. I'll draw from the three big data sets that we collected, Beaufort fishery-dependent data sets, the port samples for size and age composition of the reduction fishery catch. We have a full-time port agent there in Reedville that samples not only the reduction boats but the so-called snapper boats that fish for bait and occasionally unload at the factory.

I'll draw from the logbooks; the captains on the reduction boats keep daily logbooks. They itemize each purse seine set they make. They give us an at-sea estimate of the catch, and they give us their GPS coordinates so we can plot those catches, and I'll draw from that pretty heavily this morning.

The third data set is the catch records. Omega literally sends me 24 hours after the landings their catch by vessel for their Reedville fleet and anything offloaded by the snapper vessels for reduction at their factory. I'll get right into just where we've been in the last 20 years in the fishery. I think the graph horizontal line goes from about 1991 through 2010. The arrows are key points in the history of the reduction fishery.

That first arrow to the left is when that New England fishery – actually the fishery in Maine, the IWP with the Soviets and then Russians played out in 1993. After 1993 we see three players in the reduction fishery, AmPro Fisheries, Omega Protein in Reedville and Beaufort Fisheries in Beaufort. AmPro was acquired by its competitor across the creek, Omega, in the late nineties. That's the second arrow you'll see.

And then I believe the third arrow is when one player is left in the fishery, Omega Protein. Winter of 2004/2005 is when Beaufort Fisheries in Beaufort closed. The property was sold for developers and the factory didn't fish after January 2005. Just the last ten years or so – well, the last five or six years landings have been hovering around – that's the blue line – have been hovering around 150 or 175,000 metric tons and again with just Omega in there.

If you don't like graphics, I'm a visual person, here is the total reduction landings the last ten or eleven years with the last line being the reduction landings through October 31st of this year; a little bump in the landings last year, 183,000 metric tons; and then through October 31st, 157. If you take the last five or six-year mean – after Beaufort Fisheries dropped out of the fishery, the six-year mean for landings is right around where we are now in the 2011 fishery, about 158,000 metric tons.

Step back one year, 2010, 183,000 metric tons landed for reduction, 27 percent over the previous year and about 20 percent over the previous five-year average. That five-year average Beaufort Fisheries drops out; they're no longer in the fishery for that timeframe. The players in the reduction fishery, ten Omega Protein vessels last year; there are four or five snapper boats, if you will; generally smaller boats in the Chesapeake Bay fish with purse seines for bait.

They occasionally unload at the fish factory if the bait markets are soft or the fish are too small for the bait markets. We do get those landings from the daily landings spreadsheets from Omega. Some bullets to recap; 2010, it was if you recall a warm spring after a long, cold winter. The fishery got cranked up a little bit earlier than normal. I think the Omega boats started fishing the 10th of May. That's about two weeks earlier than in recent years. The snapper boats made sets that first week of May.

June, fish were very abundant in Chesapeake Bay last year, so much so that the factory started experiencing problems processing the fish starting in late May and by the first week in June the catches were literally clogging the works in the factory, and there were company-imposed daily catch limits put in the boats that fished in Chesapeake Bay.

In the industry vernacular they were limited to 800,000 standard fish a day, which is about half a boat load for the reduction boats, and those limits lasted all summer as did the problems in the factory until about September 6th. July, the fish didn't show very well and that's when the Omega boats tended to go north off of the DelMarVa Peninsula all the way up into Jersey. There was some good fishing off Cape May and as far north as Shark River and then off the beach ten to twelve miles.

August, the fish again showed well in the Bay, some trips still up to New Jersey. At that point the abundance of fish still was a problem for the factory. They put the boats that fished outside the Bay on 1 million fish limits, which is roughly two-thirds or three-quarters of a load of fish per boat, and boats still continued to raft up at the dock waiting to unload.

Some of the laments from the bait fishermen in the Bay, that the fish were small last year in 2010. This may have been because we had a fairly good year class of 2009 fish, there is something going on called density dependence in menhaden. You tend to get a smaller class of fish with bigger year classes. I just think that was probably what was going on with these small ones in the Bay last year.

And then into the fall, the limits were finally taken off the boats. We had a hurricane, we had a low pressure system dump about ten or fifteen inches on the DelMarVa Peninsula in late September or October. Fishing as per usual was mostly off the beaches and down Virginia Beach way.

And then November and December the fishing becomes very weather dependent. The boats can't fish with strong nor'easters and so there was very little fish last November. Probably the best catches were late in the month and there was one foray down into Louis' and my territory of North Carolina. I think it was two days some of the boats came down to Ocracoke and Drum Inlet and fished.

And to my knowledge one day in December, before the factory cut out for the year on December 10th, when the boats fished mostly outside of the Bay Bridge Tunnel of the Barrier Islands, Eastern Shore, a picture says a thousand words. From the logbooks we can plot – we get the GPS numbers of the various sets and we can plot where the fish were caught last year. These dots are piled on top of one another.

There were 5,600 plus sets made last year by the reduction fleet, but it shows you the extent of the current fishery. Those few sets down around Drum Inlet and Ocracoke in fall in November is about as far south as the boats will fish and then up around Shark River and Manasquan in New Jersey, but certainly with most of the fish being caught or sets being made in Virginia waters.

I'd like to walk you through just monthly, very quickly, where the fish were caught in 2010 by month. I'd like you to make mental notes of where the fish were caught in Bay and how many dots you

see in the Bay and this will become important as we walk through 2011. May, nothing unusual except for an early start and lots of fish in the Bay, sets in the Bay, and I think no sets outside the Bay.

June, a similar kind of aggregations in the Bay but a little bit of fishing outside the Bay in June 2010. July, the fish not showing very well in the Bay and Omega sending more boats up the beach towards Jersey. By the way, once you get north of the Virginia/Maryland Line, they're fishing outside beyond three miles in the EEZ.

And then in August a little bit of two modes in the Bay, up Bay and down Bay, if you will, still a little bit of fishing offshore. And then as you get into September they tend to fish on more of the migratory fish off the beaches, but still with some activity in the Bay. And then by October most of the fishing effort is on those migratory fish coming down from the Mid-Atlantic and off the Virginia and North Carolina coasts; and then very little fishing in November, and just that one day of fishing in December.

I can merge the port samples with the logbook data and the slices of the pie show a proportion of age ones, twos and threes caught by area. The size of the pie is proportional to the catch and a ten- ten minute cell of latitude and longitude. The take home here is the ones and twos caught in the Bay and Virginia waters and the older fish tending to stratify by size and age. Twos and threes, blues and reds you see up off of the DelMarVa Peninsula.

In 2011 I've got the landings through I guess Monday of last week, the 31st, and like I mentioned before the landings to date were 158,000 metric tons. If you look at it versus last year is down 8 percent, but for the five-year average it is up about 6 percent. The players, Omega Protein, they started out with eight reduction vessels. They sidelined one in July and added two so for a net of one so they've been since August fishing with nine vessels.

There are five snapper boats in the Bay that have offloaded periodically at Omega for reduction purposes this year. Just a look at the catch at age matrices, the percent age ones, twos and threes in the coast-wide catch, the previous four years and then just the raw port samples this year; look at the column under age ones.

I think that high proportion of ones is a reflection of some decent recruitment from the 2008 year class in 2009; the 2009 year class in 2010; and it seems like the 2010 year class in ones, those high 40-plus percentage points for age ones to me suggests that we've got some decent recruitment.

Here is where try to recall what went on last year versus what is going on this year. In May this year it started off as per usual. Fishing in the Bay, kind of bimodal distribution up Bay and down Bay, but not unusual. But starting in June the fish started tending to distribution down Bay and off the Virginia eastern shore barrier islands, and this condition continued through most of the summer; very unusual fishing in June, hit the peak around Cape Charles and then up the eastern shore, a little bit outside the Bay Bridge Tunnel.

Very unusual for July, most of the fishing again off the barrier islands; still August, usually one month of the summer you see some a lot of activity in the Bay but still the fish tending to be down Bay and outside barrier islands. From the logbooks I've only plotted half of September, but the trend continues; very few sets up Bay where you typically see them up on the top of the Virginia portion of Bay, up by Reedville. As many of you are probably well aware, we at Beaufort can track the Chesapeake Bay cap, if you will, from the logbooks.

I just summarized the previous five years where the cap numbers stood through September, and you can see the 2011 numbers. If I average the previous five years removals from the Bay, averaged about 73,000 metric tons; this year through September they were 47,000 metric tons; a 35 percent decrease in removals from the Bay this year.

I can draw on one other data set that doesn't have a very long time series, but the Omega spotter pilots fly Sunday patrols. They send generally three spotters up, upper Bay, lower Bay and up the beach towards Jersey. About five or six years ago we asked them to – we knew these paper files of their spotter pilot observations on Sunday existed, and we asked their chief spotter, Jake Haney, to translate the industry jargon into something more intelligible.

We've gotten the chief pilot to write in – we carved the Bay up into seven at-large areas, I call them, and two large areas outside the Bay. He also gives us information up the beach in Jersey. But essentially enumerate number of schools they see by area and an estimate of fish in the industry jargon in millions of standard fish, so I'll draw on that the next two slides.

It's kind of busy here, but this is a slide of the previous five or six years. I think we're missing 2007 information, but this is an amount of fish they see in the Bay by week. The horizontal axis is by week in the fishery; to the left would be mid-May, to the right would be mid-September. You know, the previous four or five years they see fair numbers of fish. There is usually peak early in the summer and then late in the summer, but with good numbers in between.

That dark black line is 2011, which tends to confirm that there weren't many fish in the Bay this year. This drawing from the same spotter pilot logs, this is what the pilots tell us they see outside the Bay; again, a little bit busy but clearly that dark black line is 2011 and they're seeing more fish outside the Bay.

So, some bullets to sum up where we've have been so far this year. It has been noteworthy this year for the lack of fish entering the Bay. The fish have been abundant and concentrated near the Bay mouth and the Virginia eastern shore barrier islands. Relative to recent years, there has been little effort in the Mid-Atlantic waters by the Omega fleet. As fish have been abundant in Virginia, why spend the fuel and time to go up and fish off of Jersey?

Conversely, the landings by the snapper fleet in Virginia have been down due to the lack of fish this year. I don't have numbers on those landings yet. It's just conversations with the snapper captains and those involved in the bait industry. All summer long, like last year, we've had good reports of menhaden off the New Jersey coast. All my information says that vessels off of Jersey, mostly out of Cape May and northern New Jersey, have had good seasons.

Again, I don't have landings to show you from that, and I probably won't have them until early next year. As per usual, in recent weeks the fleet has been concentrating off the Virginia capes catching migratory fish that have been moving down through the Virginia offshore waters. Taking a stab at total landings through the end of this year, if landings in November of this year follow the trend of the last five years where the landing in those two months averaged about 12,000 metric tons, then landings for this year could reach about 170,000 metric tons for reduction. I'll end it there and I'll entertain any questions from the board. I apologize for falling

off a cliff, so to speak, but the fishery is still in progress. Thank you.

CHAIRMAN DANIEL: Thank you, Joe. Questions for Joe? Jack.

MR. JACK TRAVELSTEAD: Joe, are you aware of the work that Dr. Sulikowski has done up in the northern range of the stock and can you comment on his findings?

MR. SMITH: I just met Jim this morning in the lobby. We hadn't met face to face. We've exchanged phone calls and e-mails. I know a little bit about what he is doing. I'm involved because they've sent some fish to us in Beaufort to age. I think a thumbnail is they've been flying transects in New England or north of Long Island to look for schools of menhaden.

They have employed ex-spotter pilots or current spotter pilots. Jim can correct me maybe later in public comment or whatever Mr. Chairman – if he would like clarification from Jim. They have been trying to look at adult abundance in the northern half of the fish's range. One of the failings of the assessment and the knocks it took in 2009 from the peer reviewers was the lack of a coast-wide adult index of abundance.

This was kind of a stab at an adult index of abundance for the northern half of the range, where the adults tend to be in the summertime. A long with that, you have to groundtruth that kind of stuff, and they have made some groundtruthing sets off New Jersey and in Narragansett Bay. Jim sent us 101 fish from that groundtruthing set in Narragansett Bay.

We have recently aged them. I've provided Jim with the ages. I want to say there were 60 or 62 percent age fours, about 20 percent threes, and the rest fives, plus or minus a few percentages. We intend to work up and age those New Jersey fish. That's my familiarity with Jim's project.

MR. TERRY STOCKWELL: Thank you for your presentation, Joe. I'm just wondering if you and your team have speculated why there has been a stock redistribution this year, why the fish didn't stay in the Bay?

MR. SMITH: The first thing that comes to my mind is freshwater coming down the Susquehanna and Western Shore river systems of the Chesapeake Bay, and that sticks out. I don't know cubic feet per second. I just haven't looked into it and maybe there

is a flushing action going on there, but I think clearly they just have not come in the Bay. You hear these anecdotal comments from the spotter pilots that they come in, they go to Kiptopeke and they turn around and go right back out. I don't know; I'd take a stab at freshwater. Stay tuned; it will be an interesting item to look into after the season is over.

MR. JAMES KELLUM: Joe, that was a good presentation and one I agreed with wholeheartedly, but we have talked all summer about why we didn't see as many fish in the Bay. You and I have had this conversation that is landings and where the sets were made, and the fleet is going to run to the best fish and the best fish have been outside the islands.

That doesn't mean there wasn't fish in the Bay. It just meant that there were better fish outside and the fleet ran to the best fish. My boats had as equal catches this year as they did last year. I mean that could skew the information a little bit.

MR. SMITH: A point of clarification; since Amendment 1 in 2001, the Virginia bait boats have carried – it was mandatory for the Virginia bait boats to carry our logbooks, so we called them CDFRs, Captain Daily Fishing Reports. As a note, the bait boats voluntarily carried our logbook forms prior to that, starting in the mid-nineties voluntarily, so we've got some pretty good information on the Virginia bait boats, pretty refined catch location information.

Jimmy's boats and the other boats involved in that bait fishery maintain our CDFRs throughout the fishing season. We don't collect them weekly like we do with the reduction fleet. We will start collecting them in the near future as the fishery is just about over. I'll have those plots this winter, but I'll have the same kind of plots for the bait vessels that I could show up there. I guess I didn't mean to lead you astray. It's not absolute that no fish came in the Bay, but a lion's share of the fish tended to stay outside or down-bay.

MR. WILLIAM GOLDSBOROUGH: Joe, do you get catch data from the bait boats further up the coast or is that just Virginia boats you're talking about?

MR. SMITH: I believe Amendment 1 said that any bait purse seiners should keep our CDFRs, our logbooks or they could keep a reasonable facsimile if a state form existed. No, none of the

bait vessels north of Virginia keep our logbooks. New Jersey has its own reporting system for landings. I think they carve New Jersey and its bays up into eight large fishing areas.

I don't believe their reporting system is as refined as our CDFRs in that I don't believe they get GPS numbers. I don't know that they get set-by-set information. I don't know about the Rhode Island boats and any of the Maine or other New England herring boats that switch over to menhaden.

That information is captured I guess through dealer reports, trip tickets, the SAFIS system, but I'm not involved with – we don't at Beaufort get information as refined from Virginia north from those bait boats. The gentleman to my left, Jeff, has compiled – the technical committee in the mid-nineties formed a subcommittee on bait when we realized that the bait industry was growing and historically the New Jersey representative to the TC, starting with Pete Himchak, then Brandon Muffley and then Jeff inherited the task of compiling the bait landings by state by gear.

Those are usually available the spring or early summer following the previous calendar fishing year, and they do work their way into the assessments. It is just the reporting system is a bit more clunky and it's a little more labored to get those removals.

MR. GOLDSBOROUGH: Yes, I was just wondering what you could tell us, Joe, if anything, about where the New England bait boats were fishing in the last year or two?

MR. SMITH: I know the fishing off Jersey has been very good the last two summers; so much so that the two companies in Rhode Island, Ark and the Lakeland's – I may have to be corrected. They be in Massachusetts, but traditionally have fished Narragansett Bay. They have moved operations off New Jersey.

There is Jeff Kaelin's folks – he works for Lund's in Cape May – and then there are a lot of landings in Point Pleasant in North Jersey. I can just speak qualitatively about their landings. I've have heard they've had very good years, last year and this year. The New England boats that have come down and fished off Jersey besides the Lakeland's and Ark's I'm not familiar with. I don't know numbers.

It's probably under ten vessels, but a couple of them have used a run boat operation where they have offloaded the fish onto a run boat or a carry boat which ran back to I think Fall River or Gloucester,

Massachusetts, and unloaded back there, which is not unusual historically in the menhaden fishery to use run boats, especially up in New England. Some of the fish came in on run boats I know last year – I'm not sure about this year – into Massachusetts via run boat.

MR. PETER HIMCHAK: Mr. Chairman, I just wanted to clarify in regards to Bill's comment that Amendment 1 actually made it a compliance requirement that any state that harvested bait through the use of purse seine was to use the CDFR or an equivalent form approved by the technical committee.

While we don't have the timeliness of reporting the bait landings as Joe gets them from the Virginia snapper rigs – and you've got to recognize that we are the second highest bait-landing state on the east coast. We do have geographical locations, we do have – it's monthly, it's daily. We get daily total harvest not by set, and then we get these mandatory reporting forms and we can match them up with the three major ports where they come in at Lund's, Point Pleasant and Belford. It is quite a substantial bait fishery. It did very well in 2010 and from what I understand is doing quite well in 2011. These numbers come in much later than what Joe gets from CDFRs.

MR. DENNIS DAMON: Joe, thank you for that report; as it has already been said, very complete. I want to follow up, if I can, though, on my friend Terry Stockwell's question with regards to the fish going into the Bay. It seems to me that whenever we find a deviation from what is typically normal of fish, the question pops up in my head at least why; and so though I understand that your laboratory has been pretty concentrated and focused on the fish; has your laboratory or any other laboratories taken water samples of the Bay and do we have a baseline and a comparative analysis of that water quality?

MR. SMITH: Our lab hasn't, Dennis. I would probably look to VIMS or Maryland DNR for water quality information. The USGS would have river flows, probably estimates of river flows from the western shore river systems. There is a fellow out there, Kevin Friedland, who has recently published this summer on menhaden feeding habits.

He tends to think that the sub-adult and adult fish tend to concentrate on grazing zooplankters. It

would be interesting to look at phytoplankton or zooplankton concentrations in the Bay. I'm just not that familiar with those data sets. I don't know what is out there, but I'd certainly look to VIMS or Maryland DNR for that kind of information; maybe ODU.

MR. MARK GIBSON: Just to Bill Goldsborough's question relative to Narragansett Bay, there was a wave of fish that came at their usual time in late May and June and triggered our 1.5 million pound or I guess 2 million pound limit in order to initiate commercial fishing, but I think only a couple of sets were made on that, and the bait boats departed for greener pastures in New Jersey. The fish showed up but apparently the gettings were better a little south of there and that's where they headed.

That wave of fish left and we had another significant wave of fish come into Narragansett Bay later in the last summer or early fall. Those were quite large fish, and I think those are the ones that Joe spoke about, the groundtruth sample. They were large and older fish. Industry did some flyovers preparing to fish on it, and then those fish disappeared.

I am intrigued, but that leads me into the point about what Joe showed about the spotter pilot estimates in the Bay that show an early peak of abundance, a drought, and then a later peak in abundance. That seems to be the pattern that is shaping up in Narragansett Bay. The residence times can differ for those waves, but that seems to be the pattern that is developing, and frankly it's difficult for industry to work with because the fish come, it will trigger our action, we open and the fish disappear, we close the fishery, so that's the pattern we're seeing at least in the past few years of our intensive monitoring.

CHAIRMAN DANIEL: Anything else for Joe? All right, thank you so much, Joe, for coming up and providing your report. Next, the board asked for the technical committee to report on our juvenile abundance indexes up and down the coast. I have seen the interaction between the technical committee on this issue, and I think they have done a very good job of putting this information together. Jeff Brust is here to review that information with us.

REVIEW OF THE JAI REPORT

MR. JEFF BRUST: As Louis mentioned, the board requested an update on the juvenile abundance index which we use to track our trends in recruitment. I'll just run through it. This is a real quick summary.

Just as an overview of the data we used, there are seven state surveys that go into this.

We have seine surveys from Rhode Island, Connecticut, New York, New Jersey, Maryland, Virginia and North Carolina. They are all seine surveys, but they all are implemented a little bit differently, slightly different gears, sampling times of the year, things like that. One important note is none of them were designed specifically for menhaden.

They're all designed for other target species, so menhaden is a bycatch but we're hopeful that the information on menhaden is useful to give us trends in recruitment. To develop the coast-wide index, we took all the data from the seven surveys. We did a Delta lognormal, which is a fancy regression model. It is the same method that we used in the last stock assessment.

Generally speaking, the index was low in the 1960's. It increased into the seventies and eighties. It declined again to low to moderate levels from the 1990's to the present. Recently we've had strong year classes in 1999 and in 2005. These are relatively strong; certainly not big as they were in the seventies and eighties. Since the last stock assessment in 2008 the trends have been relatively stable.

