

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

**Crown Plaza Hotel Old Town
Alexandria, Virginia
August 20, 2008**

Approved October 21, 2008

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ATTENDANCE

Board Members

Terry Stockwell, ME, proxy for Lapointe (AA)	Bernard Pankowski, DE, proxy for Sen. Venables (LA)
Pat White, ME (GA)	Tom O'Connell, MD DNR (AA)
Sen. Dennis Damon, ME (LA)	Bill Goldsborough, MD (GA)
Rep. Dennis Abbott, NH (LA)	Russell Dize, MD proxy for Sen. R. Colburn (LA)
Doug Grout, NH (AA)	Steve Bowman, VA, (AA)
G. Ritchie White, NH (GA)	Catherine Davenport, VA (GA)
David Pierce, MA, proxy for Diodati, (AA)	Louis Daniel, NC (AA)
William Adler, MA (GA)	Jimmy Johnson, NC, proxy for Rep. Wainwright (LA)
Vito Calomo, MA, proxy for Rep. Verga (LA)	Bill Cole, NC (GA)
Mark Gibson, RI (AA)	John Frampton, SC (AA)
Sen. Susan Sosnowski, RI (LA)	Malcolm Rhodes, SC (GA)
David Simpson, CT (AA)	Robert Boyles, Jr., SC (LA)
James Gilmore, NY (AA)	John Duren, GA (GA)
Pat Augustine, NY (GA)	William Sharp, FL, proxy for G. McRae (AA)
Peter Himchak, NJ, proxy for D. Chanda (AC)	Bill Orndorff, FL (GA)
Erling Berg, NJ (GA)	Steve Meyers, NMFS
Gilbert Ewing, NJ, proxy for Asm. Fisher (LA)	Jaime Geiger, USFWS
Jeff Tinsman, DE, proxy for P. Emory (AA)	A.C. Carpenter, PRFC

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

Ex-Officio Members

Alexei Sharov, MD DNR

Staff

Vince O'Shea
Robert Beal

Braddock Spear
Chris Vonderweidt

Guests

Mark Alexander, CT DEP
Wilson Laney, USFWS
Ken Hinman, NCMC
Frank Kearney, CCA-VA
David Nobles, CCA-VA
Marek Topolski, MD DNR
Charles Lynch, NOAA
Ben Landry, Omega Protein
Ron Lukens, Omega Protein
Jeff Kaelin, Omega Protein
Clinton Scheynayder, Omega Protein

Jay Odell, The Nature Conservancy
Laura M. Lee, VMRC
Tom McCloy, NJ DFW
Dave Ellenton, Cape Seafoods
Arnold Leo, Baymen's Assn.
Sean McKeon, NCFA
Jack Travelstead
John Clark, DE DFW
Keith Whiteford, MD DNR
Pete Jenner, Stevensville, MD

The Atlantic Menhaden Management Board of the Atlantic States Marine Fisheries Commission convened in the Presidential Ballroom of the Crowne Plaza Hotel Old Town, Alexandria, Virginia, August 20, 2008, and was called to order at 9:45 o'clock a.m. by Chairman Patten D. White.

CALL TO ORDER

CHAIRMAN PATTEN D. WHITE: Without further ado, I'll start the meeting.

APPROVAL OF AGENDA

We need approval of the agenda. Any additions or deletions to the agenda? With no objection, then the agenda is approved.

APPROVAL OF PROCEEDINGS

CHAIRMAN PATTEN D. WHITE: Proceedings from the October 30th meeting; does anybody have any additions or deletions to the proceedings? Seeing none, I'll consider the proceedings approved.

PUBLIC COMMENT

CHAIRMAN PATTEN D. WHITE: 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 up at the beginning of the meeting, and I have two people. For agenda items that have already gone out for public hearing and/or have 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 length of each comment. With that said, we have two people that have signed up for public comment. Ken, would you like to come forward.

MR. KEN HINMAN: Thank you, Mr. Chairman. My name is Ken Hinman. I am president of the National Coalition for Marine Conservation in Leesburg, Virginia. I'll be very

brief. I just wanted to pass on a recommendation to the management board. At this stage we are now halfway through the five-year cap that has been placed on the menhaden reduction harvest in the Chesapeake Bay.

With the implementation of this cap, the board pledged to study localized depletion and its impact on striped bass and other predators; and by 2010 to hopefully replace this temporary cap with a long-term management program that specifically takes into account menhaden's unique role in the coastal ecosystem.

At this point the board really needs to be thinking about what has happened over the last two and a half years both in the fishery and in the research that is underway; where we need to be in 2010 when the cap expires and how we're going to get there. There is, as I said, research underway looking at issues of localized depletion in the Chesapeake Bay as well as other concerns about the stock and the adequacy of the forage base. There is going to be a new stock assessment performed in 2009.

That's not very far away and very soon the ball that you have handed to the scientists is going to be tossed back into the management board's court. I am here today to urge the board to take the step of appointing a working group that will develop ecological reference points by the completion of the 2009 stock assessment.

What I mean is that this working group should be responsible for developing various alternatives for a threshold population size of menhaden both in the Chesapeake Bay and coastwide to meet ecological needs; a target age structure within that population and a total mortality rate that includes a specific estimate of predation demand to serve as a proxy for allocation of menhaden as forage.

That's really all I have to say. I'm going to listen to a lot of the discussions here today. I don't know if there will be any opportunity for comment later, but I did want to put that recommendation before the board because I think we are at a critical stage where two and a half years goes very quickly. I think the board really needs to be prepared for the scientific information it gets back from the research that is underway and the next assessment and can act on

it in time to have a new management regime in place in 2011. Thank you.

CHAIRMAN WHITE: Thank you very much for your comment, Ken. Ron Lukens.

MR. RON LUKENS: Thank you, Chairman White, I appreciate the opportunity to be here on behalf of Omega Protein to provide some comments to the board. My name is Ron Lukens and I come to Omega Protein after 20 years of serving with the Gulf States Marine Fisheries Commission. I'm really glad to be here and be able to reacquaint with a number of old friends that I've met over the years through my association as a commission employee.

I served 20 years at the commission and seventeen of those were as assistant director. Omega Protein has brought me on board and asked me to assist the company in trying to understand scientific language, documents that are presented, help them understand stock assessment processes and those kinds of things, both for Atlantic and Gulf menhaden, and to assist the company in establishing some collegial working relationships, better working relationships, if you will, with scientists and managers who are involved in menhaden work.

I also at this point want to bring attention to the letter which was just handed out to you. It is a letter that we prepared for your eyes. You have an important job to do here; we all know that, and the work you do has the potential to affect the lives and livelihoods of a lot of folks. We really encourage you to read the material that we've provided for you, and I hope you'll take the opportunity to do so fairly soon.

I would like to take this opportunity to report some positive developments in the fishery, starting with the fact that during the 2008 season so far fishing has been very good. Catches have been consistent with the most recent five-year average of catches. This year we've seen menhaden appearing farther north, earlier and in larger numbers than in recent past years.

All observations are telling us that the 2005 year class of menhaden is strong and it is very well represented as age three fish in this year's catch. In addition, while not currently substantiated, we believe that there are indicators that the 2008 year class will be strong as well. It gives us

some pause to be optimistic and we're eagerly watching that development.

Last year we saw much of our catch come from ocean sets with sets in the Chesapeake Bay reduced from recent past years. This is due primarily to the abundance of large fish with high oil yields occurring outside the Bay. As you know, it only makes good business sense to fish where we can get the highest return for our effort.

The variability of occurrence with menhaden being what it is, we have come to expect shifts in the location of our sets as a routine part of the daily work. We're pleased that the most recent stock assessment concludes that Atlantic menhaden are not overfished and are not currently undergoing overfishing.

As you know, Omega Protein has received certification by Friends of the Sea for sustainability, low impact with the ocean bottom and associated habitats and extremely low bycatch. While this is all good news, we recognize that the single most critical factor facing long-term sustainability of Atlantic menhaden population is the continually declining coastal water quality, especially in Chesapeake Bay.

This is an issue that I don't think we can raise enough. It's one that is multi-disciplinary and a lot of people and a lot of agencies are going to have to be the solution. Omega is pleased to see the amount of research being conducted toward better understanding of Atlantic menhaden, but we are concerned that little has been produced to date that will assist in future decision-making.

We urge the ASMFC and NOAA Chesapeake Bay Office to continue to support these and other important research efforts to improve our ability to effectively manage this important species. Additional research aimed at stock identification through genetics analysis and food web relationships through stable isotope analysis should be considered as research efforts as we move forward, and there are others that should be done as well.

