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

December 17, 2003
New York, NY

ATTENDANCE

Board Members

William Adler, MA Gov. Appte.
David Pierce, MA DMF
Vito Calomo, MA, proxy for Rep. Anthony J. Verga
David Borden, RI DEM
Gil Pope, RI Gov. Appte.
Lyell Jett, VA proxy for Sen. John Chichester
Jack Travelstead, VMRC
Bill Pruitt, VMRC
Catherine Davenport, VA Gov Appte.
Dennis Abbott, NH proxy for Rep. Mary Ann Blanchard
G. Ritchie White, NH Gov. Appte.
Russell Diez, MD proxy for Sen. Richard F. Colburn
William P. Jensen, MD DNR
Bill Goldsborough, MD Gov. Appte.
A.C. Carpenter, PRFC
John Duren, GA proxy for Gov. Appte, Ralph. J. Balkcom
Susan Shipman, GA DNR
Gil McRae, FL FEC/FMRI
Kathy Barco, FL Gov. Appte.
Damon Tatem, NC Gov. Appte.
Steve Meyers, NOAA Fisheries
Jaime Geiger, USFWS
Fred Frillici, CT Proxy for Sen. George L. Gunther
Lance Stewart, CT Gov. Appte.
Eric Smith, CT DEP
Pat Augustine, NY Gov. Appte.
Brian Culhane, NY proxy for Sen. Owen H. Johnson
Gordon Colvin, NY DEC
Jeff C. Tinsman, DE Div F&W
Sen. Dennis S. Damon, ME Leg. Appte.
Lewis Flagg, ME DMR
Dick Herb, NJ proxy for Assemblyman Robert Smith
David Cupka, SC DNR
Tom Fote, NJ Gov. Appte.

Ex-officio Members

Matthew Cieri, ME DNR, TC Chair
William Windley, AP Chair

Staff

Robert Beal
Nancy Wallace

Presenters

Najih Lazar, RI DEM

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ATLANTIC STATES MARINE FISHERIES COMMISSION

ATLANTIC MENHADEN MANAGEMENT BOARD

Roosevelt Hotel
New York, New York
December 17, 2003
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The meeting of the Atlantic Menhaden Management Board of the Atlantic States Marine Fisheries Commission convened in the Terrace Room of the Roosevelt Hotel, New York, New York, on Wednesday, December 17, 2003, and was called to order at 2:00 o'clock p.m. by Chairman David V.D. Borden.

CALL TO ORDER

CHAIRMAN DAVID V.D. BORDEN: I think most of you know we have one hour to deal with menhaden, so as soon as everyone sits down, I will start. My name is David Borden and I'm the chairman of the Menhaden Board.

As I just announced, we have an abbreviated period of time here to deal with menhaden. The reason for that is the Lobster Board has a number of really critical issues, which have to be resolved today, and they needed one hour, so I relinquished an hour of the board's time.

APPROVAL OF AGENDA

I think that, from my perspective, if the individuals giving the reports follow the guidelines I've given them, we can still get through the material. So, let me start off by asking whether or not there are any additions or deletions to the agenda. Yes.

MR. JEFF TINSMAN: I should be listed as a board member on the minutes, not a guest.

CHAIRMAN BORDEN: All right, anyone else on this? Anyone in the audience, changes on the agenda? If not we'll take the items in the same order in which they appear.

PUBLIC COMMENT

We always afford the public an opportunity to comment at board meetings, and we will do so now. Are there members of the public, who would like to speak? Ken.

MR. KEN HINMAN: Thank you, Mr. Chairman. My name is Ken Hinman. I'm president of the National Coalition for Marine Conservation. We submitted a nine-page statement to members of the board electronically on Friday, and I think it has been distributed in hard copies for people who either didn't receive it before they left, or it didn't get to them.

In the interest of time, I think I can be pretty brief. I want to begin with our recommendation. The National Coalition for Marine Conservation respectfully urges the Atlantic Menhaden Management Board to initiate the process of amending the interstate fishery management plan for Atlantic menhaden to address concerns about the diminished ecological role of menhaden on a regional as well as a coast-wide basis, with the goal of incorporating, as necessary, new objectives, reference points and management measures designed to protect and preserve the sustainability of the menhaden resource and associated species and the fisheries that depend on them.

Now, my organization, in 1980, sponsored a striped bass symposium. In the keynote remarks to that symposium, the then head of NOAA, Dick Frank, predicted that, based on the recently passed Magnuson Fishery Conservation and Management Act and its definition of optimum yield -– and these are his words –- "within a few years I expect that most fishery management plans will be multi-species plans, which will take into account predator-prey relationships in particular. Not long after that, I hope we will use an ecosystem approach to fishery management."

Now, in many respects, we are today only marginally closer to making ecosystem-based fishery management a reality than we were 23 years ago.

In 1980, the main concern was the role of environmental changes in the virtual disappearance of striped bass. Today the return of striped bass is now part of modern fish conservation lore, a success story that serves as an example of what is possible with single-species management.

But there are new multi-species concerns having to do with striper's main prey, Atlantic menhaden, and the sustainability of the present rockfish recovery. These concerns are serious, and they are legitimate.

They will not go away until they are addressed in a well-defined, informed and comprehensive manner. Now, we're aware that two years ago, the ASMFC initiated the task of constructing a process for linking multi-species and single-species assessments in management.
We've encouraged and participated in this process, as well as in the Menhaden Advisory Panel, the eco-path with eco-sys workshops, the technical committee meetings, the stock assessment meetings, the fishery ecosystem plan development in Chesapeake Bay.

But, unfortunately, we are also convinced that circumstances are overtaking the commission in the matter of Atlantic menhaden and its present and future role in the coastal ecosystem.