Showing the figure here, summarizing what I just said, it was low in the sixties, peaked in the seventies and eighties and has declined through the nineties to relatively stable levels in recent years. You can see those two stronger year classes in 1999 and 2005. The lighter gray line is the coefficient of variation, which is just a measure of uncertainty in the estimates.

It's high early in the time period because fewer of the surveys went back that far, so there is more uncertainty in the coast-wide values, but the mid-1980's we've got all seven surveys on board, and so the uncertainty around those values goes down. The technical committee was concerned that the coast-wide index might not show everything we thought you might be interested in, so we did want to look at the state surveys independently to show some regional variability in the indices.

We did look at each one individually. Generally from in the 1990's and 2000's the northern states were higher and more variable than the southern states. We had locally strong year classes in the

northern states while the southern states were relatively flat. Again, since the last stock assessment, though, we've had none of those high flyers, no spikes in any of the surveys.

One important note is the Virginia index in the last three or four years has been increasing and seems to be trending upward. This is important because the Chesapeake Bay does seem to be the center of production; and as Joe noted in his presentation a few minutes ago, this seems to be – it transfers to the fishery. We have had high catches of age one fish the year after we've had a strong year class in the recruitment index.

Again, these are kind of small, but I wanted to put them all on the same page. The four northern states are at the top there; the three southern states are on the bottom. Please note that there are two in there, New Jersey and Maryland, that the Y axis is broken. We wanted to show the full range of the index; but if we did it all on a single axis, recent years would just look like a flat line, so we had to break the axis to show a little bit more variability.

You can see during the 1990's the northern states had locally large year classes while the southern states were relatively flat. Since 2008 there is not a lot of movement in any of them except for Virginia; the last few years there do seem to be trending up. That is my full report, Mr. Chairman.

CHAIRMAN DANIEL: Thank you, Jeff and the technical committee, we appreciate that effort. Questions for Jeff? Mark.

MR. GIBSON: That graph in Maryland and Virginia, Virginia is an arithmetic scale and Maryland is on a log scale?

MR. BRUST: No, they're both on an arithmetic scale; but Maryland, we had to break the index – excuse me, we had to break the axis just to show the full extent of the – I don't what year that is – '84 or '85 index was so high, we just had to break the axis.

MR. GIBSON: There may be some trending up or down there in the recent years, but the values are so low relative to the historic time series; are there any differences in there, any significant differences in, say, the last ten years of the Maryland one?

MR. BRUST: We didn't look that specifically at it. You're right, it does look like it is trending up, but we didn't look to see if there were significant slopes in any of these years for any of the indices.

MR. WILLIAM A. ADLER: Mr. Chairman, I don't know if this is the place to just ask. Do the scientists and technical committee still believe that, first of all, abundances on menhaden are still driven by environmental factors, which is what I've been reading for a hundred years, I think it is, that the abundance of these fish goes up and down mainly for environmental factors. That's the first question. The second question is does the technical committee indicate that the fishery is overfished or overfishing is being done? I don't see that on the agenda so I'm asking now.

MR. BRUST: The general feeling among the technical committee is that recruitment is very heavily driven by environmental factors. We haven't been able to pin it down specifically, but, yes, that is the general feeling is recruitment is a very environmentally driven process for menhaden. In terms of overfishing and overfished, all we have to go on is the 2009 stock assessment, and it says the stock is not overfished but overfishing was occurring in 2008. We haven't gone beyond that.

MR. ADLER: If I may, Mr. Chairman, that overfishing time, was that that little one that I read about that it was just the first time in several years, and it wasn't overfishing by much; is that the one you were referring to?

MR. BRUST: Yes, I believe we were at – the fishing mortality rate relative to the threshold was about 1.04, so we were 4 percent above the threshold limit, so, yes, it was very minor, but it was still over the limit.

CHAIRMAN DANIEL: And we'll have a lot of discussion on that here in just a little while. Anything else for the technical committee? Jeff will be here so we have his counsel if we need it as we move forward. All right, with that, we will move in a discussion on Draft Addendum V. Toni has done a masterful job with this in putting it together, so I'm going to let her through some of these things, and then we'll have time for questions as we move through the various topics.

DRAFT ADDENDUM V FOR FINAL APPROVAL

REVIEW OPTIONS

MS. TONI KERNS: First, I'm going to go through the options that were contained Draft

Addendum V and then give the board an overview of the comments that we did receive. Just recall back that this document was approved for public comment in August. We had the public comment period open August through November 2nd. It did close last week, November 2nd at 5:00 p.m. Any comments that I received after 5:00 p.m., I did not include in the public comment summary.

Today we're going to review those public comments and consider final approval of options. The board will need to decide the implementation date for any of the options that we choose. At the beginning a member of the PDT had recommended language that was on Page 14 of the document under Option 4, the 40 percent MSP target referencing Magnuson National Standard 1 Guidelines and that the specific numbers associated with that recommendation for forage fish was 38.5 to 50 percent of the unfished stock size.

We asked that member of the PDT to give us the citation for that, and that could not be found so we are recommending that language be completely stricken from the document because we do not have a citation for that, so that's up front. The purpose of this draft addendum document was to look at revisions to the fishing mortality reference points.

We have been using F-replace as our fishing mortality reference points, and this document is proposing to go through and alternate those to maximum spawning potential reference points. It proposed using 15 percent MSP and also proposes a suite of targets for the fishing mortality reference point as well. The document also scoped to look at a suite of management tools to manage the fishery to or towards those targets and thresholds.

The first option in the document was status quo, using F-replace. The current rate is 2.2 for the threshold value. Our current F-value from the 2008 stock assessment is 2.28, indicating that overfishing is occurring. Because we're above that threshold value, the board would need to take action to end overfishing. We have projected that in order to achieve the F rate of 2.2, there would need to be a reduction in harvest of approximately 20 percent from the 2010 levels.

The second option in the document was a 15 percent MSP maximum spawning potential threshold. The F rate that is associated with that 15 percent is a 1.32. Because we're at a 2.2 rate, we would need to take steps to achieve that 1.32 F rate. Overfishing is occurring and in order to achieve that level of F,

approximately a 23 percent reduction in harvest would need to occur from the 2010 level to achieve that F rate in one year.

The document also proposed changes to the target. There was a range of target options, 20 to 40 percent. Today as the board considers those targets, they can select any value within the range of the options that were presented for the target. The first option, Option 3 – well, I think we have lost some slides. The first option in the document was status quo. The status quo F-target is 0.96. Using the F-replace, this F-target is approximately 20 percent of the MSP if you wanted to equate it on the MSP values.

The second option in the document was 20 per MSP as an F-target. There would be approximately a 27 percent reduction in harvest required to meet this F level associated with the 20 percent MSP. The third option in the document was a 30 percent MSP. A 37 percent reduction in harvest from the 2010 levels would be necessary to achieve this 30 percent MSP target if it were achieved in one year.

The 30 percent value is recommended when stock-recruitment relationships is lacking as in menhaden in the scientific literature, and in that scientific literature this 30 percent MSP is at the upper end of the range for the reference points for finfish. It includes other fish besides forage fish.

Option 4 is a 40 percent MSP target. If it's set at a corresponding level is 0.418. In order to achieve this F-level in one year, then a 45 percent reduction from the 2010 levels would be needed. A 40 percent MSP level would reflect the importance of menhaden's ecological role while still providing some fishing opportunities.

The tools are proposed to narrow the focus of a range of possible management tools that are allowed within Amendment 1 that could be used to constrain the fishery for menhaden to try to achieve those thresholds and targets that the board is considering. At the August meeting the board indicated that we would use a second addendum to propose implementation of a suite of possible management tools, and it was the purpose of this document to scope to determine what tools we would want to leave in that addendum and what tools we would want to take out.

We considered changes to the recreational fishery. In order to consider changes to the recreational fishery, the plan development team had recommended changes to the monitoring requirements because the current data collection program is insufficient to capture the recreational menhaden harvest. The document proposed using size, bag or seasons in order to manage the recreational fishery.

For the commercial fishery, the proposed changes for both the bait and the reduction fishery, the plan development team also recommended changes to the monitoring requirements for the commercial fishery in order to implement the majority of the tools that we've listed below because we only have monitoring requirements for the purse seine vessels, as Joe had gone over earlier.

Review Options The options included trip limits, gear restrictions, season closures, area closures, quotas, effort controls and limited entry. If any of the options are chosen today, the board would need to recommend dates for implementation as well as any options that they would like to consider for NOAA Fisheries to implement.

PUBLIC COMMENT SUMMARY

Now to get into the public comment summary; we received 91,949 public comments. Of those public comments, 740 were personalized individual letters, 91,149 came from form letters or letters with multiple signatures. Sixty of those letters were from organizations. We held 13 public hearings in 10 states. The state of Connecticut held three hearings and the Potomac River Fisheries Commission held a hearing in Virginia.

When we posted the total summary of all the public comments on November 3rd, that total number of comments received was different. I just want to note that for the record. I had forgotten to add in one of the sets, but we fixed that on Friday morning, and in the back the public summary does reflect all the correct numbers. The actual tallies were all correct; it was just that total number of letters that we received was incorrect.

For the threshold, the majority of the commenters were in favor of moving to a 15 percent MSP, 91,141; 35 of the commenters were in favor of status quo. Looking at the recommendations to those changes in the target, the majority of the commenters were in support of the 40 percent MSP; a total of 88,757; 2,381 were in favor of the 30 percent MSP. In that group of commenters that favored the 30

percent MSP, there was a large number of them that were in favor of starting off at 30 percent and moving towards a 40 percent MSP as the stock began to increase.

Twelve commenters were in favor of a 20 percent MSP and 27 were in favor of staying status quo. We also had some commenters that were in favor of using 15 percent MSP as the target as well as 25 and another at 50 percent MSP. For the recreational fishery management measures, the majority of the commenters favored some type of season; 206 were in favor of this. Thirty-four commenters were in favor of size limits and 27 were in favor of bag limits.

Forty-commenters were in favor of status quo and not making any management requirements for the recreational fishery. Looking at the commercial fishery management measures, the majority of the commenters who commented on this were in favor of some sort of quota. Most of those comments came in the form of a coast-wide cap, and so I categorized that as a type of quota that they were in favor of, and that 87,714.

Thirty-two commenters were in favor of status quo measures and not making any changes to what is listed in the FMP; 344 were in favor of trip limits; 347 were in favor of gear restrictions; 347 were in favor of seasons; 347 in favor of area; 341 were in favor of effort controls; and 72 individuals were in favor of limited entry. I should have noted at the beginning, and I apologize, that I only tallied individuals who actually spoke specifically in favor of one of the options listed in the document.

I did not presume what individuals may or may not have been in favor of unless they specifically stated it. There were many commenters, when they expressed interest in changing the thresholds and the targets, they stressed the importance of menhaden's ecological services and its role in the ecosystem, and that's why they favored making those changes to the new reference points.

I tallied up the number of individuals that did not actually specify any options but stressed the importance of ending overfishing and menhaden's ecological system services, and it was about 408 individuals that sent letters. Other comments that we received was for the board to consider the needs of the predator species; menhaden's ability to help restore the

Chesapeake Bay; that menhaden had not been seen in abundant numbers in northern waters mostly north of Long Island Sound; implementing measures that would achieve a fourfold increase in the population and the correlation of this to an MSP of 40 percent; that the Marine Stewardship Council recommends an MSP of 75 percent for forage fish, to consider a sufficient buffer between the target and the threshold when making changes to the reference points; to increase the abundance that is safely above the threshold; to consider the historic levels of fishing mortality and how matched the proposed targets in the document; those that favored setting the target at 15 percent MSP; and to develop scientific projects that determine what the environmental drivers are; to not allow for commercial fishing within one mile of shore; to not allow netting in the Chesapeake Bay; to place a coast-wide cap on harvest.

There were commenters that were in favor of a total moratorium; a moratorium on just the reduction fishery or reduce all commercial fishing. There were also commenters that indicated there should be a decrease in the reduction fleet and an increase in local bait vessels; that recreational fisheries should have considerable economic impacts on the communities and for the board to consider that in their deliberations; that it would cost less now to reduce fishing mortality than it will later if the stock declines further; to consider the economic impacts to the commercial harvesters under the proposed target options; to establish monitoring requirements for all sectors of the fishery; to increase observer coverage.

We did receive a lot of comments to move forward with an amendment for the management tools to manage the fishery and not an addendum. That is the summary of those comments. I'll take any questions.

MR. GOLDSBOROUGH: Mr. Chairman, I would like to just refer back to something that Toni shared with us right before she went through the public hearing comments, if I may. It kind of surprised me on that clause being stricken from the addendum because a reference couldn't be found. It took me a minute to find it, but that reference does exist, and it's in the materials that have been distributed; specifically the October 17th letter from Pew Environment Group, Page 3, Footnote Number 5.

MS. KERNS: Bill, does it specifically reference the 38.5 to 50 percent, those values?

MR. GOLDSBOROUGH: What it does is it gives the source of that language. If I could ask staff just to

review that reference and consider whether or not it's suitable for our purposes, Mr. Chairman.
CHAIRMAN DANIEL: We'll do that over lunch. David.

REPRESENTATIVE DAVID H. WATTERS: Mr. Chairman, in a sense that follows up on that, because my question is about the difference is about the difference between Options 3 and 4, the 30 and 40 percent. Reading it with that phrase in there suggested to me that the 10 percent difference depends primarily on the considerations as a forage fish, and I just wanted to know if that were the case.

Then I would follow up that with a question about if you can offer any speculation about between those two management options, what the impact might be on the increase in the population; because of what we've heard about the ecological factors involved; you know, if you do have some sense about what kinds of expectations there would be about the population increase under either of those options.

MR. BRUST: Could you break that into two parts and ask the first one and I'll respond and then we can work with the second one.

REPRESENTATIVE WATTERS: Yes, the first one is am I correct in understanding that the difference between the 30 and 40 percent in Options 3 and 4 primarily relates to that idea of the forage fish numbers from Magnuson-Stevens?

MR. BRUST: The technical committee, when we came up with these options, wanted to give the board a range of options. We certainly were in no position to presume which direction the management board would take in terms of their goals for managing this species. Generally, though, the higher the percent MSP is a lower fishing mortality rate, so the higher percent MSP generally tends to favor the ecosystem processes of this species.

We are not trying to say which one you should set, and we're not saying that 30 is not an ecosystem process and 40 is. We're just saying that here is a range; the higher percent MSP you go, you're favoring the water quality issues and the predator forage base and things like that. The lower you go is putting less emphasis on these ecosystem processes. We weren't trying to say one focuses on that and the other focuses on

that. All of the options will allow both a fishery and ecosystem processes. It's just where in that continuum the board wants to stand.

REPRESENTATIVE WATTERS: Thank you for that clarification. I guess that it just confirms my sense that it would be nice to have that phrase remain in there so that we have consideration about the forage factor there. I understand Jeff's explanation, but the phrase I thought was useful to have there. The second part of my question was can you offer any thoughts about what impact on population either of those options would have?

MR. BRUST: The technical committee did do projections based on a range of these fishing mortality estimates. I don't recall the specific results off the top of my head. Because recruitment is very strongly environmentally driven, just because we have a larger spawning base does not necessarily mean we will definitely get a larger abundance, but it will put us in the position that when the environmental variables are correct we will get a strong recruitment year. I don't have the numbers in front of me, but I believe it was the March meeting this year Rob Latour, his last meeting as the TC Chair, presented projections based on a range of these options. I don't know if that is sufficient to answer your question. We have done the work. I don't have the numbers in front of me. Again, there is no guarantee but it will put us in the position to have good recruitment years when the environment is correct.

MR. HIMCHAK: Mr. Chairman, as a point of procedure here, you have a very difficult task today and you have a luncheon scheduled at 12:15. I assume that you want to talk about thresholds first, targets first and then three separate motions on this addendum. Are you ready to entertain any comments on threshold F?

CHAIRMAN DANIEL: No, not yet. We're going to get through these questions, then we're going to break for lunch, so I'm hoping to do that quickly, and then we're going to come back for Mr. Windley's presentation from the advisory panel, and then we'll move into our deliberations on the actions to take on the addendum. David Pierce.

DR. DAVID PIERCE: Mr. Chairman, you mentioned that we would check at lunch regarding the language that relates to the 40 percent MPS – well, all that language on Page 14. I raised this issue with Toni regarding the National Standard Number 1 Guidelines. I think this is a simple question to

answer; does the National Standard Number 1 Guidelines recommend this target level for forage fish? Is it right or is it wrong?

I checked, I don't see it there, Toni has looked as well. It does not exist so it is an incorrect statement so it has to be struck because it's incorrect. It's not in the guidelines. Whether it's a good idea to have the 40 percent or not a good idea to have the 40 percent, it's an incorrect statement; so if I am correct, then it needs to be struck because it's wrong.

CHAIRMAN DANIEL: And we will clarify that for certain after lunch and we will make the proper adjustment or inclusion. Lynn.

MS. LYNN FEGLEY: Mr. Chairman, I think I had more of a comment than a question so I'll hold.

CHAIRMAN DANIEL: All right, with that and seeing no further questions or none that can't wait until after lunch, we will break until 1:45. Thank you for your attention.

(Whereupon, the meeting was recessed at 12:15 o'clock p.m., November 9, 2011.)

WEDNESDAY AFTERNOON SESSION

The Atlantic Menhaden Management Board of the Atlantic States Marine Fisheries Commission reconvened in the Wilson Ballroom of the Langham Hotel, Boston, Massachusetts, Wednesday afternoon, November 9, 2011, and was called to order at 1:45 o'clock p.m. by Chairman Louis Daniel.

CHAIRMAN DANIEL: Let's get back to work, folks. A couple of housekeeping items here real quick; any new letters that we have received since the deadline, we did put those in the back for folks that are interested in seeing those comments and reading that material. Now, just to clarify one real quick thing and then I'll go to Mr. Windley for the advisory panel report; the language that has been the discussion of some debate and this National Standard 1 issue, I believe we can resolve.

The language that is in the current addendum is incorrect to the new standards of Magnuson. While we don't follow Magnuson, per se, the language that was in the document were references to two specific model studies, the 38 point something percent and the 50 something percent. The new guidance for National Standard 1 indicates that in the absence of estimates of MSY, that F proxies should range from 30 to 60 percent. The previous language was incorrect and I don't believe it's appropriate to have it in the document. If there is objection to that around the table, we'll discuss it. If not, we'll move on. Okay, thank you. All right, Mr. Windley.

ADVISORY PANEL REPORT

MR. BILL WINDLEY: The advisory panel met on October 25, 2011, in Baltimore to make recommendations to the board on Draft Addendum V. Panel members in attendance represented the conservation community, commercial harvesters, bait dealers and recreational fishermen. We had a really good attendance. We had ten members of the advisory panel plus staff and three members of the public.

The following is verbatim what was discussed at the meeting and wordsmithed. We spent so much time on wording that I think it's only fair to present it verbatim. 2.2.3.4, Ecological Role Section; the AP recommends that the ecological role sections of Amendment 1 be expanded to include more context for the cause of mycobacteriosis, information regarding the ecological services of menhaden; i.e., predator/prey relationships, and detail of the MS-VPA used in the current stock assessment and future stock assessments. These additions are recommended to be included in the next management document.

3.0, Social and Economic Impact Section; the AP recommends that the board add long-term economic and social impacts in addition to the short term to the next management document. 2.3.1, Reference Points; some AP members feel that changes to the reference points should not be made until the updated stock assessment is released in 2012.

Others feel that waiting for the next assessment is not necessary because the reference points are management targets and limits and are independent of the results of an updated stock assessment. Threshold; the AP had a split opinion on the threshold. Some favored status quo while others favored F 15 percent MSP threshold. The group agrees that there should be a level of protection for

spawners. However, some feel that they are already getting adequate protection while others feel that the level of protection for spawners should be increased.

Target; some AP members feel that the fishery should be managed to the fishing mortality target while others feel it should be managed towards the target as to minimize the probability of approaching the threshold. The target is a buffer to accommodate for uncertainty in the assessment of the fishery.

Some members of the AP favor a F 40 percent MSP target. Some members favor a F 15 percent MSP. Note that F 15 percent MSP is outside of the range of options proposed in the document. These are comments leading to this recommendation. Some members favor an F 40 percent MSP because they feel that this would be the greatest opportunity to bring the menhaden stock back to their waters that was seen in the 1970s and 1980s.

Some noted that F 30 percent MSP could be acceptable. It is important to leave fish in the water for their ecological services, including forage. Some AP members favor a F 15 percent MSP target because they feel this level of spawning potential will keep the stock abundance, fecundity, at the target levels.

Although this is less than what is in the document, it is acceptable as MSP is a new fishing mortality reference point being proposed for this stock. One AP member added that is acceptable that the Atlantic Herring Fishery is managed at an MSY level that is similar to a 10 to 15 percent MSP according to a conversation with a scientist on the Atlantic Herring Technical Committee.

