

**PROCEEDINGS OF THE  
ATLANTIC STATES MARINE FISHERIES COMMISSION  
WEAKFISH MANAGEMENT BOARD**

**August 16, 2005  
Radisson Hotel Old Town  
Arlington, Virginia**

## **ATTENDANCE**

### **Board Members**

Paul Diodati, Massachusetts DMF  
Vito Calomo, proxy for Rep. Verga (MA)  
Bill Alder, Massachusetts Gov. Apte.  
Mark Gibson, Rhode Island DEM  
Gil Pope, proxy for Rep. Naughton (RI)  
Everitt Petronio, Rhode Island Gov. Apte.  
Eric Smith, Connecticut DMR  
Gordon Colvin, New York DEC  
Brian Culhane, proxy for Sen. Johnson (NY)  
Pat Augustine, New York Gov. Apte.  
Bruce Freeman, New Jersey DFG&W  
Ed Goldman, proxy for Asbmn. Smith (NJ)  
Erling Berg, New Jersey Gov. Apte.  
Roy Miller, Delaware DFW  
Bernard Pankowski, proxy for Sen.  
Venables (DE)

Howard King, Maryland DNR  
Bill Goldsborough, proxy for Mr. Vasta  
(MD)  
A.C. Carpenter, PRFC  
Jack Travelstead, Virginia MRC  
Catherine Davenport, Virginia Gov. Apte.  
Louis Daniel, Chair, North Carolina DMF  
Damon Tatem, North Carolina Gov. Apte.  
John Frampton, South Carolina DNR  
Robert Boyles, South Carolina DNR  
Spud Woodward, Georgia DNR  
Gil McRae, Florida MRI  
Anne Lange, NMFS  
David Perkins, USFW

### **Ex-Officio Members**

Jim Uphoff, Maryland DMF, Technical Committee Chair

### **ASMFC Staff**

Brad Spear  
Nancy Wallace

Robert Beal  
Vince O'Shea

### **Guests**

Dick Brame, CCA  
Dan Dugan, Delaware AP Rep  
Tom McCloy, NJ DFG  
Sean McKeon, NC Fisheries Assoc.  
Greg DiDomenico, Garden State Seafood

Steve Heins, NY DEC  
Chip Lynch, NOAA  
Steve Meyers, NOAA Fisheries  
Mike Howard, ASMFC LEC

*There may have been others in attendance who did not sign the attendance sheet.*

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- 1. Move to approve Draft Addendum I to Amendment 4 to the Weakfish Management Plan for public comment, with the removal of Option 2 on Page 5. Rewrite the biological sampling section to require states to collect a minimum number of samples.** Motion by Mr. Augustine; second by Mr. Calomo; friendly amendment by Mr. Travelstead; motion carried.

**ATLANTIC STATES MARINE FISHERIES  
COMMISSION**

**WEAKFISH MANAGEMENT BOARD**

**RADISSON HOTEL OLD TOWN  
ALEXANDRIA, VIRGINIA**

**AUGUST 16, 2005**

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The Weakfish Management Board of the Atlantic States Marine Fisheries Commission convened in the Presidential Ballroom of the Radisson Hotel Old Town, Alexandria, Virginia, August 16, 2005, and was called to order at 8:00 o'clock a.m. by Chairman Louis Daniel.

**BOARD CONSENT**

**CHAIRMAN LOUIS DANIEL:** If I could, I would like to call to order the Weakfish Management Board Meeting. In your briefing materials and on the back table, there's an agenda, our minutes and the addendum.

Hopefully, everyone has had a chance to look over those items. If you'll turn to your agenda, the first thing is approval of the agenda. If you'll look at the agenda, if there are no objections to the agenda — if anybody has got any other business, let me know either now or as we progress.

If there are no corrections or additions to the agenda, it will be approved by consensus. Okay, so ordered. Next is the approval of our proceedings from our May meeting. If everyone has had a chance to look those over — Pat.

**MR. PATRICK AUGUSTINE:** So moved.

**CHAIRMAN DANIEL:** Motion from Pat Augustine; second by Bill Adler. Any objection? Seeing none, the minutes stand approved.

All right, that moves us into the public comment portion of the meeting. Is there anyone from the public who wishes to address the board on weakfish management issues? Seeing no one rush to the table, I'll go ahead, fifteen minutes early, and turn it over to our technical committee chairman, Jim Uphoff, to give us the technical committee's report on the work that they've done since our last meeting.

**TECHNICAL COMMITTEE REPORT**

**MR. JIM UPHOFF:** Okay, good morning, fellow weakfish warriors. We're bright and early for a change; we're not at the end of the agenda. I guess we'll get right into this. At the last meeting you gave us the charge of developing projections and some general guidelines for management measures. I am going to go over those this morning.

The way I put this presentation together, I want to do a brief review of kind of how we got to this point, at least assessment wise; then a bunch of slides on projections and management options, and then finally, since there has been a fair amount of, I don't know, discussions or skepticism about the rise in natural mortality.

I do have some slides showing some of the results of the analyses we did, but I would like to hold off on those, if it's all right with you, to a point when you wish to talk about it. And, if you don't, that's okay, too. It depends on how far we get on the management business.

So, basically, here's where we are in landings. This is the 50-year National Marine Fisheries Service time series, plus the MRFSS. Harvest estimates, essentially, in 2003, we were at or were approaching an all-time low in the landings. Both fisheries were simultaneously falling to this low level.

One fishery did not benefit over the other or anything of that nature. As far as the indices, we have had to pare out several from the assessment. The ones that we are working from are the Delaware and New Jersey Trawl Surveys, which reflect the status of landings, and what we're calling an MRFSS Global Index.

That is an estimated weight of the harvest and releases per private boat trip in Mid-Atlantic state waters. That's a mouthful, but it's essentially the time series we're working from.

When you look at this in terms of a relative fishing mortality, this is not an absolute estimate. It's just estimating the trends. We have seen a very large drop in fishing mortality rates — the trends in fishing mortality during the early nineties. Generally, they have stayed quite low since then.

This is probably one of most basic ways to look at some of these data. There is not much of a

suggestion of high fishing mortality rates with the catches in the surveys.

This is the proportional stock density size index. Essentially, at this point it's the percentage of 13.4 inch or greater weakfish in the Delaware Trawl Survey or the New Jersey Trawl Survey. The size structure is greatly compressed in the population and is at a very low level.

It's a much more precipitous drop in the Delaware Survey, perhaps, than the New Jersey, but, nonetheless, the size distribution is quite compressed.

These are estimates from year class specific catch curves of the total mortality rate, instantaneous mortality rate from the catch-at-age matrix, from the VPA, essentially showing that the rate had dropped to quite a low level by about '92.

Ninety-three, it was not possible to do an estimate just because of some cantankerousness of the data; and by '94 the estimates of total mortality started to rise again. The last year class that was complete in the analysis, which was the '97 year class, had quite a high total mortality rate.

These are results from the ADAPT VPA. This is using the MRFSS Global Index as tuning. It's got a pretty bad retrospective bias, so we do not use these results much past 2000.

Again, this is total mortality. So, if you want to know what the total mortality rate was ten years ago, it does a great job. If you want to know what it is now, we basically don't know.

The same thing with the SSB estimates for the VPA run, and this is the reason why we pretty much abandoned the virtual population analysis is because of the retrospective bias. It's been a problem in weakfish assessments I think since Day 1, and at this point we've stopped applying it at least as the sole means of assessing the population.

This is a little bit about the age structure. North Carolina does a very good job of sampling their commercial fisheries for age structure. That's the blue line at the top, and we seem to be more or less adding an age class to the maximum every year since '96, or maybe it has leveled off here since about 2002.

From ADAPT, assuming that the retrospective bias does not run differently across year classes, we're seeing a truncation of the age structure. The

percentage of fish that are six years or older has fallen very rapidly to a very low level.

This is sort of getting now into what is the basis of our assessment and projections, which is something I guess we've called the rescaled relative F. Again, it's based on this MRFSS Index as kind of the underlying survey in it.

Essentially, we set up a relative fishing mortality rate and then rescale it to the converged portion of the ADAPT run, the part of the ADAPT run that we think is not going to change very much.

We don't go all the way back in time to 1981 because of the aging. From about that period backwards is based on kind of a constant translation of scale ages to otolith ages. We don't have enough otolith ages back there, so we've tried to pick a time period.

This is a time period that is fairly reliable for rescaling the results. It's essentially just applying a ratio to rescale the F's up into the VPA biomass currency and then taking the catch and dividing it by the F to get a mean biomass estimate.