Omega Protein is pleased with the current status of the fishery, and we look forward to continuing our cooperative working relationship with the ASMFC Atlantic Menhaden Management Board

and others interested in effective management of the Atlantic menhaden population. Thank you again, Chairman White, and I appreciate the opportunity to speak. This concludes my remarks.

ELECTION OF VICE-CHAIR

CHAIRMAN WHITE: Thank you very much, Ron. I appreciate it and I appreciate all the help that Omega has given the board. I find myself all alone up here without a vice-chair, so we need to have nominations for a vice-chair. Nominations are open. Yes, Jaime.

DR. JAIME GEIGER: Mr. Chairman, I would like to nominate George Lapointe as vice-chair of the Menhaden Board, please.

CHAIRMAN WHITE: Seconded by Pat Augustine. That's one nomination; are there any other nominations to come before the board? If there are no other nominations, nominations are moved to be closed. Without further ado, I now have a vice-chair. Thank you, George. Plan Review Team report is Brad Spear.

PLAN REVIEW TEAM REPORT

MR. BRADDOCK SPEAR: Thank you, Mr. Chairman. The plan review team met earlier this year to talk about compliance and review the fishery management plan implementation. To quickly go over the 2007 fishery, the coastwide total harvest, both bait and reduction, was a little under 220,000 metric tons. If you look at the plan review team report that was included in the briefing CD and look at Figure 1, you can get a perspective of where that fits with historical landings.

The reduction harvest was up 11 percent from 2006 to 174,000 metric tons, and that's approximately a 5 percent increase from the previous five-year average. Bait harvest was up about 70 percent from 2006 up to 44,000 plus metric tons, and that's about a 30 percent increase from the previous years.

The biggest increase in bait landings was seen in the Mid-Atlantic Region. There is a continuing increasing trend in bait landings in New England, albeit small compared to the rest of the coast, but it is expanding to levels seen in years past. All states were found in compliance with Amendment 1. There is the one main reporting

requirement and all states were compliant with that.

South Carolina, Georgia and Florida requested de minimis and the plan review team found that they all qualified so we recommend granting them de minimis status for 2008. The other compliance criteria for the management plan is the Addendum III Harvest Cap. In 2007 a cap was – it was actually 100,222 metric tons, and the harvest was approximately 85,000 metric tons. Using the calculations in Addendum III, the harvest cap is now set for 2008 at 122,000 metric tons, approximately. That concludes my report.

CHAIRMAN WHITE: I need a motion from the board to accept the recommendations of de minimis status for the three states. I'm sorry, I need a motion from the board to accept the de minimis status for the three states. Pat Augustine.

MR. PATRICK AUGUSTINE: Move to accept the status of the three states.

CHAIRMAN WHITE: Second by Bill Adler.

MR. AUGUSTINE: How about the PRT report; accept that, too?

CHAIRMAN WHITE: In the same motion? Any objections of the de minimis status? Seeing none, we will accept that. I need acceptance of the – you're jumping ahead of me?

MR. WILLIAM A. ADLER: De minimis? Can I make a motion that the board accept the recommendation for the three states to be de minimis; that being South Carolina, Georgia and Florida.

CHAIRMAN WHITE: We just did that and you seconded it.

MR. ADLER: I thought that was the report.

CHAIRMAN WHITE: No. Now I'm accepting a motion to accept the report. Pat Augustine has so moved; Bill Adler seconds.

MR. ADLER: Move to accept the PRT report.

MR. PETER HIMCHAK: Mr. Chairman, I never had an opportunity to ask a question on the report. I know that the bait landings are

becoming a significant component of the total harvest, and it was reference a 70 percent increase in the Mid-Atlantic. I know out of Cape May we're doing really well, back up to 35 million pounds where we were about ten years ago. At the same token, could you define Mid-Atlantic? Does include the Chesapeake Bay bait landings? I mean, how are the bait landings in the Bay doing? Because we have capped the reduction fisheries, so where bait landings going in the Chesapeake Bay.

CHAIRMAN WHITE: Brad, do you have a better breakdown of that?

MR. SPEAR: Thank you, Mr. Chairman. If you look at Table 2 in the fishery management plan review, the Mid-Atlantic is qualified as New York through the Maryland coast. The Chesapeake Bay bait landings are broken out separately; however, both the Mid-Atlantic coast and the Chesapeake Bay landings have increased fairly significantly since 2006.

CHAIRMAN WHITE: Pete, do you need more clarification on that?

MR. HIMCHAK: No, Mr. Chairman. I just wanted to put it in perspective, that's all.

CHAIRMAN WHITE: Okay, I appreciate that. Back to the motion, is there any objection to acceptance of the report? Seeing none, the report is accepted. All right, we will go on to an update of the 2007 and 2008 fishery with Mr. Smith.

UPDATE OF THE 2007 AND 2008 FISHERY

MR. JOE SMITH: Thank you, Mr. Chairman; I appreciate the opportunity to speak to the board today. It was Brad's idea. Pretty much most of my slides today were given at the TC meeting on July 8th in Norfolk. I've got some updates; a month or so has transpired. The first few slides, I'd like to go over the 2007 year and then give you what information I've got on the 2008 fishery.

As Brad alluded to, last year, 2007, the total landings for reduction is about 175,000 metric tons, up 11 percent from the '06 reduction landings and up 5 percent from the previous five-year average. Where we have been in the last 20 years or so, just a plot of catch and effort – I think the area to key in on this graph is from

2000 on to the right. 2000 is the year Omega Protein went to ten vessels.

Beaufort Fisheries was still in the fishery then. Beaufort Fisheries dropped out in '04-05. So since about 2000, the fishery has been operating with ten to eleven vessels. The fishing effort has been bouncing around that 300-vessel week level, and landings have been around 150 to 175,000 metric tons.

Last year ten vessels active. Omega had the only plant. Beaufort Fisheries, as I had said, had closed. The property is currently being razed in Beaufort for condo-type development. Three bait vessels operated last year in Virginia, the so-called snapper rigs, down one from recent years. Last year there were frequent unloads at the reduction factory. When the bait market gets soft or the fish get too small the bait boats will occasionally unload at the fish factory.

About five to six vessels fishing out of New Jersey for bait and two out of New England; i.e., Narragansett Bay. Last year in New England, the third consecutive summer fish were abundant in Southern New England waters; another warm winter, '06-07. The fish arrived in Rhode Island early, good catches throughout the summer, and, again, good numbers of peanuts coming out of the estuaries in Southern New England.

A comment from one of the papers, "They were so thick you could walk across them." Virginia and Mid-Atlantic last year, the first fishing started as usual, about mid-May, 14th of May, good catches, but most of the catches last summer, at least June and July, down bay off of the eastern shore of Virginia and around the mouth of the bay; August and September, good catches up bay; October, most catches off the eastern shore of Virginia, the migratory fish, if you will, coming from farther north; and very little fishing in November/December, a pretty much weather-related fishery at that time and pretty windy weather, very few sets those two months.

A picture says a thousand words. Here is the extent, the range, if you will, of the current purse seine reduction fishery. Most of the sets are dense packed into Virginia waters, of course, but they range as far north as almost Manasquan and Shark River, New Jersey; and on occasion, good weather in the fall, November, early December,

the Virginia boats will venture down around Hatteras.

I think a couple of sets made Ocracoke last year, almost to Cape Lookout in November. I'll walk your through month by month. May of last year, here are the set locations in the Bay, up bay and then down bay, mouth of the York, mouth of the James area, Ocean View area. June, a considerable amount of fishing around the eastern shore peninsula there, mouth of the bay and the eastern shore barrier islands, with some fishing off Delaware Bay, also.

There is more of this bimodal thing going on, July and August in the Bay, fishing up bay by Smith Point; and then as in previous months, down bay, mouth of the bay, and then also considerable fishing off South Central Jersey; kind of the bimodal thing again in the Bay, but a bit more exaggerated in August; September, more of a shotgun pattern in the Bay with some fishing on some of the migratory fish off of eastern shore; and then October, very little fishing in November in the Bay; and December, just a few sets off of Virginia Beach.

Age compositions last year, bait samples from Narragansett Bay, about 60 percent age threes. The next pair of bars, if you look at them in tandem, would be the reduction fishery age composition and then the New Jersey bait fishery, a lion's share of the fish were twos in the reduction fishery taken off the Mid-Atlantic; almost an even split, twos and threes in the bait fishery in New Jersey.