The FMP for menhaden and the menhaden stock assessment, as presently constituted, are not equipped to address concerns regarding maintenance of an adequate population to serve forage and water quality function, particularly as they impact striped bass in the Chesapeake Bay.

The prospects for remedial action in the foreseeable future are not good. Although there are well-intentioned moves being made in the right direction, the system moves without urgency while we continue to manage without caution.

So we believe the circumstances warrant the ASMFC taking a precautionary approach to the conservation and management of menhaden and dependent predators under its jurisdiction.

The weight of the scientific information available to us, although marked by uncertainty, nevertheless indicates potential problems with significant ramifications for a wide number of species.

The uncertainties involved, far from providing an excuse for inaction, instead demand a deliberate and informed response from the commission.

And because of the protracted process that is required to amend a fishery management plan, especially one like this that will take management into new and uncharted territory, the ASMFC should begin this process immediately.

I think most of you may be aware that this summer my organization circulated a petition. I want to say a few words about that petition that was calling for the curtailment of removal of menhaden from Chesapeake Bay.

We were told by a number of people that this was an unreasonable recommendation. I would first point out that this was an issue and option circulated to the public during Amendment I to the FMP a couple of years ago.

It was one of the policy issues, Number 3 that was put to the eco-path workshop putting together modeling the food web in the Chesapeake Bay for future management decisions.

More importantly, the fishing clubs, the fishing tournaments, the Websites, the marinas, the tackle shops and the thousands of anglers from Maine to North Carolina, who signed that petition, believe that it is unreasonable to leave fishing in Chesapeake Bay unregulated as to the amount that can be removed on an annual basis and the size and age composition of that catch.

So I think what we've done here is merely just staked out the boundaries for reasonable action. Somewhere in the middle, there is an answer to this problem and we urge the commission -- the management board first -- to take up the process at once of looking for those solutions to this problem.

I won't get into the specifics, but we have in our statement that we've submitted to you some recommendations for things we think need to be looked at in a deliberate and informed manner such as revising the objectives of the FMP; getting a definition of ecosystem; overfishing; incorporating a lot of other data that are not incorporated currently into the stock assessment that have to do with menhaden's ecological role; and, finally, in putting in some precautionary management measures having to do with total allowable catch, the disbursement of the catch throughout the range of the fishery and protection of nursery areas and forage-sized menhaden. That completes my comments, thank you.

CHAIRMAN BORDEN: Thank you very much, Ken. I spoke to Ken prior to the meeting; and unless we have objection, my suggestion here is this was not on the agenda so it would be inappropriate for us to really get into a full-fledged debate of it or take any action on it.

My suggestion is, and Ken has concurred with this, we will refer this to the technical committee, ask them to review it, give us any pros and cons that they see associated with the proposal.

That will also afford the public, since that's an open meeting, an opportunity to go comment and deliberate on it further. Then what we will do is we will schedule it for formal discussion at the next board meeting.

Any objections to doing that? If not, thank you very much, Ken. I have to step out for about one minute for a photograph with Jack Travelstead, and I'm going to turn the meeting over to Bob, since both the chair and the vice chair will be out of the room. I will recognize Michelle and then Jim Price.

And if you would be so kind, please try to limit your comments because we do have a very narrow timeframe. Thank you very much.

MS. MICHELLE DUVALL: For the record, Michelle Duvall with Environmental Defense in Raleigh, North Carolina. Thank you, Mr. Chairman. Since many of the things that I was going to say are reflective of what Ken just said, it means I will only take two minutes instead of three minutes of your time.

I prepared a letter detailing my comments, which I handed to Nancy, so there are just a couple of things that I wanted to highlight.

As you are aware, the October stock assessment review outlined the need for more data regarding the ecological role of menhaden as forage for other species, and this is a point that was also noted in the 1999 assessment.

As many of you are also aware, this same issue of forage species was discussed in the Atlantic Herring Section meeting on Monday, where various members offered different views regarding the need to bring this often technical and complicated issue to the public for comment.

I couldn't help but agree with the remarks made by Mr. Eric Smith. He noted that the subject of forage species is likely to come before the commission with increasing frequency.

I think that's especially true as the general public becomes more aware of the concept of managing at the level of the ecosystem, and the scientists move ahead with the development of tools to inform management efforts in this regard.

To that end, we also strongly urge the board to initiate an FMP amendment process or to at least send this to the technical committee to formalize the need to address the ecosystem role of menhaden on a coastwide and regional basis.

I think this will only serve to complement efforts that the commission is already engaged in at the ecosystem level, such as the development of a multi-species VPA as well as a spatial model that will incorporate components of the VPA in addition to physical and habitat characteristics.

Finally, in light of some of Dr. Hogarth's remarks on Monday, I'd like to point out that I believe addressing the ecosystem role of menhaden will serve the commission well, as it has to move forward considering management of recovered species. Thank you very much.

MR. ROBERT E. BEAL: Great, thanks, Michelle. We have copies of the letter or a copy of the letter that Michelle was reading from, and we'll go ahead and distribute those to the management board. Jim Price.

MR. JIM PRICE: Thank you. I passed out a report. This report was prepared for the Secretary of the Maryland Department of Natural Resources to look at the conditions in the bay in regard to striped bass and Atlantic menhaden.

It's pretty self-explanatory, but in addition to the report, I've included a page, the last page that will give you the information where you can go on line and print out copies of these papers that have just been published in the "Fisheries Management and Ecology Journal" in October of 2003.

They explain some of the issues that we're all very concerned about with Atlantic menhaden and their role as a forage fish as well as an important filter feeder.

Looking over the entire situation in the bay, I come to one conclusion that it may not be intentional, but under the Atlantic Coastal Fisheries Cooperative Management Act, Virginia and North Carolina do not comply with the goal and fail to achieve primary objectives of ASMFC's Menhaden Fishery Management Plan.