Those are the trends. You have seen those. F was at its peak around 1990, dropped continuously through about the mid-nineties and held constant, and then it started a slow rise.

As far as biomass, the biomass dropped very rapidly with this technique from about '81 to 1990; remained stable; began to rise after Amendment 3; plateaued for a period of about five years, about '99; and then has undergone a very rapid drop from about 30,000 metric tons to about 7,000 metric tons in 2003. That's 30,000 metric tons in '99 to 7,000 metric tons in 2003.

By a little bit of algebra and math, you can actually extend the time series of total Z's out. The VPA-based estimates are through 2000. And then as part of the technique that was developed for making projections, we were able to back out estimates for the remaining years, which you'd call an external production model.

Subtracting the F's from the Z's you get the trend in natural mortality rates. This is the estimates of surplus production versus fishing mortality in the previous year.

Note that the surplus production, which is in blue, began to fall very rapidly, about the time the stock fell, obviously, but the rise in fishing mortality rates is very low and would not seem to be a sufficient

explanation as to why the surplus production dropped so much.

Okay, now we're down to the projections. This is the classic modeler's warning; all models are wrong, but some are useful. Please bear in mind that these are projections; and the further out you go in time, the more tenuous they're going to become.

Essentially, what I've done here is we took the surplus production model and used the time series of F's and M's as the basis for making projections instead of catches, since we feel like we really need to know what the natural mortality is.

We've taken the latest estimates, which were 2001-2002, for F and M, and used the biomass estimate in 2003, which is a little under 7,000 metric tons, as the start. The projections run from 2004 to 2023. The cuts start to take place next year, 2006. By that time, the biomass has already fallen to under 1,300 metric tons.

We have cut F by zero, 25 percent, 50 percent, 75 percent and 100 percent in these various scenarios, as you requested. M is held constant at the rate that it starts; or, we depreciate it -- for the examples here -- by 20 percent per year, which is approximately the pace that it rose in 1996 to 2001 until the baseline is reached.

The baseline is the assumed natural mortality rate for weakfish, which is instantaneous rate, which is 0.25; and once the baseline is reached, it's held constant there.

These are the projections. We are going to be using the period around '99 I think to 2001, more or less, as an indication of recovery. It's going to be a little under 30,000 metric tons. If you institute no changes, the population essentially falls to zero.

If you institute a full moratorium with no change in the natural mortality rate, the population falls close to zero. If natural mortality rates start to change at the pace put up here as an example, but there is no change in fishing mortality, the population supposedly starts to rise a bit by the end of the projection horizon.

One caution with this is these projections operate mechanistically, there is no population threshold in this projection where the population is too low for the fish to reproduce.

Now, if the natural mortality rates start to drop, then cuts in fishing mortality will speed up the recovery. Essentially, the more F you cut, along with the

depreciation in natural mortality rates, then the quicker you get back to what we're using as a recovered population level.

So, at a 75 percent cut, it would be somewhere in the neighborhood of about 2017 or so is when you would be back -- all else being equal, you would be back at the level that you were when we were thinking things were going pretty well, had extended age structure, pretty good biomass, et cetera.

So, basically, M has to fall in conjunction with the decrease in F for recovery. The estimates of the young fish biomass, which you can get, derived a surplus production model were not used because they were somewhat different among the different analyses that were used, and it was kind of hard to pin this down.

So, we picked a time period estimate that should be relatively robust to changes in assessment technique. Cuts in F alone are not going to provide for a recovery. The reductions in M alone will not provide for near as timely a recovery.

If F is cut and we are lucky enough to have a decline in M, then recovery might occur about ten to fifteen years from now, according to these projections, and we can't really evaluate the effect of any 2000 cuts until late 2007 or 2008 when the data would be available, as far as actually realizing how much F was cut.

So, here are some of the management measures that the technical committee discussed. First of all, we had somewhat of a reluctant consensus for a 50 percent cut in fishing mortality rates. We had a pretty even split among no cuts and full cuts, but everybody kind of met in the middle.

We felt that the recreational bag limits and seasons should be based on the 2003-2004 coastal MRFSS data. These may have been instructions you gave us as well. Actually, I'd have to go back and look at my notes, but that's what we did these estimates based on.

Commercial cuts are based on the 2003-2004 state landings, using the Amendment 4 reduction in F formula, substituting that for the previous time period landings to calculate the reductions. We also recommend that commercial bycatch of legal-sized weakfish should be reduced somewhere between 75 and 150 pounds per trip.

The other options that we discussed and think are quite viable is that states with good trip ticket

systems could develop directed trip limits. North Carolina and Virginia come to mind as having very good record systems where something like that could be worked up.

Also, an alternative is to simply close all the directed weakfish fisheries and allow it to operate only as a bycatch fishery. We don't have any real specifics on that, but that could be an option.

So, for the recreational reductions, we looked at bag limits and seasons. The question we have or that was brought up by Jeff Brust in New Jersey, actually, is are we reducing the harvest with this technique as we did in the past for Amendment 3 and Amendment 4? Are we actually talking about reducing F?

Your instructions were to reduce the fishing mortality rates, but I'm not sure we were entirely clear on this. Essentially, for doing the bag limit analysis, we are including 20 percent mortality of the releases.

If you're talking about reducing F instead of reducing the harvest, then you're using the harvest to compensate for all release losses; not just the released fish that would have been harvested and released. This will make quite a stunning difference, as you'll see in a minute. We considered bag and season reductions to be additive.

The coastal bag limits, again, if you're talking about a harvest reduction and you want a 25 percent cut in fishing mortality rates, you're talking about a four-fish bag limit; for 50 percent harvest reduction, a one-fish bag limit.

This is coastwide. We felt that the best data we have is aggregated on a coast-wide basis, rather than split out by state by state or any other regional aggregation. At 75 percent reduction in harvest, we talking about a one-fish bag limit and 16 percent season reduction.

Now, if you're talking F reductions, if you're talking about compensating for a 20 percent release mortality of all fish released, at a 25 percent cut, a three-fish bag limit, with a 2 percent season reduction, that's not so bad.

At 50 percent, it's a one-fish bag limit, with a 97 percent season reduction, and it's not possible to get there if you're trying to reduce F 75 percent.

As far as seasons, we based them on a logistic fit of the cumulative harvest or cumulative percentage of harvest by wave. Just to give a little idea, kind of orienting you on the dates, if you wanted to have a 25

percent cut in F and a season that is closed at the beginning, that's that yellow line there. That's somewhere in July or so. If you opened the season around, I don't know, let's say July 10th, you're going to get about a 25 percent reduction in F.

Fifty percent falls somewhere close to the 1<sup>st</sup> of September; 75 percent means you would be opening your season around October 6<sup>th</sup>. This is on a coast-wide basis. Of course, you can go backwards and forwards; you can pick things in the middle to get a 50 percent reduction.

It's essentially the length of the seasons that you're talking about with just a fairly straightforward interpretation of the catch data.

We did not consider length limit changes. Length limits basically don't really control F. They control the age of entry into the fishery. The past analyses of trying to combine — actually, this goes back to Amendment 3 where we were considering bag limit and season and size limit combinations, and it was extremely complicated.

It's based on equilibrium conditions and yield-per-recruit analysis. We have anything but equilibrium conditions here at the moment. So, we're assuming that the states keep their size limits essentially.

Off to the right there is the cumulative length frequency for 2003 and 2004, where especially in 2004 most of the fish harvested are somewhere between about 12 inches and 18 inches.

As far as commercial reductions, we got enough of them done to give you at least some examples. What I've done is I've just averaged them across the fisheries and states that were available. So, currently, the average directed weakfish season is about 104 days.

At a 25 percent cut, it drops to a little over 60 days. At a 50 percent cut, it drops to a little over 30 days; and at a 75 percent cut, it's less than 10 days of a directed season for weakfish.

Now, the rapidly falling stock size could really change the effect of the bag limits based on 2003 and 2004 catches simply because if the population is dropping that rapidly, the bag limits aren't going to have the same effect that they might have had if it stayed stable.

It also can have an effect on the future assessment. Since we're basing the current assessment on an MRFSS index for the most part, the precision of the

index components could be reduced substantially as the fishery fails.

Development of other age-structured models will also be hindered by the inability to obtain samples from a fishery where weakfish may be quite rare. Well, that's it, and that's kind of why this thing is complicated.

The circle is where we are now managing, and there are lots of other things going on. I am not going to go any further at this point unless you want me to. I figure there is a lot to chew on at this point.

CHAIRMAN DANIEL: Do you think?

MR. UPHOFF: Maybe.

CHAIRMAN DANIEL: Thank you, Jim, for an excellent report. I'm sure there are questions. Paul.