More a similar split in the Chesapeake Bay between the reduction and bait fishery, a lion's share of the catch was age twos, that '05 year class last year; and then the fall fishery, age twos; and then the bar to the right would be the coast-wide age compositions, mostly age twos. Just another snapshot of the fishery; the size of the pie as proportional to the catch – I have lumped catches and age composition of the catches by 10-by-10 minutes cells, so the size of the pie is proportional to the catch in that cell.

The more red you see, the more age twos; the orange you might see is age ones caught mostly in the Chesapeake Bay; and as you go farther north you tend to get more age twos and threes off Jersey. And a parting shot at Mr. Wheatley's factory – I thought for nostalgia I'd put this here

to end the '07 portion of my presentation. Any questions on the '07 before I launch into '08?

EXECUTIVE DIRECTOR JOHN V. O'SHEA: Thanks, Mr. Chairman, just one question, Joe. On the New Jersey five to six – given the report of the increased landings in the Mid-Atlantic, do you have a sense of the size of those five boats working out of New Jersey?

MR. SMITH: I think they're probably a hundred foot or so. They're nothing like the reduction boats in the Bay. I think there are three or four out of Cape May and a couple out of Point Pleasant, and I think they're more employing the run boats now, catch boats, and then running the fish into either or Loudon's or Point Pleasant.

CHAIRMAN WHITE: They'd like a little clarification of what your slide is.

MR. SMITH: That's the old scrap shed, the steel skeleton of the Beaufort Fisheries there at the east end of Front Street in Beaufort, Wheatley's Plant, where the meal was stored in piles there, top and left, tearing that apart. That's gone now. I think the slab is actually gone, too. The real guts of the factory is bottom right.

The old evaporators, the stacks, the cookers are to the left of that slide, and then there was just a staging area for meal in that tin area to the right, and then the meal would eventually go over to the other scrap shed. I think the developer is planning on something like 200 units in there.

CHAIRMAN WHITE: There goes another access.

MR. SMITH: Yes. In 2008, again, the only reduction factory on the east coast, Omega's Plant in Reedville. Landings through the 31st of July, about 53,000 metric tons, down about 20 percent from last year and down 12 percent from the previous five-year average. It hasn't been a question of availability of fish this year. The plant has had persistent problems, breakdown problems with cookers, boilers.

Essentially the plant can't handle the fish that are coming in. There have been many weeks that vessels have not fished Thursday or Friday because they're loaded on Wednesday and just sit at the dock waiting to unload and act as floating raw boxes essentially, holding the fish until the factory can handle them.

The story in Virginia this year, fishing got started late, usually mid-May, boats didn't get out until the 27th I think was the first fishing date; early June, good signs of fish in the Bay. Most of the sets were up bay near the fish factory. The smoke from those forest fires in northeast North Carolina were really – it prevented the spotters from getting up and seeing fish for a couple of weeks there, so it did impact their ability to find fish.

Good catches; again, sort of like the last couple of years, down bay in late June and July, best catches; and July to date, good catches up bay again, near the factory, Rappahannock River and around the Maryland Line. A snapshot of where the fishing has been going on this year so far; fishing locations again pretty much concentrated in the Bay, but a considerable amount of fishing off South Jersey and Central Jersey.

Those offshore dots are indeed real. There has been considerable fish 15 to 20 miles off DELMARVA this summer. Fishing this May, very little activity; like I said, it was only the last few days of May that the fleet fished; the first half of June, fishing mostly up bay near the factory, mouth of the Rappahannock River; a little bit of fishing in South Jersey; the second half of June, more fishing effort up off of Jersey and the mouth of Delaware Bay; the first half of July, considerable round of fishing in the Bay; and then the last half of July you see this bimodal pattern again going on.

Age compositions this year thus far, in the Bay removals by reduction and the bait boats, very similar; a lion's share of the catch are those are twos, 87, 88 percent age twos in those two fisheries; and then up off of New Jersey, the reduction boats have been bringing back mostly age threes; and the bait age compositions, about 65 percent age threes off of New Jersey.

Just some bullets regionally – New Jersey bait vessels started fishing the first week of June. The Omega pilots flew up to Jersey and the fleet fished in June and July 10 to 15 miles off the beaches up there. I think we all heard the stories about the pods of dolphins in the Navasink River and they indeed were seen to be feeding on schools of menhaden up there; and large schools of fish.

They're not small bunches that have been reported off Jersey; just exceptionally large schools. A couple asterisks there; Jersey has been having a persistent upwelling event this year, which may play into the last bullet. Last week both the bait and the reduction boats were fishing 30 to 32 miles off of South Jersey on menhaden, which in my tenure at Beaufort since '83, that's the farthest offshore I can recall the fishery operating in mid-summer off the Mid-Atlantic.

Narragansett Bay, fourth consecutive summer we have seen good signs of fish up there. The Providence Journal actually reported menhaden schools in Narragansett Bay April 14th, which was rather early. Rhode Island DEM flies an aerial survey in conjunction with the commercial spotter pilot up there for bait. I think the estimate was twice as many fish in the Bay this May as it was in 2007.

The two boat operations up in Narragansett Bay for bait made good catches through June and July. Most recently it seemed like the reports that the most of the fish are moving up in the rivers where they're unavailable, and the two Rhode Island bait vessels, the reports are they moved to Portland, Maine, to fish.

Interesting stories, this year Maine, good numbers of fish; late May and June reported Casco Bay and vicinity. Brian Tarbox, who sits on the Menhaden Advisory Panel, reported good gill net catches in mid-July. I have heard there are up to three small seine vessels operating in Casco Bay and vicinity on menhaden. Through Matt Cieri, just as kind of a nickel knowledge kind of thing, Matt said landings through this July – he queried SAFIS and had 91 metric tons reported through early July.

I looked at Maine landings for menhaden the previous six years and it was just about 8 metric tons annually, so good landings in Maine. Those two bait boats from Rhode Island moved up to Portland just a couple of weeks ago and they made good catches in Southern Maine. I am told a couple of run boats ran the fish back to Gloucester, Massachusetts.

I think Maine has been deluged with some fresh water in recent weeks, and I have told the menhaden have gotten scarce. I fielded a couple of questions about data collection at the lab, and I thought I'd bring the board up to snuff about

data collection; and also considering we're going into an assessment year next year, in '09. We at Beaufort do get landings and age and size composition information from the reduction catch.

We've got a full-time sampler at Reedville who meets the boats and samples the boats and then I get the landings from the companies. One of the questions I fielded was do we also get size-and-age composition from the fisheries north of the range of the Omega boats, and the answer is yes. Pete Himchak and Brandon Muffley in the past have been on the technical committee from the state of New Jersey, and they have been tasked with putting together the coast-wide bait landings for the technical committee.

They usually report to the technical committee in the spring meeting and summarize bait landings by state by gear, so we do get those landings. We also acquire size-at-age composition of the catches from various sources, either Fisheries Service people, various state biologists and some other sources, but we do get age compositions of the bait catches Jersey and north.

Going into the assessment year, we'll merge those landings and size-at-age to produce a catch-at-age matrix for the bait fishery. We'll have one for the reduction fishery, and they'll be merged together for the assessment. Doug does not do the bait catch-at-age mergers annually, just during assessment years. So, just to fend off any questions about capturing data from farther north.

Interesting year this year – I put this slide together for the TC that met in July, and I had that comment in there. It was early July we met. Usually you don't see the fish kill reports until mid-summer, July or August, but in Jersey in April there were several fish kills blamed on avibreo – a rather spectacular fish kill in River Head, New York, in early May. I think Pat was a witness to that when I talked to him this morning; and then Fenwick Island had a couple of fish kills of age zero size fish in early June.

Subsequently Georgia has had reports of some small fish kills off Brunswick; Jersey has had some additional kills; and there was a pretty big kill in Pamlico Sound just a week or so ago. Finally, a parting comment about the '08 year class. I have been sitting in on the webinars that have been hosted by the Chesapeake Bay Office

and found some of Ed Hood's comments interesting.

He said he has been sampling in the Bay for 20 years and hasn't seen this many larval menhaden in quite a long time. That fish kill in Delaware, there were some comments by the Delaware biologists that they're seeing a good crop of juvenile menhaden. Our port agent in Northern Virginia reports seeing a lot of peanuts in the Rappahannock and Potomac River areas and their tributaries. One parting shot at a net reel at Jules Wheatley's factory, and I'll entertain any questions about the '08 season or any other questions.

CHAIRMAN WHITE: Questions for Mr. Smith? Vince.