That is to protect and maintain the forage base and

the important ecological role Atlantic menhaden plays along the coast.

I'm not saying this is a violation that any one is intending to do, but when you look at the plan and look at what it's designed to do, there are problems when it comes to this section of your objectives and your goals.

To go on to stress the importance of this, the striped bass recovery is at risk, because their forage base has collapsed and most of the striped bass in the bay suffer from poor nutrition and disease.

The ASMFC and the National Marine Fisheries Service need to implement management measures to maintain the forage base for coastal predator species in order to achieve the ecological objectives and goals of really all their FMPs.

This would help restore the striped bass forage base and the Chesapeake Bay's ecosystem, since menhaden play a vital role in top-down control, consuming zooplankton and phytoplankton, the bay's primary production.

That's very important, and for that reason alone we need to manage Atlantic menhaden better than what we're doing, because unfortunately in the bay we only have two primary filter feeders, oysters and menhaden.

Most of you probably know the oyster fishery is just about finished, and so the only filter feeder left, Atlantic menhaden, is being removed at approximately 300 million pounds a year out of the bay.

I think we may have learned a lesson with oysters. Overfishing destroyed that fishery along with disease, and overfishing is destroying the capability of our natural filter feeders to improve water quality in the bay.

Without menhaden and oysters, we have bacteria that are feeding on our algae, and that's not the best situation. The purse seine fishery should not be allowed to remove excessive numbers of immature menhaden.

They should be directed to target the older age three-plus fish.
When you look at the chart on the back where it shows you the population of forage-size fish or immature menhaden, ages zero to two, you see that currently we're at historically low levels.

So, whether or not those fish were -- or the population has been reduced because of predation or overfishing doesn't make any difference. The fact is, we're in trouble. We're right back to where we were back in the '60s when everybody said they were being overfished.

But it really doesn't make any difference whether they're being overfished by the reduction fishery or striped bass, their numbers have been reduced to a level that is not adequate. I think the commission would serve itself well to pay attention to protecting the menhaden for its ecological needs and concerns for the Chesapeake Bay. Thank you.

CHAIRMAN BORDEN: Thanks, Jim. I'd also ask that this report be referred to the technical committee for review and comment. Any objections? No objection. Anyone else in the audience? Yes, sir, if you could come up. Yes, please identify yourself for the record.

MR. TOBY GASCON: Thank you, Mr. Chairman. MY name is Toby Gascon. I'm director of governmental affairs for Omega Protein. Just a short statement I'd like to read into the record.

As we just heard, there is intent to allow the ban of commercial harvest of Atlantic menhaden fish in Virginia's Chesapeake Bay waters.

Fortunately, we feel such a prohibition is unnecessary to ensure the continued live conservation of the menhaden fish population as supported by our state and federal fisheries scientists and experts charged with regulating this public resource.

Unfortunately, these groups are using fear to promote their support over the livelihood of the Chesapeake Bay watermen and their families. The commercial fishery for menhaden is one of the oldest in existence in the United States. Its harvest has supported the Virginia economy since the late 1800s.

The menhaden industry has been the largest employer in the Northern Neck since 1913, and it's even furthering expansion this year with the construction of a new $16 million processing facility to produce food grade Omega 3 oil for enhancing the health of humans and animals.

The NCMC suggests that a recreational catch of skinny stripers is due to a decline in their prey species of menhaden. As we have seen with other abundant pelagic stocks, like herring, for example,

slow growth, low weight and small length distributions would be expected in a robust stock of striped bass when competition for food, not a shortage for food, will produce these stock effects.

The menhaden fishery removes less than 25 percent of the population annually. In other words, at least three out of every four menhaden remain in the water to fulfill their ecological role.

There is also evidence that suggests that the menhaden resource in the Chesapeake Bay is impacted much more significantly by predator activity than it is by commercial fishing activity.

In sum, the federal and state regulatory scientists that oversee Atlantic menhaden resource agree that menhaden stocks are currently healthy.

More than adequate numbers of large, reproductively active female menhaden exist, and the fishing mortality rate for these fish are in a safe area, thereby ensuring the continued health of their populations.

Omega Protein would like everyone to know that they're fully committed to the responsible management of the Atlantic menhaden resource.

Ultimately, unnecessary petitions such as the one currently lobbied by a small group of sport anglers and conservationists needlessly serves to distract the ongoing efforts of our fishery regulators.

With the fully recovered striped bass resource and booming sport catches, it would appear that the greed of a handful of these sport advocates has no bounds, including the sacrifice of human health benefits. Thank you very much. I appreciate the opportunity to read this to you.

CHAIRMAN BORDEN: Thank you very much. As I've done before, I'd ask that your submission be referred to the technical committee as another piece of information on the issue. Any objections? No objections. I'm going to move on in the interest of time. If we finish the agenda, I will come back to the audience and take additional comments. Bill.

MR. WILLIAM GOLDSBOROUGH: Thank you, Mr. Chairman. For the benefit of the board, could you summarize what the charge to the technical committee will be.

CHAIRMAN BORDEN: Excuse me? You're going to have to –-

MR. GOLDSBOROUGH: Could you summarize for the board what the charge to the technical committee will be.

CHAIRMAN BORDEN: The charge is to review all of those documents and the issues that are raised by the documents, and then basically come back to us with any position that they have on any of the suggestions, noting any positives or deficiencies in the strategies that are being advocated.

In other words, we just want a technical review of the concept. That isn't to necessarily bias the result, it's simply to be one more piece of information that the board would have at the point where we actually schedule the item for discussion. Yes, Bill.

MR. GOLDSBOROUGH: Would it be appropriate to ask the technical committee to speak to the point as to whether or not the current plan would be sufficient for addressing the concerns that have been raised, or whether or not we might, indeed, need to consider an amendment or addendum process?

