PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

ATLANTIC MENHADEN MANAGEMENT BOARD

Hyatt Regency Hotel
Newport, Rhode Island
November 3, 2009

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

Ex-Officio Members

Bill Windley, Advisory Panel Chair
Rob Latour, Technical Committee Chair

Staff

Vince O'Shea
Robert Beal
Braddock Spear
Toni Kerns

Guests

Bob Ballou, RI
Derek Orner, NMFS
Loren Lustig, PA
Ken Hinman, NCMC
Chip Lynch, NOAA
Brian Hooker, NOAA
Harold Mears, NMFS
Rob O'Reilly, VA MRC
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Vito Calomo, MA FRC
Jason McNamee, RI DEM
Clinton Scheynayder, Omega Protein
Ben Laudry, Omega Protein
Hank Soule, Newington, NH
Bob Bowes, PRFC

The Atlantic Menhaden Management Board of the Atlantic States Marine Fisheries Commission convened in Brenton Hall of the Hyatt Regency Newport Hotel, Newport, Rhode Island, November 3, 2009, and was called to order at 8:00 o'clock a.m. by Chairman Patten D. White.

CALL TO ORDER

CHAIRMAN PATTEN D. WHITE: We will get started. I will start with the agenda and there are two additions to the agenda. We will have AP nominations under other business, and I would like to begin a discussion about the bait fishery; i.e., menhaden and herring.

APPROVAL OF AGENDA

Are there any other additions anybody wishes to have on the agenda. If there are no objections, we'll approve the agenda.

APPROVAL OF PROCEEDINGS

Seeing none, the Proceedings from the August 19th meeting; any additions or deletions to that? Seeing none, I would consider them approved. We will have public comment during this, but is there anybody that wishes to speak now on items that are not on the agenda? Ron was that relative to yours?

PUBLIC COMMENT

MR. RON LUKENS: Mr. Chairman, I appreciate the opportunity to speak to the board this morning. We appreciate the opportunity for public comment. My name is Ron Lukens and I'm the senior fisheries biologist for Omega Protein Corporation. It's that time of the year again when the fishing season is beginning to wind down. We started this year off a little slow due to weather conditions early in, say, May and June, and we had some mechanical complications at the plant in Reedville.

However, beginning in late June the weather settled into a typical summer pattern and catches became more typical. As of the end of September, the most recent month for which data are available, we're less than 1 percent under 2008 catch for the same time period. Since the five-year average includes catch from Jule Wheatley's Plant in North Carolina prior to its closure, our current catch is about 8 percent below the five-year average.

In other words, this has been a typical year for Omega Protein's catch. In speaking with Joe Smith of the National Marine Fisheries Service, he indicates that age one fish are extremely abundant this year, showing up in the catch in large numbers. This information, coupled with anecdotal observations of large numbers of age one fish in the more southern reaches of the fish's range, leads Smith to believe that the 2008 year class may be strong.

Of course, we're anxious to see the outcome of the stock assessment currently underway as we believe it will show that the stock is in good condition. We're pleased with the outcome of our fishing season to date and project that the season will end with about the same total harvest as 2008. Thank you, Chairman White, for allowing the time for public comment, and we look forward to working with you as we move ahead together with management of Atlantic menhaden. Thank you.

CHAIRMAN WHITE: Thanks for the update, Ron. Ken, you had your hand up.

MR. KEN HINMAN: Thank you, Mr. Chairman. Probably Ron and I don't need to identify ourselves anymore. It seems that we're always up here following each other.

CHAIRMAN WHITE: Please do for the record, though, Ken.

MR. HINMAN: Yes, I will. I'm Ken Hinman. I'm president of the National Coalition for Marine Conservation. I just want to say briefly in August of 2008 this board made I think a very important decision, and that was to move ahead in trying to develop ecological reference points for menhaden. Really, that's just a fancy technical term for new management approaches to managing menhaden in a way to better protect their role as forage and other ecological contributions.

While a very preliminary review was done this year and presented to the board at the last meeting in August, there is still much left to do. There is a lot of information and a lot of experience out there to be mined and to be brought to the attention of the board for your consideration. I'm just here to urge you to keep this task on the front burner.

The National Coalition for Marine Conservation intends to work with you and your technical advisors on moving this process forward over the

coming months and in particular looking ahead to the first annual review of menhaden management in 2010 so that the board, in deciding on how to move ahead with management, has the full array of options in front of it for making that decision and protecting menhaden's role in the environment. Thank you for the opportunity to speak today.

CHAIRMAN WHITE: Thank you, Ken. Any other comments from the public? Seeing none, we'll move on to the stock assessment update. Rob.

STOCK ASSESSMENT UPDATE

DR. ROB LATOUR: Good morning, everyone, it's a pleasure to be here. I'll try to be brief. I have about 13 slides to sort of summarize our recent activities regarding the stock assessment. I first thought I would introduce the team. The TC had a number of fun e-mails about this picture that was taken at the end of our assessment down in Beaufort; all of us staring into the setting sun trying to figure out who had the camera and whether it was going off or not. Some of us are squinting but it was after three long days of hard work on the assessment.

To review the schedule in case you haven't followed since August, as you may recall, the menhaden assessment will follow the SEDAR process. There are three components to the SEDAR process. The first is the data workshop that was held in May of this year in Richmond where essentially all of the available fisheries-dependent and independent data are gathered, analyzed, discussed. The methods of analyses would be worked out at this stage.

The second stage would be the assessment workshop that was recently completed this past October in Beaufort, North Carolina. We reviewed all data and all preparatory analyses for those data. We actually evaluated five modeling approaches, so you could think of this as we conducted five assessments of the same stock and tried to develop objective criteria to determine the modeling approach that we would bring forward.

We did do that successfully and generated a base run and identified a number of model runs for uncertainty characterization. The schedule, as I understand it, is for a peer review to occur early 2010 following in March by the TC meeting with the final report available in May of 2010. As I sit here today, we are on schedule.

To briefly review some of the data, on the left panel here we have historic landings dating back to the late 1870's up to 2008. The brown indicates historic landings that Doug Vaughan and Joe Smith extracted from various fisheries' reports that were in some warehouse in Beaufort, I can say. The blue and red represent the reduction in bait landings respectively from the 1940's to the present. These are the more robust.

They're more informative data because from 1955 to the present we age-structured information. I presented these in August. Just to review your memories here, note that the Fishing Year 2008 has the lowest landings on record; also the lowest effort on record. There are two types of indices that go into the assessment. One is an age zero index.

Juvenile menhaden are captured as bycatch in a number of surveys from North Carolina to Connecticut. None of these surveys target menhaden. In North Carolina it is a alosine survey. Many of the others are striped bass. What we essentially did relative to past assessments is treat all of these surveys as part of a grand coast-wide age zero abundance experiment, if you will.

The panel you see on the right goes from 1959 to 2008 and represents the sort of synthesis of all of these data, all of these surveys into a young-of-the-year mean catch per tow, if you will, catch per seine haul. What we see is the standard peak in the seventies and eighties followed by some decline, but I will point out that the 1999 year class and the 2005 year class is very strong relative to the past 15 or 20 years. I think we see those promulgating through the population as well.

This index would represent our understanding of changes in abundance of young of the year or age zero menhaden. The other index that we have is a fishery-dependent index derived from the Potomac River Pound Net Fishery. There about a hundred pound nets that comprise this fishery. Essentially what we've done is taken total weight of menhaden landed and divided by the number of days fished to get an estimate of catch-per-unit effort.

The primary ages prosecuted by this fishery are generally ages one to three menhaden. With the lack of adult information or adult abundance data from elsewhere along the coast, this represents our only idea of changes in adult abundance, and we therefore apply it as a coast-wide index.

Admittedly, it's derived from simply the Potomac River Pound Net Fishery. The basic trend is the peak in the 1980's followed by some decline into the nineties and kind of a back-and-forth oscillation into the present day of 2008.