MR. PAUL DIODATI: That was very informative, Jim. Maybe this last slide is what leads up to this question. Your important assumption of the committee is that natural mortality is extremely right now, and I'm wondering what do you think attributes to that, given that is it when weakfish are their very young stages? Is there something that's causing that mortality?

MR. UPHOFF: Okay, well, that would be the next 15 or 16 slides. If you'd like, I can certainly do that.

MR. DIODATI: No, no, I'll wait.

MR. UPHOFF: Well, I mean it's entirely up to you guys. I mean, I think I can do it fairly quickly. I just don't want to divert the group from kind of the management aspects that they have to do.

MR. DIODATI: I just think it's sort of critical here, because what the committee is saying is that F is so low that our management actions may not have much of an effect on stock recovery.

So, the presumption that natural mortality is as high as it is is a very important one, so we're going to have to establish whether that's, in fact, the case. That's why I asked the question.

I have one other question. Where the committee didn't do any projections to adjust the size of recruitment, you mentioned that you left the size limits where they were.

Although that only does postpone mortality, it would certainly enhance spawning potential. With stock size as low as it is, I would think that would be an attractive option, but I guess the committee didn't think so.

MR. UPHOFF: It's not that we didn't think so. As an analytical problem, it was pretty difficult to come up -- within the framework, the time span, it was difficult to try and address the three issues at once. I think the very high size limits would certainly have a dramatic effect.

I think this is something that goes all the way back to Amendment 3 where we talked about, I don't know, I remember like 16-inch size limits or something everywhere. Obviously, that cuts a lot of the fisheries out.

At that point the argument was much different because the anticipation was of recovery, and people didn't want to get cut out of their chance to catch some weakfish and so on. It's not so much that we don't think of it as a viable option.

It was just very difficult to put it in an analytical context as to how well it was going to work, but, again, if you look at the length frequencies, you can probably figure that you're going to cut this much.

Again, those are the cumulative length frequencies, so if you assume a reasonable survival rate, say, of the younger fish and raise the size limit up to, I don't know -- on the yellow bar, there's a little yellow line that denotes 13 inches, which is where most states kind of have put their size limits at this point, and so a 15-inch size limit leaves about 20 percent of the catch. So, I guess in kind of a crude fashion, you get some idea of at least based on 2004 what size limits might do.

MR. DIODATI: Well, what is the size of maturity, say, when if 50 percent of the fish reach maturity; what size is that?

MR. UPHOFF: Well, weakfish are pretty amazing. Ninety percent of them mature at age one, and that's probably about 8 to 10 inches, 7 to 8 inches, something like that. I mean, I've seen little weakfish this year, small ones, 8 inches that have developing ovaries in them from pound net samples.

This seems to be something that's fairly constant. In fact, as a little offshoot, it's probably a fairly robust evolutionary strategy for surviving hard times is if food is short, you get small reproduce early. If things are optimal, you can get quite large.

The weakfish have the potential to get up to 30-inches plus, but they seem to be able to survive and reproduce okay for long periods of time, based on the historic record, at quite small sizes.

CHAIRMAN DANIEL: At the end of the last meeting, the board indicated that they were not interested in looking at the interactions between other species and the eco-systems effects of this issue.

But, they put it together anyway, and we brought that forward. There seems to be now some interest in looking at what the technical committee has put together. So, without objection --

MR. DIODATI: If I'm the only one who wants to see that, that's fine.

CHAIRMAN DANIEL: I was seeing a lot of heads nodding, so it seems that there's interest in seeing that; so, if that's the case, let me ask Jim to go ahead and move into the second part of his presentation and then we'll deal with other questions.

MR. FREEMAN: Louis, I had a question that's related to Paul's and perhaps it will be relevant to the discussion. Essentially, as I understand it, what we believe we understand is fishing mortality is both commercial and recreational; then we subtract that from Z to get natural mortality.

Is there some missing link; is there some aspect of the fishery that could account for mortality that we simply don't know or feel uncomfortable with? Because, this is critical. I mean, we read M by subtracting F from Z, and I'm just curious if there's something that we're missing, or the technical people believe there's something that should be looked at?

MR. UPHOFF: Well, there's actually a couple of parts to that. Typically, we estimate F by subtracting a constant M with hardly any evidence that it's constant except in a few cases. So, we're just turning the convention around, and we actually have -- as I'll explain -- we have estimates of Z and we have estimates of F.

So, what's left over isn't really necessarily assumed, but it's residual. The next part about looking for it is possible somehow, we're missing something, but it's almost like it would have to be a conspiracy on a massive scale by recreational and commercial fishermen in conjunction, because both fisheries are collapsing at the same time.

So, we have turned this thing, we have looked at what catch-per-effort data is available around different fisheries. The relative F that I showed you earlier is fairly robust to at least the trends or should be pretty robust that F has dropped considerably.

We're really stumped to find some alternative explanation other than maybe massive bycatch losses that we just have no -- although this assessment actually had -- Janika DeSilva, before he left from Florida, put together the NMFS observer data base.

So, we actually had some estimates of bycatch losses. We actually add a very substantial recreational loss, which some technical committee members believe is in excess of what the release mortality really is.

The experiments that have been done with weakfish tend to find them to be fairly tough. The release mortality rates in the experiments that have been done generally in shallow water, which is the criticism, is hovering around 5 percent, and we're using 20 percent.

Yes, we have looked, I think, fairly hard for some other signs of it; and if it's there, it's pretty well hidden. Okay, I'm going to try and do this in a reasonably quick fashion.

What support is there for a rise in M or rapid changes anytime, for that matter, we've got some basic ecological theory and statistical connections. More or less, what we're looking at is really a preponderance of circumstantial evidence.

But, in answer to a question Mark asked us the last time, I think Desmond explained it. I talked to Vic some more about this, since he's the one who's primarily doing the rescaled relative F analysis. The natural mortality rate should be, I guess, directly estimated in the rescaled F analysis, if the F that you derive from that rescaled analysis is in the proper proportion to the VPA total mortality rate that it was based on.

In other words, for the time period used to scale things back up, if the natural mortality rate is about 0.25, then this thing should have scaled things up about right. It's possible it didn't, so there's quite a good chance that this is a direct estimate.

Well, weakfish undergo rapid diet shifts as they develop in age. They start feeding on fish at age zero. They also feed on invertebrates. At age 2, they're also feeding on small fish like the bay anchovy. They're switching to larger prey like

Atlantic menhaden, and they're still fishing somewhat on invertebrates.

By ages 2 plus, they have shifted over primarily to larger diet items like menhaden, spot, squid and, finally, also some of the smaller species like bay anchovy. They are primarily pelagic mid-water feeders. Their morphology is adapted for that.

This early switch to a fish diet indicates that weakfish is what you would consider to be a specialist pisevore. This required high growth rates, and, of course, weakfish can grow very rapidly. It implies high density as a proper forage and safe foraging opportunities.

Species that are undergoing these diet transitions face risk of resource limitation that delays a shift into the next larger food item and increases their vulnerability to things like starvation and predation, which are size-dependent processes.

There is an indication of a diet bottleneck that's a supply shortfall that could retard the growth and increase the size-dependent natural mortality through starvation and predation. I have taken what indices I can find for the main forage fishes in the mid-Atlantic for weakfish, and that's menhaden, spot and anchovy.

By combing through the various diet studies, those are the primary forage items for weakfish in the mid-Atlantic. I have kind of had to just -- there are so many of them I've had to sort of just put a grand mean for the standardized index. Essentially, these species have all been at below-average levels for their time series since about 1993.

Are there any weakfish diet data to support that the main food items are in less supply? Well, the Chesapeake Bay basically had the only two recent diet studies for weakfish. One was done in the mid-Chesapeake in '90 to '92 by Kyle Hartman, and then the whole bay is being looked at by the Virginia Institute of Marine Science, their CHESMAP program.

This basically covers the period when weakfish went from being very large in their size distribution to now being very small. In other words, this proportional stock density to size quality index covers the period when this has shrunk considerably.

Basically, just to really summarize it without pounding away at the data, in the early 1990's versus now, which is, I guess, 2001 through 2002,

something like that, the anchovies and menhaden are much less frequent in weakfish diets.

Spot have all but disappeared. Cannibalism has become quite noticeable as a percentage of the diet, and essentially, the invertebrates, such as sand shrimp and mysids and things like that, are making up a much greater part of the diet than it did in the nineties.

So, essentially, by 2002 and 2003, the older weakfish are trying to subsist on the same diet as the young weakfish. This is not a formula for getting big, except that they eat other weakfish. The food item size progression -- in the 1990's you had a progression as the fish got bigger, the food items were available for them to get bigger on.