CHAIRMAN BORDEN: That's fine. My assumption is, with the guidelines that I outlined, they'd basically have the flexibility to do that, anyway.

MR. GOLDSBOROUGH: And are we meeting at the March meeting week? Will that be when they come back?

CHAIRMAN BORDEN: The next meeting will be at the March meeting. Correct, Bob? That's my understanding, the March meeting.

MR. BEAL: March is the next commission meeting, but there seems to be a trend this week, and all the boards are saying, "Well, we'll deal with that in March", so we may have to do some prioritizing for time at the March meeting, but we'll try to get everything on there.

CHAIRMAN BORDEN: It's my hope and expectation that there will be adequate time for a good, adequate discussion of the issues at that point. Yes, Dave Pierce.

DR. DAVID PIERCE: Regarding that charge to the technical committee, Mr. Chairman, I would hope that would also include the technical committee commenting on whether or not the statements on Pages 5 and 6 of the Coalition's recommendations to us are, in fact, correct.

They provide what they consider to be "evidence" regarding the nature of the problem. They make some very important statements here, very compelling statements. It would be helpful if the technical committee could comment on those specific statements regarding their accuracy.

CHAIRMAN BORDEN: Any objection to that? All right, Pete.

MR. W. PETE JENSEN: While we're on the subject, Mr. Chairman, I think it would be appropriate to ask the technical committee if they are able to establish separate biological reference points for a stock of menhaden in Chesapeake Bay as a basis for whether it can be managed as a separate component of the coastal stock.

CHAIRMAN BORDEN: All right, to that point, any objections to asking that question? No objections so that question will be asked. Yes, Matt.

MR. MATT CIERI: To answer your question, at this time, no. No, we cannot.

CHAIRMAN BORDEN: I rely very heavily on Matt, but what I would suggest is the entire committee be asked the question.

MR. JENSEN: Such efficiency is unprecedented in getting a question answered.

REVIEW OF 2002 AND 2003 LANDINGS UPDATE

CHAIRMAN BORDEN: All right, we're going to move on. The next item on the agenda is the 2002 landing report. Matt.

MR. CIERI: All right, for those of you who don't know me, my name is Matt Cieri. I'm with the Maine Department of Marine Resources. I'm currently the technical chair for Atlantic menhaden.

I'm going to talk to you today about an update of the landings for 2000 and 2003. You've already had an update of landings on 2002. I'm just going to give you an overview of some of the geographic extractions from this stock. This is a GPS plot. I'm sorry, yes, a GIS plot courtesy of Joe Smith.

As you can see, the pie diagram takes a look at the breakdown of what has been removed by 10-minute squares by age for the Atlantic Coast menhaden stock.

As you probably have assumed already, older individuals are taken further and further north, up towards New Jersey. The bulk of the catches seem to come from the area right around the Chesapeake Bay, particularly the area right off the coast of Virginia, of course.

These tend to be a mix of ages, usually age ones, twos and threes with certainly more twos. As you move further south, again, we get a lot more catches near the Beaufort plant and just outside the Beaufort plant.

These tend to be the youngest of fish, some age zeros but dominated by ages ones and twos. If we look at reduction in bait landings since 1985, remember we have two sorts of fisheries going on here, a reduction fishery and a bait fishery.

You can see that the bait fishery here in the dark line is usually about 10 percent, while the reduction fishery has actually declined over the last couple of decades. This sort of indicates that there is going to be or there has been an increase in the importance of the bait fishery compared to the reduction fishery since historical times.

If we look at catch landed by state where we have the Mid-Atlantic states up here, New York, New Jersey and Maryland, and some of the southern areas including Virginia for both ocean --or I'm sorry coastal as well as Chesapeake Bay and North Carolina, you can see that there has been recently an increase in the importance of fish extracted from the Chesapeake Bay.

However, there are fish extracted from many different locations up and down the coast. This is in thousands of metric tons. Please note that the 2003 data is only available right now through September, as we're still working on the data for 2003.

If you look at the breakdown by fishery and by area as to what sort of ages we're looking at from the extraction for 2003, for the Mid-Atlantic predominantly it's age twos, about 56 percent, with a lot of age threes, again, up towards New Jersey.

For the Chesapeake Bay, we're looking predominantly again at age twos and usually about an equal split between age ones and age three pluses. If we look at the South Atlantic, again predominately age three pluses with some age ones -- I'm sorry, age twos with some age ones.

If you look at the Atlantic coastwide with all this summed together, this is predominantly age twos and, again, equal age ones and age three pluses. Now please, again, keep in mind that this is the raw unweighting.

This is not weighted by actual catches. We're still in the process of going through these samples, and we'll have a complete catch-at-age matrix for the 2003 season, hopefully, some time by March.
If we look at the bait fishery, we can tell, again, that the bait fishery seems to catch different fish than the reduction fishery.

Up towards New Jersey, again, dominated exclusively or almost exclusively by age three plus, but even in the Virginia area as well as North Carolina bait tends to be larger, older fish, very few age ones.

If you look at coastwide, again, dominated almost exclusively by age twos. There are a lot of age threes and some age ones. So, basically, the bait fishery and the reduction fishery catch different types of fish. That's about it.

CHAIRMAN BORDEN: Any questions for Matt? Yes, Tom Fote.

MR. THOMAS FOTE: Could you put your first slide back up again, Matt.

MR. CIERI: I'm sorry, I didn't hear that.

MR. FOTE: Could you put the first slide back up again? The question I wanted to ask, then that means there is no significant either bait landings or anything north of New Jersey? There's no major bait landings in New York, Rhode Island or Massachusetts any more, or Connecticut?

MR. CIERI: That is correct. There are not a lot of bait landings north of New York Bight.

MR. FOTE: I would also like to one of these days get an historical perspective of what was formerly landed in those areas over the years, because we know there was a big fishery. Vito was involved in it and so was Tony Regan. I just wanted to know what the past landings were over the years.