Onto the models; for consistency the 2003 and 2006 assessments used what the Beaufort Team has affectionately named the BAM Model or the Beaufort Assessment Model. That's not my acronym. For consistency we must consider the BAM Model, but we identified several alternatives. Stock Synthesis 3 made it to the table. You may be aware Rick Methot has revised his Stock Syntheses 2. It is a grand stock assessment, multi-dimensional, multi-option stock assessment package, so we consider that.

The Multispecies VPA, which Lance Garrison, ASMFC funded; you're all familiar with this, was an option for us. What we've deemed the UBC or University of British Columbia Martell Approach – some of you may be aware that Steve Martell was contracted to work – actually I was a part of this contract – to work on spatially inputs the menhaden assessment.

The idea was to try to identify whether or not we could estimate a Chesapeake Bay population size. It turns out that we could not. However, as part of that effort and without my knowledge Steve went ahead and conducted his own single-species assessment coast-wide scale and submitted a report to the NOAA Bay Office.

We therefore felt it would be important to consider this modeling approach as an alternative to the BAM Model. The Stock Reduction Analysis was another modeling approach identified. Its primary usage is for characterizing uncertainty, although it could be used as your primarily tool. We have essentially five models here that we all assigned a member of the TC to take the lead on and worked on developing over the summery and evaluated at our meeting in October.

I realize you probably can't see this table; it will be in the report. The point here is we spent a considerable amount of time identifying what we thought to be objective criteria to evaluate these models. On the left-hand column are those criteria; along the top are the respective models that we used.

The criteria involved things like applicability to management, whether the models would internally estimate benchmarks, so actual tools to give us stock status determinations; how much history these models have in terms of being used in other assessments, are they brand new, are they old hat; are the data requirements low, moderate or high; are the models complex or relative simple; these kind of evaluations; how they handled measures of uncertainty and ability for us as analysts to understand the impacts of uncertainty.

A red-faced test and an honest evaluation of our abilities to run some of these models; the SS3, for example, none of us as TC members had much experience with this approach, so we felt it important to convey that – et cetera down the line. The end result was the BAM Model was selected as the primary tool for the following reasons.

I'll go through the list of the others and we sort of arrived at the BAM Model as a means of eliminating the others as viable options. The SS3, as I said, is sort of a grand approach. When you started to configure a model specific for menhaden, we had to turn off, for lack of better words, a lot of the options, and the configuration basically became the same as that of the BAM Model.

Knowing that we had Beaufort scientists on our team, the familiarity with the BAM Model outweighed that of the SS3. They were essentially the same so SS3 was ruled not appropriate. The MS-VPA was considered in great deal as an appropriate model. There was some concern that menhaden predators were missing; specifically birds, mammals, other fishes. We have striped bass, weakfish and bluefish in there. There was concern about a lack of full characterization of predation.
In general, some of the VPA Model characteristics are undesirable; things like the inability to characterize or handle aging error, external benchmark calculations, these sorts of things, so it was sort of on the table but a little behind the BAM Model, if you will. The UBC Model, Genny Nesslage took the lead on this.

Despite many e-mails from me to Steve and his colleague, Lena Christensen, as well as Genny reaching out to try to contact Steve and his colleagues, we could not get the computer code that supported the report that Steve submitted to the NOAA Chesapeake Bay Office; that is to say the computer code we got, Genny was unable to reproduce the results in that report.

She then went ahead and tried to modify that computer code to effectively reproduce those results and got close but never quite there. In her evaluation of the approach, the major limitation we saw was that it required a narrow prior probability on Fmsy, basically saying you had to feed the model a range of what Fmsy should be, and that range was quite narrow for it to actually converge and produce results.

It's almost the saying as saying if you give it the answer, it will work. We felt Fmsy is one of the least known parameters especially for menhaden so we were a little bit uncomfortable with that kind of approach, so it was viewed as inappropriate or unacceptable. The SRA Model, the Stock Reduction Analysis, as I said, was best used to characterize uncertainty.

However, it only produces MSY benchmarks, which we feel in general are not appropriate for menhaden. Why not MSY-type benchmarks? A lot of folks have asked me this over the years. The basic message is an MSY benchmark requires a decent understanding of a stock-recruitment relationship.

Here we have model-predicted abundance of adults or in this case mature eggs on the X-axis and recruits on the Y-axis. You can see although we fitted a stock-recruitment function to these data, you can see that some of the lowest or smallest levels of egg size produced the highest recruits, so it's sort of counterintuitive. Some of the larger egg sizes produced moderate recruitment levels. There isn't a well-defined stock-recruitment function. Basing MSY benchmarks on this would be dangerous, so we felt the MSY was not the way to go.

For those of you that want to know the details, I'm sure there may be questions, the configuration of the BAM Model was as follows. Our workhorse relating catch to abundance is the Baranov Equation. This is a common practice in fisheries. We have sex, size, percent mature – although the percent maturity was updated with recent data from Joe Smith – and fecundity, all age specific.

There are multiple options for recruitment, multiple options for selectivity of the fisheries. The reduction fishery could be treated as a asymptotic or flattop selectivity curve or a dome-shaped selectivity curve in an effort to sort of model the contraction of the fishery to the central part of the Mid-Atlantic.

The indices, as I mentioned, were the age zero; next the Potomac River Pound Net. The age classes considered were zero to an eight-plus group. The base model considered years from 1955 to 2008. Two new things; we turned on the switch, if you will, or we allowed for aging error to be a part of the model. A small experiment of 3,000 fish from 2008 were aged twice by the primary ager in Beaufort with only about 80 percent agreement, so this suggests there is the potential for aging error in the catch matrix, so we tried to model that and allow for that.

Then the other big advancement relative to the past assessments is we incorporated successfully and age and time-varying natural mortality rate. We got estimates of M from the MS-VPA for the time period 1982 to 2008. These are age-specific and time-specific. Not having MS-VPA configured for years prior to 1982, we essentially took the averages for each age across that '82 to 2008 period and applied them back in time. We have age and time-varying M for the most recent 20-something years.

The selected benchmarks that will see were the median fishing mortality rate, which is basically the value that produces 50 percent of the fishing mortality rates above and 50 percent below. The idea here is that it's generally robust, but it does admittedly require that the stock have experienced a wide range of abundances during the time period of analyses.

We certainly feel as though the fishery peaked in the sixties and seventies. I don't see it ever reaching 700,000 metric tons. The infrastructure is a fraction of what it used to be, so we may have the upper echelon or the upper limit taking care of the lower limit is debatable, but we still felt that Fmed was something that is something that is a little bit more appropriate than an MSY approach for the fishing mortality side.

Because of the lack of stock-recruitment relationship, SSB or spawning stock biomass would not be appropriate so we stuck with the egg production fecundity-based abundance benchmark. The base model produced the following control plot, and I'll try to walk you through this. On the X-axis we have a measure of egg production or mature ova, so this is our abundance so this is our abundance threshold and target.

On the Y-axis we have a fishing mortality rate, this Fmed, if you will, for ages 2-plus. The lower right corner has the box lines delineating

the F and abundance levels for the target. Sort of superimposing that, that is a larger box for the threshold. What we see is a timeline of where the stock status would be from 1999 up to the present.

Here we are in 1999 at or about the abundance target but above the fishing mortality threshold. We move down to 2000 here, '01, '02, '03, '04, '05, '06, and this value right here corresponds to 2008, which puts the stock status preliminarily from the base model run at or about the target abundance threshold and just – sorry, at or about the target abundance value and just below the fishing mortality threshold; so, in general happy face land with a little bit of concern that we're approaching the fishing mortality threshold subject to change.

All uncertainties have not been characterized and incorporated to understand how robust the stock status determination would be to those uncertainties, and in general as preliminary evaluation this is what we've ended up with. My last slide here sort of is something that occurred to me during the process.