Industry had funded an independent survey conducted by the University of New England. Preliminary results show that there are adult menhaden north of New Jersey. The assessment assumes that fish do not occur outside of the fishery areas. They now have evidence with their independent survey that the spawning adults do occur outside the fishing zones.

The intent of the target is to satisfy the ecological role of menhaden as forage for predatory species that other fisheries heavily rely on. This is not an interim action because the board has been discussing this for a long period and the MS-

VPA will take time to develop and use for management purposes.

The 20 percent MSP target option is the same as status quo. Environmental factors may be influencing where menhaden are migrating. Some AP members stated they are not seeing menhaden in northern waters like they used to see.

2.3.2.1, Recreational Fishery Management Measures; the AP supports status quo because the recreational fishery is insignificant when compared to the commercial fishery. The only viable measures are bag and size limits, but they would be very difficult to enforce.

2.3.2.2, Commercial Fishery Management Measures; most of the group recommended that an amendment must be considered for the suite of commercial management measures being considered in Addendum V; not a follow-up addendum.

The AP recommended that all the measures proposed in the commercial fishery management tool section of Draft Addendum V be explored in a future management document. The AP stated that the board is prematurely asking for directions on management tools, and the AP should be asked for recommendations on how to manage the fishery after the board has made a decision on reference points, but before a second document is approved for public comment.

Other comments: What percentage of the total stock does the existing fishing mortality reference point protect? A lot of people are referring to the vast overfishing in the time series, but that has nothing to do with the current status. The most important time series to look at when considering if overfishing is occurring is the most recent years.

Why are early landings being grouped in bait catch if those landings were going to the reduction industry? Peer review recommendations of alternative reference points came when overfishing was not occurring. The peer review recommended alternative reference points to protect more SSB.

The PDT recommendations for this document say that they can't discern that there is a stock-recruitment relationship. It's not that there is no relationship. Spawning stock may take more advantage of favorable environment if more spawners are left in the water. How many ASMFC fisheries are actually managed at the target? That concludes the report. I am sad to say that long-time

member Jule Wheatley passed away. He was our vice-chair and was to become the chair. We have all known Jule a long time. He has been with the AP since the day it started. I regretfully inform of his passing.

CHAIRMAN DANIEL: Thank you, Mr. Windley. Questions for the AP? Seeing none, excellent, excellent report, Mr. Windley.

CONSIDERATION OF FINAL APPROVAL OF ADDENDUM V

CHAIRMAN DANIEL: All right, I guess it's that time. We've gotten down to the point where I think what I'd like to try to do here – and there has been a tremendous amount of discussion. There has been a tremendous amount of public comment. At this point I just don't know what additional information we gain from a lot of additional comment.

At least at this particular point I want to kind of see how it goes first with a threshold discussion. Then what I'd like to do is I'd like to have a discussion on the threshold and a decision; a discussion and a decision on the target. Then I'd like to have a discussion and some decision on some of the recommendations that we've heard around the table of whether or not we proceed with an addendum or an amendment.

Then once we make that decision, then Toni is going to go through some information that staff needs in order to put together the addendum or the amendment, however we determine is the most appropriate to go. Does that sound like a fair and reasonable approach on how to proceed from everyone? With that, I'll open up the floor for the board to comment on the thresholds, and I'll start with Ms. Fegley.

MS. FEGLEY: Mr. Chairman, I just wanted to start by centering the debate I hope a little bit as to how we've reached this point and why we're here. When the most recent stock assessment was reviewed, one of the primary findings of the peer review panel was that the reference points as currently set were not protecting an adequate of SSB for menhaden. That is the primary driver sparking the discussion for altering these reference points.

It's true that we were overfishing slightly in 2008; but even despite the fact they were overfishing in 2008, those reference points were identified by the peer review as not being

adequate. That is the prime reason why we're taking this action. In addition, Draft Addendum V and documents back to Amendment 1 state clearly that if the fishing level exceeds the fishing threshold, the board will take action to reduce harvest to the target level.

So there we are in 2008, we have exceeded the threshold, and not only have we exceeded the threshold, but it was stated by the peer review panel that threshold was not conservative enough. There has been debate about National Standard 1. We don't operate under Magnuson. There is clear language in National Standard 1 that if you have a forage species you should be managing for a higher biomass.

They don't specify the numbers, but it does say that within National Standard 1. We have a situation where we have fewer menhaden in the water than we have in many, many years. We have reference points that are identified as not being conservative enough. With that, I'm just going to stop. Thank you.

MR. TRAVELSTEAD: I was expecting a motion there. We only have two options on the threshold; status quo and the 15 percent MSP. I suspect that most folks around the table are inclined to support the 15 percent MSP. To implement that would require a reduction greater than 20 percent; I think on the order of 23 percent, which is an enormous reduction.

As long as I've been sitting around the table here talking about menhaden, our technical committee has been telling us that there is no apparent relationship between fishing mortality and recruitment. They have decades of data that they have looked at trying to look for that relationship and it's never shown up, so there is an enormous amount of uncertainty if we take this step to go to a 15 percent MSP threshold that it will have any effect at all.

We're going to have to sit back and wait for the appropriate environmental factors to click into place, and hope that happens soon, before we see any benefits. And if they don't click into place, the one certainty is that we will have presented all of this economic impact to the fishermen through that reduction, and that is what concerns me.

The Virginia Institute of Marine Science has completed a three-year economic analysis of the menhaden fishery in Virginia and has shown its importance to the Reedville and Northern Neck Area to the economy in terms of dollars and jobs. And while the study isn't specific to MSP values that you see here before you, it shows that a 23 percent

reduction in harvest will have an enormous impact on the economy there; not only because Omega is located there, but that's also where our snapper rig bait fishery is located, which is the largest on the east coast.

It's very difficult to support implementation of 15 percent MSP. Joe Smith showed us a slide earlier today that showed that landings and effort have been pretty stable since 2000. We're down to nine boats in the fishery now. We're only overfishing by this extremely small amount and haven't been overfishing the eight years prior to that, and yet we want to take this enormous reduction in the fishery that we know is going to have economic impacts to try to correct that small smidgen amount of overfishing and then aren't even sure that it is going to ultimately have any effect.

Now, if it does and environmental variables are there, it says we're going to essentially be doubling the spawning potential of the stock. If you go back through history, the average MSP I think is about 6 percent for the fishery, and in the most recent assessment we're up to about 8 percent. We've only been to 20 percent one year; I think it was 1958.

And so we're trying to solve this small overfishing problem, in my opinion, by doubling the spawning potential. I don't know that we've ever done that in any fishery, taking that giant of a step to fix the problem. Having said all of that, Virginia will support the 15 percent MSP threshold and pray that environmental conditions are right soon and that will result in big increases in the stock that our fishermen can enjoy.

I mean, eventually if everybody around the table is right and we will see some benefits from this, those benefits hopefully will accrue not only to the reduction and bait fisheries but to the recreational fishermen and everyone. Having said that we will support 15 percent MSP for a threshold, I think that is literally as far as we can go.

You go beyond that; how much more of a guarantee do you get that you're really going to help the stock by going from a different target of 15 to 20 or 30? It's math and you're still sitting there waiting for the right environmental variables. Let me, if I could, just lay out Virginia's position on all of this. It is that we support the 15 percent MSP as a threshold.

We think the target should also be 15 percent MSP. Again, that guarantees, if you believe the environmental variable is going to come around, you're going to double the spawning stock. And then the other thing is this is going to be an enormous effort to – once the threshold and target are adopted to come up with the methodology to do that, and that is going to get complicated.

You've got the reduction fishery, the bait fishery, you've got pound net fishermen, gill net fishermen up and down the Atlantic Coast, all of them harvesting menhaden. If we're going to look at quotas, then we're going to have to have discussions about allocation, and that is going to take some time. I would hope that the board would be inclined to support the longer, more detailed, more thought-out amendment process to get us to the final steps.

I think there is one practical matter that you may not be aware of in the discussion of an amendment versus addendum, and that is the Virginia General Assembly is the entity in Virginia that has to adopt the rules on menhaden. We have no authority at the commission. They only meet in January and February and part of March every year.

Unless we can get through this today and do another document that implements all of this and get it to the Virginia General Assembly in January, you're going to have to wait until January of 2013 for them to look at it again. And by law, once adopted during a session, is effective on July 1st of that year. With Virginia obviously going to bear the brunt of our decisions, it looks like we have a little over a year to get something to the General Assembly, I think that gives us plenty time to use a very methodical discussion, involve our technical committee, involve the AP – they have asked to discuss all these measures we make any final decision. I appreciate you're allowing me to sort of lay out Virginia's thinking on this, Mr. Chairman. But to go to the issue at hand, Virginia will support the 15 percent MSP threshold.

CHAIRMAN DANIEL: Yes, and it's appropriate for Virginia to lay out its concerns and issues because it is a significant impact to Virginia. Pete.

MR. HIMCHAK: Mr. Chairman, I may be echoing a lot of Jack's remarks. I'm coming from a different point of view. I spent 19 years on the technical committee and 5 on the board now for menhaden. When I was on the technical committee, we were constantly grilled about the spawner-recruit

relationship. We always believed it was a very poor relationship.

We strongly believed in the environmental component as the driver of developing good recruitment and a good year class. We always had to argue against a higher percent – we used to call it a percent SPR at that time, but percent MSP is what is being used in this document. So even in the addendum itself it says that if the environment is still a critical driver in determining year class strength, then the percent MSP may not be the best reference point. It may not get you to where you want to go.

With that said, the board nonetheless was required to come up with a more restrictive reference point. We have gone this MSP route as an interim measure pending the development of ecosystem-based reference points. Like Jack, New Jersey will support the 15 percent MSP – I'm speaking for the agency here – but we think that in and of itself is a sufficient reduction that is addressing a situation that may or may not produce a better year class. I'll just leave my comments there on the threshold.

CHAIRMAN DANIEL: Thank you; and if anytime somebody wants to make a motion that we can speak to, that would be awesome. Pat.

MR. PATRICK AUGUSTINE: I think all the points made, Mr. Chairman, were well intended and good and very informative. Mr. Travelstead lays out the various issues that are going to be faced by Virginia, and they're pretty tough, but we've got to move forward with this. I think, as Mr. Himchak pointed out, there is flexibility in the document where the 15 percent has to go up or down.

My suggestion, I think – and I think there are a couple of others I've talked with around the table – that we should set the threshold as a single item to start with; and to address some of the concerns that Mr. Travelstead has mentioned, we may want to consider going to a full-blown amendment to address those specific concerns. So with no further ado, Mr. Chairman, **I move that the board accept Option 2, 15 percent MSP, as the new F-threshold for menhaden.**

CHAIRMAN DANIEL: Thank you, Mr. Augustine; is there a second? John Duren is the first I saw. All right, anybody have comments now on the motion on the floor? David Pierce.

DR. PIERCE: I have, of course, for many years sat on the Menhaden Board, and I have heard the position and concerns of Virginia, notably, and the menhaden industry itself. Over those years I have been, I think it is fair to say, supportive of those particular concerns. They made a lot of sense and Jack Travelstead has done a real good job explaining and presenting information and defending the position of Virginia.

But now we're in basically a new era, a new era that has come about because of the peer review panel and their recommendation that has already been referred to. They have indicated that the percent MSP that we used as a threshold is not conservative enough, and that is stated very clearly in the statement of the problem on Page 3 of our addendum. Also, I note that when we talk about decreases in catch that would occur with this particular percent threshold, percent MSP threshold, if we compared it with 2010, in 2010, from all the tables I see in front of me and the figures represented the year when there was a spike up in catch.

If we look at 2008 and 2009, the cut that would occur in catch or landings is not 23 percent. It may be 10 percent or so even factoring in landings for bait, so bait and reduction. So, the statement of the problem is clear and this particular option is, in my view, the correct option for us to choose, that indeed we should go with that 15 percent MSP. Obviously, I support this motion.

MR. GOLDSBOROUGH: Mr. Chairman, I had a couple of points to make as part of the broader discussion and not necessarily specific to this motion, but I will say that in referencing the O'Boyle Paper that was distributed in the public comment that F 15 percent is the bare minimum we should be adopting as a threshold. I recognize that from the record to date that we have essentially already compromised on this point.

If we recall the previous debate when we decided to go with these two options in the draft addendum, there was a motion to include a wider range of possible values for a threshold, that we decided not to do, but we did recognize that this is the bare minimum and essentially compromised at that point with respect to how much we can do in one jump. I do want that on the record so we can keep in mind that for the future we may not be done yet.

MR. DOUGLAS GROUT: Mr. Chairman, my original hand going up was to make a motion similar to this, but I'll take this advantage to give you my

viewpoint on this, which is very similar to what other people have stated here, that we have a peer review that recommended a more conservative reference point, and there was a recommendation to even going to ecosystem-based reference points.

We heard that was going to take three, four, or maybe five years. Clearly, we needed to do something in a more timely fashion and this was a first step. At least I support the 15 percent MSP as a threshold. Thank you.

MR. MARK GIBSON: With regard to a couple of comments that have been made so far, I think it's naïve to suggest that there isn't a stock-recruit relationship for menhaden. I think it's flat wrong to cast as an either/or issue, spawning biomass or environmental conditions. In my view in research and a review of the literature and in the case of the menhaden information, it tells me that there is a stock-recruit relationship in there and it's modified by important environmental factors that are trending over decadal scales.

I support this motion strongly. It's the right step to move the threshold up a tick to get more SSB in there and to take advantage of those environmental conditions when they exist. I think this motion is a no-brainer and I think we should move on and then get on to the discussion of the target. Thank you.

MR. STOCKWELL: Mr. Chair, I'll be short. I support the motion on the board for all the reasons mentioned.

CHAIRMAN DANIEL: And I believe between status quo and the 15 percent, I have not heard any opposition to the 15 percent threshold. With that said, I don't think we'll gain anything from public comment on this issue, so I'll call the vote. All those in favor of the motion raise your right hand, 17 in favor; those opposed same sign, none opposed; abstentions or null votes. **It's unanimous; 15 percent is your new threshold.** All right, target time. Lynn.

MS. FEGLEY: Mr. Chairman, with all due respect to the concerns that we've heard around the table, I don't think that anybody sitting here takes this decision lightly. Selecting an appropriate target is one of the most critical decisions that we can make because it creates

that buffer of safety between the target and the threshold.

At the August meeting the chair of the technical committee, Mr. Brust, informed us that currently our target is sitting at approximately F 20 percent. He did say and I quote “that one definite caveat for having your threshold and your target is you need to have a significant – you need to distinguish between the threshold and the target easily.” It is very important that we create this buffer. **I’m going to make a motion to select Option 3, which is a target of 30 percent.** This is consistent with scientific literature for appropriate targets for a wide range of species.

This will result in significant payoffs in terms of SSB as measured by eggs. And while we measure the health of the menhaden population in terms of the number of eggs, predators do not feed on eggs and fisheries do not harvest eggs. The board clearly stated as a goal that we wanted to increase the number of menhaden in the water. F 30 percent will accomplish that goal, and that will be good for both the fisheries and the ecosystem.

CHAIRMAN DANIEL: All right, I have a motion from Ms. Fegley; second by Sarah Peake. I’ll start with Jack.

MR. TRAVELSTEAD: Mr. Chairman, I’m not going to repeat all my previous remarks although I think they’re germane to the motion. As I said earlier, it’s difficult for Virginia to support any target that’s higher than 15 percent. I guess the question for the board is how much buffer do you need between the target and threshold?

In my opinion this fishery has been pretty darned stable for the last eight or nine years or at least the last eight or nine years of the last stock assessment. If it were an entirely erratic fishery, up and down from year to year, and it was difficult to control such that you in attempting to achieve the target were afraid you would go over your threshold, then I would say you need a big distance between the two, but I don’t think that’s the case here with menhaden at all.

So I think that allows you to close gap between the target and the threshold; and in doing so, still present a target that’s sufficiently large that you greatly increase your chances of success by increasing the MSP. **We can’t support the 30 percent MSP at all, but I would move to amend the motion by changing 30 percent to 20 percent.**

CHAIRMAN DANIEL: I’ve got a motion to amend; seconded by Pete Himchak. Discussion on the motion to amend? Mr. Meyers.

MR. STEVE MEYERS: Mr. Chairman, NOAA Fisheries cannot support the substitute motion. I would like to point out that putting MSP at 20 percent is slightly less than what we have now as an existing target of F at 0.96, which works out to an MSP of 22 percent. Thank you.

MR. HIMCHAK: Mr. Chairman, it’s my understanding that the band or the buffer between the threshold and the target is largely influenced by the precision of the estimates of the current fishing mortality. I guess my question to Mr. Brust – I think you knew this was coming – as Jack says if the precision around current fishing mortality is very precise, what is the likelihood that it’s going to – well, the fishing mortality is 0.988 plus or minus 0.255, and then you would be left with the quandary of are you over the threshold. So, you would have to give me some direction on how precise you could narrow down current fishing mortality and how big the buffer would have to be.

MR. BRUST: If I might just redirect that a bit, as Commissioner Fegley mentioned at the last meeting I did say that one caveat is that the threshold and the target should be sufficiently distinguishable. The technical committee checked – when we put in the option of 15 percent for the threshold and 20 percent for target, we double-checked our math and made sure those were sufficiently distinguishable. I hope that answers your question. I don’t know the exact range around the point estimates, but we did double-check that and they are sufficiently distinguishable.

MR. HIMCHAK: So with that answer, New Jersey would support the substitute motion or the amended motion.

MR. GOLDSBOROUGH: Mr. Chairman, I can’t support the motion to amend because it dramatically reduces the buffer between the threshold and the target from what we have now. Right now the F-threshold is 2.2 and the F-target is 0.96, more than an order of magnitude difference between them. I suggest that at a minimum we should maintain the same buffer between the threshold and the target. With a

threshold of 15 percent, that would put it at about 30 percent for the target. Thank you.

MR. ADLER: Mr. Chairman, I would like to just briefly go back to the report that was given at the beginning. Aside from what it looks like 2011 catches total are going to be, which you had somewhere around 170, what was the average over – not counting the ones; what was the average number; was it 150, 160? It was mentioned earlier. Can you respond to that?

MR. SMITH: I believe the previous – what was it, the previous six-year average was 158 – were they the numbers?

MR. ADLER: That sounds like what it was, so I just wanted to get that figure. Thank you.

MR. GIBSON: Mr. Chairman, I made some fairly strong comments about the earlier motion. Now I will moderate a bit and express my support for this motion and here is why. First, MSP reference points are obsolete. They were good in their day when there was a lot of depleted stocks and we needed proxies for Fmsy and F rebuilding, but they have a fundamental equilibrium assumption of constancy of vital rates over time, and that assumption is simply untenable anymore.

I'm supporting a less drastic action relative to the target because I believe we need to keep our feet to the fire for those working for us on the ecosystem-based reference points and the multispecies reference points. We may very well end up down the road with conservative targets based on the evolving science for forage-type species, but we shouldn't do it with an interim action and with these obsolete tools. I support a less drastic separation between the target and the threshold in the hopes that we will progress where the science needs to progress to in the future for proper setting of the targets. Thank you.

CHAIRMAN DANIEL: Thank you. There has been some confusion I think in some of the terminology that has been used in this issue that have an 8 and a 20 percent threshold and target and we have been managing at the 8 percent, which is inconsistent with the way we do a lot of our fisheries or at least all the fishery management plans that I'm aware of.

What we tend to see in stocks, using weakfish as an example, we might have a threshold of 20 percent and a target of 30 percent, and that seems to be fairly consistent with the way we do things and I think also with the way the councils do them, at least the ones

that I'm familiar with like on some of the long-lived species, late maturing, hermaphroditic. It might be 30/40, maybe even as high as 50 percent on some of those really long-lived species.

Oftentimes when you're thinking about these targets, you need to consider the longevity of the animal, how productive they are, when they start to spawn, those kinds of things. I think based on everything I've read and everything I've seen, that the 15 percent appears to be a fairly good threshold.

We've got a motion to amend the target motion to lower that target down from 30 percent to 20 percent, which is going to mean – and I'm assuming that as we get into the discussion on how to move forward with this, I'm assuming around the board we're going to be managing for the target and not the threshold. I just want to make if that's not the intent of the board in the discussion that we're going to have, I think that needs to be made pretty clear before we move forward much past this motion to amend. Other comments on the motion to amend? Jaime.

DR. JAIME GEIGER: Mr. Chairman, certainly reading from the addendum and the previous information, I believe it was stated that 30 percent would be a good first proxy as we start this journey towards sustainability of menhaden stocks. I recall the conversation we had about striped bass just the other day.

This is more than just about menhaden. This is our first journey to really start looking at a multispecies approach to fishery sustainability. This is where we start connecting the dots, and unfortunately my feeling is with this substitute motion not only we're not connecting the dots, but we're being blinded to where even the dots are.

Quite frankly, I think 30 percent is a reasonable first start. I give given the state of the fishery and importance of forage fish species to a variety of fish species of importance to this commission, that that is where our starting point should be. That is the reasonable approach we should take and that is what I think certainly the general public and by far the vast majority of the comments that we received were at least 30 percent and very many of them, if not most of them, were upping to 40 percent in terms of this target.