That doesn't seem to there anymore. Vic Crecco did a series of analyses from an external production model, based on the relative F estimates -- or the rescaled relative F estimates of biomass and fishing mortality.

He did a series of multiple regressions where he added in candidate species and also F and then regressed that against surplus production, and essentially, in each case for these candidate species, menhaden, striped bass and Atlantic croaker, the level of significance is -- well, the species interaction is a stronger candidate for explaining the changes in surplus production than fishing mortality rates in those statistical analyses.

Weakfish and striped bass, in particular, are direct competitors for most of the food items. If I put a striped bass in instead of the weakfish in that opening slide about how they shift in diet and then shift everything one year, they essentially go through the same transitions.

Striped bass start their first year feeding on invertebrates. By the second year, they have shifted over to anchovies and maybe a little bit of menhaden. By the third year, they're concentrating on menhaden and spot and larger diet items from then on.

So, these things are very direct competitors. This is again Chesapeake Bay data as an example. Striped bass also are predators on weakfish. When you look at striped bass diet studies, a small but significant fraction of their diet is typically weakfish.

This is a striped bass up in Delaware Bay, a slide I got. I guess it's been passed on through Desmond to me, et cetera. Those are about eight or ten or so weakfish up to 13 inches in a striped bass stomach.

In terms of looking at some analysis of striped bass, I had two datasets. One is long-term egg-based biomass estimates which would be probably larger fish. The other is the VPA estimates of biomass. The trend, essentially in both of them since the early eighties, is for the biomass of this predator-competitor to be going up.

In the short term, where I first started with this was looking at the size quality of weakfish, that proportional stock density. One of the things about the PSD Index is not just by itself; it's a very good indicator of the state of most of the fisheries.

It's highly correlated and positively correlated with the commercial and recreational harvest, whether the harvest has shifted inshore or offshore and several other features. It's a pretty good indicator of the quality of the fishery. Essentially, this is a natural log of striped bass biomass. There's a negative correlation between the two.

On the long term, using the egg index as my striped bass indicator and estimates of age zero menhaden abundance, I think I can make a fairly reasonable prediction of what the size quality is going to be.

Menhaden account for about 50 percent of the explained variation, and striped bass account for about 11 percent of the explained variation. This is a simple linear multiple regression model.

One of the things that Vince had suggested a while back was looking at just the landings. So, these are the National Marine Fishery Service weakfish and striped bass landings, to look for some sign of interaction over the long term.

And what you get is -- actually, it's pretty interesting. When you just look at it as a whole by itself, it doesn't explain a lot of variation, but it's still significant. Well, I applied what's called categorical regression where you're actually fitting slopes to essentially two time periods of data.

So, in addition to sort of a general negative relationship between weakfish and striped bass, there's also a suggestion of different periods of productivity. That is, in the 1970's and '80's, weakfish in general -- this is when you had the big weakfish.

Things were much more productive on a per capita basis than they are now, but generally there's a pretty strong negative relationship and a strong significant -- I don't know, I guess a conclusion that there are

regime shifts or two periods of productivity within these data.

If you go back into the older data, which I haven't been able to pull out analytically, but you look at the pattern from preceding 1950 back into the twenties, generally the large weakfish were available, I believe, in the twenties, thirties and the forties when striped bass were much more rare.

The striped bass began a long comeback kind of up into the fifties when these accounts of tide runners and so on started to diminish. So, I think there's some suggestion, if I could get that data, that it would fit this pattern as well.

I think this may be getting on to the final one. There was a really nice paper done by Steele and Henderson back in the mid to late eighties where they developed -- essentially, it's a Schafer type biomass dynamic model with a Type III predator-prey function on it.

When they subjected it to sort -- this was a simulation study, some kind of directional noise. They could reproduce these very rapid changes in population status, the regime shift concept, that populations can undergo changes very rapidly due to kind of an underlying environmental forcing and predation.

I have applied this model to weakfish. Actually, Jeremy Collie and Paul Spencer used it to look at haddock and dogfish interactions in economics, I think, in Georges Bank. There were a series of papers.

Once I kind of deciphered it, I put that together. Essentially, if you run the regular biomass dynamic model, which has an underlying assumption of ecological stability, you get that line kind of there with the triangles in the remaining years where the population is at some very high level.

It's a carrying capacity, essentially. This is kind of a duplication of what was going on in ADAPT as well. When you put all the indices in there, ran the model, didn't really worry about the retrospective bias too much, you ended up with very high population estimates.

The rescaled relative F analysis is the blue line, of course, taking a dive here, and if you add striped bass biomass from the ADAPT VPA as a term in the biomass dynamic model with this predator-prey function, you can reproduce to a degree this decline that is occurring from about the mid or late nineties on down; although you don't reproduce it exactly.

This is one of quite a few versions of this thing that I've run. They all, with striped bass, have about the same behavior. I've looked at a suite of other species, summer flounder, Atlantic croaker, as other candidate species.

Croaker won't produce this decline. They will produce kind of a stable population. Now flounder will mimic the decline because the trend in the flounder population is very similar to that of striped bass, but you have much higher biomass and much lower fishing rates, which don't seem particularly realistic or compatible with the estimates we've made so far.

Striped bass is probably the strongest competitor-predator candidate, but the underlying reasons perhaps for this really strong competition and even predation would be that the other food items are in low supply compared to the predator populations.

Okay, finally, you can make estimates of a natural mortality rate associated with the striped bass effect, which is mirroring -- since, say, about 1990 or so it seems to be mirroring the rise in the M that we're getting from the rescaled relative F analysis and subtraction.

There are a lot more different things that we've done, but just to try and keep so that it's not just one big slide show, it's kind of the highlights or low lights, depending on how you want to look at it.

But, these are some of the ways that we've instigated the hypothesis that M is rising and some of the underlying effects of it through these types of analyses.

CHAIRMAN DANIEL: Okay, Paul.

MR. DIODATI: Again, extremely interesting and very informative. If this is all true, then, and I guess weakfish are going through starvation and heavily being preyed on by striped bass, and there's cannibalism going on, it doesn't seem that there is anything in the near future that's going to alleviate that.

So, assuming that that's true, I think we could also assume that will continue well into the future, because I don't see anything changing the balance in the ecosystem, at least not immediately.

So, one of your projections earlier on about what direction management goes was premised on if natural mortality remains very high or if there are no decreases in it.

So, it seems to me that weakfish that are around this size are being eaten, and fish that are around this size are being caught by the fishery, and that's what's holding this thing down. But, I have only been managing weakfish for 49 minutes, so I may be wrong.

MR. UPHOFF: I can't argue with that. I mean, really the default projection is the one that M does not change. It remains high, and your consequences of management are pretty grim.

Actually, the falling M scenarios were more kind of a request, well, what if M falls, then what happens kind of a thing. So, depending on how comfortable you feel that M is going to fall or something like that is the only reason for showing that, that if it does start to fall, that it does aid recovery.

As everything is calculated here, it isn't going to do a whole lot for recovery now. If we made big enough errors in our calculations, then reducing M is likely to have -- calculations of F, then it may have more of an effect, but I'm not very comfortable wanting to count on that at least from the technical standpoint, anyway.

CHAIRMAN DANIEL: Well, I guess I'll just try to summarize. What it appears is that if the M's stay the same, the likelihood of any recovery of minimal. And, based on what the technical has produced on striped bass, it doesn't appear that there's anything that's going to result in a depreciation in M.

If we couple striped bass with increases in population abundance of flounder and dogfish and the various other things and competition with other species, et cetera, I think taking a management approach that relies on a reduction in M is going to be a difficult thing to do.

I think that's where we are, and I think that the work that the technical committee has done sort of shows that. Anne.

MS. ANNE LANGE: Earlier someone asked, relative to any understanding of whether or not there was fishing mortality that may not be accounted for, I am just curious if it were accounted-for landings, what's the magnitude we're talking about?

Jim, you just said it would be a conspiracy between both commercial and recreational fishermen, but I'm just curious what kind of level of landings -- are we

talking about a doubling of what's reported or any rough estimate?

MR. UPHOFF: Okay, how high do you want F to go? I mean, right now with the landings we have, I think the highest estimate is somewhere in the neighborhood of about 0.4, so you'd have to double the landings to get 0.8, which then might be enough to be really much more of a driver.

Of course, maybe that would be simply additive. Well, I guess not. I guess it would have to probably double in order to switch the role of fishing and natural mortality.