Strategic planning is always something that is always on folks' minds. Within the menhaden structure, I see several single points of failure, if you will, and perhaps the need for developing a succession plan. We have tremendous dependence on the Beaufort staff. Admittedly, they have a long history with the menhaden fishery so there is good reason for that dependence.
However, that staff is aging, approaching retirement years. There is a concern that we have a single individual aging all menhaden samples taken from the catch. She is a wonderful lady and has been doing this for 30-something years. From a design perspective, having only one person is not the best scientifically, functionally, and we're not transferring her expertise on to other members of the group or that sort of thing.

Her retirement period is probably coming soon, so we may need to be thinking about cross-training for consistency and transitioning. Who takes the lead on this aging project and will there be new costs, wherever those monies come from – questions that should be posed now I think rather than later.

The other is with Magnuson-Stevens coming on line, the pressure on the Beaufort Team to respond to federally managed species is increasing. Menhaden are not within their jurisdiction, so to speak, so there may be more per unit or per analyst workload increasing there. Joe Smith, admittedly, and Doug Vaughan have been associated with menhaden forever, and they're talking about retirement and an amazing amount of information about the fishery and the relationship that Joe has with industry, we have no one to replace those individuals.

There is a great deal of concern in terms of what would happen if we lost or if those members decided to actually stop working for a while. Then the last is Erik Williams, who is the team leader there, basically built the Beaufort Assessment Model himself. He wrote the code, he has kind of lead the construction of it. He is the most familiar. If he were to disappear, we have capable individuals, but there would be a learning curve required to get up to speed in terms of understanding it.

Beyond menhaden, I think the Beaufort Assessment Model could be a workhorse for all of the ASMFC or for many of the species. It's an appropriate model for a lot of the species that we have, so developing some other familiarity with it could prove dividends beyond menhaden. So with that, I will just take some questions if you have any. Thank you for your time.

CHAIRMAN WHITE: Thank you very much, Ron. Questions from the board? David.

MR. DAVID SIMPSON: That was a great presentation. I don't see it in the binder. Did I miss that or can we get a copy of it?

DR. LATOUR: I made it on the airplane coming up here so that's probably why you don't see it, but you can absolutely have a copy.

MR. SIMPSON: That's great! You did a great job for knocking it off on the airplane on the way up. Just one general comment if you could on implications of being slightly or right around the threshold for F; what would be the concern if F rose above the threshold? I mean in some ways it's obvious, but when you look at menhaden and you think about the recruitment that you can get out of a very small stock size; so if you could just talk about that for a second.

DR. LATOUR: The definition, if we would be beyond the threshold, the fishing level would be associated with an overfishing condition. Beyond that, whether I think we're in danger, I think the abundance threshold is not even close to being touched since we're so far above that. We're basically at the target which is a

conservative abundance threshold, so I don't have a lot of worry at this point outside of the strict formal interpretation of where the value lands on the control plot.

MR. SIMPSON: So the implication would be more in terms of maybe yield that's foregone or it certainly doesn't seem to be a recruitment failure concern.

DR. LATOUR: The recruitment, we reanalyzed – actually, this is my contribution to the assessment. I reanalyzed all of the young-of-the-year data and took a slightly different approach than Doug has in the past; this idea of just combining everything at the raw data level and getting a coast-wide index, and it shows fairly strong year classes periodically through the time series.

1999 and 2005 stand out in the most recent years, but even the trend from the mid-nineties onward is greater than that of the fifties. One could say that the majority of the recruitments are down near where they are now and the anomalous or atypical recruitments are those in the center of the time series.

So rather than always comparing to that center of the time series, it's worth asking the question the other way and saying is that an atypical time for menhaden and is what we're experiencing now a more reasonable or average case? I can see both sides. If we were experiencing recruitment failure, we couldn't experience it for 15 to 20 years and still have a stock.

DR. DAVID PIERCE: By the way, I always enjoy your presentations, so thank you very much. This is a coast-wide assessment that will be peer reviewed sometime fairly soon. I noticed that in Addendum IV, in the background statement there is a remark regarding the status of the resource within Chesapeake Bay. It is unknown. Will this assessment provide us with any insight into the status of Chesapeake Bay or do we just continue with the same situation of unknown for Chesapeake Bay?

DR. LATOUR: This will not provide information specific to Chesapeake Bay. Let me further say that Steve Martell's involvement with menhaden came for the expressed purpose of evaluating whether existing data could be analyzed in a way to provide exactly that type of information; that is, an estimate of abundance for Chesapeake Bay per year.

The answer is, no, there are not enough available data particularly on the adult component of the stock along the entire coast to yield that kind of information. This is really the only way we can go to do an assessment or to conduct the assessment. If you are thinking strategically about moving in a direction that provides a tool that gives you estimates of abundance on a regional scale, I would say the existing data platforms do not provide that.

In fact, the only way that could happen would be the creation of a new data collection program and all the associated investment and resources required to do that. It is just not possible with the data we have.

MR. WILLIAM GOLDSBOROUGH: Thanks, Rob, for a great presentation. I had a couple of questions. First off, on the recruitment pattern, I guess what you described is the coast-wide composite pattern, but just to refresh our memories isn't it also true that the recent pattern in the Chesapeake has been well below the historic pattern in the Chesapeake, so we do have recruitment issues that we have not quite figured out just yet?

And, again, to refresh our memory, that combined with the fact that we do have the fishery concentrated in that area is the reason why we have had concerns and the reason, essentially, why we adopted the five-year cap and five-year research program and some of the work that Rob has already described trying to get a handle on the stock status in the Bay and how the fishery relates to that, so we still have a lot of work to do to flesh out that picture, if you will.

My second question was I'm not sure I quite understand what you said about us being close to the threshold F, particularly combined with the earlier report that the landings and effort were the lowest on record. It seems like being close to the Fthreshold with the landings and effort being the lowest on record would suggest that the stock is quite low or am I missing something there?

DR. LATOUR: Recruitment first – the time series you see before you, Maryland is the long-running state for which we have data in 1959 to 2008. When I combine the data, you can only combine for the years that the survey has operated. You can think of the first several years of the time series basically being the Maryland Index, because it is. That's the only state contributing.

The New England states come on line in the mid-eighties, and they basically affect the more

recent part of the time series, and essentially what they do is they add a little bit of noise. They're much noisier than in the Chesapeake Bay Surveys, and so they spread out the data points a little bit effectively is their contribution.

This basic general pattern is that of the Chesapeake Bay. Whether it is Maryland's alone or Maryland and Virginia combined – I've looked at all of those scenarios – it's low in the fifties and sixties, it peaks into the seventies and eighties, and then it comes down. The question is how far does come down?

Yes, you're correct in that the Chesapeake Bay alone index comes down a little below what you see here; the reason being the New England states are not part of that analysis or they're not part of that time series. When you combine them on a coast-wide basis, the New England states tend to bring up the index values in the most recent periods because that's what the data suggests.

All of this being stated, these are not menhaden surveys so we're driving this time series of abundance as a bycatch scenario from all of these surveys. It's not the way you would want to design a fishery-independent index for menhaden. From that point, yes, there is a lot to be learned about menhaden recruitment. Our tools are what they are at this point.

The situation here – the changes that we made in the most recent assessment, this one here, relative to what the status of things were in 2006 are significant, so I caution you in comparing the results of this assessment with those of '06 and '03 because the model structures are very, very different. For example, we have time and age-varying M now.

We never had that before, so we are allowing the predation effects of the predators, at least the three major ones in the MS-VPA, to impact the assessment results. We didn't do that as much in the '06 and didn't do it all in the '03 assessment. From a continuities' perspective, we don't have perfect continuity because the models have evolved and changed quite a bit structurally.

I just would caution you there; that is to say, if you look at the stock status determination from '06, it might not be above the fishing threshold. That's simply a function of the model structure and the interpretation of the data. That being said, we're in the happy zone. We're below the threshold in this base model. We're well above the threshold if not at the target in terms of abundance. Where to interpret that management-wise is obviously where you come into play, but from the sheer definition of the control plot we're approaching the threshold and have not exceeded it at the moment.

MR. GOLDSBOROUGH: Just on the age and time-varying M, just for my information, those are derived from the MS-VPA, right?

DR. LATOUR: Correct.