MR. CIERI: Yes, exactly. In times past there were large catches of menhaden. In fact, as many people remember, there was an IWP in the Gulf of Maine back in about the early '90s. There were significant reduction and bait landings north of Cape Cod during that timeframe. And within the last, probably about the last decade there hasn't been a lot in the way of menhaden catch north of Cape Cod.

MR. FOTE: Just a follow up.

CHAIRMAN BORDEN: Go ahead.

MR. FOTE: I mean, because I can understand the reduction boats no longer going that far up and some of the states have banned that, but I would understand if there was menhaden up there, the bait boats would still be operating because most of them could still operate.

A lot of them now are stationed in New Jersey that used to be in Rhode Island and Massachusetts. So if there was fish up there, I guess they would go back up there. I want to make sure we know those old figures.

CHAIRMAN BORDEN: All right, any other questions? Vito.

MR. VITO CALOMO: Yes, along that line, Mr. Chairman, the bait industry in Massachusetts has been predominantly taken over by the herring industry, and we've supported two brand new facilities in the Commonwealth of Massachusetts, one in Gloucester, Massachusetts, called Cape Sea Foods, and the other one in New Bedford, Massachusetts, called Norpel.

As far as menhaden are concerned, no one has been fishing for menhaden in several years, but we've seen the influx of many menhaden over the last five years, but, again, the industry has preferred, especially the lobster industry, which takes the abundance of our bait, in herring. Thank you, Mr. Chairman.

2003 FMP REVIEW

CHAIRMAN BORDEN: Thank you, Vito. Any other questions? If not, we're going to move on to the next agenda item, which is a review of the 2003 Atlantic Menhaden FMP review. Nancy.

MS. NANCY WALLACE: Thank you, in the interests of time I'm going to just briefly touch on the points, and you'll hear more at the technical committee update.

The PRT report combines both the FMP report and the compliance reports for 2002. The PRT updated

the status of the stock, including the new stock from the 2003 benchmark assessment.

We included the new data inputs and the new model used in the assessment. We also included the recommendation from the technical committee with their new benchmarks that they have recommended. We included the new tables and figures to depict that new data.

We also updated the status of the fishery from 2002 and included new figures in tables to depict those trends. We also included the advice from the peer review panel in the recommendation section.

The technical committee has recommended changing from an SSB target and threshold to a fecundity-based target and threshold. They have also recommended a new F target and threshold, which we've included in this report. Control plots of these new target and thresholds were included in this report as well.

REVIEW OF 2003 COMPLIANCE REPORTS

That moves on to the 2003 compliance reports. We received all the reports in a timely fashion from each state. Table 2 of the FMP document summarizes the compliance reports. All states are in compliance.

We just wanted to note that Massachusetts currently does not have an offshore reporting requirement for menhaden; however, this represents a very minor portion of the fishery. We did have requests for de minimis status from South Carolina and Georgia.

The PRT recommendations. We feel that an addendum should be prepared to address the new reference points recommended by the technical committee, and the research and monitoring recommendations are consistent with the technical committee's recommendations in the 2003 stock assessment report which you will be hearing about in a few minutes.

CHAIRMAN BORDEN: Questions for Nancy? Let's see, what I would suggest is you've heard the recommendation that we should revise those terms of reference. What is the preference of the board? David.

DR. PIERCE: Well, this is a bit of a tough one, Mr. Chairman, because the assessment report does provide some recommendations and findings, notably the one that was just highlighted, that the SSB be replaced with population fecundity, the number of maturing or ripe over as an improved measure of reproductive capacity.

I won't pretend to have read all this, I haven't, but I still don't understand the logic for that. And my question, therefore, would be when are we going to get the presentation that would describe the specific logic, and why those who did this particular report, feel that, indeed, is a better way to have us identify reference points?

CHAIRMAN BORDEN: Nancy.

MS. WALLACE: We are going to hear –- I believe it's the next agenda item -- the SEDAR panel. This assessment did go through the benchmark assessment, and today you're going to hear the peer review panel's recommendations. If I can make a suggestion, we can hold off on approving the FMP report until after you hear that presentation.

CHAIRMAN BORDEN: Any objections to doing that? We'd just hold off on formalizing a recommendation until we hear the subsequent report. David.

DR. PIERCE: Yes, provided that we have more than a five-minute presentation. I know we must be getting pretty close to the end of the line. One hour for this board meeting is extremely tight. I think we're going to feel uncomfortable when everything is all over and done with, because there are some important issues here.

CHAIRMAN BORDEN: All right, any objection to moving on to this? Susan.

MS. SUSAN SHIPMAN: Thank you, Mr. Chairman. I have no objection on the biological reference points. Do we want to take action on the de minimis requests, though, and get that out of the way?

CHAIRMAN BORDEN: Any objection to doing that? No objection. Go ahead.

MS. SHIPMAN: **Then I would move that the board approve South Carolina's and Georgia's requests for de minimis status.**

MR. DENNIS ABBOTT: Second.

CHAIRMAN BORDEN: Seconded by Dennis Abbott. Discussion on the proposal. Any objections to the proposal? **The motion stands approved without objection.**

All right, next report is the presentation of the peer review panel's report. Let me just say that it's my intent to get the advisory panel recommendation before we take up the issue of whether or not we should change those terms of reference. Najih.

SEDAR PEER REVIEW PANEL'S REPORT

MR. NAJIH LAZAR: Thank you, Mr. Chairman. My name is Najih Lazar. I'm with the Rhode Island Division of Fish and Wildlife. I'm speaking here on behalf of the SEDAR, the peer review panel that took the menhaden assessment in October 6 and 7 in North Carolina and rendered the recommendation and the decision on this assessment.