CHAIRMAN DANIEL: To that point, Anne, some of the fisheries that we look at that may have high levels of discards, like the shrimp trawl fishery south of Hatteras, we did look at some of the north and south of Hatteras issues. The technical committee did not feel comfortable recommending a split north and south of Hatteras right now.

I support that decision, but we seem to be seeing a different trend south of Hatteras, so I think we need to look for something occurring north of Hatteras that would be unaccounted for landings.

I agree with Jim, I think you're probably looking at something like a doubling of the current landings in the mid-Atlantic to account for this. The likelihood of that happening I think is pretty remote.

MR. DIODATI: I'm just going to assume that this predation and cannibalism and starvation, these factors are all true. Then what you have is because this type of predation is very size-specific, what you probably have is a situation where the fishery exasperates the natural mortality by cropping off all the larger fish.

So, you know, you might have a situation there that that's what's reducing your spawning potential. The fishery is cropping off the larger fish, and the smaller fish are being eaten.

MR. MARK GIBSON: I guess I have two questions. I'll go with the first one and see where that leads. You mentioned that there may be differences between North Carolina or Virginia and south. I don't know where the line of demarcation might be.

But, if the ADAPT VPA were run only on -- I don't know -- Virginia and the south inputs, I mean, aren't they the dominant portion of the catch at age at any point or into the converged portion of the VPA or

even the unconverged portion, would it change if we only restricted the analysis to that portion of the range of the species?

I mean, in sidebars with Louis, there seems to be some clear distinction between what's happening in Maryland north and south of there. I mean, the overall question, is their grounds or basis to revisit the stock structure assumptions and the assessment assumptions?

MR. UPHOFF: Yes. The things that we didn't want to get into we'll get into. Right after the technical committee meeting, basically Lee Paramore of North Carolina and Vic started talking, but previous to that I had been approached by several of the board members, "Geez, you know, in the south we're enjoying pretty good recreational fishing. You know, we're not seeing what's going on there."

We've spent several weeks -- essentially, we split out the data from -- in North Carolina we essentially made a -- the recreational data plus a portion of the catches that were south of Hatteras were placed -- we analyzed those separately, formed another MRFSS index and did -- essentially I can fit a biomass dynamic model to that data without a lot of trouble. Vic's model, the rescaled relative F analysis worked very well. But, the thing that we weren't comfortable with was we don't have much corroboration of the MRFSS trends, and some of the estimates for segments in states of the fishery were pretty poor to work with.

But, there's a strong suggestion from that of a more regional dynamics. And actually one of the things is something that Desmond has pushed for quite a few years, based on both otolith microchemistry studies, which are fairly recent, but also a very substantial tagging experiment that was done in the thirties.

Weakfish seem to have more of a regional component to them. Essentially, fish that were, say, tagged in Pamlico Sound were almost never recaptured above -- or recaptures were never reported from above about Virginia.

And then fish in Paconic Bay generally didn't show up in North Carolina. Now, I don't know exactly how different the fisheries are and so on, but the tagging data support that there may be contingents or sub-stocks or stocks or something that these -- we've aggregated this thing over a very large portion, but it may be more appropriate to -- if you had the data, you would do it on a regional approach.

I mean, one of the problems with trying to run ADAPT for southern data is you have almost no age-structured data. Well, you have SEAMAP, but it's generally maybe age one and age two fish.

Also, the larger fish in the recreational catches tend to be up north for whatever reason. So, there's a lot of things we don't know, so the technical committee basically was pretty interested in this, but felt like it wasn't particularly safe to treat this as a regional population.

But, it's certainly a very strong suggestion that that could be going on. This is a long-winded answer to the question.

MR. GIBSON: Well, thanks to the technical committee for following up on my questions in May about external evidence for increasing natural mortality rates. I'm buying more what you're selling now.

I would caution the board about writing off F reductions as a strategy for facilitating recovery of weakfish. I don't think the work of Collie and Spencer indicates that there's no hope when this sort of triad comes together of environmental forcing Type III dispensatory predation on the fish.

It means that your ability to recover depends on much greater F reductions than perhaps some fortuitous circumstances as well. So, I'm not ready to write off F reductions as a management strategy.

I may argue for greater ones in the technical committee consensus, but I am concerned about the evidence you just talked about of a richer, more diverse stock structure, potentially one that waxes and wanes depending on these fortuitous circumstances in Type III predation, but I'm not ready to write off F reductions, even if natural mortality is high in some sectors of the population.

CHAIRMAN DANIEL: Thank you, Mark. I've got Vince.

EXECUTIVE DIRECTOR JOHN V. O'SHEA: Thanks, Mr. Chairman. My question is probably similar to Paul Diodati's, but the big picture is there's no weakfish around for a lot of the states here.

I think your presentation pretty much confirms people's perception of that. The second thing I'm hearing "big picture" is M might be going up, but I didn't see anything in there that really was a realistic

answer at how this board or even the commission could reduce that M.

So, that kind of leaves big fish and little fish, and you're saying they spawn at maybe eight inches. My question is given all this, why wouldn't it be prudent to try to protect as many of the surviving big fish and allowing them a chance to spawn in the hopes that M might change?

MR. UPHOFF: That's certainly an option.

EXECUTIVE DIRECTOR O'SHEA: Obviously, it's an option, and that's not really what I'm asking. I'm asking more in terms of what is the sort of potential payback for that type of strategy?

MR. UPHOFF: Okay, the dynamics that we've looked at so far in the projection are really based on aggregated biomass. There are not size or age-specific factors involved in it. I guess the thing that having a high size limit would do would be to change the spawning dynamics, say, from more or less a status quo, but at this point we haven't had the ability to model that age or size-specific type strategy.

The equilibrium-based spawner biomass per recruit analyses that we've used in the past, essentially that's what they argue. You trade off certain fishing mortality rates and the ages of entry for a certain amount of egg production.

What we were shooting for in Amendment 4 was 30 percent of the unfished spawning potential. At this point, you may need a lot more than 30 percent, but I don't know how much more. That, to a degree, wasn't what you asked. We did the options of various cuts and essentially the zero cut -- I mean, the total moratorium to a degree can answer that's the maximum you can do.

Based on the information we have at hand, if those trends continue, that's where things end up. In terms of looking at how to reduce M, actually we did some of that in a little brief exercise in the meeting in Raleigh with this predator-prey model.

And, you can actually make some projections from it, but that wasn't -- that's not the consensus model from the technical committee. What you saw here was based on where we kind of ended up in the assessment process and projecting it forward.

There are certainly many, many -- it's almost like a sensitivity model. You can try all kinds of adjustments to it. We just needed to put up a few --

EXECUTIVE DIRECTOR O'SHEA: I think I got the answer to my question, Mr. Chairman. Thank you.

CHAIRMAN DANIEL: Ed.

MR. EDWARD GOLDMAN: Thank you. I have a similar question on the spawning issue. We talked about ways of reducing F, and I was wondering, recreationally and commercially, did the technical committee look into not a moratorium but reducing fishing pressure during spawning season for weakfish?

Anecdotally speaking, there's a lot of why are we catching these spawners. Why don't we just not put any pressure on them during the spring, things like that? Did you look at any of those results?

MR. UPHOFF: No. Again, this is kind of very much just an aggregated model. So, something that's specific right down to spawning seasons and locations and so on wasn't really possible for us.

We don't have that fine level of detail. Actually, that, then, begs the questions that Mark is asking about regional dynamics and so on. So, that would require something that's probably a great deal sophisticated than what we're looking at.

I mean, we're just looking at overall — if this is the rate that the population increases and this is as high as it can get, you've got this many, and you kill them at that rate, what's the trajectory of the overall biomass?

MR. DIODATI: Again, I think you already presented this, but can you refresh my memory? What is the size distribution of the spawning stock now? Is it predominantly these smaller fish?

MR. UPHOFF: Yes, it would be. The proportional stock densities indicate that most of the fish are really — well, this in the Delaware Survey, which is our best long-term look at the dynamics of the stock. Most of them are under 14 inches.

MR. DIODATI: Right. And I guess what's quirky here, something that I typically don't see at that very young age of maturity coming in at around eight inches, you said, so this is that very unusual situation where predation is occurring on your spawning stock, and your fishery is occurring on your spawning stock.

Usually, you've got to have one or the other. You've got to have some protection in there, and typically I

don't see a situation like this. That explains the precipitous drop in the stock.

MR. UPHOFF: Yes, I can't argue with that. It's some good insight.

MR. AUGUSTINE: Thank you, Mr. Chairman. Maybe we should be looking at this in the opposite direction. I hate to say this but I will. The other approach where Paul asked a very good question, if predation is on the smaller fish by the spawning stock, which is 8 to 14 inches or so, maybe we go the other way and protect a little higher.