MR. G. RITCHIE WHITE: I guess I don't fully understand the happy zone comment, so explain it to me a little more because I would think happy zone would be down on the target line and not at the threshold line. I would think we're in the concerned zone.

DR. LATOUR: I apologize if I'm cavalier with the happy zone. When I teach this, I always put smiley faces on these plots. So you usually define targets, this is the abundance target that we would shoot for; this would be the fishing mortality rate that we would shoot for. If you're in here, you're as happy as you can possibly be.

If you're above, you're happy in terms of the abundance; maybe less happy but still happy in terms of fishing mortality. It's not until you get above the threshold that you start to enter into defining things as overfishing or overfished. I'm reluctant to put too much emphasis on this in terms of I don't want interpretation to get out of control, but we are certainly right about the target for abundance and just below the threshold for fishing mortality.

We're well away from the abundance threshold here. To Bill's point, it does not necessarily suggest that abundance is low. This would suggest abundance is healthy; in fact, basically at the target. The fishing mortality, yes, it's approaching the threshold, but what it is what it is. I think the difference you see here is the effect of the different model structure. In particular, the time-varying Ms, we're starting to allow the model to promulgate the effects of those time-varying and age-varying Ms.

MR. MARK GIBSON: I have several questions. The first was I wanted to know what the status of the evaluation utility of the power industry data is. There are virtually hundreds of plants up and down the coast that routinely monitor the amount of the menhaden eggs and larvae that goes through known amounts of coolant water; similar

for the amount of juveniles impinged in traveling screens.

I'm wondering what the utility of that data is for looking at recruitment strength and regional abundance potentially of spawning stock and again recruitment. I'm also wondering what the utility of the over-flight data is, spotter pilot data and potentially depletion estimates from regional fisheries on estimating local biomass. I guess I'll stop with that one for now and then if I could follow up with another one, Mr. Chairman.

DR. LATOUR: Power plants, I don't have a good answer for you. We did not consider it in this assessment. My gut feeling is that Doug Vaughan has considered those data in the past and felt perhaps and I'm speculating that they were not as representative or not broadly distributed along the coast enough to give a signal. I would have to defer or get back to you with a better answer on that question.

The spotter pilot information, we have been, in cooperation with industry, to see if we can effectively use their spotter pilots to develop an index of adult abundance. At this point in time we have two – well, in 2009 we'll finish the second year of the pilots logging – well, they would log this information, anyway, but actually sharing it with Joe Smith; flight times, flight tracks; not GPS, per se, but general flight tracks; numbers of schools and their determination of approximate size of schools.

At the very least we have presence, absence and some qualitative categorical data to perhaps begin determining or developing an index of abundance from the spotter pilots. The weakness, if you will, is that it's not a scientifically designed study. The spotter pilots are doing their normal Sunday behavior in terms of where they fly and what they look for. It is not transect survey, if you will, so we can't go too far in terms of getting solid answers on what relative densities would be, but it's a start, I think.

MR. GIBSON: On the stock-recruit relationship in the MSY calculation, it seems that there is an assumption that all eggs are created equal in using that. Is there any evidence in menhaden that eggs from older, larger spawners are more viable and should be taken into account? Also, there are clearly externalities that influence recruitment success other than egg abundance or SSB.

I'm wondering if there has been an examination of the serial correlation properties in examining those. I'm concerned about moving away from Fmsy type reference points without me understanding there has been a thorough evaluation of the stock-recruit data from that sort of perspective.

DR. LATOUR: The stock-recruit data that I presented are model predictions. We have no field-based measures of egg production or adult abundance. For the stock-recruitment curve we constructed what is predicted from the model. Perhaps there is room for improvement, fair enough.

The recruitment data, I will say, were analyzed in a generalized linear modeling framework. The factors included year, month and location or state, depending on the scale of the analysis. While environmental variables certainly are considered important, those three alone explained 80-something percent of the variance in the data. We felt like including more variables at this point would be chasing small amounts of variability in an otherwise highly variable data set.

Auto-correlation and those kinds of time series analyses have not been considered. The idea would be maybe linking them to NAO or other sorts of environmental processes. It's worth an investigation, I guess. I'm trying to recall our discussions because we did discuss this a little bit. I'm not at this point so I'll just leave it at that. Nothing formally has been done. It has been discussed kind of in a conceptual framework.

MR. THOMAS FOTE: I noticed in the presentation there weren't any slides on age distribution. I mean, it always upsets me that stocks and most stocks we look at we always look at, you know, how much age class we have in each one of those years. Menhaden is a species that will live to be nine or ten years old. They're usually very truncated toward the end of it. Is there any information on what the age class distribution is now?

DR. LATOUR: Model-predicted or actually field-derived from collections?

MR. FOTE: Well, I guess you're going to have to do field-collected data. I understood your comment that these indices weren't designed to basically do menhaden. They were bycatch in other fisheries, but most of the stuff that we use in winter trawl surveys and everything else, that

we do for sea bass and everything else was designed for other fisheries, and that's the only data we have as best available.

DR. LATOUR: Yes, but at least that's fishery independent. We have no empirically field-derived measures of any adult abundance outside of the pound net survey or fishery-dependent pound net index from the Potomac River. This is one of the weaknesses, for sure, in that when we're fitting the model to trends and abundance, we have nothing to inform the model about trends of the adults, so I couldn't tell you if they're – I couldn't give you field-based measures of age five, age six, age seven relative abundance.

I can give you what the model predicts, and it predicts some decline recent years, but in general a healthy abundance as indicated through this conversion of abundance to eggs and egg productivity benchmark. But in terms of whether that's a correct model-predicted trend, we cannot cross-reference it with field observations because there are none.

MR. FOTE: What is the catch data showing because we usually have catch data that shows year classes? I would assume that since the older the fish is the more oil it has in it, and that's one of the reasons you're basically harvesting the fish. We should be able at least to see if there is an abundance of older fish in that fishery.

DR. LATOUR: We did have those data, correct. I apologize; maybe in the future I'll provide them. The contraction of the fishery to essentially the Virginia, North Carolina, New Jersey areas limits the age structure that it can actually prosecute. Given that menhaden latitudinally migrate; that is, older fish migrate farther north, the fishery is not in areas where we presumed the older ages five, six, sevens fish to be.

The catch is very truncated coincident with the geographic constriction of where the fishery operates. There is information in the catch matrix on the age structure. We see propagation of catch classes through – for example, we've been following the 2005 year class through the catch. There is information there, for sure, but we have no – the fishery doesn't prosecute the older animals anymore, and we have no fishery-independent measures of those older animals.

CHAIRMAN WHITE: Any other questions for Rob? Vito.

MR. VITO CALOMO: Thank you, Mr. Chairman, my name is Vito Calomo. I'm from Gloucester, Massachusetts. On a note speaking about menhaden, Mr. Chairman, as usually I do, I think the report was excellent in two ways. Number one, I could understand you perfectly and I know the fishermen understand you perfectly. The other one, you're talking about still a healthy stock, overfishing isn't occurring and the stock is not overfished.

I would think that everybody in this room would be joyous, yet you always hear some negatives and trying to figure out why we still are fishing menhaden, as we have done for over a hundred years. Mr. Chairman, I just say that people are working in this economy because of menhaden, whether it be in the reduction business, the bait business, or whatever, or the sports business.

It is a healthy stock and people are making money. Mr. Chairman, I know we stopped at Connecticut in our survey. Again, I come from the great Commonwealth of Massachusetts. Being a fish-spotting pilot and my brother is currently a fish-spotting pilot working for some menhaden vessels, I would like to give you just a brief summary of what has happened in our area off of Massachusetts and towards New Hampshire and Maine.

First of all, Mr. Chairman, we had no spring. As you probably know the weather conditions were terrible. We had very little summer. It didn't come until August, and usually we fish menhaden around the 23rd of May, somewhere around there. My brother didn't get started until August. Well, the fish inside were of various sizes and year classes; from zero class right up to, in my estimation – of course, I'm just a fisherman and I don't have the degree to say what year they are, but they looked like six, sevens and eights; the biggest I've seen in a while.