EXECUTIVE DIRECTOR O'SHEA: Not so much a question, Mr. Chairman, but a comment, and just to publicly acknowledge the great help that Joe Smith has been to the ASMFC staff. I think this report is another example of the detail and the passion at which he pursues this. There has never been a time when we haven't been able to call on him and get a quick response and be very helpful. I would like to again publicly acknowledge and thank Joe for the great work that he has done to help us do our job at the commission. Thank you.

CHAIRMAN WHITE: And for me, also, Joe, the information you've sent me has been very helpful, and I appreciate that. We do have a question.

DR. DAVID PIERCE: Yes, thank you, Joe, that was a great job, but just one question. I couldn't help but notice your reference to the summer upwelling event that occurred off of New Jersey and how that seemed to affect the distribution of menhaden and some of the fishing. How were you aware of that summer upwelling event, and do you have any information regarding its duration and extent? We're always interested in these oceanographic phenomena that might change the distribution of fish.

MR. SMITH: Just general press releases. I think there has been persistent southwest wind this summer off of the Jersey coast, of course blowing the surface water offshore, upwelling coming back inshore. I had a couple of menhaden captains say they were three or four miles off Jersey recording water in the low

sixties; you move off ten or fifteen miles, and you're almost into 70 degree water.

This coupled with where they have been fishing year, the fish seem to have moved offshore ten-plus miles. Like I said, fishing 30 to 32 miles off the beaches is a real revelation to me. They're catching bluefin tuna 40 to 50 miles off the Jersey coast this year. There is a lot of forage out there that's pretty far off the beach. It kind of plays into that localized depletion things, too, I guess. They seem to have moved farther off this year.

CHAIRMAN WHITE: Any other questions for Joe? Seeing none, research program, Brad.

COLLABORATIVE RESEARCH PROGRAM

MR. SPEAR: Thank you, Mr. Chairman. Derek Orner put together most of this presentation, and I'll be giving it to the board on his behalf. The NOAA Chesapeake Bay Office has been funding a number of menhaden-related research studies, and I'll give you a brief update on a few of those studies and where the program stands.

Generally, the program solicits proposals and has a competitive funding process in place for various numbers of studies, including menhaden. Funding has been provided since 2005; and between 2005 and 2007 the funding was competitively awarded to proposals that were submitted. Because funding was slashed for the Chesapeake Bay Office in 2008, money was only allocated to the existing studies or multi-year studies.

Again, the Chesapeake Bay Office uses as kind of a guideline to categorize the different research studies the research areas that were in Addendum II for menhaden. The four research areas are basically menhaden abundance, predator-prey relationships, exchange rate in and out of Chesapeake Bay and recruitment studies. The Chesapeake Bay Office recently has been giving more emphasis or more focused priority to studies for exchange rates in and outside of the Bay.

Back in 2007 the office held a symposium in which one full day was dedicated to the menhaden-related research. Unfortunately in 2008 they weren't able to hold a face-to-face

symposium because of budget cuts and instead did a series of webinars or web-based seminars that people could call into and watch presentations on the internet.

Those four webinars were, again, grouped around kind of the research priority areas. Those were held late this spring. These are some of the qualifications of the presentations. All of the research that was presented was preliminary. These are ongoing studies. No formal reports have been written up and reviewed.

The Chesapeake Bay Office is coordinating most of the research or much of the research; however, they aren't funding all of them. There is a various suite of agencies and organizations funding the research. It will be up to those individual agencies to review the research through their processes, one of which is the ASMFC Technical Committee. Derek gives these presentations to the technical committee frequently, and Alexei may comment on a couple of the research projects from the technical committee perspective.

And, also, there is the NOAA disclaimer that the views of the research aren't necessarily representative of NOAA. To get in the details in the recruitment priority area, some of the findings that have come out recently is there is a peak hatch date seen off the Chesapeake Bay around mid-November. Around the mouth of the Chesapeake, the larvae appear to be 30 to 60 days old.

Recruitment appears to be patchy from year to year, and it's doesn't correlate with any sort of flow rates or directions that the researchers have seen. Playing into that variability, you will see high and low recruitment. Reiterating what Joe had mentioned about Ed Hood's study, there were large numbers seen in the 2008 survey. There is indication of a bimodal distribution of larvae, kind of a mid-Atlantic Bight and the South Atlantic Bight division.

For the population structure and exchange category, there are differences seen in spatial structure in the Chesapeake Bay based on otolith chemistry of juvenile menhaden. This is kind of a preliminary conclusion and this is one of those ongoing studies where more information will inform that. There is the potential for localized depletion if there is limited exchange between the Bay and the ocean.

It also appears that the population is resilient where you'll see high productivity in one area one year offset by high productivity in an area in another year. Looking at the predator-prey interactions, menhaden appears to be the most important prey for large striped bass off New Jersey and Virginia in their wintering grounds. Similarly, up-bay in 2006 and 2007 menhaden were shown to be a fairly significant portion of the striped bass diet; again, fairly large striped bass.

There is one study on birds, and the research conducted recently was compared to research conducted about 30 years ago, and it showed almost an order of magnitude increase in predatory demands of birds. These are ospreys, eagles, cormorants. The last category of research that was discussed at the webinars was growth of menhaden, and there were some comparative studies of growth between the Chesapeake and Delaware Bays.

Menhaden growth appears to be higher in the Chesapeake Bay than in Delaware Bay. Conversely, striped bass growth appears to be higher in the Delaware Bay. Again, there were spatial differences in growth patterns even within the Chesapeake Bay. There are findings that indicate that temperature, abundance and food availability do play roles in the growth of menhaden. There is evidence that phytoplankton is correlated with recruitment potential for young-of-the-year menhaden.

Okay, the LIDAR Study is I think in its third year. The first year was more of a pilot study to set up the design. It is capable of detecting menhaden schools in the bay and the ocean, but it is limited based on water turbidity and school depth. The laser that is used by LIDAR can penetrate anywhere from five to fifteen meters, again depending on ocean conditions. There is the potential for the LIDAR to underestimate menhaden abundance because of a shadowing effect, basically what is underneath the school and that is seen on the surface.

This past year or last year – I think it was last year, maybe the year before – LIDAR was also paired with a high-definition video; so as the planes were traversing the Chesapeake Bay there was a video taken to kind of test or groundtruth the LIDAR, and it shows that they are quite well correlated. It was also indicated to the technical committee that LIDAR tends to be quite

expensive to implement each year for the survey and that video might be a cheaper alternative that produces similar results.

There was the Chesapeake Bay Focused Assessment for menhaden presented during the webinars. Basically, the conclusion of the technical committee was that this is not practical at this point because of limited data, but there was, since then, an alternative coast-wide assessment proposed or methodology that is in the literature, and that will be explored by the technical committee at future meetings.

Derek has indicated to me that they will be producing a couple of different written materials from the seminars. There is kind of a glossy one, a two-pager, very general, on menhaden and the research that's going on, and I believe that's being put together as we speak. Then later there will be a more detailed report on Chesapeake Bay Office funded research that goes through methodology and more detailed analyses. Thank you.

CHAIRMAN WHITE: Thank you, Brad. Any questions from the board? Go ahead, Jack.

MR. JACK TRAVELSTEAD: Not so much a question but a comment. Two and a half or three years ago we were sitting around this table, and I think pretty excited about the level of funding and industry cooperation that would be dedicated to research and produce results that could be used by this board on the issue of localized depletion. I guess hearing the report today I'm not quite as optimistic that in another two and a half years we're going to have the kinds of answers that we had hoped to have at the end of the five-year cycle.

I guess it raises a lot questions in my mind; you know, how much money is available for further research and has the technical committee or will the technical committee attempt to sort of focus the research in particular areas in the next two and a half years to produce answers to the kinds of questions this board will need.

I don't know if there are answers to those questions at that point, but I think the technical committee needs to be looking at where we are in the scheme of things relative to the research and whether or not those efforts can be focused to produce the kinds of answers that we'll need. You know, in another year and a half we're

going to be looking at another addendum, I guess, replace the one that's now in existence.

CHAIRMAN WHITE: I think that's a good point. I will refer part of it to Brad, but I also think that the job of the technical committee is often guided by what this board needs, so that has to be reflected in the information that we get. Brad, do you want to respond to that.

MR. SPEAR: With regard to the funding question, it's up in the air what will be available in the future. I believe the Chesapeake Bay Office is committed to continuing at least the research projects that are in place. It's my understanding that there is a good chance that the federal government will be on a continuing resolution for 2009 at least for part of the year, which doesn't bode well for getting any sort of increase.