Mr. Chairman, I'm sensitive to the arguments of Virginia. I'm sensitive to the economic impact that this is going to have to make, and I'm sensitive to what Mr. Travelstead said that such drastic reductions and modifications are going to cause some financial hardship, but this has happened before. This is not the only time we've had to take dramatic reductions. Again, I believe it started with the keystone species of this commission, striped bass. Mr. Chairman, I can't support the substitute motion. Thank you.

MR. DAVID SIMPSON: I'm also opposed to the substitute or the amended motion. I think the original motion is the direction we should head in. I realize percent MSP is a rather simple substitute for identifying fishing targets, but it's also one that is very commonly used. It's used by the commission and the Mid-Atlantic Council, I believe.

I believe scup we're managing for 40 percent MSP and summer flounder is either 30 or 40. My memory is a little bit faulty, but it's above 20. This motion would actually cause us to backslide just a couple of percent as was mentioned earlier, so I don't think that's appropriate. I do think the 30 percent in the original motion would take us a big step toward recognizing those ecosystem functions of menhaden and it's the appropriate way for the commission to go at this point.

MS. FEGLEY: Mr. Chairman, I'm going to repeat a lot of what has been said, but I cannot support the amendment. I think given the overwhelming public comment that we've had, it's going to be very hard to justify to constituents adopting a framework that is somewhat less conservative than the one that we have currently.

We don't have a good record so far of fishing this thing to the target. I believe it is our intent to fish to the target and certainly F 30 percent is a very rational level. I understand and I agree with both Mr. Gibson and Commissioner Simpson that MSP is a – well, it's a proxy that we have adopted to put more fish in the water, but I think that we need to move this forward and go with something a little more conservative than what we have currently. Thank you, Mr. Chairman.

MR. GOLDSBOROUGH: Mr. Chairman, remember we have two steps here, and this is setting the standards we're going to manage by. The next step will be determining the way we're going to achieve them. Given the assessment before us and the peer review recommendations, I don't think now – and in the public comment as well I don't think now is the

time to compromise quite to the extent – we are actually backsliding as has been mentioned with 20 percent as the target value.

And as we saw in a number of the sources of information that were presented during public comment, 40 percent is actually widely regarded as the minimum target that should be adopted for forage species. Thirty percent was presented in the motion out of deference to the step we're taking now and the short-term impacts that would be caused, so I think it's reasonable as well as responsible as a step we take at this time.

If I'm not mistaken, the projections suggests that would amount to a 37 percent cutback from 2010 levels which were 20 percent higher than the year before, so a much less of a reduction from the terminal year 2008. I too am sensitive to the impacts of cutbacks, but I have to emphasize that cutbacks are not the goal here. They're the unfortunate means to the end, but the end is more fish in the water that can support higher harvest as well as a healthier ecosystem.

If we keep that in mind and compare it to some of the other actions that this commission has taken just yesterday. We wrestled with how we were going to achieve 53 percent cutback in tautog. Certainly there are socio-economic impacts here. This commission has to take the responsible action that it is obligated to. I think 30 percent is barely in that category.

Forty percent is better, but 30 percent again is reasonable. I would just conclude by reminding that we have a second step to this process; and once we set the standards perhaps we can then discuss of a way of phasing in to meeting those standards over a period of years to minimize the bite that – the short-term impact that might be caused, but I don't think we should compromise the standards at the outset. Thank you.

MR. G. RITCHIE WHITE: Mr. Chairman, I'm not going to repeat what the past speakers have just said except that the public has sent us a very clear message to do something substantial, and this amended motion is clearly not substantial, and I can't support it.

MR. AUGUSTINE: Mr. Chairman, again, why reiterate what everyone else has said. Obviously, we have to move forward with this and stop dilly-dallying around. The public has spoken loud and clear. The scientific community has

spoken loud and clear. Our assessment folks have spoken loud and clear. Our PDT has spoken loud and clear and the technical committee has come forward loud and clear.

The advisory panel, they gave all their options and points of view for us to try and establish the right way to go. I think we have to take the bull by the horns. And as was said earlier, I think following the objection or the failure of this substitute motion and approval of the original motion, we should focus our conversation on looking at what we're going to put into the next addendum with specifics that are not going to allow the public, the commercial fishery, bait people, partyboat and charterboat people, people that need bait to be worrying about; that we will set a course of action with specific items that we will address as quickly as possible in a clear, concise document as a new amendment. I think the key here – I would recommend that we are not going to support this – is that we defeat this motion and get back to the business at hand, approve the original motion and move on. Thank you, Mr. Chairman.

CHAIRMAN DANIEL: I will make one clarifying comment, though, Pat, and that is I think we've had pretty clear direction from our AP, and I think we've gotten very clear direction from the public. The information from the PDT, though, and the technical committee, that was guidance to us. I think they favored one action over another. They simply provided us with the information, provided us with what we asked for. I don't want people to think that the technical committee –

MR. AUGUSTINE: Thank you, Mr. Chairman, I stand corrected; thank you for that clarification.

CHAIRMAN DANIEL: Yes, sir, I just wanted to make sure that was clear for the record. David Pierce.

DR. PIERCE: My points have been made, Mr. Chairman, and I pass.

MR. STOCKWELL: Mr. Chair, I'm still sitting on the fence on this motion to amend. I mean, I consider a 30 percent reduction – a 30 percent MSP and a 37 percent reduction in landings quite significant. It greatly impacts jobs and it also greatly impacts the bait supply that enables a number of other fisheries particularly in the northeast.

I heard the AP's report, and I took a very split opinion from them. The Striped Bass Board made a deliberate yesterday not to move to move ahead with

an addendum. Is 20 percent too low? Perhaps, but I don't want to complicate things by adding an alternative for 25, but probably the middle is where I'm feeling more comfortable about.

MR. HIMCHAK: Yes, one new facet in this discussion and whether 20 percent is enough or do we need 30 percent; I'm getting the impression that people are thinking that in the current menhaden stock assessment that we are not even considering the forage fish aspect of it. I'd just like to remind everybody that the MS-VPA-X that was developed with great expense and very good scientific documents that accounts for forage fish utilization by striped bass, weakfish and bluefish.

Those natural mortality estimates highly elevated from what we used to use because we didn't account for the predation, so we do account for forage fish utilization in the current stock assessment, the 2006; and when we go for an update, aren't we not going to be using the same age-specific, time-specific natural mortality estimates in determining SSB, so we're not ignoring the forage fish issue.

We want to get to ecologically based reference points, that's true, but at the same time as we're taking a more restrictive fishing mortality we are already addressing a major issue with striped bass as a prey species. I remain committed to the 20 percent.

MR. TRAVELSTEAD: I would support many of the comments around the table if we had been managing this fishery to the target for the last ten years. The fact is we haven't been doing that. We've been managing to the threshold. We haven't given management at the current target a chance to work. The argument that you can't support MSP 20 percent because it's too much like the current target to me doesn't make sense. It seems to me we ought to give it a try.

My God, it's going to mean potentially a 27 percent reduction in harvest. It would seem to me you'd try something like that and see if it works. If I could, I have a question for Jeff, and that is how much time do we need to give a particular target a chance to know whether it's the right one or not? I mean, it's just a waiting game for the environment to do its thing, right?

MR. BRUST: Well, yes, the amount of time would depend on where you are relative to the

target, the life history of the species, the magnitude of the cuts, but, yes, it's a waiting game. I don't want to back myself into a corner and tell you a certain number of years for menhaden, but, yes, we'd have to wait. It would be a number of years. It won't be an immediate turnaround.

MR. TRAVELSTEAD: Last point, we change these targets every year if we want to. There is going to be a new stock assessment, right, another turn of the crank in 2012. We'll have a few more years worth of data. We've seen that recruitment in the Bay, at least in Virginia is starting to tick up. It just seems to me the 20 percent makes sense for now; and if in a couple of years it's working, we try something else, or by then the science is better and we get away from MSP altogether and try something else.

MR. ADAM NOWALSKY: Mr. Chairman, one of the things that I've been struggling with here is that with the near proximity to the updated stock assessment and always wanting to manage with the most recent data and the fact that we're making changes to the biological reference points on a three-year-old stock assessment with another one coming up next year.

That being said, with the comments from the public, the concerns from all parties that we've heard from here today, I'm encouraged that action is being taken to proactively manage these species. The 15 percent MSP threshold is certainly a step in the right direction. I am struck by the history of the management of this species; the fact in only one out the last fifty-plus years has the species actually been managed to the target level.

Those comments with regards to managing to the threshold to date I think are very appropriate. Mr. Chairman, you asked the question before or posed the statement that we would be managing towards the target in the future, as I sit here today, I'm not actually sure of that and I look forward to the toolset that we discuss next. I really think that's what is going to be the most important part of this.

I think a lot of the constituents that we all sit here and represent have put forth their comments for a number of different reasons. Whether it's because they want a lot of forage fish out in the ocean or whether it's because of competition from recreational sport fishermen with striped bass in direct spatial conflict with commercial fishermen and they think that by enacting the greatest reductions here today, that's going to fix their spatial problems.

Again, it's going to come back to the toolset that we employ next. My final comment would be is that I hear the comment about how managing to a 20 percent MSP would be a step backwards from where we are; I think one thing that is important is that F 15 percent as a threshold would be a 23 percent reduction. F 20 percent MSP, if we do in fact manage to that target level, is a 27 percent reduction; and then to go ahead to F 30 percent now is a 37 percent reduction.

I think when we hear about socio-economic concerns, when we think about what we're actually doing for the resource in terms of what our harvest changes are, that's really the most important takeaway from this is those different levels in harvest reductions that these numbers represent.

MR. WILLIAM A. McELROY: Mr. Chairman, I can't give great comments compared to all these comments we've had so far. I just want to simply say I support this motion. I'm a simple man; a 27 percent reduction sounds like a significant amount to me. Thank you.

MR. GOLDSBOROUGH: Mr. Chairman, I just wanted to respond to two points that were made. First of all, I would agree that the current assessment does incorporate predation impacts from three predators that we manage, and that's one of the great advances of that assessment, and it's a first step in the direction to ecosystem-based management where we're trying to go.

But there are a lot more predators on menhaden, a lot of fish predators. There are king mackerel in the South Atlantic, many others we have discussed, marine mammals, seabirds, as we know. We've discussed all that and we've heard about it from the public. We know that osprey, for example, are severely limited in the Chesapeake Bay for lack of menhaden. The point is if we are going to wait for ecosystem-based management, we have to keep this lesson in mind. It took us seven years to develop the MS-VPA for those three predators.

How long is it going to take us to expand upon that to where we're confident that we've got reasonable and responsible ecosystem-based management? So with that in mind, I think it's important to realize that this interim step we're taking now is going to be with us for a while, and we ought to take our best shot at establishing

a responsible as well as a reasonable set of standards.

I also want to comment on the notion that we're just going to be waiting for good environmental conditions and note that is basically what we have been doing for the last couple of decades. It was mentioned earlier – Mark indicated that he thought it was nonsense to think that we had no stock-recruitment relationship.

I would echo that and point out that the 54-year time series does have two peaks that I would agree are peaks that were driven by environmental conditions and note that reference has been made to us maintaining percent MSP at somewhere around 10 percent or less during that whole time series with one peak up around 20; and note that it's no surprise that the only times we would have good recruitment and bring up a reasonable size stock is when we had perfect environmental conditions.

So what we're trying to do now is actually get beyond that and boost the spawning potential in order to take maximum advantage of environmental conditions when they do come, and that's a stated goal of this board already on the record. Thank you, Mr. Chairman.

CHAIRMAN DANIEL: All right, we've got to start to wrap this up now. We're on our time limit. I would just caution us of that. I'm going to call – I've got three more people. All right, raise your hand if you want to speak again to the issue. Doug.

MR. GROUT: Mr. Chairman, approximately two years ago we received a stock assessment that had two basic pieces of advice; one, we are overfishing. According to our plan, we need to take action to address that and bring us below overfishing. The other piece of advice that the stock assessment and the peer review gave us is that we need to develop more conservative reference points.

With the previous motion we took our first step towards addressing that number two recommendation. The most important thing now to me that's left is getting the rubber to meet the road and actually implementing measures that are going to reduce the fishing mortality rate down to below an overfishing condition so that we can start addressing these things.

It strikes me that it seems like we're spending a considerable amount of time debating essentially what is a comfort level for our board here with how much distance we have between our target and

threshold, which is essentially dealing with management uncertainty and maybe a little bit of scientific uncertainty.

My recommendation is we've already took a quick step here to address the reference point recommendation; that we dispense with both of these questions as quickly as possible. No matter how it ends up, it's all about how much comfort we have here. Let's get on to the next amendment or addendum to try and implement these things. Thank you.

CHAIRMAN DANIEL: I've got three more folks that I don't think have spoken on this issue yet, and then we're going to wrap it up, I hope. John Duren.

MR. JOHN DUREN: Mr. Chairman, I have been watching the clock and thinking about all we've got to do; and while all the comments are really good, I believe it's time – so that we can hopefully take some action today rather than have to postpone, I think it's time that we test and call the question and see if we have a consensus on this motion to amend. I call the question on the motion to amend.

CHAIRMAN DANIEL: A.C. is the only one that hasn't spoken on this issue and I'm going to allow him to speak and then we're going to vote.

MR. A.C. CARPENTER: I'd like to call the question as well.

CHAIRMAN DANIEL: That was easy; thank you, A.C.

MR. CARPENTER: And I'd request a caucus.

CHAIRMAN DANIEL: Absolutely! All right, the motion is to amend the 30 percent MSP motion by changing 30 to 20 percent.

(Whereupon, a caucus was held.)

CHAIRMAN DANIEL: Is everybody ready? We have been requested to do a roll call vote.

MS. TAYLOR: State of Maine.

MAINE: Yes.

MS. TAYLOR: New Hampshire.

NEW HAMPSHIRE: No.

DRAFT

DRAFT

DRAFT

MS. TAYLOR: Massachusetts.

MASSACHUSETTS: No.

MS. TAYLOR: Rhode Island.

RHODE ISLAND: Yes.

MS. TAYLOR: Connecticut.

CONNECTICUT: No.

MS. TAYLOR: New York.

NEW YORK: No.

MS. TAYLOR: New Jersey.

NEW JERSEY: Yes.

MS. TAYLOR: Delaware.

DELAWARE: No.

MS. TAYLOR: Maryland.

MARYLAND: No.

MS. TAYLOR: Potomac River Fisheries Commission.

POTOMAC RIVER FISHERIES COMMISSION: Yes.

MS. TAYLOR: Virginia.

VIRGINIA: Yes.

MS. TAYLOR: North Carolina.

NORTH CAROLINA: No.

MS. TAYLOR: South Carolina.

SOUTH CAROLINA: No.

MS. TAYLOR: Georgia.

GEORGIA: No.

MS. TAYLOR: Florida.

FLORIDA: No.

MS. TAYLOR: National Marine Fisheries Service.

NATIONAL MARINE FISHERIES SERVICE: No.

MS. TAYLOR: U.S. Fish and Wildlife Service.

U.S. FISH AND WILDLIFE SERVICE: No.

From Pg 26 CHAIRMAN DANIEL: The motion to amend fails 12 to 5. That brings us back to the main motion, and the question has been called. I don't think we need any further discussion on this. Move to select Option 3, a target of 30 percent MSP consistent with scientific literature. Motion by Ms. Fegley; seconded by Representative Peake. Another roll call vote.

MR. CARPENTER: I'd like an opportunity for a caucus.

CHAIRMAN DANIEL: Absolutely!

(Whereupon, a caucus was held.)

CHAIRMAN DANIEL: A.C., have you got a comment?

MR. CARPENTER: I would like to offer an amendment to the motion to change 30 to 25.

MR. DENNIS ABBOT: Point of order.

CHAIRMAN DANIEL: Yes, sir, point of order.

MR. ABBOTT: I believe we're in the voting mode right now. The question has been called; a vote was called for; we went into a caucus. We have to vote.

CHAIRMAN DANIEL: I think Dennis is correct. All right, roll call.

MS. TAYLOR: Maine.

MAINE: Yes.

MS. TAYLOR: New Hampshire.

NEW HAMPSHIRE: Yes.

MS. TAYLOR: Massachusetts.

MASSACHUSETTS: Yes.

MS. TAYLOR: Rhode Island.

RHODE ISLAND: Yes.

MS. TAYLOR: Connecticut.

CONNECTICUT: Yes.

MS. TAYLOR: New York.

NEW YORK: Yes.

MS. TAYLOR: New Jersey.

NEW JERSEY: No.

MS. TAYLOR: Delaware.

DELAWARE: Yes.

MS. TAYLOR: Maryland.

MARYLAND: Yes.

MS. TAYLOR: PRFC.

POTOMAC RIVER FISHERIES COMMISSION:
No.

MS. TAYLOR: Virginia.

VIRGINIA: No.

MS. TAYLOR: North Carolina.

NORTH CAROLINA: Yes.

MS. TAYLOR: South Carolina.

SOUTH CAROLINA amendment.....: Yes.

MS. TAYLOR: Georgia.

GEORGIA: Yes.

MS. TAYLOR: Florida.

FLORIDA: Yes.

MS. TAYLOR: National Marine Fisheries Service.

NATIONAL MARINE FISHERIES SERVICE: Yes.

MS. TAYLOR: U.S. Fish and Wildlife Service.

U.S. FISH AND WILDLIFE SERVICE: Yes.

CHAIRMAN DANIEL: **All right, the motion carries 14 in favor; 3 opposed.** We need to do two things. We need to determine what is the implementation date for this. Normally thresholds and those types of things would go into place right away. Then we need to approve the addendum. If there is no objection to having the new threshold and targets, go ahead and implement those. We still have got to through the process of developing the reductions and the harvest issues. If everybody agrees to that, if I can get a motion to approve the addendum, then we'll move on.

MR. AUGUSTINE: Mr. Chairman, **I move to approve the addendum as agreed to by the board with the specific options that we selected being a target F 15 MSP and the threshold at 30 percent.**

CHAIRMAN DANIEL: Motion by Mr. Augustine; seconded by Dennis Abbott. Discussion on the motion? Do we need to caucus on this one? Mr. Adler.

MR. ADLER: The two things that were listed that we've just voted on, what happened to the rest of the options in the addendum; what happens to those?

CHAIRMAN DANIEL: Well, that was information that was scoped to the public. We're going to talk about that here in just a little while. The decision we have to make after the approval of the addendum is do we want to move forward with a follow-up addendum to implement the reductions or do we want to go with a full-blown amendment.....: Yes.

MR. ADLER: So everything beyond those two discussions, the thresholds and the targets, which were in the addendum, you approve the addendum, are you approving –

CHAIRMAN DANIEL: No, they were scoping. It was scoping. You're not approving anything but the target and the threshold. Any other clarification on where we are and what we're doing? The motion is to approve Addendum V to the ISFMP for Atlantic menhaden with selected options. Motion by Mr. Augustine; seconded by Mr. Abbott. Is there any objection to the motion? **Seeing none, that motion carries.** Pat.

MR. AUGUSTINE: Mr. Chairman, it just seems based on what Mr. Travelstead and I think others are going to be faced with, in order to take legislative action following, it appears that we'd want consider first and foremost an amendment as opposed to an addendum. I think an addendum is going to end up with a lot of dead end places in it that we don't want to go. So just a suggestion that we consider that, Mr. Chairman.

CHAIRMAN DANIEL: Well, I don't want to direct things from the chair too much here, but I think that it's critical that this be done through an amendment. We've never really managed menhaden before, and we're coming in here and we're going to make some very serious decisions and we're going to have a lot of impact here.

Does anybody feel that this should be done through an addendum? So we can all agree by consensus that we're going to move forward with an amendment and we don't need to have that discussion to debate? That's great, so that will resolve one presentation we need to have, right? I did have Bill raise his hand.

MR. GOLDSBOROUGH: Mr. Chairman, I have no objection to doing an amendment. I just wanted to ask staff or perhaps the chair to speak to the timeline that we would anticipate relative to an addendum because we're already talking, as was discussed earlier, with the process that would have to take place of implementation not occurring until 2013, I want to make sure that isn't pushed back to 2014 because we're talking about units of years here and not weeks or months. Thank you.

PLAN DEVELOPMENT TEAM GUIDANCE

MR. ROBERT E. BEAL: To answer Bill's question directly, there is a slide up on the screen on what the amendment process would look like and the timing of that. It's going to take five meetings to get an amendment finished, but we can use this as Meeting 1 provided the group gives enough direction to the plan development team, for the plan development team to develop a PID between this meeting and the February meeting.

It's important to note that we've received a lot of comment that folks are concerned about the socio-economic analysis in the document. I think it's important that we'll pull that together as well as we can. The socio-economic work is limited by data, so we'll do everything we can. The plan development team will search and low to find any economic data

and socio-economic data that we have, but just be aware that there are going to be things that aren't included because the data doesn't exist.