The fish on the inside waters in our state of Massachusetts were more abundant this year than they were last year. The problem in fishing was that the vessels are small and they couldn't get out with the tremendous winds and rains and conditions we had; an unusual circumstances of weather that prevailed in the northeast region, Mr. Chairman.

Again, I appreciate this opportunity to speak to you, and I look on it as joyous. I think anytime

you have a fish that's doing well and people that are making a living especially during these economic hardships; I think we should be smiling. I think you again for the greeting and I thank you for the opportunity.

DRAFT ADDENDUM IV

CHAIRMAN WHITE: I'm glad to see you in the happy zone. Moving on, we will do a review of the draft addendum with the public comment summary with Brad Spear.

PUBLIC COMMENT SUMMARY

MR. BRADDOCK SPEAR: Including in the briefing CD packet were all the individual comments that were received for Draft Addendum IV, and also there were summaries included on the briefing CD. The public hearing summary, there were three hearings held up and down the coast. ASMFC staff attended two of those. In total there were 29 attendees that signed in at these hearings.

Eight voiced favor for status quo, Option 1 in the addendum; and two were in favor of the cap extension. A total of 222 comments were received through the mail, through fax, through e-mail, including 11 that were representing different organizations of companies. 186 were in favor of Option 1, status quo; and five were in favor of the cap extension.

Some of the additional comments that were received in significant numbers were some suggested management alternatives, including restricted harvest of age twos and under. There were proposals of some sort of a size limit. There was also the suggestion to mandate at-sea observers in the reduction fishery, and those observers would be there to monitor some sort of size limit and also bycatch in the reduction fishery. There were also a number of comments to prohibit the harvest of Chesapeake Bay menhaden. One other comment was in regards to the localized depletion research that has been ongoing, to expedite that process as quickly as possible. That's it.

CHAIRMAN WHITE: Thank you, Brad; any questions of Brad? Next is the advisory panel report. If you have questions for Bill, he'll nod but otherwise Brad is going to give that report. Bill has a case of laryngitis.

ADVISORY PANEL REPORT

MR. SPEAR: We held an advisory panel meeting in September to talk about a number of issues. It was the first time we had met face to face in quite a while. To start off, there were seven AP members in attendance. We tried to patch one in through the phone but just had difficulties doing that. Rob Latour also sat in for part of the meeting.

We went over the FMP review to look at the status of landings and where management is. The most significant discussion came with regard to collecting bait samples. There was a strong consensus and recommendation from the advisory panel that it recommends that states be required to collect a certain amount of samples from the bait fishery.

It has come up in Rob's presentation and in some of the board discussion that there is this need to collect a broader age range of fish. To date all those samples have been sent to the Beaufort Lab and processed there, and for the near term at least that is still an option. We also talked about the Chesapeake Bay Research Program that is ongoing and the CIE Review of that program.

There were a number of comments and suggestions from the advisory panel that are listed in the report that was on the briefing CD. Rob went over the stock assessment to date and answered questions that the panel members had. Specifically to Draft Addendum IV, there were three members in attendance that support Option 1, which is the status quo, and four members that supported Option 2, the cap extension. That's it.

CHAIRMAN WHITE: Any questions of Brad from the committee?

DISCUSSION OF PUBLIC COMMENT SUMMARY AND AP REPORT

MR. JACK TRAVELSTEAD: With all of the public comments in support of Option 1, I'm just curious what their reasoning was by supporting no extension of the cap; in other words, the cap would simply expire in another year. Were there reasons given for supporting that, recognizing the amount of public support there was just a few years ago for establishing a cap?

MR. SPEAR: Jack, most of the comments that favored Option 1 were linked to some other

alternative management recommendation. Those were the restriction or prohibition of harvest of age two or less fish; the mandatory observers. It was paired with I guess more restrictive regulations in place of a cap extension.

MR. GOLDSBOROUGH: I think Jack raises an important point. Speaking as someone who is very involved in promoting the cap adoption four years ago, I can tell you that the public's message then was not in support of a cap, per se. The public message was let's figure out what is going on in Chesapeake Bay and see if we can come up with something that would address it.

The cap was simply a backstop. It was never considered to be a long-term measure. I think what we're hearing now is a continuation of that sentiment that is saying we have not completed that process yet. We are in Year 4 of that five-year research analysis phase within which we promised the public and the public is in expectation of us coming up with an alternative management regime that would address the concerns in the Chesapeake.

I think what the comments are saying is get on with the job, that you're seeking to extend the cap a year early, and why are you doing that? What you ought to be doing is focusing on coming up with these alternatives like the one that was suggested was prohibiting the take of age two and younger. That essentially is saying don't take pre-spawned fish, which I think is a fairly routine option that is considered, and the public is aware of that.

That is just one possibility and there are lots of other ones, too, some of which are outlined in the white paper that we received earlier this year from the National Coalition for Marine Conservation. That is just a point to be emphasized that even if we do decide to extend the cap, the public message is you're doing it a year early, so please don't allow that to deter you from the job at hand, the job that you promised the public four years ago, which was that you would attempt to develop as much information and do as much analysis as you can to come up with a viable alternative that addresses the problem; that the cap itself is not a long-term measure.

CHAIRMAN WHITE: Thank you, Bill. Any other comments from the commissioners? Go ahead, Jeff.

MR. JEFF KAELIN: Mr. Chairman, Jeff Kaelin, representing Lund's Fisheries. I am a menhaden advisor representing the state of New Jersey. On the AP report there was one I thought very important consensus statement that the AP made that wasn't reported just a moment ago. That had to do with the fact that the industry – both the reduction fishery and the bait fishery have been working with state biologists to gather samples from menhaden, particularly in the northern range of the stock.

Those fish were available for aging. I think they were considered in the assessment. I think we were able to provide some number of older fish for analysis by Joe Smith in Beaufort. The advisors were unanimous that the collection of these fish from the bait fishery, primarily in the northern range, should be a compliance measure in the plan, potentially. I think that was a unanimous agreement of the AP, which was not reported a moment ago.

I wanted to stress that because I think it is important to get those samples from the bait fishery, particularly in the northern range, on a regular basis. I wanted to just mention that for the commissioners today to realize that this is something that we could do to improve the data that Rob and his colleagues have to analyze. Thank you.

MR. PETER HIMCHAK: Mr. Chairman, I did read the comments about providing more bait samples. I think we ought to remember Rob's message early on about the limitations of the Beaufort Laboratory staff in aging fish. We have been sending over 500 samples for the last ten years and they do it, but to make a compliance requirement on states to sample their bait fisheries and then put the burden on the NMFS person, one person, to age all these things is a bit overaggressive I guess I would say. Thank you.

CHAIRMAN WHITE: Thank you, Pete. Any other comment? Seeing none, we're down to consideration of approval of Addendum IV. Jack.

CONSIDERATION OF APPROVAL OF ADDENDUM IV

MR. TRAVELSTEAD: Mr. Chairman, I certainly appreciate the comments from the public and their indication that we ought to get on with understanding the dynamics of menhaden in Chesapeake Bay and how important they are and whether or not they're properly managed there. I think everyone around this table has made that a priority over

the last several years, and I think it continues to be a priority.

Unfortunately, we're not there yet. We've spent a lot of money on the science and lot of that still continues, but it's still not telling us everything we need to know, but I think that's not a good reason to simply let the cap requirement lapse. That's why Virginia is asking that the addendum be adopted and that the cap continue.

I think you have to go back and ask yourself what was the purpose of that cap to begin with. It was simply to prevent an expansion of the fishery until we do have an understanding of the science there in Chesapeake Bay. In that light the addendum has been very successful. I think at the same time we were talking about implementing that cap, there was a lot of encouragement from the members of this board to the industry to redirect their efforts out of Chesapeake Bay to the ocean.