As I noted earlier, the 2008 number came in lower than 2007, so it doesn't appear there will be extra money for any additional research than what is being conducted at this point without additional sources. To echo Pat's point, the technical committee does monitor this information, but I think it sounded like a specific task that the technical committee can undertake at their next meeting, specifically reporting on what sort of findings they expect to come out of this research and how it may help the board.

MR. ALEXEI SHAROV: Thank you, Mr. Chairman. This is a very important question. I believe that the technical committee has outlined the research priorities a long time ago, and they stand as they are today; that is, we know exactly and you know exactly what needs to be done or what types of research should be conducted to answer specific questions that you're interested in.

Unfortunately, when, for example, the Chesapeake Office of NOAA was deciding on which proposals to fund, when they announced the requests for the proposals, they used the technical recommendation to outline the priorities in terms of the research, but it is up to the investigators, which are not, obviously, the – or in most cases not the technical committee members and it's not a technical committee priority.

The research community coastwide, when they respond, they come up with their own ideas and the funding agency simply chooses out of what is

being proposed to study. As I understand it, what tends to be funded are the most appropriate studies out of what was offered to them, but those studies not always respond to the very exact, specific issues that the board does have.

The technical committee certainly understands the difference; however, we're just the technical committee representative from individual states, that we obviously are not a research team. We can review the data that's available but we cannot engage ourselves in a specific research project. That certainly is a challenge to the process. How to deal with it and how to improve the quality of the research is an open question for probably your discussion and discussion with the scientific community.

MR. HIMCHAK: Thank you, Mr. Chairman, and I was very happy to hear the public comment by Ken Hinman to essentially pull us back into the perspective of where we are in this management process.

I had already heard about the decrease in funding on the 2008 level. Yes, I think it seems to me that we have lost some of the momentum on our charge of several years ago when we had a multi-day workshop on the issue and defined research studies. It all started out great, but it seems like the well is drying up a little bit. As Mr. Hinman said, you know, two and a half years from now will we have the answers that we were so optimistic just a couple of years ago?

MR. WILLIAM GOLDSBOROUGH: Thank you, Mr. Chairman. Just to follow up to both Jack and Pete's comments, in 2010 we'll come to the end of this five-year period of the cap and this research program that's supposed to help us move to the next level, as it were, in management, presumably having something to put in place for the 2011 season, which Ken referenced.

2011, I should note, will be the ten-year anniversary of the adoption of the current amendment in which we committed ourselves to protect menhaden's ecological role. We haven't really done anything on the ground that would do that, that would affect that kind of protection yet; and if we don't have something to put in place for the 2011 season we will be open to substantial criticism, I would think.

In that regard I would note that there was a hearing – it has been referenced – back in May on two bills in congress that would phase out the reduction fishery entirely. I only mention that because that's sort of the tip of iceberg of the public sentiment that is out there that we got a full dose of a couple of years ago when we were considering the cap.

I think this commission received something on the order of 20,000 letters and e-mails in support of that action, and yet the commission took the defensible proper action given the information it had of going down this road of the five-year cap and research program. That brings me back to Ken's suggestion that we ought to appoint a working group right now to look into the development of ecological reference points for adoption in the 2011 season.

Maybe if what I'm hearing is that there is insufficient information from the research to date to do that, such a working group could help guide the research that we still have a little bit of time to do, so that we can hopefully get to that point in the timeframe, or I'm afraid we're going to be open to some other alternatives that not be consistent with where this commission would want to go. Thank you.

CHAIRMAN WHITE: Okay, we'll hold that thought for a minute. I've got a few other speakers and then let's come back to it, Bill, if we can. Pat Augustine.

MR. PATRICK AUGUSTINE: Thank you, Mr. Chairman. Bill was headed in the same direction I'm heading. We have a target date to accomplish what we said we were going to accomplish, and a ten-year cycle is a long period of time. We're coming near that five-year mark and what have we accomplished? We have accomplished a lot so far.

The real critical issue is, is industry able to give any support for some specific funding between now and the end of that ten-year cycle? The point that Bill made about putting together a working group, it seems absolutely obvious we have to do that as soon as possible; so with what funding we do have left, we can move forward on those most critical research projects where we can have the greatest impact. Thank you, Mr. Chairman.

MR. STEVE MEYER: Thank you, Mr. Chairman, good morning. Just to quickly summarize what the federal process is for competitive grants, at the beginning of the year we have several grant programs. We put out proposals. It may seem a little bit like a shotgun approach to some people, but, again, we went to the technical committee and started what the technical committee suggested as areas for research.

This is the process we use with the Bay Office, with S-K, with MARFIN, with several of our other programs. If there is a need to sit down and take a look at some aspects of where we're going with this, fine, but let's not think that – how to phrase this – let's not think that we have and the agency has somehow decided that we're going to sort of pick and choose whether this meets the criteria or not because we went out of our way to ensure that those points were made to the scientific community.

Also, when it comes to funding, well, we're the federal government and we're within the process of funds are appropriated through the system, which is congress, the White House and everyone else. 2008 was not a very good year for funding the bay programs because there was not a lot of money given to the bay programs that year. That's just the process.

So we continued what we could and we're looking to build on that for the future, but, as was pointed out, we're going to be in a rather rough financial period come '09. Should folks want to sit down and review this, fine, but I think we have made a true yeoman's effort here up with a very robust grants' program to get the information going to provide data to the technical committee for their informed review and thus reporting to this board for management considerations. Thank you, Mr. Chairman.

DR. PIERCE: A number of individuals have expressed concern about research funds and Steve has just highlighted the fact that little money was given to the bay's program in '08 and that the '09 situation looks pretty rough. Therefore, it seems that we need to be relying on the research that has been done to date and that we hope that research will pay some dividends.

With that said, I'm uncertain as to what Brad concluded or what the report that Brad provided has concluded regarding the LIDAR and I would

appreciate a little elaboration. Specifically in your presentation, Brad, you noted that the LIDAR has underestimated the number of schools and absolute abundance under certain conditions.

I guess my question would be do we have any idea as to the extent of the underestimation; are they serious underestimations; and these certain conditions that exist, these certain conditions that caused the problems, are they prevalent? So, to what extent can we, this board, conclude that the LIDAR actually holds the kind of promise that we had hoped it would provide for future evaluations of the abundance of menhaden?

CHAIRMAN WHITE: I think, David, they would be addressed to – we'll ask Alexei if he has comments on that.

MR. SHAROV: I've already had an opportunity to present the progress on the LIDAR Study several months ago where I identified and described these issues. By the end of this year we'll conclude the three-year pilot study and report to the board on our findings. You'll get the full picture very soon, but to answer your specific question, yes, indeed, there are some serious issues, a serious issue with the possible underestimation of the estimated school size due to the so-called shadowing effect where essentially you're eliminating the school.

The nature of the menhaden school is such that the fish are so close to each other, the school is so dense that the light penetrates only through the upper layer of the school. We do have a measure of the diameter of the school, if you call it a diameter or at least the surface area, and the depth of the school that the light penetrates through, say, two or three meters, depending on the density of the school.

It doesn't go beyond that. The light reflects back and doesn't go any further, and that's the limitation. So how far the school extends further down in the water column is an important question, but it could be one meter in one case, it could be five meters in another case, and we're not going to have the answer with this particular methodology. That's the limitation. How to deal with it, well, we'll come up with some explanations and ideas of how to deal with that in estimating the population size. That's what we know for now on this particular subject. If

you want more specific details, I'll be happy to answer.

DR. GEIGER: Thank you, Mr. Chairman. Again, I believe two and a half or three years ago we did have a very aggressive, ambitious research program. I believe at that point in time we had a very robust discussion around this board about mechanisms on how to fund this research proposal.

Certainly, it was recognized that we needed contributions from a variety of funding sources; and if memory serves me correctly, I thought we did have a commitment from the state of Virginia and the industry to pony up additional research funds to help us make up some of the appropriate shortfalls or the apparent shortfalls that we anticipated from the federal contributions.

Certainly, it would be well worth our effort to investigate did we get some additional funds from the state of Virginia and/or the industry, and what is the potential for future contributions to continue this very aggressive research program. I would just ask that – again, I think the administrative record was pretty clear on that, and certainly I would like to see if that indeed has happened.

Secondly, Mr. Chairman, I think the value of ecological reference points is extremely valid and very important, and certainly we are running out of the window on what we said we were going to do for menhaden, and we certainly need to consider that aspect. And, again, for every management board meeting we've had, we've bounced around concepts of ecosystem-based management.