So Meeting 1 is this meeting; Meeting 2 will be February. Between the February meeting and the May meeting there will be a round of public hearings, and then at the May meeting the board will have to give direction to the plan development team for drafting the amendment. Between the May meeting and August meeting the plan development team will have to analyze all the options that the board wants to have go forward; and then public hearings.

Between the August meeting and the annual meeting, we'll be at the annual meeting one year from now making a final decision on the amendment. If any of those steps are missed along the way, the 2013 fishery will be missed or getting something to the legislature in Virginia to get it in place by summer of '13.

The annual meeting next year will be in Philadelphia so that will be the venue and we'll make sure we have seating in the back of the room, I suppose, if that's available. I just want everyone to control their expectations that there is lot of work that needs to be done. Analyzing all the potential options is a lot of work.

As you move forward with direction to the plan development team, I think it's wise to pare down the options that you ask of the plan development team to analyze rather than throwing everything in there and potentially slowing down the process because the analysis is going to take longer than the time between two meetings. That's a quick summary of where I think we are.

MR. DAVID SIMPSON: Could I ask who is on the PDT; and based on that, I might have a followup.

MS. TONI KERNS: Well, we said at the last board meeting that the PDT would be dismissed after this document was completed, and so we would need to repopulate the PDT. For the last addendum the PDT was made of myself as chair, Alexei Sharov, Derrick Warner, Rob O'Reilly, Jay McNamee.

MR. SIMPSON: I might suggest that there be some board representation there; I'd suggest the principal commercial fishery's states beginning with Virginia, New Jersey, Rhode Island and if

another state has a deep interest. I think if there is that higher level input early on that would act something like a council oversight committee to really get at these practical management approaches and consider cost and effectiveness of dealing with a quota in a fishery for the first time and how is this going o work and how are we going to keep track of this. For all those principal fisheries, I think it would help us move this process along and deliver a better product in the end.

MR. R. WHITE: I appreciate Dave's intent. I guess I have some concern over commissioners possibly driving the process a little too much at that PDT level. I agree with his idea of them having input, but I would have a concern that the PDT might have some issues with a number of commissioners sitting at the table.

CHAIRMAN DANIEL: Well, I'm going to jump in here, too. I think this is going to need to be populated by policy folks more than science folks, I think, and so the states will have to make that decision. I don't think you need a number cruncher here. You need somebody who can discuss policy and knows fisheries management as opposed to stock assessment science. That's just a thought. Jimmy Kellum.

MR. KELLUM: With all due respect, Mr. Chairman, we didn't base this on fisheries management. This is based on political agendas. If we're going to split this pie up, we should have industry representatives from your state of North Carolina, the gill nets; Virginia, the gill nets; Maryland, the gill nets; Delaware and New Jersey, the gill nets; pound netters from each state; purse seiners from each state. You sealed our fate here today so we should at least be able to go down swinging. Thank you.

CHAIRMAN DANIEL: Well, we would certainly have the AP meet again before the PID, and that would be an opportunity –

MR. KELLUM: With all due respect to Mr. Windley, what I took out of the AP meeting, and I was there part of it, what I took out of it and what I received today was two completely different things. Two of the things that was brought out was – and by the way, this is not a referendum. This is fisheries management; it's not a vote. The public input is important, but it's not a vote. We've put management in place; we don't have any data from New Jersey; do we, Joe? We didn't even discuss it today.

MR. SMITH: Yes, but it's not as timely.

MR. KELLUM: It's not as timely you say, but we've –

MR. SMITH: It's as not as timely as the reduction data that we get, but we eventually get it generally the year after the fishery removes those fish.

MR. KELLUM: Are we going to have overages and underages?

MR. SMITH: There are a lot devils in the details, yes.

MR. KELLUM: Are we going to have pound netters culling them at the net and culling dead menhaden overboard; is that the goal we're after here? Thank you.

MR. GROUT: Mr. Chairman, with all due respect, I disagree with you that it's going to have to be primarily populated with policy. I think the thing that we need is the people that know the landings data inside and out and what kind of information we're going to have available to determine the effect of these various management options that we have out here. Can we even have gear restrictions in these things?

For me to make a decision as a policy member, I need to know whether we can implement seasons with the kind of data that we have in both the reduction and the bait fishery. Do we have the data that can tell me that over an average so many years. that if we put in a season to close, say, three months of the year, that's going to get us towards a 37 percent reduction or not. I think these are the people. The people that know the landings data, both the strengths and the limitations within each of the key states, are going to be the most important people on this PDT to help us determine what direction to go and starting to put in these reductions. Thank you.

MR. STOCKWELL: Mr. Chair, this 37 percent reduction in landings is going to significantly impact multiple fisheries so as the PDT is repopulated I would suggest that representatives from some of the northern states, the end users of pogies, be included. I would be happy to provide someone from my staff.

DR. GEIGER: Mr. Chairman, I appreciate this discussion but my sense is we need some more horsepower on the PDT, and certainly the Fish and Wildlife Service would be glad to offer one or two individuals to assist in that endeavor if it is so needed, and that offer is still open. Thank you, Mr. Chairman.

MR. TRAVELSTEAD: I was going to respond to Connecticut's suggestion that board members from Virginia and New Jersey and Rhode Island participate on the PDT by saying, yes, I have so much free time I'll be glad to do that, and I really would; but if there is one person on this board who would think that in doing so the product would be tainted, then I would say absolutely not, I want no part of it.

Let's keep it to the technical folks on the PDT and feel comfortable in doing that. One last comment; I think along the lines of Terry; the AP, because of the potential impacts of these decisions on the bait fisheries, I think we might want to add some crab pot fishermen and lobster fishermen there who could potentially be affected by those decisions.

MR. HIMCHAK: Mr. Chairman, this was my biggest fear is the reduction comes and then dominoes are going to start falling and they're going to go in all different directions particularly in the bait fisheries. Some of them have been very consistent throughout the years since 1985, but we've seen recent developments related to Atlantic herring that have redirected a lot of bait landings, increased bait landings, so where these bait landings are going and the impacts, we're going to have to do some homework on this.

DR. PIERCE: When we cast our vote regarding the way in which to go with the threshold and the target, we knew that we were crossing a threshold, a door threshold, and we were going to get into some very difficult and dark waters relative to how in the world we can achieve these particular objectives of ours with all the management tools that we have before us. It's going to be difficult, obviously, but, hey, what else is new?

I look at the draft addendum and all of the ideas that we've brought to public hearing regarding what to do. The management tools for the commercial fishery I would say it's likely, based upon the pros and cons of the different options and the comments we've gotten back from those who cared to comment, that Option 5 would be likely favored; that is, that needs some real exploration with a tremendous

amount of input from a wide variety of fishermen, fisheries that heretofore perhaps have not really been involved in the discussion much at all.

Now they have to be because we've crossed that threshold. Option 6 as well, I think that is the other option in the list that bears a close look. We're there with just about every other fishery that ASMFC manages, the councils as well. We have to address that now in light of the objectives we set for ourselves.

I don't see Option 7, which is effort control. I'm not so sure about Option 8, limited entry. I'm open to that but I suspect that would be incredibly difficult to do. I would suggest that as a start, again consistent with – well, responding to the comment or the question made by Bob Beal about can we today provide any guidance as to how to proceed; I would say that Option 5 and Option 6 in the document would be the two options that we need to pursue and relatively quickly, and that involves, again, getting the industry to come forward to assist us with the setting of plan development team with technical people involved in a major way – I agree with Doug Grout – and with that industry advisory panel that needs to be expanded. That's my suggestion, Mr. Chairman. I don't think you're looking for a motion and I don't care to make it in light of this fact we don't have any time, but that's the way I prefer to go.

CHAIRMAN DANIEL: Well, if we're serious about this, we need to make the time. I'm trying to move us through this as quickly as I can, but we do have a presentation to go through real quickly that will lay out those things that we want to give the direction the PDT to try to do, and we're going to do that.

One thought are the options of phasing in some of these things. It doesn't necessarily mean that you have to go right in and say, bam, 37 percent Day One. What I've heard and what has been said to me a lot about this stock is that if we do see increases in the spawning stock biomass and we do have good increased recruitment, that the actual harvest levels may not be reduced that much. If the available biomass goes up, then the reductions may not be much of anything.

It may be that if we phase these things in over time, recognizing that at first we've got to at least hit the daggone target – I mean, threshold.

Those are options that the board has to try to mitigate some of the potential economic impact and the industry impacts that this could create. I think we have a lot of options that we can consider in the actual amendment. But what we need to do at this particular point in time is give some very clear direction – and also for the folks that pony up PDT members, they've got to be active.

We tend to fall into a hold sometimes where we'll have maybe one person that really helps and nobody else even responds. We as state directors offering up our staff, we need to make sure that they're contacting back with ASMFC, they're working with ASMFC staff to get these jobs done. Otherwise, we're on a fairly tight timeline right now, and it's pretty clear that you want this done by 2013, and it's going to take a lot of help from the states to get it done. I don't think Toni can do it all by herself; shouldn't have to. So, with that, Toni, if you want to run through these real quick so we can get out of here.

MS. KERNS: In order to move forward, the plan development team will be seeking guidance from the board for both the PID as well as moving on to a draft addendum if the board does move forward in that direction. First is looking at the threshold and how long we would take to achieve that threshold. Today the board said that these reference points would be implemented immediately.

Through the option that was approved, because overfishing is occurring, the document says that the board will take steps to immediately end that overfishing. I think as we develop this addendum we would take steps to get to that threshold as quickly as possible and typically guidance one to two years is what we're looking at.

Next is looking at the target – and as Louis just said, it would be prudent for the board to give direction to the plan development team of how many years you were looking to achieve the target F level. Does board want to time-step that in order to meet that reference point? Your level of F at a 30 percent MSP is – I can't remember right off the top of my head now – 0.62, so we could tier our F levels to that point over a time period, so it would be good for the board to give direction on how long that time period would be if you wanted to tier to that level of F.

Next is looking at achieving the reference points. To account for uncertainty in the terminal year F estimate of the stock assessment, the board may consider using an average F estimate, anywhere from

two to five years, to determine harvest projection estimates to meet the reference points.

When we gave the examples of how much you would need to reduce your harvest by in order to achieve each of the reference points, we used the terminal year F estimate from the stock assessment in order to project what the stock would look like in the future and then give total harvest based on the F that was specific to that target or threshold.

The board can consider averaging that terminal F year to account for the uncertainty that's in the assessment of the terminal year estimate. You may want to consider tasking the TC for input on how to do so. The PDT would also look for feedback on types of monitoring requirements the board would like to put in place.

The FMP requires that menhaden purse seine and bait seine vessels submit the CDFRs. There are no other monitoring requirements within the document. We would need to have consideration for non-reduction fishery monitoring and non-bait seine vessels. Does the board want to include recreational measures moving forward in this document? Less than 1 percent of the total harvest is from the recreational catch.

If the board does want to move forward with any size, possession or season, then the board may want to consider monitoring changes for the recreational catch to actually get a better estimate of what that harvest is. For commercial measures, should all the commercial management measures be considered that are in the document?

There were a total of seven options outside of status quo to move forward if you want to consider all of the options. The first is trip limits. We could consider trip limits by individual trip or by day, by fishery type and by gear type. If a trip limit is done by day, there is the possibility of multiple trips within a day or multi-day trips, so the board would need to give guidance on where you want the PDT to go.

CHAIRMAN DANIEL: Anything we can do to pare this down will make it a lot easier on staff. Just knowing the menhaden fishery, this doesn't seem to be something we might want to move forward and others might disagree, but if we can have some discussion on some of these items, particularly from folks here that are involved in

the industry, it might help to move some of these things forward along a little quicker. Dave.

MR. SIMPSON: Just starting with the easiest one first, I would suggest that for the recreational fishery we think about defining in terms of a possession limit what recreational fishing is because there are some net fisheries that are personal-use fisheries. We have one that has limits on size of net and things like that.

Right now we're considering a limit because we have an issue with – we have a concern out there about unlicensed commercial activity using so-called recreational gear. We're thinking in terms of 50 or 100 fish, five or ten gallons, something like that that would say above that is probably not personal use. I think going beyond that would unnecessary to limit harvest, but let's make a distinction between a recreation activity and a commercial one.

CHAIRMAN DANIEL: Good comment. Do you want to do these as we go through or do you want to get through them all and then we'll come back and do a Round Robin?

MR. AUGUSTINE: There should be a very great concern about peanut bunker. I do know in our backyards that we do have bait fishermen, cast netters, 16 to 20-foot cast nets, literally wiping out schools of peanut bunker. Unless we put a minimum size on both commercial – or consider minimum size on commercial where we're not wiping out the whole zero year class population, we're only kidding ourselves.

We're beating up on the small ones; we're beating up on the bigger ones, and what do we have left? I would think for recreational we'd want to put there an option for size; not necessarily maximum size but size referring to possible minimum, along with what Dave Simpson said about a possession limit in terms of number or quantity.

CHAIRMAN DANIEL: Okay, just so I don't get confused, let's go ahead and go through what Toni has, and then I'll come back to all the folks that want to comment on these. Again, anything we can pull out of here the better.

MS. KERNS: So for gear restrictions we would use gear modifications to restrict the amount of catch. Gear types could be used to suitably modify. In order any type of gear restrictions, we would need to conduct gear selectivity studies to justify the use of these gear modifications. For example, mesh sizes can be implemented to minimize the harvest of

immature fish, but we would need to actually conduct those studies before we brought that forward to the board.

We could also do area closures or season closures by gear types and have a designation of allowable gear that could be directed or for bycatch purposes. For season closures, this would set a season length, the number of fishing days, and it could be restricted to only certain time periods. You could have closures by fishery type. The temporal distribution of the stock to implement the most effective season closures should be considered. We could have the removal of passive gear types during closures and also have consideration for recruitment of harvest during open seasons.

For area closures we would prohibit fishing in specific areas. The board would need to consider the spatial distribution of the stock to implement the most effective area closures. For example, you could consider nursery areas. We could have possible recoupage of harvest in open areas. There would need to be sufficient enforcement for those areas closed if we did do area closures for them to be effective.

For quotas, if the board wants to move forward with quotas, we would need some sufficient guidance from the board on how you would want to move forward. There are many different options that you could look at in doing quotas to set a total allowable amount of fish that can be caught, a TAC.

If we set a quota and the board decided they wanted to allocate, it could be by fishery type, you could allocate by state, you could allocate by region, you could allocate by state waters, allocate by federal waters. You could allocate by gear types. Would the board want transferability amongst entities allocated quota? What would be the timeframe for doing all of those allocations? Is it based on historical catch, more recent catch?

There is also ITQs and IFQs associated with quotas. The plan development team also stated when developing this document that monitoring requirements would have to be implemented for all fishery types in order to do any type of quota. We do not have sufficient monitoring currently to implement a quota.

Next is looking at effort controls. Under effort controls, the board could look at things like days at sea. The board would need to consider the number of days fished, vessel size, fleet size. You could do days at sea by fishery, gear type, vessel type, potentially by state. What would be the requirement for getting into the number of days at sea? Would we use historical estimates of catch rates?

If VMS is required, monitoring could become expensive for those vessels that do not already have VMS. We could also look at vessel restrictions and whether or not there would be requirements for upgrades, size or capacity of vessels. Lastly is looking at limited entry limiting the number of participants into the fishery. The board would need to consider the control dates for limited entry, any type of entrants' criteria.

This can be based on participation, demonstrated dependence on the fishery or other options, and then also looking at a permitting system that could be done by state. These were just the things that the PDT had come up with to consider. There may be other issues that the board would want to consider. If there are any of these types of management measures that the board does not feel would work for the menhaden fishery, it would help the PDT to have the list narrowed down or at least some guidance on how you want to look at them.

CHAIRMAN DANIEL: Thank you, Toni. Terry.

MR. STOCKWELL: I'm extremely uneasy about cherry-picking any of these measures at this time. I can't speak about any of the other public hearings other than the Dedham hearing that was in Maine, but industry participation and comments were extremely limited. Much of the focus was on the addendum and not on the management measures to achieve the goals of the addendum.

We've just significantly reduced this fishery down to a point where people are going to have some very tough decisions on how to move ahead. We all want to do it right. If we're going to do it right, then I think the industry deserves a chance to scope on the measures that would match the fishery to the reductions that we're just about to impose upon them. If it takes an extra meeting or two, I'm good with that.

MS. FEGLEY: I want to agree with Terry that I think it's really important to get industry input and public input on these options. I also have one more comment and a question. I think it's important that

we ask the technical committee and technical people involved to really do some research and help us understand. There is a lot of literature out there about setting quotas for highly variable stocks that offer some stability and allow you to achieve your targets.

I think that we need to make sure that the technical committee do due diligence to research some of these techniques. I think we have been told that when you go to an MSP approach that annual quotas tend to be really the way to deal with an MSP, but I want to make sure that we are doing the research and that we're given the opportunity to listen to industry and come up with some creative solutions. I also wanted to ask the question when is the next assessment due to be released to the public; when are we going to have the outcome of that?

MS. KERNS: We haven't actually scheduled the workshop. It is for late summer of 2012, and so it probably would not be released until the fall. I'm looking back at Dr. Genny Nesslage to nod her head in confirmation, so the fall of 2012 released to the public and to the board for their review.

MS. FEGLEY: So there is some possibility that if we were setting an annual TAC, a quota, that we would have the information from that assessment to work with?

MS. KERNS: That is a possibility, depending on how quickly this document gets developed.

MR. THOMAS FOTE: What Pat was talking about, when we look at peanut bunker, if you look at Florida and Georgia – and they can speak for themselves – that's a big part of their recreational fishery is basically netting and putting them out, which part of that is bunker. We're going to need to have to deal with all those issues when we comment, especially if you put a size limit, because it's not just New York. It's from Florida all the way north.

I mean, unless you can prove, when we're talking about the total fishery including the large fish, which is by weight, make up a majority of the catch, so we need to really look at this and figure out how we're going to handle that. I'm hopeful for some input from Florida, North Carolina, South Carolina, because they do that for a large part of their fisheries – and Georgia.

MR. ROY MILLER: Mr. Chairman, I just want to point out I don't think it's too soon to begin to think about allocation and quota issues. I wanted to focus on those two items which were on Toni's list and also to point out that in terms of allocation issues we also need to consider allocating among different types of fisheries. In other words, does all of the burden for meeting the target have to fall on one portion of the industry versus another portion of the industry? If the percentage is to be equal for both, what should the percentage be?

Obviously, coming from a state that has a very importing crabbing industry, I'm very concerned about impacts of the restrictions on the bait fishery for our crabbers. Others might feel the same way about their lobster fishery and so on. I think sooner or later we're going to have to address this issue, and I think we're going to have to address it head on. Thank you.

MR. TRAVELSTEAD: Just some general comments on all these various options. Trip limits, I don't see those working at all in the purse seine or pound net fisheries. All you're going to do is create dead discards, so I would suggest the PDT not waste any time there. Season closures, they're generally recoupable. I don't see that working all that much.

Obviously, quotas should be included and you're going to get into allocation issues. That's going to take a lot of time. The one area where I'm hearing, in talking to my industry, that they want to see some effort is days-at-sea effort-type control, so I would strongly suggest that you spend some time evaluating that option.

Limited entry, remember we want to come back with a document this time next year. You're not going to be able to do that and talk about limited entry unless it's on the very base level. My suggestion would be to forego that and concentrate on quotas and effort controls. The AP suggested you ought not to worry about the recreational fishery. Was it less than 1 percent of the total harvest? I understand some states have some concerns there, but, golly, I wouldn't spend a lot of time on that either. That's all.

MR. HIMCHAK: Mr. Chairman, personally I would prefer not to start eliminating options because the first thing that I have to do is when we go back – we have been engaging in meetings with our New Jersey Marine Fisheries Council Menhaden Committee. We have already put in a limited entry program that became effective in 2011, so we would have to work with the Menhaden Committee of the council to

discuss the options on whatever we do or whatever regulations we develop. It's premature for me to comment on eliminating any options at this point.

MR. GROUT: I'm hearing some comments here that we need to get input back from our industry before we start eliminating options here. I agree with Jack; I think there are a couple of things that we could vote out, but respecting the other commissioners' request here what I would ask is what is the process now for getting that information?

We already went out and we scoped for these things. We got some information back, but essentially it was a broad range from what I saw. Everybody is in favor of quotas or a lot of people, excuse me. Then there seemed to be an equal number across everything but status quo. My question to the people that want to wait to go back to their industries is what is the mechanism to get that feedback back to the PDT? What are you going to plan – how are you going to gather that information and get it back to the PDT if we don't start cherry-picking right now.

Number 2, there were some other things in Toni's presentation there were questions for this board that we might be able to give them a range of options. For example, I believe the first one was how many years before we reduced to the threshold. My personal input on that is I think our plan already says we have to do it as quickly as possible, which to me would be one year, do it immediately. It's not going to be that great of cut right now.

The second thing is how many years to get to the target? Well, I'd like to have a range of options for that, maybe one, three and five years, for analysis and then we make some kind of a decision based on that. How many years to average the F estimate? Again, a range of options would be appropriate here, I think.