The SEDAR or the group that was in this peer review were from the state and federal agencies and then some people from Canada. The panel had to deal with four terms of reference.

The first one was to evaluate the adequacy of data; then to evaluate the adequacy of the model that we used in this assessment to evaluate the recommendations of current stock status; and the last one was to develop the resource recommendations.

The data source or the data that were available for this assessment were landings and some fisheries-independent data from surveys. Landings were composed of two portions, one from the reduction fisheries from 1940 to 2002 and the bait fishery's landings from 1985 to 2002.

Both fisheries were sampled, I believe, by the folks in National Marine Fisheries Service, and some age data were available from 1955 to 2002.

In addition to the fisheries-dependent data, we had the fisheries-independent data from state seine surveys from Rhode Island, Connecticut, Maryland, Virginia and North Carolina.

This graph here basically shows the reduction fishery's landings and effort from 1940 to 2002. In the last 15 or 20 years, there was a little bit of discrepancy between effort and landing -- probably suggests some increase in catchability.

The bait landings, which comprise of about 10 percent of the total landings, come mainly from Virginia and New Jersey. The fisheries-independent index, which we used in this assessment, was a composite index from several seine surveys, but it was put together in time series from 1959 to about '72.

It was a Chesapeake Bay index only, and from '73 to '87 was from Chesapeake Bay and North Carolina. Then from '87 on, it was a composite index from all those states that I indicated, from all regions. This index, as you can see, fluctuated.

It was high during the '70s and '80s, and it went down to low levels in recent years. As to the term of reference, Number 1, the panel accepted the accuracy and suitability of landings data.

The panel also agreed with the committee on admission of minimal recreational data, and I felt that is not an issue. Also, the panel recommended developing an index of adult abundance. There was some data available to the panel that we looked at, in particular the commercial purse seine effort and the captain's daily fishing reports that were available from 1987 on.

Also, we recommended developing an index jointly with fishermen.
On the same terms of reference, the panel recommended to investigate the current productivities, to develop protocols to quantify contribution of different nursery areas, in particular the Chesapeake Bay, and to initiate the new research to quantify the contribution of potential nursery areas.

The panel also accepted the new maturity schedule that was revised. On the same term of reference, Number 1, on data the panel recommended to keep the change that was made in the natural mortality that covers all ages and replace it with the old constant M over all ages.

The panel also recommended for the next assessments to present the output of the MSVPA for review. We didn't have those outputs during the review, so we couldn't judge the MSVPA, but the panel recommended enhancing the MSVPA in the future to include all key predators and prey and to assess the key sources of predation mortality to evaluate comparable patterns.

The panel also recommended updating the fecundity at age and maturity ogive. I think this assessment used an old maturity ogive and fecundity, and we recommended to look at some new information that was available; and also to evaluate the historical change in size at age, which could impact future forecasts.

On the second term of reference, which is the model, in the past, as you all know, the menhaden assessment used a typical Murphy VPA or end-tuned VPA, as called, that does not include the fishery's independent data.

This is a new model that was used. It's a forward projection. It's not a backward calculation, as done in the traditional VPA. It's a forward projection that's based on the stock recruit relationship that was selected, either a Beverton, a Holt or a Ricker model that estimates age zero, and then forward the population numbers in time, using the stock recruit relationships.

The panel looked at the new model basically to summarize the term of reference number to the model. The panel agreed with all aspects of the model. They approved the new model.

We agreed with the weighting used in the model. We agreed also with the fisheries-independent index that was used, and also the model didn't see any retrospective pattern in the model.

Moving on, on the stock structure this assessment assumes a unit stock. The panel recommended to look in the future for other available data to confirm the unit stock that is being used in the assessment and also to evaluate the pattern of M at age over time.

We are assuming a constant M over time but variable by age, so we are recommending looking at that over time. On the same term of reference, Number 2, the panel recommended to investigate residual patterns of numbers at age that we observed in the output of this model and develop the measures to screen multiple models.

What we had was a forward-projection model that estimated the numbers at age over time, and there were no other available models to assess the validity of those numbers, in particular the age zeros, because the age zeros were much higher than the usual VPA that was done for a number of years before.

On the reference point term of reference, in the past assessments, as you know, I believe the fisheries management that was done in the last 10 or 15 years was based on the F-Max, the target fishing mortality, and the SSB that was calculated by the VPA.

The current assessment changes the reference point, as was indicated just recently. It changed the reference point because of the new modeling. The new modeling allows calculations of certain parameters that we feel are a better measure for biomass, and in particular fecundity.

But, to keep the Fmax as a reference point, as was done before, this model did not calculate the F-Max in a good way. F-Max converts to infinity, so there was no reasonable number to calculate with this type of modeling.
This table pretty much summarizes just the old benchmarks and the new benchmarks. The F-Max for target -- I'll just go very quickly on this -– the F-Max target in the old benchmarks was 1.04.

The new F target is 0.75. The SSB was about 37 kiloton in the old benchmarks, and now it's based on the fecundity in trillions. It's about 26.5 to 26.6.

This graph is an output of age zero from the model. It pretty much shows a decline in the last 10 years with a good year class in 2002.

The fishing mortality, as calculated with the forward-projection model, is right on target in 2002. The first line below is your target. The line above is the threshold, so we're right on target.

The SSB, we're above the threshold for it and we've been above the threshold for a number of years now, since 1970, as indicated by this model.

In the control plot, the 2002 datapoint, the right panel is what we want to be. In 2002 fishing mortality is right on target and SSB is above the threshold.

This is just a summary for the term of reference, three biological reference points. The panel agreed with change to population fecundity, which improved the measure of productive capacity of the stock.

The panel agreed with the proposed F target. Deviation of F from target would not result in overfishing. The panel agreed with the new benchmarks of stock status. The stock is not overfished and overfishing is not occurring. I think, with that, I'll stop here.