In fact, that is what has happened. I think this is one of the good things that has come out of the addendum in that the industry has changed its harvest patterns. Now, I think a lot of that was simply related to the fact that right about that same time industry got FDA approval for human consumption of Omega oils, and so they're much more interested now in chasing the larger fish because they have the higher oil content.

That obviously had a lot to do with how industry prosecutes the fishery now. I think it would send the wrong signal to not continue the cap. We know we always have the ability as new science comes in to change that cap to something else or completely redesign how we manage the fishery in Chesapeake Bay.

You know, there are also things going on that we don't fully understand with this fishery, and we're going to talk about it a little bit later, and that is with respect to what is going on in the herring fishery and how that might change the menhaden fishery. I think all of that begs the continuation of the cap. For that reason**, I would move, Mr. Chairman, that we adopt Addendum IV, Option 2, to continue the harvest cap until 2013.**

CHAIRMAN WHITE: So moved; Pat Augustine seconds. Any discussion?

DR. PIERCE: This addendum has an aspect to it that I still don't completely understand, especially after reading the comments that were provided by all the many commenters, pro and con, on the extension of the cap. One reason why I really don't understand this aspect of the addendum is that it seems that we are a bit contradictory in the language of the addendum relative to how we deal with underages.

I'm going to ask my point and ask someone to provide some explanation as to the logic for the manner in which we intend to treat the underages. At the beginning of the addendum, which is relatively short, as it needs to be, we make it very clear that the 109,020 metric ton cap on the reduction fishery from Chesapeake Bay was a precautionary measure while research was done and is underway, enabling us to determine as best we can whether that cap is still appropriate; should it be lowered; should it be raised, whatever?

All right, so that is the cap, precautionary cap; yet we then say at the end of – well, on Page 5 of the addendum, prior to the compliance section, that in years when we fall short of the cap for whatever reason, the underage would be credited to the following year's allowable harvest. Then, of course, we say that it can't be more than 122,740 metric tons.

I'm assuming, therefore, that – well, I shouldn't say I'm assuming. My understanding is that there likely will an underage this year, so if there is an underage this year that means that the cap would be increased to 122,740 metric tons for next year, which doesn't seem very precautionary to me; if, indeed, the 109,000 is precautionary.

Again, I'm wrestling with the logic here. It seems to me that it would make more sense for us to just have the cap extended at 109,020. If there are underages, so be that, let them be underages because that will be to the benefit of the resource specifically in the Chesapeake Bay area, and we don't end up with the potential for there being 122,740 metric tons from the Chesapeake Bay for reduction fishery.

That's is my question, because I can't recall and it's not really stated specifically in the addendum, what is the logic for the way in which we intend to treat the underage and why shouldn't we just do away with that aspect of the addendum to be precautionary as we state at the beginning of the addendum that we need to be? So, Mr. Chairman, if someone could help me with that, I would appreciate it.

CHAIRMAN WHITE Well, I'll start it a little bit because I think, if I remember correctly, when we established the 109,000, that wasn't necessarily precautionary. It was taken as an average of I think five years or something of landings that they had. They peaks and valleys of it which is why we considered doing the underage not to exceed the 122,000, and that the stock was healthy enough to support that. Have you got anything you want to add to that, but I think it was done on landing averages, David, and not on necessarily a precautionary approach to what the stock assessment was. Does anybody have any disagreement with that?

DR. PIERCE: Well, in light of the presentation that was given to us earlier on regarding the assessment and in light of the way this document is worded and the public comments that have been received relative to the need to be precautionary and actually reduce the cap, which I'm not willing to do – I can see extending the cap as is because we can drop it if need be when additional scientific information is brought forward – I would move to – I'm not exactly sure how to do this.

We have moved to adopt the addendum, so I would move to amend Addendum IV, that the cap underage amounts not be credited to the following year's allowable cap; the 109,020 metric ton cap would be in place for 2011-2013.

CHAIRMAN WHITE: Are you making this as a substitute motion, David, because it would not be appropriate to have a new motion while we still have a motion on the floor, as I understand it.

DR. PIERCE: I'm amending the motion; it's not a substitute. If there is any need to amend, to change a portion of the addendum, I suspect that we have to do it in this way, move to amend the motion to change some language within the addendum, and that's essentially what I'm doing. That basically is to strike the paragraph on Page 5 that relates to the underage, but specifically the language of my motion is the cap underage amounts not be credited to the following year's allowable harvest.

MR. HIMCHAK: Mr. Chairman, I was going to support the first motion to adopt Option 2, the cap extension. Again, why are we here with this addendum? In the statement of the problem Virginia asked us to develop this addendum to extend the cap to accommodate their legislative process, and the cap would have expired in 2010.

But what is going to happen before the cap expires in 2010? We're going to have a benchmark stock assessment presented to us in May of 2010. I think this addendum is basically bridging the gap for their legislative process, and we will have to start a new course of management on menhaden after the benchmark stock assessment comes in.

We're going to have to start looking at the bait fishery and the coastal harvest and the bay harvest. We're going to have to look at all these facets, and we may charting a new direction on menhaden management. So, again, I believe Virginia came to us to ask for this accommodation. It's basically an administrative process. I know if you go out to public hearing on menhaden, you stir up a whole world of emotions. As I said, I think next May we're going to be focusing on charting a new course. Thank you.

CHAIRMAN WHITE: We need a second to this motion to amend. Seconded by Tom Fote. I have Roy next and then Jack.

MR. ROY MILLER: There may not be any need for me to speak depending of what Vince is going to say, but I was just thinking that perhaps a cleaner way would be to consider this as a substitute motion, in which case we would move to amend the original motion; David's original motion to exclude the underage credits for the following year. Thank you.

CHAIRMAN WHITE: I'm not sure I understand, Roy, because I thought that is what this was doing?

MR. MILLER: It is. I think what David is suggesting is the original motion be amended such that Addendum IV, Option 2, would be accepted but that the underage amounts would not be credited to the following year. This motion, I'm not sure it's a substitute motion. I guess it has to be. It simply deletes that from the addendum so they accomplish the same thing.

MR. TRAVELSTEAD: I have, I guess, a point of order question for you. The addendum raises the question of whether or not the existing measures should be extended to 2013 or not. It presents two options; one, don't extend it; number two, do extend it. I'm wondering if the motion is out of order because this particular

provision was not taken out to the public for comment. I would ask for a ruling on that.

CHAIRMAN WHITE: Okay, to the point that Jack is bringing up, I don't know the answer to that. Do any members of the board have a comment related directly related to that? Tom.

MR. FOTE: Yes, basically when we move forward with amendments all the time, we change them in the process of doing that. Everything doesn't go verbatim; I've seen that change over the 20-something years I've sitting here, so I don't see where it is out of order. We're not changing the whole focus. All we're doing is basically amending a part of it. I seconded that motion for discussion.

I think what the public was seeing is we put a cap place that really has had no effect because the industry hasn't reached that cap for years when we put it in place, and so this is just – and you get another measure, it's not going to make any difference because the underages are not going to taken in the following year just because of the pattern of what the menhaden industry is doing. I guess it's more symbolic than anything else, and I always thought this whole addendum was symbolic.

MR. WILLIAM A. ADLER: I view this as being more restrictive. Going back to what Jack said about taking out things to public hearing, you can be more lenient but you really shouldn't be more restrictive than what you took out to public hearing. Given Option 1 and Option 2, I think that this change would make it more restrictive.

I'm going to disagree with my colleague next to me, and I think everything has been working fine and the stock is in a happy face. The Chesapeake Bay reduction companies have been very cooperative and tried to work with us and work with everybody. Therefore, I see no reason to change what was taken out to public hearing as Option 2. Thank you.

DR. PIERCE: The language regarding the underage is in the relatively brief addendum, so I think it is fair game. If you care to, Mr. Chairman, I would like to heed the advice regarding the way in which this is worded. To make it cleaner, it could be a substitute motion to adopt Addendum IV except that the underage amounts would not be credited to the following year. **That would make it a substitute motion and would make, I think, procedural matters a little bit clearer.** That's my suggestion if you care to go with that, Mr. Chairman.