Maybe two and five were the options that were up there. Let's just use those two and we can bracket it and then we'll have an idea of the effects of those two options. I wasn't quite clear what you were asking about on the reporting mechanisms. Maybe I wasn't listening very quick at that point.

MS. KERNS: I was just making it clear to the board that we only require reporting from two

types of vessels, the purse seines and the snapper rigs. If we want to capture the harvest from all of our non-reduction fisheries and those non-reduction fisheries that don't use purse seines or snapper rigs, then we need to change our monitoring requirements within the FMP. There are states that have regulations within their own state waters, but we do not capture all of our non-reduction harvest.

MR. GROUT: So my suggestion would be that we go out to the states where at least the lion's share of the fishery or maybe all the states and find out what their state reporting requirements are right now and how that compares to the current state regulations and then see if we can get some determination from the PDT as to what would be needed for reporting requirements for things like quota monitoring or season restrictions or days at sea or any of those options that we have there. That would be my suggestions here.

Again, I'd like to hear back from the other states that have significant fisheries and they are saying we need to wait to pare down these options. How does this commission plan to get that information on what would be on these various management options to the PDT for consideration?

CHAIRMAN DANIEL: I'm getting mixed opinions here on what to do. I think if we don't limit this thing, there is no way it's going to be done by 2013, no way. That's what you told me you wanted to do first, so what I'm hearing is inconsistent with what you wanted to do first, which is get this thing done in 2013.

I agree a hundred percent direction on when to meet the threshold, the phase-in option of getting to the target to hopefully at least reduce some of the angst – I think Jack hit the nail on the head with the items that we need to move forward with. I can't imagine us moving forward with limited entry or ITQs or ITQs, that kind of thing in a year.

That's just not going to happen so why are we going to waste the technical committee's and the plan development team's time even looking at that kind of stuff? Size limits on menhaden, I mean that one seems a little wonky to me, too. You're telling me two different things here, so we need to get on the right track and decide are we going to eliminate some of these measures or not. I think we've got the good direction that we need as far as the targets and the thresholds and that type of thing. Mark.

MR. GIBSON: Mr. Chairman, I would caution against removing things at this point. I would ask that the PDT make sure they understand for those states that have what I would call advanced management programs – for example, Rhode Island already has a control rule. We have a biomass threshold to Narragansett Bay, and above and beyond that we have a limit exploitation rate. I would ask that we ensure that those states that have those kinds of programs; that those programs will be able to map into whatever toolset that comes down the road to it.

We don't want to have to abandon what we have. We want to be able to – it's not clear to me how our control rule right now maps into a 30 percent MSP. I don't know if we have to cut or not cut, so that translation ability needs to remain in the amendment so that we can react to it and make appropriate adjustments. I would echo some of the concerns that Lynn Fegley made about the need how to understand how to set quotas and control rules in a species that will not only vary in abundance but can vary strongly in terms of its timing and residence periods in particular areas. Thanks.

MR. CARPENTER: I was just going to make the point that if we ultimately decide to go with a quota-based type of system – and I realize that involves the allocation issue, but I don't think any state should be subject to any of those other regulatory measures as long as they can meet the quota. They can do it any which way they please and any which way that fits within their guidelines within the state. If you make a basic assumption that you're going to go with a quota-based system, the PDT doesn't have to devote anytime to all those other measures. Each state has to be able to meet the number at the end of the year.

CHAIRMAN DANIEL: I like simple and I know staff does. Lynn.

MS. FEGLEY: I'm just wondering if it would be appropriate – it seems as though there is some work that the PDT could get started on in terms of investigating quota methodologies. I'm just wondering if we should not – if it would be appropriate for the states that need to get with their industry, to get with their industry, and if we set a deadline and by conference call some time before the next meeting those states that need to talk with their industries can then say which options they would like eliminated.

So we're not limiting ourselves to meeting by meeting but perhaps the states can have a chance to weigh in with their industries and get together by conference call and submit the information and which tools should be eliminated via conference call.

MR. ROBERT H. BOYLES, JR.: Mr. Chairman, I would make a motion that we eliminate consideration of limited entry, trip limits, and recreational management measures.

CHAIRMAN DANIEL: I've got a motion by Chairman Boyles; second by Mr. Cole. Any discussion on the motion? Mr. Kellum.

MR. KELLUM: Is it fair to eliminate – Mr. Chairman, is it fair to eliminate anything at this point? If we go to a quota-based system, our infrastructure cost a great deal of money. All our equipment is not easy to come by. If another faction wanted to come out of the Gulf of Mexico and put a factory ship off the Carolina coast and fished five boats and take up half our quota, we have no protection. Omega Protein has no protection and the bait fishery has no protection. I think it's careless and reckless at this time to scratch anything. Thank you.

MR. McELROY: Mr. Chairman, I agree completely with Jimmy. We were just discussing here amongst ourselves the potential here if we rush forward here today to either delete something or not include something. I think that right now we need to stop and either have a conference call or come back at the next meeting after we've had a chance to catch our breath, see what is going on, have a chance to talk to industry a little bit.

If it takes an extra three-month delay to do that, I think that's time well spent. I'm terribly concerned right now here. My mind is spinning and I assume everybody here at the table is, too; and to try to sort through and make these serious decisions on a basis where we don't have adequate time to sort our thoughts out I don't think serves the process well. Thank you.

CHAIRMAN DANIEL: Yes, and we can scope these options. We have scoped it. That's an important point; we have scoped the issue. We did get some feedback. I can't help it if everybody was concentrating on the target and the threshold. We did scope it. We spent the money, the time and the effort to scope it.

If you add three months, that's adding in a year, so just expect and understand that if we don't take final action on this document this time next year, then it will be 2014 before the Virginia Legislature can take the issue up. A three-month delay is a one-year delay; a two-month delay is a one-year delay. I just want to make sure the board – I'm not commenting on it either way. I just want to make sure everybody understands what the specific issues are. If there is an interest by the industry particularly to maintain all these items and not to take anything out, I think we need to listen to that fairly carefully. Tom.

MR. THOMAS FOTE: I think it's difficult for the Atlantic States Marine Fisheries Commission to deal with limited entry. We deal with limited entry state by state. The example is right off New Jersey's coast we have boats that are basically harvesting menhaden even though we have – we don't have control once it's three miles out and they land them in other states and we can't do anything about that.

We're going to need our federal partners if there is going to be limited entry to figure out how this can be accomplished, and that gets into another whole can of worms. That's why in my mind it's very difficult to figure out how we would do this. I would ask my federal partner over here to explain how that could work.

MR. MEYERS: Mr. Chairman, to that point or slightly to the point, given the Section V recommendations with federal waters, we would like to have a NOAA Fishery staffer as part of the plan development team, and I would like to recommend Mr. Derek Orner to take care of that for us.

CHAIRMAN DANIEL: Okay, if he has got the time.

MR. MEYERS: We'll find him the time.

CHAIRMAN DANIEL: Okay, cool. Joe Smith wanted to ask a question or make a comment.

MR. SMITH: Several comments back I heard the "A" word, allocation. Being on the technical committee since its inception, I don't want to be too presumptuous and speak for everybody on the committee, I know they're probably dead set against making allocations calls. I'd ask that the board not foist that on – I thought I heard

technical committee a couple of sentences down the line from allocation, and I'd ask the allocation issues not be foisted on to the technical committee because I think there will be pushback from the TC on that. Thank you.

CHAIRMAN DANIEL: Yes, I would agree. Pat.

MR. AUGUSTINE: Mr. Chairman, I do think there are some people around the table that would agree with one or two parts of this motion up there, but to lump them all together you're either going to vote it up or vote it down unless you agree with all three, taking them out. Similar to what Joe said, I would put another one up there as a single motion to remove allocation from it, but to lump three of them together, no matter which three they are, unless they're closely knitted, either commercial or recreational, we're mixing apples and oranges again. Again, we'll debate this for the next hour and a half or two and not come to a consensus because people will not agree to all three. So, maybe we divide the question, and if the maker of the motion wants to do that and be on with it, and then add a separate motion as allocation –

MR. BOYLES: Mr. Chairman, I was trying to help you along by just getting this off the dime, **so I would like to withdraw the motion**, if it's okay with my seconder and the body.

CHAIRMAN DANIEL: I appreciate that and I appreciate what you were trying to do. I was glad to see that happen. Pat, have you got a further comment?

MR. AUGUSTINE: I would like to go ahead and make that three separate motions. He withdrew the motion but those three items to get out of the document. We're trying to weed down or narrow down the document. Those three were put on the table as three options that were asked to be removed, and now we've removed the motion so we have nothing that we have removed, let alone are we addressing anything.

CHAIRMAN DANIEL: What I'm hearing from industry is that they don't want to take anything out of the options at this particular point in time. Now, we can still do it. Just because they said they didn't want it, it doesn't mean we don't do it, but that's the indication that I've gotten from industry. If we were to go out and scope it again or however we're going to do this, then we're going to have to make some selections maybe at the next meeting, because we're going to have to pare this thing down. We can do that here today when everybody's head is spinning or

we can go out and get that information and come back at the February meeting and then we'll do some cherry-picking and eliminate some of these. There is no way we can analyze all these various options. Dave Simpson.

MR. SIMPSON: Jack may be able to help me with this, but I think this is an awful lot for us to take on, 45 people or more sitting around the room, and when I heard the comments, the real focused comments came from Virginia and New Jersey and Rhode Island. I don't think North Carolina has had the opportunity, but it came from the principal states that know the most about the fishery and can see what the issues are. I might suggest that let's give industry and the commission representatives from those states an opportunity to get together and really focus now. We know what the targets are now and the thresholds, so now you can really have some specific thoughts about what will work and what won't work, develop some strawman ideas and proposals and bring those back to the February meeting.

CHAIRMAN DANIEL: I like that approach. Jack.

MR. TRAVELSTEAD: Excellent suggestion. I mean, we can waste time now and we're not going to get anywhere today. If you spend a little bit of time up front, you're going to save time down the road. If you would allow the principal states to get back and have some conversations with their industry and narrow this thing down, that's going to save the PDT a whole lot of time down the road. I don't think it's going to take us a lot of time to get that out of our industry. They have been thinking about this. Just in a matter of weeks we could have I think a much narrower list for the PDT to evaluate.

CHAIRMAN DANIEL: Well, I'm hearing around the table that we essentially have identified New Jersey, Rhode Island, and Virginia as the principal states. Is that everyone else's understanding?

MR. SIMPSON: I don't know the statistics as well as I probably should, but I've omitted North Carolina and I don't know if that was a mistake. Certainly, any state that has a real keen interest, get together with your industry and come up with some ideas and hopefully talk among yourselves.

It's a more complicated fishery than any of us want to think about when we try to manage it. You've got Virginia boats fishing off of New Jersey and all that. I think those were the principals, but certainly others that have a real stake and a real concern, get together with your industry, and, okay, it's 15 and 30 percent and a couple to five years, how are we going to do it?

CHAIRMAN DANIEL: No, I think that's a good – just as long as everybody is aware North Carolina is a fairly – I mean, we land very small amounts and it's primarily in bait fishery. It is a bait fishery and most of our fish go to Virginia where they're packed out for crab bait. Jimmy.

MR. KELLUM: The Virginia boats that fish off of New Jersey fish outside of three miles, so they're not New Jersey fish. They're United States of America fish. In regards to the state of Maryland, they have a very robust pound net fishery for crab bait, and I think it would be remiss if each state that has a licensed pound net or a licensed gill net didn't have to come back to the committee.

MR. AUGUSTINE: Point of information, Mr. Chairman. It's a simple and straightforward one. We're then assuming that the implementation of any of these activities will not occur until probably – I'm guessing – July of 2013 at the earliest. If we don't take any action between now and then other than the PDT gets together with a group of states to come up with clarifying what we're trying to do, Virginia is one of the states that has a legislative process.

If they don't put anything before them in January for possible review and passage to implement by July of 2012, then this group that's going to put together the options that we're going to move forward will not be ready for primetime for the Virginia legislation and others that have a legislative structure that won't allow them to do it before that, so it looks like before anything happens it will be July or so of 2013.

Earlier on in today's conversation we were talking about the haste to do something more than just set the MSP and the other thing, so on the one hand – and I would be remiss if I didn't say that, Mr. Chairman, in a way you kind of coached the folks around the table – if I'm out of order, please tell me and shut me up, but you kind of coached the folks around the table and said who knows what is going to come out of the reports and so on in my mind raised the feeling that, well, there may be some flexibility and latitude we won't have to do anything at all.

Please, I'm not dunning you, I'm just saying that's a concern where I don't think the impression that the board was trying to give to each other and the audience that we were anxious to move forward with a viable tool to do what we have to do with menhaden. Again, is my timetable right at this point in time that we will not expect to put anything in place other than the 15 percent and the 30 percent between now and July of 2013?

CHAIRMAN DANIEL: I believe that's correct based on the Virginia Legislature.

MR. AUGUSTINE: Okay, then as long as we're all aware of that's where we're going, fine.

MR. HIMCHAK: Mr. Chairman, the origin of all these landings is not a big mystery. Joe Smith knows where – he has got the whole offshore coded for where all the CDFRs come for the reduction fishery. We have bait tables for every single state by gear type, wherever your 1.3 million pounds or where Maryland's pound net fishery – typically, New Jersey and Virginia have accounted for at least 85 percent of the entire bait landings along the Atlantic Coast on any given year.

We can look these tables on bait landings and reduction, and you can tell where all the fish are being harvested. I don't think it's very difficult. I think Virginia, New Jersey and Rhode Island most recently or Massachusetts; that's appropriate enough. That's where the landings are.

CHAIRMAN DANIEL: All right, I'm going to break here for just a second and ask Toni to kind of lay her thoughts. We've been up here trying to talk and listen at the same time, but I think she has got an idea that could help us out here.

MS. KERNS: What I've been hearing from the board is that we could go out and scope. The plan development team can bring a PID document for this board to look at in February for approval for public comment. That document would include information on how to achieve the threshold and target in terms of a range of years that was identified; one year for the threshold and a range from one to five years for the target; looking at an average of the F estimate and putting a range of averaging two years and five years to put bookends on either side.

Then we can go out and scope the management tools that we scoped from the previous document. It will look quite similar to the previous document. Then we can come back with the public input in May and this board will have some tough decisions to make in order for us to be able to continue to meet the timeframe that you guys are looking for in terms of getting a document completed.

Depending on how many options we reduce it down to, we'll see if we can another document for the following meeting. It just depends on how far you pare it down; but if that's helpful, the PDT can do that and move forward for the next meeting.

CHAIRMAN DANIEL: Can we agree that is the way we want to move on this? I think it's the best approach that we can come up with. Thank you, Toni. Doug, did you want to speak to that?

MR. GROUT: Yes, from the discussion around here, I was very pleased with the way the discussion was going on and trying to get the information. I was under the impression that a number of states were willing to get together with their industry even sooner. I was going to make a suggestion that might get us there a little bit quicker and that we set a date that any state that wants to get together with their industry – it doesn't make any difference whether you have a big fishery or a small fishery – get together with your industry in the month of December and get your comments on the effectiveness or the appropriateness of different measures, different management measures by the first Friday in January, get it back in writing to Toni and the PDT, and they bring that information to us at the January meeting and then we can make some decisions there.

Now, if the board wants to go back out and re-scope, go ahead, but we have scoped once. Actually you could probably go to the AP, too, because they said in their report that they wanted to wait until they found out what the target and threshold was before they provide comments and now we have a target and threshold, so they should be in a position to provide comments. My suggestion was going to be to make a motion like that unless you think it's something we can do by consensus.

CHAIRMAN DANIEL: All right, we've got two options out there. We can put the burden on us to go out and canvass our industry, canvass our people, come back in February prepared to pare this document down so that we can get it out there; or, we can hold off until February – I guess what I was

hearing, Doug, was the concern about taking a lot of action today at this meeting, but really they're both doing the same thing. It's just a matter of waiting to pare it down in May or paring it down in February, and you told me you wanted it done in '13. Your suggestion is going to get us off the dime quicker, for sure.

MR. STOCKWELL: It may be quicker but it may not be better. I'm extremely comfortable with Toni's suggestion. I wasn't satisfied with the scoping that happened at least in Maine. If we go down the road of allocations or something like that, we're at the tail end of the dog. We have a good fishery every number of years. We have a holiday season coming up, we have a compressed time schedule. To delay it by a meeting to get a quality product to me is my preferred way to move ahead.

CHAIRMAN DANIEL: Would you make that in the form of a motion?

MR. STOCKWELL: **I would make a motion – I move to adopt the schedule that was proposed by Toni, and you can put it into her words.**

CHAIRMAN DANIEL: Second by Bill McElroy. Is everybody clear what the motion is? Is there any need to discuss this? John.

MR. DUREN: Just to verify will that let us get to a decision on the amendment by the annual meeting in 2012?

CHAIRMAN DANIEL: We believe so, yes, if you pare it down. We're going to have to pare this down and it's just going to be a matter of getting the information from industry of what they want pared down. I think we'll probably come back to where we were 45 minutes ago in six months, but we will have satisfied the process and satisfy folks' opportunity to make those comments, and I think that's very important for the process.

MR. GROUT: Before we vote on this motion, I would like to have the dates that were outlined by Toni in her proposal up there so I know what I'm voting for or against.

MS. KERNS: What I had said is that we would put together a PID for the board approval to consider for public comment at the February 2012 meeting. We would conduct public

comment in the spring and come back for the board to consider a draft amendment at the May meeting. I did not give any additional dates from there.

MR. GROUT: Yes, you just did.

CHAIRMAN DANIEL: All right, so February and May. We may stop spinning between now and February and there may be some things we can take out of that or there may be more things we want to add. Is everybody clear on the motion? I'll read, move to adopt the schedule putting together a PID for board approval for public comment at the February 2012 meeting and conduct hearings and come back to the board for the May meeting. Motion by Mr. Stockwell; second by Mr. McElroy. Is there any objection to the motion? **Seeing none, that motion is approved.**

OTHER BUSINESS

CHAIRMAN DANIEL: Is there any other business to come before the Menhaden Board? Roy.

MR. MILLER: Mr. Chairman, I did not see any discussion of de minimis in the paper that we reviewed today. Maybe it's in there and maybe I missed it, but in any event I think the plan development team would be wise to include a draft definition of de minimis in what they bring back to us. Thank you.

CHAIRMAN DANIEL: We'll make sure that's done for the amendment. Any other comments or issues? Mr. Adler.

ADJOURNMENT

MR. ADLER: Motion to adjourn.

CHAIRMAN DANIEL: Accepted. We're adjourned.

(Whereupon, the meeting was adjourned at 4:15 o'clock p.m., November 9, 2011.)

Atlantic States Marine Fisheries Commission

DRAFT PUBLIC INFORMATION DOCUMENT

**For Amendment 2 to the
Interstate Fishery Management Plan For**

ATLANTIC MENHADEN



ASMFC Vision Statement:

Healthy, self-sustaining populations for all Atlantic Coast fish species or successful restoration well in progress by the year 2015

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The Atlantic States Marine Fisheries Commission seeks your comment on the Initiation of Amendment 2 to the Atlantic Menhaden Fishery Management Plan

The public is encouraged to submit comments regarding this document during the public comment period. Comments will be accepted until **5:00 PM (EST) on Month Day, 2012**. Regardless of when they were sent, comments received after that time will not be included in the official record. The Atlantic Menhaden Management Board will consider public comment on this document when developing the first draft of Amendment 2.

You may submit public comment in one or more of the following ways:

1. Attend public hearings held in your state or jurisdiction, if applicable.
2. Refer comments to your state's members on the Atlantic Menhaden Board or Atlantic Menhaden Advisory Panel, if applicable.
3. Mail, fax, or email written comments to the following address:

Michael Waine
Fishery Management Plan Coordinator
Atlantic States Marine Fisheries Commission
1050 North Highland Street, Suite 200A-N
Arlington, Virginia 22201
Fax: (703) 842-0741
mwaine@asmfc.org (subject line: Menhaden PID)

If you have any questions please call Mike Waine at (703) 842-0740.

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YOUR COMMENTS ARE INVITED

The Atlantic States Marine Fisheries Commission (Commission) is developing an amendment to revise the interstate fishery management plan for Atlantic menhaden. The Commission, through the coastal states of Maine through Florida, is responsible for managing Atlantic menhaden.

This is your opportunity to inform the Commission about changes observed in the fisheries; actions you feel should or should not be taken in terms of management, regulation, enforcement, and research; and any other concerns you have about the resources or the fisheries, as well as the reasons for your concerns.

WHY IS THE ASMFC PROPOSING THIS ACTION?