In other words, maybe we start at 14 inches; or, let's go the other direction, go back to 10 inches, and start harvesting more of those fish. That would be one point.

The other point is we don't want to talk about the sacred fish, which is striped bass, and maybe it's time we take another look at harvesting a few more of those.

Whether we're harvesting too much or not, the point is apparently we're trying to bring up a level of success or a level of biomass in each of these competing species at the same time, and I think we all heard it and we've said it at one time or another.

I don't see how the ocean could possibly support all species being at maximum sustainable yield. If this is just a peak at what ecosystem management is going to be all about, it appears to me maybe we'll end up harvesting our daily catch of X inches of fish per day, no matter what the combination is, or what you catch is what you get up to a certain number of fish.

I think we're eventually going to look outside the box as to how we solve this problem. The bottom line is I don't see how we can solve this problem by taking any major, aggressive steps. I think we have to do something. We can't just sit by idly and not do anything.

The other question was, Jim — and you didn't mention it — when will this work be peer reviewed or looked at by any other organization?

MR. UPHOFF: I have no clue. I would actually like — I think some members that have worked on it would like to certainly submit it to a journal at some point, but that's like a lot of things. There are also a thousand other things to do when you're trying to put something like this together.

It's been a really interesting problem. We've presented at least bits of this when we went up to the SARC. We kind of had the first cut at some of these analyses, and the fellows were receptive to it, but that's not where their emphasis was.

MR. AUGUSTINE: A follow-up question. Well, then, what is it we have to do or what is it we can do to get this peer reviewed? I'm not sure it's within the commission to push this approach or not or whether it just has to be the SARC, whether they will eventually take a look at it?

MR. UPHOFF: That's really, I guess, the ASMFC's bailiwick.

CHAIRMAN DANIEL: To that point, Gordon?

MR. GORDON C. COLVIN: I think that's a critical point, and I would ask the staff, if they could — I mean, this is quite interesting and important information that's coming forward from the technical committee. It has significant ramifications on our management approach to weakfish.

It has some intriguing questions that might take us in directions in other management arenas. I would ask the staff, please, to review with us where we stand in terms of the weakfish stock assessment and its review and update where this work might fit into that?

We're seriously considering management options based on a situation that I think we need to understand exactly where we're going and what the game plan is for peer review and formalization of this work in the stock assessment.

CHAIRMAN DANIEL: Thank you, Gordon, and I'll let staff respond as well. Certainly, there are a lot of issues in this assessment that need to be reviewed. The technical committee has done an excellent job of trying to put together the information and trying to answer some of these questions.

It's a tough row to hoe. I applaud the efforts that they have made, but there are issues. I have talked to some board members in the back of the room about the MRFSS Survey and the results of some of that, but yet that's one of the things that's driving the assessment is the Global MRFSS Index.

When we look back at the trends now in these new assessments, we're looking at a period of time when now, during Amendment 3 implementation, F's were at their lowest level. So, when we implemented

Amendment 3, we implemented Amendment 3 under the assumption that F was about 1.9.

Now, as look we look back at these assessments, the F at that period of time was below the target. So, there's a lot of funny stuff going on in these weakfish assessments. Certainly, I know the technical committee would like to see this work reviewed and give them some suggestions on how to improve what we've got.

Certainly, we need to have some type of peer-reviewed process go through with this. We'll get to Brad's presentation in just a minute, but the question is do we go ahead and can we take a moderate approach now, collect the information that we need, get the assessment peer reviewed — and if we have to do more in the future, do more — or do we take the hit now, as some have suggested we may need to do.

I think that's where we are, and it's a confounding problem; because, when we get these assessments, we want to see some consistency in the previous results, and we're really not seeing that, and that's one of the reasons why I think we need to have some review. Bob or Vince, do you have any comments on Gordon's point?

EXECUTIVE DIRECTOR O'SHEA: Thanks, Mr. Chairman. I think just to retrace the history here, the technical committee was tasked with doing a stock assessment for this board, and that was going to be reviewed by the SARC.

They didn't produce a stock assessment, but instead went to the SARC and outlined concerns and difficulties that they had in producing that stock assessment. In return, they got advice from the SARC as to how to proceed in addressing some those data deficiencies.

That advice was forthcoming back in December, and we're here in August listening to the technical committee's stock assessment subcommittee's work that they did as follow-up to the advice they got in SARC.

So, the advice that you're getting today is the result of advice that the stock assessment subcommittee was given at the SARC. Technically, we don't have a peer-reviewed stock assessment, but one of the key reasons you don't is because of data problems.

So I think the question before this board, in terms of going to get another peer view, is are you going to add new data into the mix? I think you know the answer to that, so the question is are you getting

sufficient advice now to make a management decision?

I would suggest a two-part management decision. One is what are you going to do with regard to the fishery, and second is what are you going to do to address the data deficiencies.

That's what I think the chairman was suggesting is that there's a need here to get additional data, and then we can look at incorporating that data into another stock assessment that would then further work that would then go for peer review. But I'm not very optimistic about the value added of getting another peer review of the work that you have now when the lack of data is one of the key issues here.

CHAIRMAN DANIEL: Thank you, Vince. Gordon, did that satisfy you?

MR. COLVIN: Not entirely. I think it satisfied my question insofar as trying to understand the history of where we are, and I appreciate that. I think the difficulty I see is that there are probably a lot of mixed opinions around the table on what this all means.

Some of those opinions probably stem from if we accept the advice we're getting and the conclusions that are being submitted to us at face value, they may suggest to us that natural mortality is such that we can't manage this problem and maybe we ought to do nothing, and I don't agree with that viewpoint at all.

I sort of feel as Mark did, only more strongly. That's an important, new piece of information that has significance for this management program and potentially others that has not been peer reviewed, and that's what I'm concerned about.

It needs that validation and verification, I think. It's very important, and I'm not looking at the technical committee. I'm looking at the board and the commission to say how do we get this vetted?

EXECUTIVE DIRECTOR O'SHEA: I understand that question, Gordon. I guess there's another way, it seems to me, to look at that. The issue here is uncertainty and how you're dealing with uncertainty.

I think one could make a reasonable argument that dealing with the uncertainty at some point can become a policy call. Certainly, those on the precautionary side frequently argue that as well, that in the absence of information, you err on the side of caution.

I hear you in terms of whatever this board does, that the board would be a lot more comfortable if they had some outside advice endorsing or at least opining on the advice that you're getting right now. I think that's always going to be the case.

The question is how critical is that to make the decisions that are before you today and how much do you want to, frankly, pay to — not necessarily the cost of doing it, but in terms of staff time and scientists' time and Center time to set that up, and is that really critical to where you are right now?

CHAIRMAN DANIEL: Both of you make good points, and I'm not really sure how to move forward with this. Certainly, one alternative that the board may want to consider is vetting weakfish through the SEDAR process, a SEDAR-like process, to get the state experts together to help put together the data and the assessment and those types of things.

That process has worked very well in the South Atlantic and has been used now by the ASMFC as well. That's not something that's going to happen between now and the next season or now and the end of the year. I mean, that's a down-the-road type process, probably a couple of years, couple or three years.

Before us we've got an addendum that we're going to have to deal with. Whether or not we delay it to have the assessment peer reviewed or take some moderate approach until we can do a SEDAR-like assessment, which is what I would support, that's something that the board is going to have to make a decision on.

I've got a bunch of hands up around the table. I wanted to try to take about a ten-minute break at some point before Brad gets into his presentation, so let's take Gil, Bruce and Robert, and then we'll take a ten-minute break and then we'll come back.

MR. GIL POPE: Thank you, Mr. Chairman. I think we need to look at this in a different way. And to follow onto Vince's earlier point about big fish, what do we actually define as a big fish in this fishery?

Paul Diodati brought up a good point, is that even though they reproduce at a smaller age, they get eaten at high rates at that same small age. So, if we're going to use spawning size here, I think that's a mistake.

I think we should go with when they become less of a prey size here as to when we can consider it to be a

bigger fish. If they spawn at eight inches, they're certainly going to get eaten also at twelve, and at fourteen inches they're going to get eaten.

So, I think that if we look at it in a slightly different way, then we might be able to solve this problem, redefine what we call a big fish.

CHAIRMAN DANIEL: Let me let Jim address that.

MR. UPHOFF: I just want to point out that we hear a lot of talk about weakfish being eaten. We actually don't know how they die. They could be starving; they could be eaten. It's probably a combination of both, so, to me, I don't want one faction of this to be more narrowed down than the other at this point.