CHAIRMAN WHITE: That, then, I think would be – then we would vote on that first, so I think that would be the way to do it. As Bill brought up, I think this is a substantive change and to pull it out separately would be not appropriate. If the seconder will take that as a substitute motion rather than an amendment – okay, it appropriate with the seconder. Ritchie.

MR. G. RITCHIE WHITE: Just for my edification, since this was put into place, what have the annual harvest rates been? Have they ever come up to the quota?

CHAIRMAN WHITE: No, they have not. Any other comments to the substitute motion? Dave.

DR. PIERCE: Sorry to jump back in for a second, Mr. Chairman, but one reason why I've made this motion to substitute, it's in the context of our discussions later on about sea herring in that there is going to be, I suspect, a much greater need for bait, and I suspect that could translate into greater harvest of menhaden.

Whether that would translate into greater harvest of age one and age two fish in Chesapeake Bay to deal with the bait market, I don't know, but I believe that young herring are used in the bait market in the state of Maine so I could see no reason why young menhaden wouldn't be used as well. Again, in the interest of being precautionary and to be consistent with the language of the addendum, I still think that the motion to substitute is appropriate.

CHAIRMAN WHITE: Any other comments to the substitute motion? Pat.

MR. PATRICK AUGUSTINE: Mr. Chairman, do I understand correctly that they have not reached 109,000 since we've set this up; you said that?

CHAIRMAN WHITE: No, they have not.

MR. AUGUSTINE: Could you give us an idea of how far below the 109,000? What is the Delta here to get to 109,000? The reason for the question, Mr. Chairman, is in view of the fact the herring situation is what it is and fishermen are under very severe stress, or they will be dependent on the outcome of our quota setting, and looking at the need for some 85 or 90,000 metric tons a year – is that a right number for

bait; 85 metric ton a year for bait, Bill? What is the number for herring, about 85,000?

MR. ADLER: Yes.

MR. AUGUSTINE: Metric tons a year. If that gets shortened and there is a need for the bait, it seems rather ludicrous to have another bait source that could be supplemented for it; and in view of the fact that we've got a couple years to do with it, so if legislation goes through for Virginia – if I understand correctly, it may take a year, more, or two to get this through your legislature, to get this squared away, why are we willing to jeopardize the industry by not being allowed to provide that bait. If they go over 109,000, so what! They can correct it the next year and that's why I would not favor this motion. I would favor the original motion.

CHAIRMAN WHITE: Pat, the cap is not on the bait fishery; the cap is on the Omega Fishery in the Bay. It isn't going to affect what can happen elsewhere. It doesn't affect the bait fishery.

MR. AUGUSTINE: But could they not supply bait?

CHAIRMAN WHITE: No.

MR. AUGUSTINE: So it would have to stay here, then? My correction; I thank you for that, Mr. Chairman.

CHAIRMAN WHITE: Do people need time to caucus? Let's take a minute.

(Whereupon, a caucus was held.)

CHAIRMAN WHITE: Okay, while you're caucusing, the motion is move to substitute to adopt Addendum VI, Option 2, and not to allow underage amounts to be credited to the following year. Motion by Dr. Pierce; seconded by Mr. Fote. We'll go by a show of hands. Those in favor of the substitute motion please raise their right hand; those opposed. **The motion fails five to eleven.** Going back to the main motion, any further comments on the main motion? Yes.

MR. GOLDSBOROUGH: Mr. Chairman, just to put it in a context or the context that I'm looking at it, as was mentioned earlier, we are in the midst of a benchmark assessment and next year we'll have a lot more information from which to base menhaden management decisions. In fact, it was that very circumstance that led this board at its last meeting to table a well-grounded, I'll say, proposal from the state of Maryland to start the evaluation and development of ecological reference points until next spring.

It's a little curious that we're saying we will have this assessment that will give us a lot more information so let's table that until next spring and yet we're going to go ahead and extend this cap a year early in spite of that. It's routine, it seems, for better or worse for this commission to await the completion of an impending assessment and yet we're not doing it. I just put that out there because it is, from our standpoint, another contradiction and one that would at least lead me within our group to vote against this motion. Thank you.

CHAIRMAN WHITE: Thank you, Bill; any other comments? Any comments from the audience? Seeing no comments, another minute to caucus.

(Whereupon, a caucus was held.)

CHAIRMAN WHITE: All right, those in favor of the main motion please raise their right hand; those opposed; null votes; abstentions. **The motion passes.** We have an addendum. Bill.

MR. GOLDSBOROUGH: Mr. Chairman, just to clarify one point; the addendum calls for an annual review of the cap. Can we assume that the annual review will begin in 2010? I think the point I've described in the addendum is the annual review would take place as soon as the previous year's landings' data were available, so I think that would be the summer meeting next year.

CHAIRMAN WHITE: I think that would be our intention, yes, Bill. Okay, I am assuming by this vote that the full addendum has been approved with that option. Is everybody of the same understanding? Okay, thank you. I have AP nominations. Brad.

ADVISORY PANEL NOMINATIONS

MR. SPEAR: Included on the briefing CD was a nomination for a commercial purse seiner from Virginia, Mr. Jimmie Kellum.

CHAIRMAN WHITE: Any comments to the AP nomination? Jack.

MR. TRAVELSTEAD: Mr. Kellum is nominated to replace another Virginian who was on the AP who apparently never showed up at any of the meetings. Mr. Kellum is in the bait fishery; he is a purse seiner in the bait fishery. **I would move his approval to the AP.**

CHAIRMAN WHITE: Seconded by Robert Boyles. Comments on the motion? Any objections to the motion? Seeing none, he is approved as an AP member. Getting back to some of the discussions that started out of the addendum discussions, I would like to just open the floor up to discussions on people's interpretation – I've had a number of commissioners call me concerned about what is happening in the herring fishery and their concerns about the menhaden fishery.

We're shooting in the dark a little bit with this because we don't have the final numbers in the herring fishery as to what is going to transpire and how good or bad – none of it is going to be in the happy zone. I would like to get comments from members of the commission as to what their concerns are and if any action is warranted at this point or at what point people feel it would be.

MR. HIMCHAK: Mr. Chairman, just as a little background, the Virginia Snapper Rig Bait Fishery and the New Jersey Purse Seine Fishery have typically accounted – those two fisheries have typically accounted for about 85 percent of the total bait landings on the Atlantic Coast in any given year.

Recognizing that we are a fine location for purse seining for menhaden and with the forecast of a rather diminished ACL on Atlantic herring, we are aware of some purse seine operations that may be making plans to come down. We already have an operation out of New England that fishes out of Point Pleasant, New Jersey, every year. We fear that the effort in the purse seine fishery is likely to increase.

Our Marine Fisheries Council Menhaden Committee has already met with industry representatives. This was on October 21st. Yes, we're very fearful about an influx of new effort, and in the purse seine fishery these landings which – let's see, they have been as high as 37 million pounds in the last couple of years, which sounds like a lot, but it's not really when you compare it to the reduction fishery, but it could grow substantially.

As a state agency and industry, we are both attempting to essentially limit the influx of new effort in 2010, which means that either we have to pass a regulation or a bill in the legislature by December 31st, which is a tough task, but we are making the attempt to essentially say if you haven't been in this fishery prior to 2009 you're not going to be allowed in it in 2010.

I don't know how successful we'll be in this effort. Even capping the number of eight licenses, that doesn't control effort that allow for a lot of carry boats. You know, we're very concerned about where this fishery may go in 2010. I don't know if there is any other action that we could take at this time in the state to put a cap on our bait fishery or anything of that nature. I don't know how we would justify it, but that's where we're at. Thank you.

MR. FOTE: It was interesting. The industry, when they heard about the herring catch, approached me and quite a few other people, with the industry basically saying how do we stop what is going to be a problem because we know that what causes the problem is a spatial conflict for the most part. It's boats pushing each other out.

It's stock depletion in a certain area, which has nothing to do with the overall stock assessment, but when you basically remove all the menhaden from one area, the game fish seems to go with them, and that's part of the controversy that goes on all the time. Hopefully, people will respect each other on the water.