During the 2010 Atlantic menhaden benchmark stock assessment, the 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). 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 adopted new fishing mortality reference points. The new fishing mortality threshold is $F_{15\%MSP} = 1.32$, and the new fishing mortality target is $F_{30\%MSP} = 0.62$. The 2010 benchmark assessment estimated fishing mortality for the terminal year (2008) to be 2.28, indicating that fishing mortality had exceeded the threshold resulting in overfishing. Addendum V states that when overfishing is occurring the Board will take steps to reduce F to the target level. In order to reduce overfishing to the target, the Board needs to consider changes in the management tools used to regulate the fishery. This document proposes a suite of management tools that could reduce fishing mortality.

WHAT IS THE PROCESS FOR DEVELOPING AN AMENDMENT?

The publication of this document and announcement of the Commission's intent to amend the existing FMP for Atlantic menhaden is the first step of the formal amendment process. Following the initial phase of information gathering and public comment, the Commission will evaluate potential management alternatives and the impacts of those alternatives. The Commission will then develop Draft Amendment 2, incorporating the identified management options, for public review. Following that review and public comment, the Commission will specify the management measures to be included in Amendment 2, as well as a timeline for implementation.

In addition to issues identified in this Public Information Document (PID), the Draft Amendment may include issues identified during public comment period of the PID.

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The timeline for completion of Amendment 2 is as follows:

	Feb 2012	Mar 2012	Apr 2012	May 2012	June 2012	July 2012	Aug 2012	Sept 2012	Oct 2012
Approval of Draft PID by Board	X								
Public review and comment on PID		X	X						
Board review of public comment; Board direction on what to include in Draft Amendment 2				X					
Preparation of Draft Amendment 2					X	X			
Review and approval of Draft Amendment 2 by Board							X		
Public review and comment on Draft Amendment 2								X	
Board review of public comment on Draft Amendment 2									X
Preparation of Final Amendment 2									X
Review and approval of the final Amendment 2 by the Board, Policy Board and Commission									X

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WHAT IS THE PURPOSE OF THIS DOCUMENT?

The purpose of this document is to inform the public of the Commission's intent to gather information concerning Atlantic menhaden and to provide an opportunity for the public to identify major issues and alternatives relative to the management of this species. Input received at the start of the amendment development process can have a major influence in the final outcome of the amendment. This document is intended to draw out observations and suggestions from fishermen, the public, and other interested parties, as well as any supporting documentation and additional data sources.

To facilitate public input, this document provides a broad overview of the issues already identified for consideration in the amendment; background information on the Atlantic menhaden population, fisheries, and management; and a series of questions for the public to consider about the management of the species. In general, the primary question on which the Commission is seeking public comment is: **"How would you like the Atlantic menhaden fisheries to look in the future?"**

WHAT GENERAL ISSUES WILL BE ADDRESSED?

The primary issues Considered in the Public Information Document are:

- Timeline to Achieve the Fishing Mortality Target
- Timely and Comprehensive Catch Reporting
- Recreational Fishery Management Tools
- Commercial Fishery Management Tools

ISSUE 1: Timeline to Achieve the Fishing Mortality Target

Background: The intent of the Atlantic Menhaden Management Board is to protect and maintain the stock at levels to maintain viable fisheries and the forage base with sufficient spawning stock biomass to prevent stock depletion and guard against recruitment failure. To do so the Board must manage the fishery to the target F . The Board is considering a one, three, and five year schedule to reduce 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 smaller increments until the target is reached. If the target F is to be achieved on a shorter time frame, annual reductions in landings may be more substantial than if the F was achieved over a longer time period with a time stepped F .

Statement of the Problem: Given that the current fishing mortality rate $F_{2008} = 2.28$ exceeds the fishing mortality threshold $F_{15\%MSP} = 1.32$, and target $F_{30\%MSP} = 0.62$, the Board must take steps to reduce F to the target level.

Public Comment Questions: Should the target F be achieved over one, three or five years, or some other time frame? If the F should be reduce over a number of years how much of a reduction should occur each year?

ISSUE 2: Timely and Comprehensive

Background: The current catch reporting requirements for the Atlantic menhaden fisheries do not provide timely or complete data for use by managers and scientists, particularly the bait fishery. The current reporting program requires catch reporting

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Catch Reporting

on a weekly, monthly, and yearly basis depending on gear, permit type and state. Additional monitoring requirements and timelier reporting would allow managers and fishermen to monitor the landings throughout the season, and evaluate the effectiveness of any fishery management measures selected.

Statement of the Problem: The current reporting structure has led to uncertainties in the landings history for Atlantic menhaden.

There are many electronic based reporting options that could be used to significantly improve reporting with only modest burden of the fishermen and/or dealers.

Public Comment Questions: How should the landings reporting system be improved to provide timely and comprehensive catch information? Should both dealers and fishermen be required to report? Should fishermen be required to report data to help support stock assessments (area fished, effort, etc.)? What electronic reporting options should be considered: Vessel Monitoring Systems (VMS), Interactive Voice Reporting (IVR), web-based reporting, or reporting through the Standard Atlantic Fisheries Information System (SAFIS)? Should all state dealers be required to report weekly to be consistent with federal reporting requirements? How should the data elements reported be standardized (e.g., landings, gears used, area fished)?

ISSUE 3: Recreational Fisheries Management Tools

Background: Menhaden are important bait in many recreational fisheries; some recreational fishermen employ cast nets to capture menhaden or snag them with hook and line for use as bait, both dead and live. Recreational harvest is not well captured by the Marine Recreational Information Program (MRIP) because there is not a known identified direct harvest for menhaden. MRIP intercepts typically capture the landed fish from recreational trips as fishermen come to the dock or on the beach. Since menhaden caught by recreational fishermen are used as bait during their trip, they will not be a part of the harvest that is typically seen by the surveyor completing the intercept.

The recreational harvest has varied over time with a high of 672.25 mt in 1992 and a low of zero metric tons in 2009. The average harvest since 1981 is 126 mt. Landings have averaged 95 mt over the last 5 years. (Figure 2).

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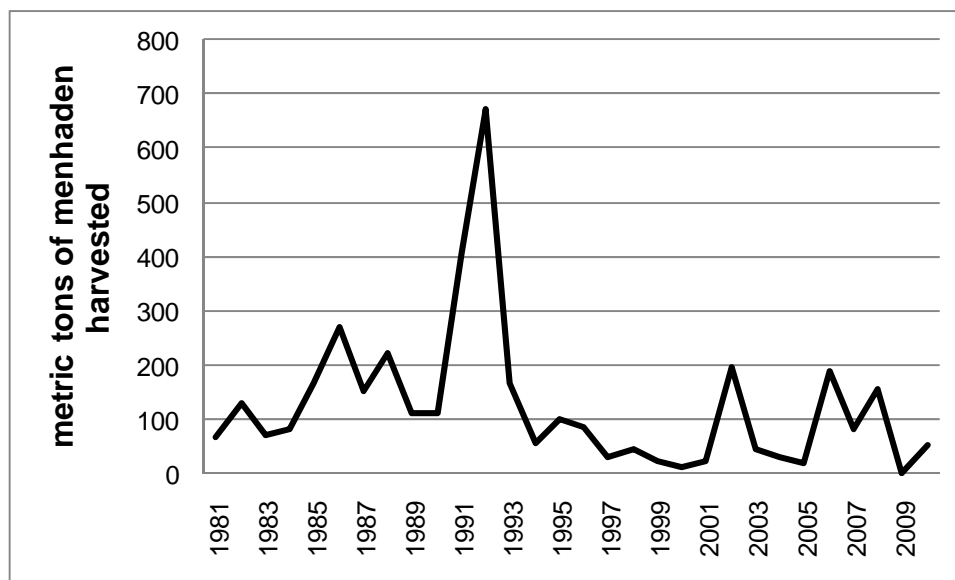


Figure 2. Atlantic Menhaden Recreational Harvest (A1+B1) from 1981-2010. Source: "Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division. [June 30, 2011]"

Statement of the Problem: Currently no recreational fishery management measures have been implemented for Atlantic menhaden. Considering a reduction in F is necessary to move to the threshold and target, there is a need to explore other management options that may be used to regulate the recreational fishery. Based on the terminal year of the most recent stock assessment, $F_{2008} = 2.28$, meaning to achieve the new fishing mortality threshold ($F_{15\%MSP}=1.32$), and fishing mortality target ($F_{30\%MSP}=0.62$) landings will need to be reduced.

The 2012 Atlantic Menhaden stock assessment update will provide a more recent estimate of fishing mortality. The intent is to simultaneously update the stock assessment while developing Draft Amendment 2 to provide the most accurate estimation of the harvest total allowable catch (TAC) that is recommended to achieve the new threshold and target fishing mortality rates. Therefore, harvest reductions (bait and reduction) are not currently provided in this PID document because those estimates will be determined based on the best available science coming out of the stock assessment update.

The schedule for the stock assessment as it relates to Amendment 2 is as follows,

Feb 2012: Approval of Draft PID By Board

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June 2012: Preparation of Draft Amendment 2

June 2012: Assessment Workshop

July 2012: Finalize Stock Assessment Update and Draft Amendment 2

Aug 2012: Review and approval of Draft Amendment 2 and 2012 Stock Assessment

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Any combination of the management options below can be considered. It is recommended that alternative data collection procedures are explored under the MRIP since it is believed that the current data collection program does not effectively capture recreational menhaden harvest.

Option 1: Status Quo:

Currently, no recreational fisheries management measures have been implemented.

Option 2: Size Limits

Under this option, minimum or maximum size limits could be considered to constrain the fishery to an F-based target or a quota.

Option 3: Bag Limits

Under this option, possession limits could be considered to constrain the fishery to an F-based target or a quota

Option 4: Season

Under this option, season closures could be considered to constrain the fishery to an F-based target or a quota

Option 5: Area Closures

Under this option fishing is prohibited in specific areas. Area closures have the potential for creating protection for immature fish, spawning stock and the protection of ecosystem services.

Public Comment Questions: Should certain gears be restricted in the recreational fishery? What other measures should be implemented to establish a more predictable fishery?

ISSUE 4: Commercial Fisheries Management Tools

Background: Atlantic menhaden have supported one of the largest fisheries since colonial times. In 2004, there were only two reduction plants operating on the Atlantic coast, Omega Protein in Reedville, VA. and Beaufort Fisheries in Beaufort, NC (Cheuvront 2004). Since February 2005, Omega Protein's plant in Reedville, Virginia, with approximately 10 vessels operating in 2010, is the only active menhaden reduction factory on the Atlantic coast. In addition to traditional menhaden use in the agricultural (both aquatic and land) and soluble industries, the oil has been refined to produce omega-3 fish oil products for human consumption, including food additives and capsules in recent years.

The 2010 Atlantic menhaden harvest for reduction purposes was 183,085 mt. This is up 27.3% from the 2009 landings of 143,800 mt, and up 19.9% from the previous 5-year (2005-2009) average of 152,747 mt (Figure 1). The average reduction harvest for the last ten years was 170,400 mt.

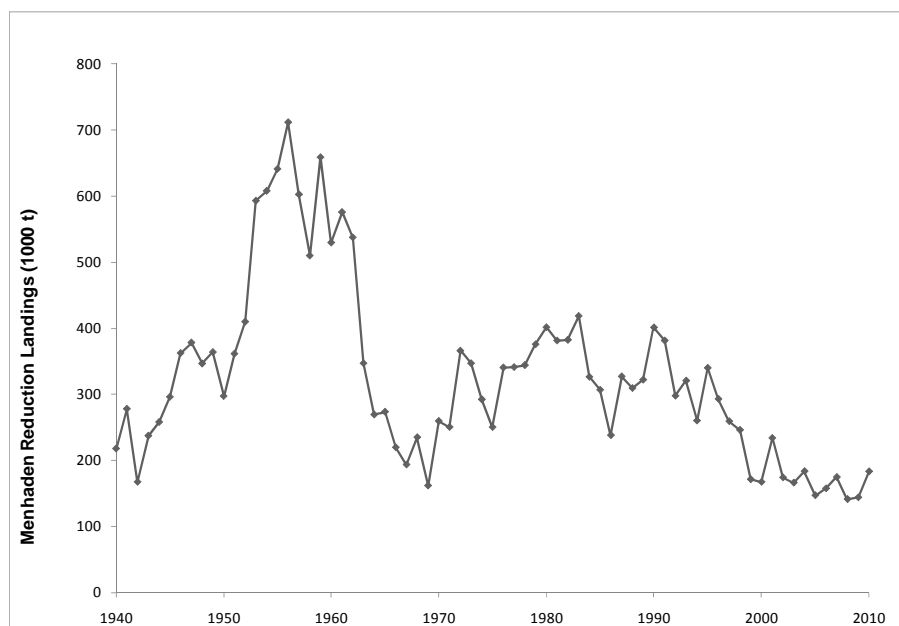


Figure 1. Landings from the reduction purse seine fishery (1940–2010) for Atlantic menhaden.

The harvest of menhaden as bait for a variety of commercial and recreational uses is associated with a range of directed fisheries using purse seines, pound and gill nets, and bycatch in fisheries targeting other species (using haul seines, pound nets and trawls). The dead bait is used in pots and for commercial hook and line fisheries, while live baits are important for recreational “slow trolling” in the hook and line fishery.

The bait fishery taking place in southern New England, namely in the area south of Cape Cod, MA, is comprised primarily of two purse seine vessels in the 90 foot range. These operations are based out of Fall River, MA and prosecute the majority of their fishery while in southern New England in Narragansett Bay, RI. The fishery takes place from late spring in to the summer, with occasional harvest taking place in early fall if southward migrating fish come in to Narragansett Bay in significant numbers. In recent years, with a few notable exceptions (i.e. 2008), the adult menhaden populations entering Narragansett Bay have been small, and the vessels have moved their operations south, mainly to New Jersey, during these years. Recently there have been additional purse seine operations that have attempted to prosecute fisheries in this same area, and there are also a few small-scale cast-net and floating fish-trap operations but in total these operations have not contributed significantly to the New England bait harvest. The majority of the menhaden landed in southern New England is transported overland to ports in Maine and Massachusetts for use as bait in the lobster fishery.

North of Cape Cod, the largest volume of menhaden is landed in Gloucester, MA. However, in recent years, all of these fish have been caught off the coast of New Jersey via purse seine, transferred at-sea to a mid-water trawl vessel, and brought to Gloucester. In some years, small purse seiners and gillnetters will harvest

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menhaden from local waters, notably from Boston Harbor and Salem Sound, yet these fish typically comprise less than three percent of the total New England menhaden landings. In Maine there are also two to three herring seiners who switch to harvesting menhaden for bait on an opportunistic basis even if outside of the Gulf of Maine (Kaelin, personal communication).

Smith and O'Bier (2011) report that the bait fishery in the Chesapeake Bay is a major contributor to the landings of menhaden bait. The number of vessels reduced from eight during the 1990s to four in 2009 due to management restrictions. Their sizes and original purposes varied. Four of the five vessels fishing the past few years are less than 100 feet in length. The fishing season extends from early May to late November.

Historically, the in-state bait fishery in North Carolina has operated on an even smaller scale than in New England. Very small operators, some associated with marinas, use cast nets in the late afternoon or early morning during the summer months. In addition to harvesting bait for crab fishing, one type of operation keeps the fish alive in holding tanks or nets for "slow trolling" for king mackerel, or bottom fishing for cobia. The operators anchor near the pathway of early morning recreational anglers in boats ranging from 17 to 30 feet in length as they leave their moorings to fish in the bays or inshore outside of inlets. Nearshore head and charter boats also purchase menhaden. The fish are sold by the dozen and are kept alive in live bait wells in the sportfishing boats. In the past, licensing on the part of commercial fishermen for bait required a special permit, but that has been changed. Licenses which allow the use of commercial gear for purposes other than purse seining can now be used for bait fishing.

Total reported annual landings of Atlantic menhaden for bait on the Atlantic coast averages about 36,000 mt for the period 1985-2010 (Table 1). The reported bait landings in 2010 increased from the previous year to 44,000 mt. The Chesapeake Bay region has been the largest harvester of menhaden bait since the 90s, with the Mid-Atlantic only exceeding the bay harvest in 1992, 1997 and 2010. In 2010, the Chesapeake Bay harvest declined to 17,880 mt. The Mid-Atlantic bait harvest increased in 1992 and then decreased in 2003–2006. The Mid-Atlantic harvest increased to the record value of 23,065 metric tons in 2010. The New England bait harvest was less than 1,000 mt from the mid-90s to 2004. In 2005 the harvest began to increase and reached approximately 8,000 mt in 2007 and has since declined to 2,320 mt in 2010. The South Atlantic harvest has been less than 1,000 mt for the last nine years.

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Table 1. Menhaden Bait Landings by Region (1985 – 2010) [in 1,000s of metric tons]

Year	<i>New England</i> (ME – CT)	Mid-Atlantic (NY – MD Coast)	Chesapeake Bay (MD Bay, VA, PRFC)	South Atlantic (NC – FL)	Total (ME – FL)
1985	6.15	1.82	16.42	2.27	26.66
1986	13.75	1.33	10.46	2.44	27.98
1987	13.28	1.29	13.50	2.56	30.63
1988	19.73	1.21	12.43	2.88	36.25
1989	9.54	1.58	16.48	3.41	31.02
1990	11.19	4.49	11.06	4.07	30.80
1991	14.47	7.98	10.40	3.39	36.23
1992	12.44	13.04	10.45	3.10	39.03
1993	11.64	13.40	15.65	2.10	42.80
1994	0.43	17.81	17.72	3.17	39.14
1995	4.08	17.18	19.55	1.57	42.39
1996	0.04	16.20	18.49	0.58	35.31
1997	0.14	17.60	17.13	1.66	36.53
1998	0.21	15.34	22.49	1.33	39.37
1999	0.15	12.78	21.94	1.32	36.20
2000	0.19	14.50	19.65	0.97	35.30
2001	0.08	12.18	22.67	1.37	36.31
2002	0.69	11.50	23.73	1.14	37.06
2003	0.12	8.00	24.93	0.79	33.85
2004	0.03	9.60	25.33	0.50	35.47
2005	1.02	8.18	28.97	0.66	38.83
2006	1.56	9.89	14.50	0.51	26.45
2007	2.61	17.10	22.54	0.55	42.80
2008	7.78	17.55	21.15	0.31	46.79
2009	3.71	15	19.26	0.99	37.87
2010	2.32	23.07	17.88	0.62	43.88

Statement of the Problem: Currently, the only commercial fishery management measure is a harvest cap on the reduction fishery in the Chesapeake Bay. Considering a reduction in F is necessary to move to the threshold and target, there is a need to explore other management options that may be used to regulate the commercial fishery. Based on the terminal year of the most recent stock assessment, $F_{2008} = 2.28$, meaning to achieve the new fishing mortality threshold ($F_{15\%MSP}=1.32$), and fishing mortality target ($F_{30\%MSP}=0.62$) landings will need to be reduced.

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assessment while developing Draft Amendment 2 to provide the most accurate estimation of the harvest total allowable catch (TAC) that is recommended to achieve the new threshold and target fishing mortality rates. Therefore, harvest reductions (bait and reduction) are not currently provided in this PID document because those estimates will be determined based on the best available science coming out of the stock assessment update.

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June 2012: Preparation of Draft Amendment 2

June 2012: Assessment Workshop

July 2012: Finalize Stock Assessment Update and Draft Amendment 2

Aug 2012: Review and approval of Draft Amendment 2 and 2012 Stock Assessment

Any combination of the management options below can be considered. It is recommended that more timely and comprehensive data reporting be implemented with all of the following options.

Option 1: Status Quo

Under the current management program, the only harvest restrictions are listed in *Section 3.1* of Addendum IV to Amendment 1. *Section 3.1* sets an annual total allowable harvest from the Chesapeake Bay by the reduction fishery of no more than 109,020 mt (the average landings from 2001-2005). 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. In years when annual menhaden harvest in the Chesapeake Bay for reduction purposes is below the 109,020 mt 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 mt. 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 mt.

Option 2: Trip Limits

Under this option catch is restricted using a maximum poundage allowance per trip or day. The Board would need to consider,

- If trip limits would be implemented by individual trip or by day because the possibility of multiple trips within a day exists or multi-day trips
- Implementation by fishery type
- Implementation of trip limits by gear type
- If trip limits would create discard mortality

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- Designation of triggers based on harvest levels
- The spatial and temporal distribution of the stock to implement the most efficient trip limit

A benefit of trip limits when used in conjunction with quotas is that they allow some measure of catch rate control. They also allow for the allocation of specific areas of the fishery based on performance. A negative aspect of trip limits is that they can create discard mortality with most fishing gears. They can be difficult to enforce and monitor due to the magnitude of the catch in the menhaden fishery.

Option 3: Gear Restrictions

Under this option gear modifications are used to restrict the amount of catch (e.g., mesh size, seine size). The Board would need to consider,

- Gear types used that would be suitable to modify (e.g., gill nets, purse seines)
- Gear selectivity studies that justify the use of gear modifications; for example, mesh size can be implemented to minimize the harvest of immature fish.
- Realized costs by fishery to modify current gears
- Area or season closure by gear
- Designation of allowable gears, could be for directed or bycatch purpose

A benefit of gear restrictions is that they are enforceable measures by gear type. Significant amount of research would need to be done before gear restrictions could be implemented.