It continues to come up in virtually every species board we have, and some point in time, Mr. Chairman, I think we're going to need to take a more serious view on ecosystem-based management and multi-species interaction and predator/prey dynamics as we look at fisheries management. I believe the ASMFC is the most appropriate management entity to do this. I'd urge us to continue to pursue that. Thank you, Mr. Chairman.

MR. TRAVELSTEAD: Thank you, Mr. Chairman. I think we need to task the technical committee with providing a description to this board of what they believe the research will tell

us when it's completed as step one. Step two, I think they need to look at what research is planned from here for the next two and a half years and tell us whether some changes should be made to those projects, whether they should be focused in other areas or concentrated in other areas to get the answers we need.

Then I would ask Steve whether NOAA would be receptive to that kind of advice from the technical committee given your limited funding? Are you looking you looked into where you are now in research or do you have some ability to focus or concentrate it in different areas?

MR. MEYER: Mr. Chairman, to that point, good question. Within the grants' world, usually funds are available on an annual basis. Even though a project may be on the table, say, for three years, they don't get three years' worth of money that first year to go do things. I do think that there is some flexibility inherent in some of these.

I would have to get with the Bay Office because they are the official keeper of these grants to make sure that the person who has called the federal program officer, who is responsible for dealing with the grants and with the grantees, will allow some negotiation on this, but I don't see that as a particular problem.

I think that given the needs of this board and given the needs of successful sustainable fisheries with menhaden, I think it all behoove us maybe to take a little bit of a break and take a look at what we've done and where we're going with this. I am sure that we will be able to do our best to facilitate any discussion of changes within the grants' world that we need to.

Again, the grants are a competitive process. In some ways it would seem to be easier if we would just target a few people to give money to to go do specific things. That gets into a whole slew of administrative and legal issues when we just give money directly to someone and it's not a competitive process. So, again, I think we can discuss this and see where we need to go. Thank you.

MR. TRAVELSTEAD: Could I just follow up, Mr. Chairman? I just want to give you an example of what I'm looking at. Based on, for example, what we know about LIDAR versus

high-definition video – and this would be a question for the technical committee – does it make sense right now for us to drop the work on LIDAR and start to concentrate on the video methodology? I mean, those are the kinds of answers that I think we need from the technical committee. Given the small amount of money we have, we need to make sure that it's being used wisely.

MR. VITO CALOMO: Thank you, Mr. Chairman. I have several statements I would like to make, and I'm not pounding my chest. I just want you to realize that I've been through this. When we spoke about LIDAR last year, Mr. Chairman – and Alexei can remember this, I think, because I speak very clear – I told you it would underestimate the fish.

It would not estimate the depth of the fish, the body that is underneath, because we, as pilots – and I was one for years – would have trouble estimating a school of fish. I would call it a hundred thousand pounds, say, and there would be 150,000 pounds because of the depth of the water. I flew with LIDAR over 30 years ago when they sent a plane from Texas, and I told you it couldn't estimate – it doesn't show the depth. That's number one.

Number two, when I sat here last year, Mr. Chairman, again, speaking to Alexei, who has done a tremendous job – and so has Joe. I enjoyed the reports very much. I said the fish would be offshore. There were kind of snickers because everybody was talking about this localized depletion, a new term that I'd never heard, but, hey, things happen.

I told you the fish would be offshore like they've never seen. I also expressed my thoughts to you that in the northeast region there would be a rebirth of menhaden, which has happened. Something that is very dear to my heart, and I spoke about it yesterday, Mr. Chairman – I'll wait one second to go into that – and I recall what Jack Travelstead was saying, and so was my friend to my left, Jaime Geiger, about the industry helping out.

I do recall very clearly, and I've made that statement myself, that industry would allow us to use their vessels as platforms from time to time and to use the gear support that they had, and I believe that was agreed upon. As far as the

money situation, you people have better memories than I do on that part.

As far as I think we should get rid of the LIDAR system because of the limitations it has and go to the picture show, as I call it, I think it would be much better. A picture is worth a thousand words. I've flown for many years and what you see from up there is unbelievable, especially if you're trained for it. I think that would happen to assist us much better.

The last one, Mr. Chairman, again, I won't repeat what I said totally as of yesterday with the herring industry, is that there should be an abolishment of purse seining and other things in the peanuts, zero age class. I think we're destroying ourselves when we start taking peanuts for reduction or peanuts even for bait.

I think that's something that this body should go forward with in other fisheries such as, like I said, in the herring industry and again now in the menhaden industry and even in the spot industry where they're using little spot as bait. The cast net people, there are thousands of them, and they are taking them by the slew. I know that since they closed the Beaufort Plant, he used to target zero age class.

I don't think it's a problem now, but I'm not here to build for today only but for tomorrow as well. My time will pass like all of us that sit here. I think what we set now is the foundation of the fisheries for the future; and by saving young fish and protecting sometimes spawning year classes in other fisheries, I think that's what we're doing better than anybody in the fisheries management.

I see this board again is very concerned about a fish that's not overfished and overfishing is not occurring, but yet we want to take strides that this will continue for years. We go back 400 years from my town of Gloucester, Massachusetts, and we have been in the purse seine fishery it looks like forever. But again I am very proud to listen to the people that make these presentations; and for the most part, I agree with them. I think you very much for this opportunity, Mr. Chairman.

CHAIRMAN WHITE: Thank you, Vito. Jeff, have you got a brief comment and then I want to get back to the working group discussion, if I can.

MR. JEFF KAELIN: Thank you, Mr. Chairman. I'm Jeff Kaelin from Winterport, Maine. I am here again today with Omega Protein. All I wanted to do was let you know that Derek Orner had asked us for comments for the webinar presentations, and on July 29th we wrote him six pages of comments. We had hoped that they would be here today along with Derek. We know Derek is at AFS.

I'd like to give a copy of these to Brad to distribute to the board, not for discussion today, and let you know that we characterized these comments around three questions that Derek asked at the webinars, which, unfortunately, we ran out of time and didn't get a chance to get into those questions.

It was what are the implications of the work and how do we move forward; what are the datagaps and the redirection of work necessary; the third being what else can and should be done to assist management? These comments that we prepared begin to represent our thinking in those areas, the same things as you just listened to in this discussion. I just wanted to let you know that we did that. They're not here today but we'll give them to Brad so they can be distributed, if that's appropriate.

CHAIRMAN WHITE: That's very appropriate and thank you, Jeff. Bill, I'm guess I'm going to put a little bit of the onus on you for a working group. I think this is a great idea. I think it's important, and I think we are behind in where we should be on that. Would you be willing to begin a working group; and if so, how would you like it structured and who would you like on it?

MR. GOLDSBOROUGH: Well, I'd certainly be willing to participate, Mr. Chairman, absolutely, and help in any way I can. I think the people that we would want on a working group like this would be people with some experience on ecological reference points; certainly some ecological expertise; and some background in menhaden, certainly. I think it's largely a technical group; and beyond that, Mr. Chairman, I defer to the technical committee, I suppose.

CHAIRMAN WHITE: Okay, I guess what I would ask, Bob, then would it be possible for staff to get together and help develop this and what the needs of the technical committee would be, and then could we have this somewhat

formed for the annual meeting so we could move forward?

MR. ROBERT E. BEAL: We'd be willing to do that. I think the question to help us do that would be what exactly do you want get out of this working group? What products and what questions would you like the working group to answer? That will, obviously, steer the direction they go, but it would also dictate the membership of this group.

I guess the way I see this is what additional folks beyond the technical committee would need to be included in this process to develop ecological reference points or whatever the specific question is. We're willing to help out but a little more direction would be beneficial.

CHAIRMAN WHITE: Okay, so as not to take further time with this, I guess I would rely on – did you have a comment to that point, Jack?

MR. TRAVELSTEAD: Just to suggest – I mean, the technical committee is going to be working on a new assessment, I guess, in the year ahead, and it seems to me they could pull in some other ecological experts during that process to sort of initiate the work.

CHAIRMAN WHITE: But there seemed to be a desire from a number of people on the board here to have a working group that would maybe head up the direction of what these various research priorities would be.

MR. BEAL: Just following on Jack's comments, I think maybe step one would be developing terms of reference or questions for this working group. We can develop that at the staff level, run it around the management board; and if the board buys into those questions and terms of reference, then we can start work crafting the membership and discuss the approach to answering the questions that come out of this process, as well as getting the stock assessment done and balance out the workload of the people involved. I think we can bring you a proposal or some draft proposal for the annual meeting.

CHAIRMAN WHITE: Pete, you had comment on that?