CHAIRMAN BORDEN: Questions for Najih. Tom Fote.

MR. FOTE: Najih, the fecundancy of menhaden has always been very confusing to me, because I look at striped bass. We know that we protect the females and basically let them spawn. That will produce over the years, and the same thing with summer flounder and weakfish.

What I've been told over the years, there doesn't seem to be a correlation between what is available to spawn and what it does to some of -- the worst years we've had of mature fish is some of the best spawning we've had.

Now, this is a hearsay argument in my head. I'm trying to get some more clarification on that over the years. Did I make myself clear?

What I've been told is unlike striped bass, unlike weakfish, unlike summer flounder, that what we have in egg production, actual success of a year class, doesn't, a lot of times, depend on how many females that are out there that are mature to basically produce those eggs.

We've had years that we've found an abundance of small fish when there hasn't been a lot of females that produce the fish, or years that there have been a lot of females out there to spawn, and that hasn't occurred.

So, that's what I'm trying to figure out. Do environmental factors play a major role in this more so than maybe with other species?

MR. LAZAR: The panel had almost a half-a-day discussion on ecological factors that affect this stock, and there are a lot of indications that this stock -- at least the epicenter of the reproductive stock has shifted from southern areas to some northern areas.

The recruitment, which is not captured with a lot of surveys that we have in this model, they might indicate that the recruitment is low, but there are indications where big year classes are observed in the northern part of the East Coast, as far north as Maine, but those are not captured with these in-shore beach seine surveys.

CHAIRMAN BORDEN: Tom, you need to follow up? If not, I'm going to go to Bill.

MR. FOTE: I know that answered part of my question, but what I'm saying is how do we get all these young, immature females in the northern part of the range when there's not enough females to do that? That's what I'm trying to get a handle on.

MR. LAZAR: I'm sorry, I didn't get that.

MR. FOTE: When we basically see, like in the last couple of years, a large production of peanut bunker up in Maine, Rhode Island, New Jersey and areas like that, and we don't see a large abundance of the older, mature fish.

And years that we had the older, mature fish, we didn't see abundance of small peanuts. I'm trying to figure out a relationship between the fecundancy of the females and what we actually have.

MR. LAZAR: I don't know.

CHAIRMAN BORDEN: Let Najih think about that. Bill.

MR. GOLDSBOROUGH: Thank you, Mr. Chairman. Having participated in the peer review, I think there is a point or two more that I'd like to make that speaks to some of the issues raised today.

It is true that the peer review concurred with the stock assessment finding in that last line there, that the stock is not overfished, and overfishing is not occurring on a coast-wide basis. There is a key clarification that was in the report.

But to take it further, the panel also concluded that the coast-wide stock assessment is not an effective tool for identifying localized depletion. It went on to recommend that research be conducted to investigate the possibility of developing regional reference points to deal with that problem.

CHAIRMAN BORDEN: David.

DR. PIERCE: Mr. Chairman, are you looking for us to make a decision here today to change the biological reference points based on the recommendations provided by --

CHAIRMAN BORDEN: Actually, that was my original intent. Just so everyone is clear, if you look on Page 9 of the 2002 review of the fishery, there is a recommendation there at the top of the page, which essentially frames the recommendation of the committee.

Given the time constraints we're operating on, my recommendation to the committee would be to not make the decision today, to basically schedule this on the March agenda for action. I don't want to cut off Bill.

Bill is going to give us an advisory committee recommendation, but I just want people to understand there probably is not adequate time for everybody around this table to discuss and debate the issue, and we certainly don't want to make a decision that isn't carefully constructed.

DR. PIERCE: Okay, thank you. If I may, Mr. Chairman, just to follow up.

CHAIRMAN BORDEN: Yes, David.

DR. PIERCE: I'm very glad that's the conclusion you've reached, because I'm not prepared today to make that kind of a decision, especially in light of the fact that I know that the initiative for all of this work to focus on population fecundity is the fact that we really don't have a good stock recruitment relationship right now.

That's identified on Page 54 of the report, recommendations and findings. I had assumed, therefore, that there's some relationship good enough for us to use regarding stock recruitment, or let's say recruitment versus population fecundity that we can use, but I don't see it.

On Page 112 and on Page 113 of the assessment document, I see plots of the number of maturing ova. That's the population fecundity versus recruits to age zero.

I look at these figures, and I see no improvement in the relationship regarding the stock and recruitment, so I'm still very unclear as to why this peer review actually led to their recommendations that, indeed, population fecundity is the way to go.

I don't see it, yet I'll look into it a little bit deeper, but now I'm just very uncertain as to why the change is being recommended.

CHAIRMAN BORDEN: Najih, do you have an answer for that question?

MR. LAZAR: It's all based on the new modeling. You have a forward projection that is used right now, and it relies on a stock recruit relationship.

I agree with you that the stock recruit data that's available right now does not offer the best. It offers, with the Ricker model, the most reliable stock recruit relationship you can get with the data that's available.

With that, you have to use it to use this forward-projection model to estimate age zeros and forward the ages in time. It was recommended that the best way to assess the reproductive capacity of a stock is to use the fecundity.

We have very good data on fecundity by age for menhaden. It's really a surrogate, if you want. It is almost the same as a biomass-based benchmark. It is better when you have fecundity data to use.

CHAIRMAN BORDEN: Any follow up, David? Anyone else, a question on this? Yes, Lew.

MR. LEW FLAGG: Thank you, Mr. Chairman, just a thought I had. I wonder if we're not going to make a decision on this today, and I think it's well that we don't, if we could ask the technical committee to perhaps give us a side-by-side analysis of the SSB approach versus the population fecundity approach and kind of give us just a list of maybe some of the pros and cons of each approach, so that we'll have a little better sense for what we're moving into. I think that would be very helpful.