What happens is when some of the boats that come from out of state, the ones in the state try to avoid this conflict because we try to work together, but some of the boats from out of the state do not do that and that is when spatial conflicts arise and they drop nets at the wrong time. Hopefully, the fishermen will behave in a better manner than they previously have.

MR. GIBSON: Mr. Chairman, we certainly share some of New Jersey's concerns and I think some of the concerns that Dr. Pierce expressed earlier about what is going to happen with the herring fishery and potential large-scale shortages of bait to the lobster industry and potential expansion of effort on menhaden, particularly in the New England area.

In Rhode Island we have to build a management system in house that recognizes the ecological services that menhaden provide and their importance to the recreational fishery as well as

the commercial fishery, and they're trying to balance that. They're trying to balance the amount of fishing effort that is deployed out there, the amount of catch of menhaden they're taking out of the bay.

Unforeseen circumstances could put us in difficult situations if we were to have significant activation of permitted effort on menhaden in Narragansett Bay and the delicate balance we have between interests to eliminate the commercial fishery entirely and accommodated in some way, that balance would be easily upset. We're watching this very closely.

CHAIRMAN WHITE: Mark, do you currently have regulations on state-licensed fishermen for menhaden?

MR. GIBSON: Yes, we do, but I think I'd ask Bob if he wanted to speak to that. I don't want to put you on the spot, but you know those better than I do. I think the answer is yes.

MR. BOB BALLOU: Bob Ballou with Rhode Island DEM. I think the short answer is that we do have a purse seine gear endorsement that we now require for anyone looking to purse seine for menhaden. We don't have any limits on that, but we do require that anyone purse seining would have to append that endorsement, and that gives us a potential management tool to control effort if we felt the need to. Thank you.

MR. TERRY STOCKWELL: There is no doubt that there is a significant amount of fishing power in New England, particularly the Maine purse seiners that are really hungry to make a living after the upcoming herring specifications. It is good to have this discussion now because there are still a lot of unknowns.

Although there is a good catch off of New Jersey this year, there is nothing in the Gulf of Maine. A year ago we had a great catch in Maine and the boats didn't go down. With this upcoming stock assessment, I don't know – it might have been Tom who mentioned that we're going to need to address a new way of managing the fishery. I think we'll know better after next week.

CHAIRMAN WHITE: Other comments? Dave, did you want to go a little bit deeper into it as to what you brought up initially?

DR. PIERCE: Yes, only that this relationship between the sea herring fishery and menhaden fishery in the Gulf of Maine is quite tight in that when we deal with regulations on the sea herring fishery in the Gulf of Maine, we can always be less restrictive – we can be more restrictive than we might not want to be if, indeed, the menhaden availability is high because the fishermen can go after the menhaden and that supplies the bait needs. The menhaden didn't appear to be in abundance in the Gulf of Maine to supply that bait this year, but who knows what it will be next year.

So, yes, the assessment will be welcome information for us. I think it's safe to say that once we have a Herring Committee meeting next week, we'll likely be faced with a drop in the Area 1A quota – that's the inshore portion of the Gulf of Maine – from around 42,000 metric tons to maybe 20,000 metric tons or 15,000 metric tons.

Area 2, that's the Mid-Atlantic area and the Southern New England area, that could drop down dramatically as well. It's almost a hundred percent certainty that there will be a dramatic decrease in the amount of herring available for fishermen. Therefore, herring as bait will drop dramatically and there is bound a very significant demand for other sources of bait; menhaden being at the top of the list.

We really have to watch it very closely and see how all this unfolds. The reason why we are in this situation with sea herring is that even though we are not overfished, even though we are not overfishing, and even though we are at our biomass target, one would think that's a very optimistic situation leading to good catches in the future, there is a precautionary element to what we have to do, what we're obliged to do.

The Science and Statistical Committee has taken the lower abundance level that we now are working with and they have taken a large amount off top of that in order to be precautionary of the uncertainty with the assessment. There is a lot less available to be harvested and it's going to, again, create very low quotas everywhere even though we are not overfished, no overfishing and we are at our biomass target. It's a rather ironic situation with the adverse consequence now being lack of sea herring for bait and for other uses and the likely increased attention being paid to menhaden.

MR. ADLER: Mr. Chairman, this is just another FYI also on the same issue. Basically the lobster

industry in New England uses somewhere in the seventies and 90,000 metric tons of bait a year. The sources of herring cross skate, menhaden and groundfish cuttings. Now, as we all know, the groundfish cuttings have dropped because the groundfish catches are being restricted, and this has gone on for several years.

Now there is a movement to limit the skate catches by the federal councils. With the herring cut and skate potential cut and the groundfish cut, the lobstermen are going to have to use something. I don't want to have to say what we're going to use, but the 70 to 90,000 metric tons is needed to keep the New England Lobster Fishing going.

It would have been great if we could have kept the herring quota up somewhere where it is now. But menhaden is, in fact, coming in for bait as well. This is just a picture of the bait industry at least in New England.

CHAIRMAN WHITE: Thanks, Bill. I'm sure most people are aware there is about 9,000 metric tons of redfish that is being considered an underutilized species at this time. It is going to take some specific action to allow it as a fishery because it is a small-mesh fishery. I understand that is going to go before the council as a discussion, but I don't know if that will ever happen in time. Gil.

MR. GIL EWING: Mr. Chairman, a few minutes we were considering an amendment to a motion for Addendum IV to eliminate the rollover of the underage. Our good friends from North Carolina, earlier we had said that we weren't going to do rollovers of underage when they asked for a rollover for the striped bass industry. We're allowing it again here in this menhaden industry, and we're going to face a large increase in the bait fishery. I see this as a very possible problem when we start managing the bait fishery, which I think we're going to have to do, and I think this could cause us a problem by setting this precedent.

I don't think we should be looking into rolling over the underages. Specifically, we don't even say when the underage is caught. Is it caught first or is caught last? You say, "Well, what does that mean, what difference does that make?" Well, if we catch the underage first, then they haven't started on the quota. Now the quota is not caught and they can roll that quota over again into the next year; so even though we say that we can only roll it over one year, in effect we can roll it over continuously. Thank you.

CHAIRMAN WHITE: All right, Gil, thank you. I have to think about that one, but, again, bear in mind that this addendum is for the reduction fishery and not for the bait fishery. Any other comments on the herring?

DR. LOUIS DANIEL: I can't let that go; I tried. I certainly appreciate the comments from my friend from New Jersey, but I think it does beg the larger question for another time at the Policy Board on how to deal with rollovers. We have always, at home, told the folks that we never do rollovers unless we're not overfished and not overfishing.

If we're in a healthy situation and if we're in our happy place, then we can allow rollovers. There seems to be some real confusion around the table, at least from my perspective, on when is a rollover okay and when is it not okay. In my opinion we're spending a lot of time on menhaden, on a stock that's in good shape.

I agree with the concerns on the bait fishery. I think that is a real concern up in the New England area, and I think we need to address that; but for the purposes of this addendum, I think we need to move on.

CHAIRMAN WHITE: Well, maybe I misunderstand your comments because we have moved on from the addendum. I'm just trying to create the discussion and hear people's concerns about what is happening in the herring fishery relative to the menhaden fishery.

DR. DANIEL: I understand; I'm just excited about this rollover issue. I just think for a larger question later on this week, I think we need to have this discussion as a Policy Board on how we're going to deal with this. Mr. Ewing makes a good point in terms of how this could impact – ultimately, we're going to have a plan that deals with the bait fishery and the reduction fishery together, I'm assuming.

ADJOURNMENT

CHAIRMAN WHITE: Thank you. Any other comments from the board? I'll take a couple of brief comments from the audience if there are any people in the audience that would like to speak to this issue. Seeing none, are there any other issues to come before the board? Seeing none, we are adjourned.

(Whereupon, the meeting was adjourned at 9:48 o'clock a.m., November 3, 2009.)