Option 4: Season Closures

Under this option the season length (fishing days) is restricted to certain time periods. The Board would need to consider,

- Closures by fishery
- The temporal distribution of the stock to implement the most effective season closures
- Fishing prohibited on specific days of the week (days out)
- Removal of passive gear types during closures
- Recoupment of harvest during open season

A benefit of season closures is that they are easily enforceable. A negative aspect is that they can create menhaden bycatch and regulatory discards of menhaden in directed fisheries for other species.

Option 5: Area Closures

Under this option fishing is prohibited in specific areas. The Board would need to consider,

- The spatial distribution of the stock to implement the most effective area closures (e.g., consideration of nursery areas)
- Recoupment of harvest in open areas
- Enforcement of areas closed

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Area closures have the potential for creating protection for immature fish, spawning stock and the protection of ecosystem services. A negative aspect is that they can create discard mortality of menhaden bycatch in directed fisheries for other species.

Option 6: Quotas

Under this option a limit is set for the amount of fish allowed to be caught by year or season. The Board would need to consider,

- TAC
- Allocation
 - a) By fishery - guidance on how to set allocation (e.g. historical reference years?)
 - b) By state or region - guidance on how to set
 - c) By state/federal waters
 - d) By gear - guidance on how to set
 - e) Transferability among entities allocated quota
- Catch shares, ITQ, IFQ
 - a) Allocation formula for ITQ, catch share, IFQ (i.e. historical catch, vessel size based, combination of these two, etc)
- Monitoring requirements

Quotas are the most direct method to manage towards a F target. When used alone, in its simplest form, a quota has potential to create a derby fishery. A negative aspect is that and they can create discard mortality of menhaden bycatch in directed fisheries for other species after the quota is met. Additional monitoring requirements would be needed.

Option 7: Effort Controls

- Days at sea
 - a) Board would need to consider the number of days fished, vessel size, fleet size
 - b) By fishery, gear type, vessel type, state
 - c) Will require historical estimates of catch rates. If VMS is required, monitoring becomes expensive (especially for smaller vessels).
- Vessel restrictions (upgrades, size, capacity)
 - a) Board will need to consider vessel characteristics to define effort.

Option 8: Limited Entry

Under this option, a limited number of participants would be permitted to fish for Atlantic menhaden. The Board would need to consider,

- Control Dates
- Entrance criteria (e.g., based on participation, demonstrated dependence on the fishery)
- Permitting system by state

Limited entry will give a fixed number of entrants and gear types for the fishery thus creating a known universe of participants. When establishing a baseline of

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entrants, it can be difficult to maintain fairness.

Public Comment Questions: Should different sectors (bait and reduction) have different management measures? What other measures should be implemented to establish a more predictable fishery?

BACKGROUND INFORMATION ON THE MANAGEMENT AND STOCK STATUS OF ATLANTIC MENHADEN

Summary of Fishery Management

The Commission has coordinated interstate management of Atlantic menhaden (*Brevoortia tyrannus*) in state waters (0-3 miles) since 1981. Management authority in the exclusive economic zone (EEZ, 3-200 miles from shore) lies with NOAA Fisheries.

In 1988, the Commission initiated a revision to the FMP. The Plan revision included a suite of objectives to improve data collection and promote awareness of the fishery and its research needs, including six management triggers used to annually evaluate the menhaden stock and fishery. In 2001, Amendment 1 was passed, providing specific biological, social, economic, ecological, and management objectives for the fishery.

Addendum I (2004) addressed biological reference points for menhaden, the frequency of stock assessments, and updating the habitat section currently in Amendment 1.

Addendum II of the Atlantic Menhaden Management Plan institutes a harvest cap on Atlantic menhaden by the reduction fishery in Chesapeake Bay. This cap is established for the fishing seasons in 2006 through 2010. The Atlantic Menhaden Technical Committee determined the following research priorities to examine the possibility of localized depletion of Atlantic menhaden in the Chesapeake Bay: determine menhaden abundance in Chesapeake Bay; determine estimates of removal of menhaden by predators; exchange of menhaden between bay and coastal systems; and larval Studies (determining recruitment to the Bay).

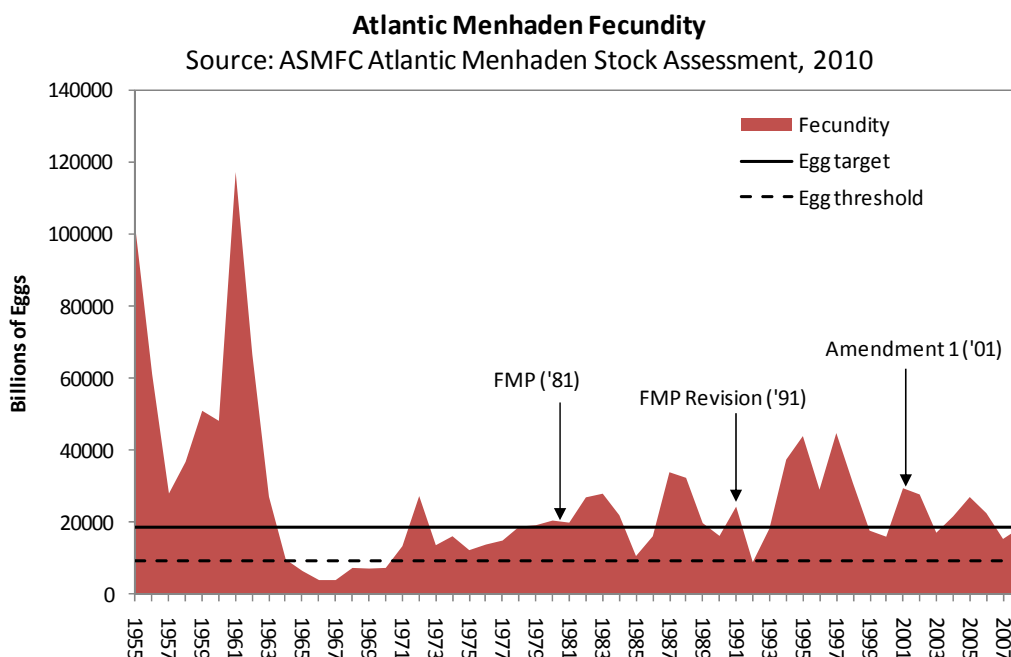
Addendum III was initiated in response to a proposal submitted by the Commonwealth of Virginia that essentially mirrors the intent and provisions of Addendum II. It placed a five-year annual cap on reduction fishery landings in Chesapeake Bay. The cap, based on the mean landings from 2001 – 2005, was in place from 2006 through 2010. Addendum III also allows a harvest underage in one year to be added to the next year's quota. The maximum cap in a given year is 122,740 metric tons. Though not required by the plan, other states have implemented more conservation management measures in their waters. Addendum IV (2009) extends the Chesapeake Bay harvest cap three additional years (2011-2013) at the same cap levels as established in Addendum III.

Addendum V, approved in November 2011, establishes a new fishing mortality threshold and target rate (based on MSP) with the goal of increasing abundance, spawning stock biomass, and menhaden availability as a forage species.

Summary of Stock Status

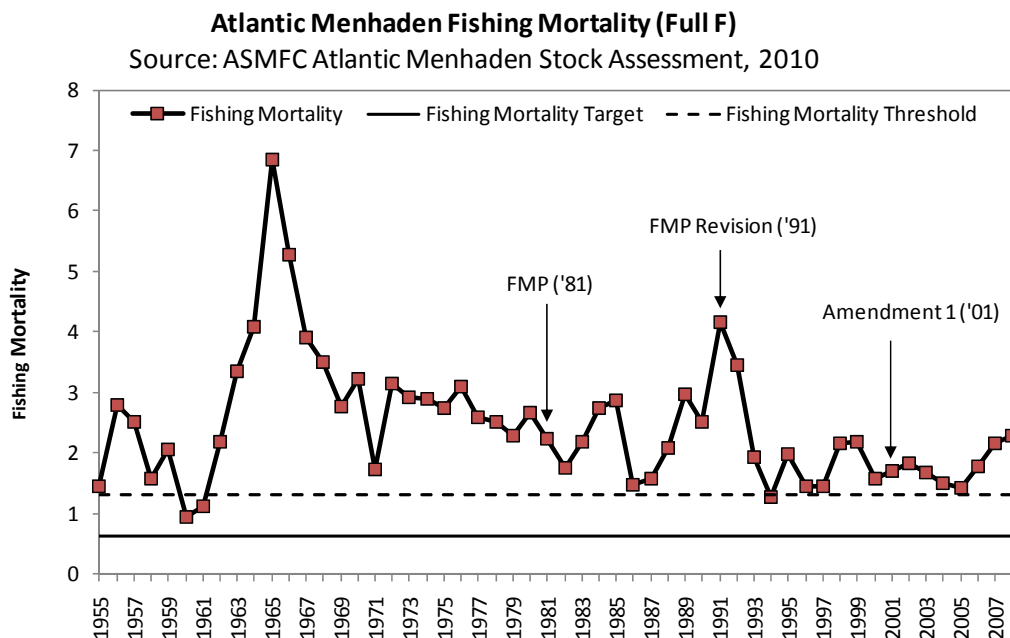
The Beaufort Assessment Model, approved for management use, is a statistical catch-at-age model that estimates population size at age and recruitment in 1955 and then projects the population forward in time to 2008. The model estimates trends in population dynamics, including abundance at age, recruitment, spawning stock biomass, egg production, and fishing mortality rates.

Model results indicate the population has undergone several periods of both high and low abundance over the time series. Abundance has declined steadily since the peak observed in the early 1980s and recruitment (age 0 fish) has been relatively low. Population fecundity (measured as number of maturing ova, or eggs) was high in the late 1950s and early 1960s, low in the late 1960s, and generally increasing since that time.



Fishing mortality rates were highly variable throughout the entire time series, with a decline in fishing mortality from the mid-1960s to the 1980s. Since the mid-1980s fishing mortality rates have varied between some of the highest and lowest values in the entire time series. The model suggests a high degree of variability, but in general the reduction fishery has experienced declining fishing mortality rates since the mid-1960s, while the bait fishery has experienced increasing fishing mortality rates since the 1980s.

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In 2008, the population was not overfished but overfishing was occurring, relative to the current biological reference points. The overfishing threshold for menhaden is now $F_{15\%MSP} = 1.32$. A 15% MSP would equate to a fishing mortality rate threshold required to maintain approximately 15% of the spawning potential of an unfished stock. For reference, an unfished stock is equal to 100% MSP. Over most of the time series, fishing mortality rates were above the new threshold level. Fishing mortality on all ages in 2008 (the latest year in the assessment) is estimated at 2.28, which was above the new target and threshold, hence overfishing is occurring.

The biological reference point that determines the fecundity target for Atlantic menhaden is defined as the mature egg production one would expect when the population is being fished at the threshold fishing mortality rate. Population fecundity in 2008 was estimated to be 18.449 trillion eggs or 99% of target (and 198% of the threshold). This means that the spawning stock in 2008 appears to be adequate to produce the target number of eggs, and thus the population is deemed not overfished. However, the number of young fish in the population has been consistently low in recent decades, indicating that high egg production may not be translating into high survival of young menhaden. Given this finding, the Peer Review Panel recommended examination of alternative reference points to provide more protection to the spawning stock biomass. The Board followed this advice by approving alternative fishing mortality reference points in November 2011.

Social and Economic Impacts

What is known at this time is that a reduction in the total allowable catch, no matter the form would directly impact the Chesapeake reduction fishery employment profile. Potential reductions in workforce are estimated to be proportional to

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reductions in harvest.

Commercial fishers who depend on menhaden harvesting to sell as bait would be impacted to the extent they could not have a suitable alternative. It is difficult to provide any direct and indirect impacts in the sector at this time. New England operators indicate that the most dramatic impact on their fishing operations would be inside, or bay, closures.

Accurate impacts indexed to specific measures can only be estimated by data which are currently unavailable.

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Appendix 1.

State	Met Reporting Requirement of Section 4.2.5.1	Summary of Regulations and Reporting
ME	Yes	Commercial license and endorsement if gillnetting. Unlawful to fish more than 2000 feet of bait gillnet in territorial waters. Bait gillnet shall have less than 3.5 inches diamond or square stretch mesh throughout the entire net. Area pilot program with daily catch limits and vessel restrictions. Reporting requirements cover all baitfish fisheries, including gillnets and purse seines.
NH	Yes	State law prohibits the use of mobile gear in state waters.
MA	Yes	No specific menhaden regulations. Purse seining prohibited in some areas (mostly nearshore), and no purse seines larger than 100 fathoms may be used. Mandatory dealer reporting (SAFIS).
RI	Yes	Menhaden harvest by purse seine for reduction (fish meal) purposes is outlawed. Mandatory dealer reporting (SAFIS). Daily reporting by bait purse seine fishery. No purse seines larger than 100 fathoms in length or 15 fathoms in depth may be used. Commercial gear and vessels need to be inspected and may not have a useable fish storage capacity greater than that that can hold 120,000 pounds of menhaden. Daily catch limit of 120,000 pounds per vessel when standing stock estimate reaches 3,000,000 pounds. When 50% of estimated weekly standing stock is harvested, or estimated weekly standing stock drops below a 1,500,000 pound threshold, the fishery closes until further notice. Permanent closures in specific areas.
CT	Yes	Purse seines prohibited in state waters. Menhaden can be caught by other gear and sold as bait. Personal gillnet restricted to mesh greater than 3 inches and net shall not exceed 60 feet in length.
NY	Yes	Mandatory reporting for all commercial food fish license holders, this includes all who harvest menhaden. Purse seines limited to certain times/areas. Purse seine season commences on the Monday following the fourth day of July and ending on the third Friday in October.
NJ	Yes	Prohibited purse seining for reduction purposes in state waters. Mandatory reporting for purse seine (bait) fishery. Bait fishery subject to gear restrictions and closed seasons. In 2011, implemented a limited entry program for purse seine fishery. To purchase a license applicant must have purchased a license at least one year during 2002-2009 and a license in 2010. Length of vessel under permit is allowed to increase by 10% (not to exceed 90 feet) and up to 20% greater horsepower.
DE	Yes	Purse-seine fishery prohibited since 1992. No specific regulation of gillnetting for menhaden.

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MD	Yes	Purse-seine fishing prohibited; menhaden harvested by pound net primarily. Mandatory reporting of commercial landings by day, area and gear. Reports are submitted monthly.
PRFC	Yes	All trawling and purse nets are prohibited. Mandatory commercial fishing reporting. In 2011, Pound net fishery which is limited entry must use at least six PRFC approved fish cull panels properly installed in each pound net to help release undersized fish.
VA	Yes	Implemented CDFR reporting requirement for bait seine/snapper rigs in 2002. The reduction fishery landings in VA are reported via daily catch records and CDFRs to the NMFS. Unlawful to use any net with stretch mesh size of less than 1 3/4 inches.
NC	Yes	Mandatory commercial fishery reporting (trip ticket). Combination of gear restrictions and seasonal and area closures (e.g., no purse seine fishing within 3 miles of coast of Brunswick Co. from May – October).
SC	Yes	Purse seines prohibited in state waters; mandatory dealer reporting; requests <i>de minimis</i> status.
GA	Yes	Mandatory commercial fishery reporting (trip ticket); state waters closed to purse seine fishing; requests <i>de minimis</i> status.
FL	Yes	Purse seines prohibited in state waters; primarily a cast net fishery; mandatory commercial fishery reporting (trip-ticket); requests <i>de minimis</i> .

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**Ecological Reference Point Development:
Recommendation to adopt Multiple Management Objective Decision Analysis**

Board Task: The Atlantic Menhaden and Multispecies Technical Committees have been tasked with developing ecological reference points (ERPs) that recognize the role of Atlantic menhaden as forage for other managed species.

Progress to date: A joint subcommittee of the Atlantic Menhaden and Multispecies Technical Committees met in 2011 and produced a set of potential ERPs and management triggers that could be explored and further developed for use in Atlantic menhaden management.

Problem statement: The Board needs technical guidance regarding which ERP options might be viable for use in menhaden management and how those ERPs might be implemented. However, without an explicit set of ecosystem management objectives from the Board, technical staff cannot produce a reasonably narrow, focused, and useful set of ecosystem reference point options for the Board to consider.

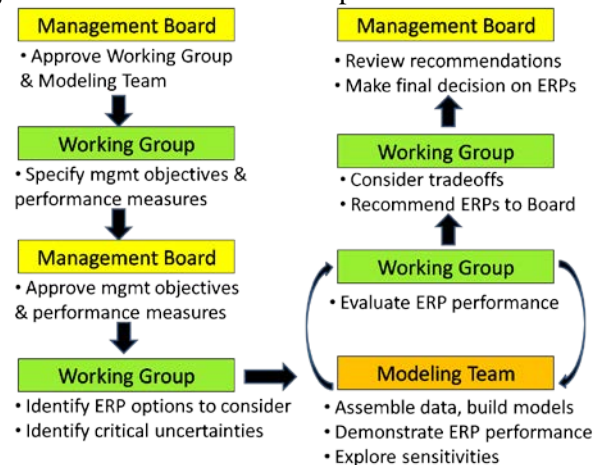
A dynamic approach is needed to effectively move forward with developing ecosystem management objectives and reference points in preparation for the 2015 benchmark assessment and peer review. This approach should be inclusive and transparent such that all key stakeholders are involved throughout the process.

TC's recommendation: Multiple Management Objective Decision Analysis (MODA) should be used to explicitly state ecosystem management objectives and identify potential ERPs that are likely to be most effective at addressing those objectives.

MODA is a formal evaluation process implemented through a series of workshops and modeling exercises (see Figure 1 below) that would:

- Involve representative key stakeholders, Board members, and technical committee members
- Use facilitated “Structured Decision-Making” to come to consensus
- Explicitly define ecosystem management objectives
- Explicitly define ERP performance measures
- Work with an independent scientist on collaborative model development
- Transparently evaluate and review potential consequences of ERPs
- **Result in recommended set of ERPs for Atlantic menhaden that all key stakeholders find acceptable**

Figure 1: Flowchart of major milestones in the MODA process



Expected Outcomes & Deliverables:

- Explicit list of ecosystem management objectives for Atlantic menhaden stock
- Explicit acceptable risk statement for stock(s)
- Definitions of ERPs based on explicit management objectives
- Short list of mutually-acceptable ERP options for incorporation in the 2015 benchmark assessment
- A quantitative evaluation of ERP performance under a suite of uncertain conditions
- With collection of new data, MSTC could continue to update models and monitor performance of ERPs in the future

Timeline & Estimated Budget:

- Begin as soon as funding becomes available. Funding external to the ASMFC budget will be sought.
- Ecosystem management objectives ready for Board approval by 2013 Winter Meeting
- Deliverables ready Spring 2014
- ERP options incorporated into 2015 benchmark assessment and peer review
- Estimated cost: \$150,000-\$250,000 per year for two years depending on negotiated consultant fees or overhead rates.

Applications in other fisheries: MODA-style approaches have been successful in other fisheries, namely the Adaptive Resource Management program adopted by the ASMFC Horseshoe Crab Board, the king mackerel FishSmart program used to inform the South Atlantic Fisheries Management Council, and others in the United States and around the world (Bence et al. 2008, Irwin et al. 2008, Jones and Bence 2009, Miller 2010, Irwin et al. 2011).

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MEMORANDUM

January 13, 2012

TO: Atlantic Menhaden Management Board; Shad and River herring Management Board; Summer flounder, Scup, Black sea bass Management Board; Weakfish Management Board

FROM: Melissa Paine, CESS Coordinator

SUBJECT: Recommendation for CESS Representatives to Plan Development Teams and Technical Committees

The Committee on Economics and Social Sciences (CESS) has recommended the following individuals be appointed as the economist or social scientist representative to the Plan Development Teams and Technical Committees for the following species.

Atlantic menhaden	Dr. Peter Schuhmann	Economist
Shad and River herring	Dr. Winnie Ryan	Social scientist
Summer flounder, Scup, Black sea bass	Dr. José L. Montañez	Economist
Weakfish	Mr. Manoj Shivlani	Social scientist

Dr. Peter Schuhmann is a Professor in the Department of Economics and Finance, at the University of North Carolina, Wilmington. His research interests are in fisheries policy analysis, recreation demand, discrete choice models for non-market valuation of environmental amenities and natural resources, welfare analysis of local and regional environmental issues, bioeconomic modeling, and natural resource damage assessment.

Dr. Winnie Ryan received her PhD from the Virginia Institute of Marine Science, College of William and Mary. Her research focuses on social impact assessment in fisheries and closed area management.

Dr. José L. Montañez is an economist on staff at the Mid-Atlantic Fishery Management Council and is the assistant coordinator for Summer flounder, Scup and Black sea bass.

Mr. Manoj Shivlani is the Program Manager at the Center for Independent Experts. He is pursuing his PhD on the impacts of non-fishery factors on the persistence of commercial fishing communities in the Florida Keys.

Curriculum vitae can be made available if desired.

M12-08