A big weakfish is kind of relative in time. If you looked at the trophy catches, they used to be -- well, North Carolina, of course, it's a six-pound fish. Some places, as the size crept up, for trophies it was up to twelve pounds, and now it's starting to drop as the size contracts.

I mean, actually, a large weakfish right now might be considered to be fourteen inches long, considering the contraction of the size distribution that we seem to be seeing in the survey data. So, it's somewhat of a moving target, depending on the pressures out there, you know, excessive fishing rates or excessive natural mortality rates.

CHAIRMAN DANIEL: I've got Bruce.

MR. FREEMAN: Jim, in your presentation on natural mortality, you talked about or you showed slides up there that had a relationship between menhaden and weakfish and croaker, and then you had the striped bass.

I'm looking at the information primarily in Delaware Bay where 80 percent of the diet of age one weakfish is bay anchovy. It appears to me that bay anchovy is much more important than is menhaden, especially in Delaware Bay.

I'm just curious, I think you had one slide showing some index of anchovy, but is simply the anchovy data lacking to do additional analysis?

MR. UPHOFF: The data I showed you was a summarization of surveys. I could go into the computer here and figure out how many I had. I think every state from New Jersey -- North Carolina didn't have anchovy data. But, what I had done -- it

was kind of like I would ask each state if they had something, send it to me.

I mean, it would be nice to have -- I wanted for years to have like a workshop where the states bring this kind of data together, and you kind of get more of a sense of what's going on a coast-wide basis, because almost every state either has a trawl or a seine survey or something that's an indicator of relative abundance.

But there were quite a few anchovy surveys. I went into this in more detail when I gave this presentation in February. I didn't want to kind of go in a nauseating detail this time, because I know there's a lot of things to think about.

But, there's quite a bit of data there now. The validity of it, you know, the statistical properties and so on was not something that I had the luxury of questioning. I processed it kind of as a whole and looked at it as kind of just a grand trend from what you saw there.

So, again, these things move in steps. They start off, when they're small, feeding on invertebrates, switch very quickly to anchovies, and then try and switch to the larger items. There is at least one diet study in the eighties in Delaware Bay, which is regionally close to home, and, you know, spot -- well, anchovies were probably one of the main diet items.

Menhaden, spot and then other weakfish -- you know, different conditions than now, weakfish were present in the weakfish diet. That seems to be a feature of their ecology, that they do feed on each other.

I don't know if that really answered your question, but there is stuff out there. I compiled it fairly quickly for this. I think it would be really good to kind of be able to work on it some more.

But, it's a hypothesis that we have investigated, but because of the nature of what you guys have requested hasn't necessarily been a main focus of what we're doing, but we have processed about four or five, three or four different analyses of this as we've been going along.

MR. FREEMAN: If I just could follow up, the information that New Jersey has been gathering seems to indicate that we are getting recruitment, we are getting spawning. Recruitment of young-of-year fish seem to be about normal over the last five or six years.

But, we don't see those young-of-year fish coming back as one's and two's. They just simply don't seem — they just go south, they migrate south, and that's it.

Somehow they just don't return. Of course, that could be a scenario. If, in fact, they're an important prey item, they could be fed heavily and their population reduced to a point where they are no longer as available as we've seen in the past. It certainly is a plausible explanation.

CHAIRMAN DANIEL: Robert, and then we're going to take a break and come back with Roy.

MR. ROBERT H. BOYLES: Thank you, Mr. Chairman. Jim, real briefly, you had said earlier, as you opened your presentation about the weak consensus you had among the technical committee. Certainly, our staff had been looking at this and has noted some fairly significant issues with the data, at least as far as South Carolina is concerned.

Can you describe a little bit better for me, so I have a better understanding, the nature of your consensus and the degree to which a peer review may help you iron out some of those differences?

MR. UPHOFF: The nature of our debate is pretty much what you guys are going through right here. Even though we were kind of supposed to divorce ourselves as scientists from all of this, most of us, because we're in state agencies, are intimately connected to management and fairly well connected to fisheries and fishermen and so on.

So, the debate we had is as much a reflection of what you're going through here. I mean, do you do nothing? You know, proponents for doing nothing because, boy, the natural mortality rates are high and we're not really in control of it because of the fishing mortality — you know, shutting the fishery down is as much as you can do.

Then the argument about that is, well, that's hurting fishermen for no reason, and so on. So, it would have been nice to — the staff tried to keep us focused on just the scientific aspects, but it's very difficult to do when you've got people from state agencies that are much more closely connected to kind of the entire issue.

So, that was really the nature of the debate. Now, when we talked about the north-south split, then we did talk a little bit more about the precision of some of the estimates state by state. I'm kind of assuming that may be a part of what you're alluding to.

By aggregating them over the region, you get reasonable precision, but when you do look at the components state by state, certain fisheries and so on, then it becomes — let's say we got to a point where we just decided that caution was — it was much better to be cautious.

For one thing in the south, some of the appearance of the trend is driven by an increase in recreational — the index in 2004. If you looked at it otherwise, the previous years it might suggest that it wasn't necessarily doing that.

So, we understand. That's why we wanted some kind of validation either from a state survey or from SEAMAP. We did look at the SEAMAP — the report is on the ASMFC website. We took a quick look at that, but there wasn't anything so convincing in that north-south split, in particular, that we wanted to go with it.

Now, you know, by aggregating, though, over broad regions, you generally get reasonable precision with the MRFSS, because it is, after all, designed really to be a coast-wide survey. So, when you try and split it down into state components, a lot of times it doesn't work very well.

CHAIRMAN DANIEL: Thank you, Jim. All right, we will start back promptly at quarter 'til ten, and then we'll come back with Roy Miller. Have your questions ready so that we can get right into Brad's presentation on the addendum when we come back.

(Whereupon, a recess was taken.)

CHAIRMAN DANIEL: We'll go ahead and reconvene the Weakfish Board. Roy's question was in line with Bruce's as far as what they're seeing in the bay in recruitment issues.

I am going to take one last question from Anne, and then we're going to move into Brad's presentation on the addendum so we can move through that and go ahead and take the actions that we need to take.

MS. LANGE: My question was of Jim, and it was a follow up to Robert's question relative to consensus. I was wondering if there was consensus relative to the cause and effect to the predator-prey relationship or overall cause and effect. That part of the analysis that Jim went into detail with here, was there consensus with that analysis?

MR. BRADDOCK J. SPEAR: At the last technical committee meeting, we really didn't get into that very much. We held a conference call subsequent to a face-to-face meeting, and there wasn't explicit consensus asked for, I believe, with regard to that information.

MS. LANGE: In follow up, so the analysis was done by several people or was it the work of the technical committee or of one or two people? I'm just trying to get a feel again of whether the analysis is --

MR. SPEAR: The actual analysis was conducted by a few select people. The participants of the call had ample opportunity to comment and, I guess, suggest otherwise if they did not agree with the analysis. There was no dissent from this analysis.

CHAIRMAN DANIEL: All right, Brad, if you could take us through the addendum.

#### **DRAFT ADDENDUM I**

MR. SPEAR: Thank you, Mr. Chairman. The draft addendum basically is broken down into two parts, the management options that Jim ran through, and the biological sampling program. I'll quickly, again, reiterate the management options that are currently in the draft addendum.

But, first, just a quick look at the tentative timeline. Today the board will provide staff guidance as to changes or additions to the draft addendum. Then the board will vote on whether to approve the document for public comment.

If it does go forward for public comment, during September-October a draft addendum will go out for public comment and states will hold hearings. Then at the annual meeting the board will vote on the options and finalize the document. That will put us roughly on a timeline to implement the addendum in early '06.

The first options are recreational bag limits. If you look at Page 3, Table 1, in the draft document, you'll see a table with those options. As Jim pointed out earlier, those options were developed on a coast-wide basis, using coast-wide data.

The analysis was conducted maintaining the current size limits. Again, if you look at the options, status quo would be the current bag limit; reducing the harvest by 25 percent would be a four-fish limit for every state; 50 percent reduction would be a one-fish

limit for every state; and 75 percent reduction would be a one-fish limit coupled with a season.

Just to clarify something in the document, on Page 2, at the bottom, there is a statement to the effect that states that have de minimis status will not be required to implement recreational and commercial measures in the draft addendum.

There should be a clause on that; "unless otherwise noted". This recreational bag limit option is the exception. The technical committee felt that in order for the bag limit -- well, further analysis and for the data available, management of recreational bag limits would have to be at coast-wide basis, regardless of de minimis status.

CHAIRMAN DANIEL: Question from Pat.