CHAIRMAN BORDEN: All right, any comments on that suggestion? Any objections to that suggestion? That's another task for the technical committee, then. They will come back to us with a side-by-side comparison of the two. All right, Tom Fote.

MR. FOTE: Yes, and also the confidence levels in those projections. I want to know how much are we confident in the projection of the fecundancy. Is it one standard deviation; is it two or is it three? What's the probability?

CHAIRMAN BORDEN: Okay, any other points here? Let me move on and take the advisory panel recommendation on this and then we'll come back and formalize a position on this issue.

ADVISORY PANEL REPORT

MR. WILLIAM WINDLEY JR.: Okay, we had the opportunity to hear the landings reports, and then we were given the new indices and the stock assessment by Matt Cieri. Three of those seemed to be important. I think you guys have picked them out already, the mortality being based across age groups.

If you look at the multi-species virtual population, you will see that they show that younger fish have much greater mortality, so if they have the standard across-the-board mortality rate, not only is it not accurate, but it doesn't allow it to change as the stock changes.

It doesn't give it a direct relationship to the stock makeup, because if it's something that is dependent on age, then as the stock makeup changes, then the mortality changes, so we thought this was a much more accurate way to look at that.

The same thing was true with the fecundity aspect because it gave fecundity a range over age so that the maturing ova were rated in degrees of maturity up to full maturity, like we've done with striped bass so that, again, there would be a great improvement when we're looking at changes in stock structure from time to time.

It would help equate the fecundity to stock structure. We have recommendations based on the SEDAR and peer review. The AP agreed with the peer review panel that the multi-species virtual population analysis should be more inclusive of a broader scope of predators, such as marine mammals, sea birds and other fishes.

The AP agreed with the peer review panel that the use of age-specific values for M were an improvement over the previous singular M estimate for all age groups.

The AP supported the change from spawning stock biomass. Fecundity methodology provides a clearer spawning potential and rates it to current stock structure.

We expressed the same concerns as the SEDAR group with the inability to the model to address local depletion. The review panel suggested, and I quote, "The investigation of models to determine the proportions of the stock that may reside in a particular area in a given season and where the regional reference points can be developed." The AP concurs.

Much discussion developed around the peer review panel's concerns that though environmental needs are mentioned in this stock assessment, no new data or analysis are presented.

The panel noted that the 2003 peer review report -- that in the peer review report, it states that in the 1999 peer review, the panel concluded that the management had specified an allocation goal for menhaden as forage fish or filter feeder.

It will not be possible to develop a reference point to concern menhaden's ecological function. The current review panel recommended that management objectives be established by the management board and given to the technical committee, so that they may determine what kind of scientific information will be useful for ecosystem-based management decisions.

The AP recommends looking at the ecological role of menhaden, including their role as forage and filter feeders in the management plan.

The AP feels that presently we have not established clear goals and objectives needed to address these issues. The AP feels the management board needs to take the first step by clearly defining their goals so that the technical committee can provide guidance in achieving these goals.

It was suggested that the board needs to give the technical committee a clearer picture before the technical committee can move forward.

The recommendation was made that if the board decides to do an addendum or an amendment as a result of the new targets and thresholds, they should, at the same time, incorporate the issues of menhaden's ecological roles.

Under the heading of "other research needs", we feel that there is a need for additional research investigating the disappearance of menhaden in the New England waters in the northern part of the range. Thank you.

CHAIRMAN BORDEN: All right, you've heard the advisory panel recommendation. Any comments or questions for Bill?

MANAGEMENT IMPLICATIONS FROM 2003 STOCK ASSESSMENT REPORT

If not, we'll move back to the issue of discussion on the management implications from the stock assessment report. It seems to me that where we are is that there are a number of technical chores that need to be completed prior to consideration of the issues before us.

I think it's reasonable to have those items completed between now and March. Without objections, we'll set the technical committee with written tasks on those and bring recommendations back to the board meeting at the March meeting. Any objections? Bill.

MR. WINDLEY: Mr. Chairman, could I ask that you also include the AP report in that task so that – there's a lot of overlap, but there are some things that aren't the same.

CHAIRMAN BORDEN: The AP report will be distributed to the technical committee. Yes, Bill.

MR. GOLDSBOROUGH: Would that

charge also include the peer review panel recommendations?

CHAIRMAN BORDEN: Peer review –-

MR. GOLDSBOROUGH: Not to complete the tasks but to include them in the overall evaluation, because it's all relevant.

CHAIRMAN BORDEN: All right, comments to that point. Any objections to doing that? No objections, then that will also be included. So, there is no action at this point, and we'll move on with the advisory panel nominations.

AP NOMINATIONS

We have four advisory panel nominations that have been submitted: Chuck Casella from Massachusetts; Louie Lachance from Rhode Island; Ed Cherry from New Jersey; and William Wilson from Delaware. Are there any comments or questions about the nominations? Bill.

MR. ADLER: **I'll make a motion to accept these people on the advisory panel.**

CHAIRMAN BORDEN: All right, we have a motion to accept. Seconded by Bruce Freeman. Any discussion? Any objection to approving the nominations as submitted? **The nominations stand approved.** Any further business to come before the board? Tom.

MR. FOTE: Dave, just a quick question. 7:30 yesterday morning was a long time ago for me in the last two days with all the good times we have had, did we have a –- I'm trying to remember in the action plan whether we allocated enough money if we have to do an addendum to this plan this year, and I can't remember if we did or not.

CHAIRMAN BORDEN: Bob is shaking his head, yes.

ADJOURNMENT

CHAIRMAN BORDEN: Any further business? If not, the meeting is adjourned. Thank you very much for your indulgence on the timing issue.

(Whereupon, the meeting adjourned at 3:05 o'clock p.m., December 17, 2003, at 3:05 o'clock, p.m.)

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