MR. HIMCHAK: Yes. I'm thinking back about five years of being on the menhaden technical committee and the very same discussion. Our

realization at that time was a need for a multi-disciplinary committee when this concept of ecological reference points first came to us. I think what I'll do is start digging back through the technical committee's meeting summaries, and there might be some good information to set the stage.

We recognized that we needed people expert on phytoplankton production and consumption rates and all this stuff. In some of our past meeting records we may have some good background on this already.

CHAIRMAN WHITE: Is everybody fairly comfortable with what Bob Beal just described, and we'll follow up on that and get back to the board. Unless there are other comments, we'll put that bed and we will have something working by the annual meeting. Okay, thank you. Alexei, the technical committee report.

TECHNICAL COMMITTEE REPORT

MR. SHAROV: Thank you, Mr. Chairman, for the opportunity to present the technical committee's report. We had a very full agenda at our last technical committee meeting. We reviewed the 2007 fisheries, which you've heard the presentation by Mr. Joe Smith. We also discussed the update on the cooperative research work. We reviewed the Ocean Associates paper at the request of the management board; discussed the Chesapeake Bay Research Webinars.

We have discussed the Rhode Island activity on monitoring the fishery using the depletion model and also planned for the upcoming stock assessment of Atlantic menhaden. We also reviewed the triggers that are sort of the interim indicators of the status of the stock. As you recall, in the years where the stock assessment is not being conducted, we're using two triggers or two indicators of the status of the stock.

One of those indicators is the catch per unit of effort. As we have looked at the data, the 2007 CPUE was above the fifth percentile for the average of the previous 20-year period. The second trigger is the percentage of the two, three and four fish in landings, which was within the two standard deviations for the 20-year period, so both triggers have not been fired, technically speaking; that is that based on these two

indicators, the stock was within the normal limits of fluctuation.

The TC reviewed the reporting of the landings, and we have identified that there were some problems with the bait landings New York reported. Specifically, it was mentioned that the landings are being reported both within the state reporting system and the National Marine Fisheries Service Reporting System. It was not clear whether the same data are being recorded by two systems.

Currently the NMFS Reporting System is being used to actually report the landings to the ASMFC. However, there seemed to be two different sources, and there might either undercounting or double counting of certain landings when and if they're reporting by the fishermen to both agencies. The TC recommended that New York attempt to clarify the reporting system so that we get the clear and full data on the bait landings from New York before the next assessment.

The TC recommends the state, where possible, to determine and report the best CPUE data for its bait history. We discussed the results of the Cooperative Research Meeting. The subcommittee of the technical committee has met previously with the representatives of the industry, and we talked about the possibility of developing the coast-wide aerial survey, so that we would have the coast-wide index of the population abundance.

The meeting was very successful. Both sides I think learned a lot from each other. However, through the discussions, it became clear that we would probably not be able to use the spotter pilots directly for the development of such index. The purpose of the industry and the purpose of the researchers are different.

The spotter pilots are always looking for the highest concentration of the fish, and that's where they spend most their research time, while the statistically sound survey would require a full and even coverage of the coastal waters where the large areas with the medium to low concentrations of fish would have to be covered as well.

Both sides agreed that for the reliable survey, one would have to develop a dedicated survey where the dedicated pilots would be flying

coastal areas according to a scientifically sound survey design. There was also a discussion of the training of the pilots and observers. The spotter pilots indicated that it does require years of experience to train the human eye to be able to detect the fish in the ocean and determine the size of the schools, and they did not advise to use on-board observers that haven't been trained extensively.

So, issues like this of finding appropriate pilots and training and such are taken seriously. All this was detailed in the cooperative research meeting report. Meanwhile, to move on, Joe Smith will continue to work with the spotter pilots and collect the log sheets that he developed for them as sort of the initial stage of the development of such a survey in an attempt to see how well we can monitor and collect the information that we would need to get from the spotter pilots.

At the request of the board we also reviewed the Ocean Associates paper that reflected the issues of menhaden's ecological role in the Gulf of Mexico, but, obviously, the request was made with the thought in mind that equivalently the ecological role of Atlantic menhaden would be similar to that described in the paper for the Gulf of Mexico.

If you would summarize the claims of the paper, there would be four major claims. Number one would be that the author of the paper claims that the menhaden are omnivores. The second one is that the high menhaden abundance leads to lower shrimp, oyster and game fish abundance. Then harvesting menhaden improves the water quality, and, four, the bycatch in the purse seine fishery is not a problem. The technical committee has agreed with the first and the fourth statements.

Certainly, menhaden are omnivores, which means that they eat essentially everything that they can retain in their feeding system that they catch with their gill rakes. Their orientation in terms of what they eat, changes in their life history, when they begin their life as larvae, they are zooplankton feeders or they're feeding on zooplankton.

When the larvae turn into small, real menhaden, into the fish, they feed primarily on the phytoplankton. At this time their gill rakes are very small, very dense and they are able to retain the smallest organisms, but as they grow larger

they filter lots of organisms present in the water, and, certainly, not just algae. That is true and there was probably too much emphasis in the past on the role of menhaden as the phytoplankton filterers. In fact, they retain not just phytoplankton but zooplankton as well.

Therefore, the second statement that high menhaden abundance would lead to lower abundance of shrimp, oysters and other important fish species, the claim was based on the general idea that the menhaden, by filter-feeding and moving in the water column, are retaining the larvae of those organisms like shrimp and oysters and fish, and therefore if you maintain a high abundance of menhaden you're reducing the recruitment of the other important organisms in the area.

The TC unanimously agreed this claim is not substantiated by any research. There are no papers that indicated a significant negative impact of menhaden on the abundance of eggs and larvae of the other species has never been shown. Harvesting of menhaden improves the water quality; the claim was made that when you harvest more menhaden, that would lead to the reduction in the number of zooplankton organisms consumed by menhaden.

Therefore, zooplankton is a predator of the phytoplankton, so if you leave more zooplankton then they would consume more of the phytoplankton and the water quality would improve. There is no straightforward answer to this. The research that has been done so far has shown that, indeed, the menhaden do have a local impact on the number of both phytoplankton and zooplankton present in the area.

However, whether this improves the water quality or not, the results could be variable depending on the composition of the plankton in general. The TC believes that much more research needs to be done to actually being able to answer a question like this. Like I mentioned in number four regarding the bycatch in the purse seine fishery, it seems that the studies that have been conducted indeed proved very low bycatch levels in the purse seine fishery.

Most of the TC members also participated in the Chesapeake Bay Office Webinars. The TC indicated they will continue to monitor the progress of research. There was a discussion of

the attempt to develop a spatially implicit model to conduct the menhaden stock assessment on the spatial grounds considering the Chesapeake Bay and the coastal areas as separate areas.

This was an attempt made by a research group funded by the Chesapeake Bay Office to develop an alternative coast-wide assessment. However, the researchers have found that due to data limitations, specifically lack of information on the emigration rates or exchange rates between the Chesapeake Bay and the coastal areas, this fact would not allow the model to be appropriately parameterized. Therefore, even the theoretical formulation is there, the lack of the appropriate information does not allow us to utilize this mode. The TC has agreed that an approach like this is not possible at the moment.

When we discussed the upcoming stock assessment, we were made aware of another study that was completed by the research group funded by the Chesapeake Bay Office where a different alternative approach to describe the population dynamics of menhaden had been tried and the preliminary conclusions were different from what the ASMFC stock assessment has concluded two years ago.

The technical committee members have agreed that this is a very important element, and we recommend that the stock assessment subcommittee of the Atlantic Menhaden Technical Committee should meet this fall to discuss the strategy and all possible methodologies that could be tried for the future assessment. We would like to meet with the authors of the alternative methodology that was made available to us and have a full discussion of this study, as well as other approaches that the committee would think possible for our trials.

We're looking forward to this discussion. Once that will be completed, the candidate models or the assessment models will be selected. We will plan for the first data workshop and hopefully we'll have one in the spring of 2009 with the first step of the preparation for the next stock assessment. That pretty much covers what the technical committee has completed so far. If you have any questions, I'll be happy to answer.

CHAIRMAN WHITE: Thank you, Alexei. Jack Travelstead.

MR. TRAVELSTEAD: Real quickly, the charges, Alexei, that I mentioned earlier for the TC relative to the research; would it be possible to complete those and report back by the annual meeting?

MR. SHAROV: Well, definitely. We did discuss all the research projects that were presented at the webinars. We just have not completed a formal evaluation as to how each of those projects reflects the research priorities identified by the TC, but it certainly is not such a difficult task and we will be able to present it to the board.

DR. PIERCE: I realize we're over our allotted time, Mr. Chairman; however, I think it's important for us to highlight some technical committee recommendations, and then I would turn to you, Mr. Chairman, to see how you would like this board to then address those specific recommendations. They're somewhat buried within the documents themselves and they shouldn't be because they're quite important.

Let me note them. That information is in the meeting summary on Page 1 and 2, the review of the '07 menhaden fisheries, and in particular the committee makes some important recommendations that I think they would like this board to respond to. The first one is that we request New York to clarify its reporting system to enable the TC to obtain accurate data on bait landings.

The other one is that all states; that is, where applicable, report bait landings and effort; recommend the best measure for CPUE; and report back no later than the data workshop for the 2009 assessment. Then, finally, this is an important one and I suspect a controversial one, the TC has indicated that the Virginia monitoring data for landings against the Chesapeake Bay reduction harvesting cap be made available to the TC. These are important recommendations so I don't want them to be lost. Mr. Chairman, how should we now proceed to address those specific recommendations?

MR. SPEAR: Thank you, Mr. Chairman. With regard to the New York request of sorting out the data, I might turn to New York to see their ability to do that. Currently they do not have a member on the technical committee, so we weren't able to sort that out at the meeting,

which is why it's in the report and brought to the board.

As far as the second one, the CPUE from states where states have available data from their bait fishery, the states are already working on that task. The members that were at the technical committee are looking into that. As far as the information brought forward to the technical committee with regard to the reduction fishery in the Chesapeake Bay and out in the ocean, we haven't had an internal discussion at the staff level, but we will have to get back to that and maybe report back at the next meeting.

DR. PIERCE: I assume that menhaden is going to be on the agenda for our annual meeting. If that, indeed, is the case, then I would urge the staff, working with the technical committee, to further follow up on these recommendations and for the board to be given some guidance as to what needs to be done relative to our helping technical committee do the important job it needs to accomplish.

This will also provide more time for Virginia to discuss with staff, I suppose, this issue regarding getting to the TC that information as to the monitoring data for landings against the Chesapeake Bay reduction harvest cap.

MR. HIMCHAK: Thank you, Mr. Chairman. To bring up a point that David mentioned, I know there are some states that have excellent CPUEs on small menhaden gill net bait fisheries. In New Jersey we've gone back and taken all our harvest reports, and we're computerizing them all now to come up with CPUE. There is progress on that front.

The reason I raised my hand initially is I don't understand what you're talking about in paragraph three on page two. You're monitoring the cap but you're not getting all the data. Detailed landings data remain confidential, but the TC is getting the CDFRs to know what the landings are in the bay. You're not getting them on a regular basis, on a weekly basis, or you're going to know them after the season? What is the problem there; I don't understand that?

CHAIRMAN WHITE: I think Brad can take that, Pete.

MR. SPEAR: The plan review team is monitoring the cap and the landings towards the

cap. We do get all the data that we need to do that effectively. The technical committee is interested in data prior to the implementation of the cap, so the years prior for reduction landings both inside and outside of the bay. That hasn't been made available to the technical committee at this point.

MR. SHAROV: Well, I just wanted to add a little bit. Essentially, the confidentiality issue is that the National Marine Fisheries Service is allowed to release only general information to the landings and such from the industry. More detailed information cannot be released without the permission of the company, as we understand. Since the technical committee has meetings that are open meetings, that detailed information cannot be effectively presented to us. We don't know how to go around this and we're facing that problem.

MR. HIMCHAK: Again, we deal with this at home on confidentiality of landings for the individual, yes. By statute we're not allowed to give that out to anybody. I don't understand if you get collectively the CDFRs and landings within the bay, you're monitoring the cap. The individual fishermen or the captain's report which shows what he himself and his crew is catching, I can understand that shouldn't be discussed in an open meeting. I'm still not sure what the TC is looking for that they're not getting.

CHAIRMAN WHITE: Well, I think the reporting incident is unusual because it's under one company, and the only way it can be public information would be, as you suggest, is as whole, including the bait fishery, I think. Bill, do you have something to that point?

MR. GOLDSBOROUGH: Yes, Mr. Chairman. I attended the technical committee meeting, so I can perhaps offer an observer's perspective on this. They are open meetings; and by virtue of the confidentiality, the committee was not able to openly discuss the landings, the ramifications, the progress toward the cap, the implications or any of that. I think what they're trying to express in their report, as I read it, having been there, is that hampered their deliberation substantially.

MR. JAMES GILMORE: Thank you, Mr. Chairman. In terms of the reporting, I'm not

sure what the solution is; however, we obviously will look into it when I get back and at least come up with – we'll work with the Service to see if we can resolve it. If not, we can at least identify what the problem is and we'll get back to the board.

DR. GEIGER: Mr. Chairman, I just want to be sure. Dr. Pierce raised several good issues that he requested us to report back at the annual meeting and get them vetted out. Now, did I get the sense from you that will be done, there will be a menhaden meeting at the annual meeting, we will have these four recommendations of the technical committee fully vetted out and discussed and ready for discussion by this board at that time?

CHAIRMAN WHITE: The short answer is yes.

DR. LOUIS B. DANIEL, III: This is another issue and it be more of a Policy Board decision, but I just am very concerned about heading down an ecosystem's route with this species and putting more money into this resource when we have the data-poor species that we're setting quotas based on trawl indexes and the like. I would certainly much rather see our effort spent towards removing species off the data-poor list than moving this second-order assessments before we get our first orders in place.

MR. G. RITCHIE WHITE: Thank you, Mr. Chair. Going back to the information that is not available due to confidentiality, I guess I'd like to ask industry – if this is information we need, the technical committee needs, and industry is here, I'd just like to ask industry why they would not release that and allow that information to go to the technical committee?

CHAIRMAN WHITE: I would ask Vince at this point process-wise if that's an appropriate question at this point. I remember when the negotiations went on, and I guess I'd like your opinion on that before I turn it over to industry.

EXECUTIVE DIRECTOR O'SHEA: I guess I want to think about it before I answer, Mr. Chairman.

CHAIRMAN WHITE: Okay. I guess at this point we will come back on that issue without putting anybody else on the spot so everybody has a chance to think about it. Ron, keep that in

the back of your mind, too, and we'll get back to you. There is anything else on the agenda. The enforcement committee surveyed all its members, and there were no issues outstanding at that point, so there really is no report from the Law Enforcement Committee.

OTHER BUSINESS

Does anybody else have anything on under other business, assuming that we are going to follow through on this working group and try and come up with something on that? Yes.

MR. THOMAS O'CONNELL: Thank you, Mr. Chairman. I just have one point of clarity for the technical committee chairperson. The technical committee report suggested that the technical committee is interested in looking at an alternative assessment methodology.

The report that was presented did indicate that they plan on doing that, and I just wanted to make sure there is confirmation and if there is anymore guidance from the board to direct the technical committee to proceed with that. The question is, are they planning on doing that new spring?

MR. SPEAR: The technical committee is planning on doing that. The meeting that we have scheduled for this fall is to look at specifically one alternative methodology that has been brought forward or brought to the attention of the committee.

As Alexei pointed out, the table is open when a peer-reviewed assessment is scheduled; so if there are others at that point or around that time we would also like the committee to look at that with the intention of bringing forth the current assessment methodology in addition to any alternative methodologies to the data workshop and beyond this spring.

CHAIRMAN WHITE: In the interest of time, do you have another agenda item, David?

DR. PIERCE: It's a question about process, Mr. Chairman, and it relates to a decision that we've already made, a relatively simple decision, and that is we did approve the 2008 review of the FMP and the state compliance for menhaden. In doing so, I'm wondering now if that means that we have approved the PRT requests regarding their reporting recommendations?

Without stating them specifically, did we decide that all menhaden bait landings be reported to the technical committee even though the compliance criteria is only related to purse seines? In other words, do the specific requests from the PRT – there's three of them – have we now, by accepting the report, satisfied their requests and will those specific actions happen? That was my understanding, and I just want to make sure that I'm correct in that understanding because there are certain states that will have to pay attention to those requests.

CHAIRMAN WHITE: Correct; I would assume so, David, and it will have to be – because it's other individual states, this will have to begin a new process, but I assume from the way it was presented, that will take place.

ADJOURN

I'm going to hold off on public comment, I'm sorry. We're really behind on time. Is there anything else to come before the board? Seeing none, we are adjourned.

(Whereupon, the meeting was adjourned at 11:45 o'clock a.m., August 20, 2008.)