MR. AUGUSTINE: Yes, thank you, Mr. Chairman. I did notice there was an option that combined Option 2, which would be a four-fish limit for all states, and I wondered why we don't have a four-fish bag limit for all states, plus the season, to achieve a particular percentage; only because of the variability in where the fish occur up and down the coast?

In other words, conservation equivalency, and I think that's what that's alluding to, isn't it?

MR. SPEAR: The committee did not explore fully the combination of bag limits and seasons. There were some analyses conducted to that effect, and I think that's what you're referring to. The next suite of options, the next set of options is with regard to the recreational season.

It's broken down separately in this addendum. The board can choose to do combinations. It does not preclude that.

MR. AUGUSTINE: A follow up, Mr. Chairman. So, Brad, what you're saying is you could select -- let's assume we selected Option 2, coastal, four fish for everybody. Then you said the board -- you didn't say the states -- so, what you're saying is the board would collectively have to accept one of the three options under Table 2, so it would still be a coastwide season?

MR. SPEAR: Maybe if I move on and explain that table, it will help. Also, one other piece of information; the committee developed these options so as they were the only management tool chosen for the reductions.

So, a 50 percent reduction in bag limits would achieve what the board has asked, and then it would not be required to put in a season. It would maintain a full season.

MR. AUGUSTINE: To that point, Mr. Chairman, it just seems to me that if we allowed states the flexibility of selecting the time they want, whether they liked it or not, they would double or triple the reduction, it would seem to me.

I don't know what it would take to put that in as an option, if it's too late to consider it as an option, to be put in this document or not?

CHAIRMAN DANIEL: Well, I thought Jim indicated that the bag limit and seasonal options were additive?

MR. UPHOFF: That's how we approached it. I mean, what we kind of had set up were examples that if you wanted to accomplish the reduction solely by a bag limit or solely by a season, this is what it would look like.

But, yes, we consider them to additive. We have like a spreadsheet analysis that's in place that we could -- you know, you wanted five fish or something you get less a reduction, then you could take a reduction in your season.

To us, it was the board's option as to combine them or not. Maybe we looked at it wrong, but we felt like the two of them could be treated as additive. The thing we had difficulty with was trying to analyze the effect of size limits in the case of this rapidly diminishing stock and so on. So, that's kind of why we really didn't do that.

CHAIRMAN DANIEL: But I think, though, to address Pat's issue, and I think for the board as a whole, if we wanted to achieve, say, a 50 percent reduction, then the four-fish bag limit gives us 25 percent.

Then the technical committee has a table that tells us what seasonal closures will result in an additional 25 percent; that the two together would give us the 50 percent, so that we wouldn't have to go to a year-round, one-fish bag limit; is that correct, Jim?

MR. UPHOFF: Yes, I mean, that is generally -- what we considered was something like that. We didn't work out a table that way, unfortunately, for you, say, with a five-fish bag limit, you get this much of a season and so on.

But, it was just the idea of this is what you're with faced bag limit alone, season alone. It was kind of your worse case. The real worse case is trying to achieve all your reduction in F through the bag limit, which was like the second part of those tables, as opposed to a harvest reduction.

MR. AUGUSTINE: To follow on that, I don't mean to belabor the point, but it seems to me if our goal, based on the technical committee's recommendation, is 50 percent, and there was not real heavy consensus by the technical committee, it seems to me that it puts the onus on the board to come up with their best guesstimate to what would be in the best interest of the fishery and at the same time would be more acceptable to fishermen -- and it is a two-part thing, you know.

There is a perception as to what's good and what's really bad. In this particular case, when I'm arguing the point or discussing the point about the second part, Table 2, the coast-wide seasons, I'm assuming we're going to take one of the options on Table 1. We're going to get 25 percent or more.

I'm suggesting that if there was any way, instead of saying early option, middle option or late option, we collectively will take one or the other, one of the above.

But if I understand it right, that would then apply coastwide, whatever one we select collectively as a board? You're telling me, no, a state could say we want the early option; another state could say we want the late option?

CHAIRMAN DANIEL: Well, it kind of goes back to what Gil was saying about what is a large fish? I mean, what's a large fish in North Carolina is different than what's a large fish in Rhode Island.

I mean, I believe that the states need to have the flexibility to come up with a compliance plan. Now, I'm getting ahead of myself a little bit here, but, certainly, it seems like to me, once we can get through this with Brad, that we need to come up with an approach on how are we going to do this and at what level of reduction do we think we need to achieve?

But it's my opinion that the states should be able to have the flexibility. If somebody wants a one-fish bag limit year round, cool. If another state wants a four-fish bag limit for a season, cool.

So, I think we need to have that flexibility, but we need to have that discussion once we get through the options, and then we can decide collectively how we want to approach that. Roy.

MR. MILLER: Thank you, Mr. Chairman. I know for purposes of these tables that Brad has put together for our review today, we have more or less divorced ourselves from consideration of minimum size limits, because these tables, I believe, reading through them, inherently have the existing size limits. I'm just wondering if that's perhaps a mistake, that we're glossing over that too quickly. Granted, that raising the minimum size limit is not going to have an effect on F, it just delays F.

But, there are other advantages to raising the minimum size limit. I'm thinking of spawning advantages. It's well known that the larger weakfish enter Delaware Bay in April and do their spawning in May and early June, and then they're finished and gone.

The smaller weakfish that you're referring to, these eight- to twelve-inch weakfish, spawn all summer long. There is some thought that the larger weakfish and earlier spawn offers a competitive advantage to a particular year class.

If that's true, then delaying fishing mortality until the weakfish reach a larger size, like, say, 16 inches or something, there may be a competitive advantage for those juveniles produced from larger fish.

One, they're spawned earlier. Perhaps there's even an egg viability advantage. Certainly, there are far more embryos produced by larger fish than an eight-inch fish. So, I think we're dismissing minimum sizes too quickly, and I'd just like to keep that on the table. Thank you.

CHAIRMAN DANIEL: Thank you, Roy, and it was going to come up. Brad, let's get through the addendum and then we'll get back to these issues.

MR. SPEAR: Okay, getting back to Table 2, hopefully, I'll be able to clear this up. Basically, the board will choose one of the options, a percent reduction, if they choose so, and that will be handed back down to the states to develop an implementation plan to either choose an early season, a middle season or a late season.

They'll be able to basically craft their own season, I think, similar to what was done with the commercial fishery back with Amendment 4. Again, Table 2 has the options from status quo to a full moratorium.

The times in the table are approximate times. This is just a rough cut to give the board examples of what sort of seasons may come up if they chose to go with recreational seasons.

MR. FREEMAN: Louis, just a quick question to Brad on that. Are these mutually exclusive? In other words, you could attain, let's say, Option 3, a 50 percent reduction just by the seasons; nothing to do with bag limits, correct?

MR. SPEAR: Correct.

MR. FREEMAN: And so there was no table here to generate a combination; these are mutually exclusive?

MR. SPEAR: No, but I believe what Jim was suggesting, if the board chose to say go for a 50 percent reduction overall, there's the possibility of combining a 25 percent reduction option of Table 1 with a 25 percent reduction of Table 2 to produce that combination.

MR. FREEMAN: And that would accomplish a 50 percent reduction?

MR. UPHOFF: It would accomplish a 50 percent reduction on paper. In a few years we might be able to get some idea of what it actually accomplishes. I think maybe this was me looking a little too far ahead.

I was thinking like Louis, that you have a set of options here, and then the state comes back, like we did, you know, with the inception of Amendment 3, with plans. It's reviewed by the technical committee and approved.

So you have some combination of bag limits or seasons -- and, really, if somebody has an -- I don't think it would preclude a state from coming up with an analytical solution for a size limit if it passes muster; or, area closures.

I mean, in Amendment 3 originally, right, the area closure was really not a visible option, if I remember correctly, but we substituted the south of Hatteras closure for a season. So, I think that there's flexibility to mix and match and come up with things.

It's just that in the time allotted -- as time went on, I realized the size limit thing was going to be a problem, but I don't have a good rule of thumb right now for saying a 16-inch size limit is worth this, just because of the extremely dynamic nature of the

changes in the population versus the equilibrium conditions you need in typical assessment procedures for looking at reference points. It just wasn't applicable.

MR. SPEAR: The next set of options in the draft is for commercial seasons. It's on Page 4, Table 3. Again, it's set up so the board would choose a percent reduction, and the non-de minimis states would be required to do an implementation plan to achieve that percent reduction.

The same percent reductions are listed in there. If you look at Table 3, it's just a sampling of the states that actually did calculations for potential or estimates of seasons. And just in case there's confusion, New Jersey calculated their reduction in seasons three different ways, so there's a range there.

But, what will have to happen, if the board chooses to implement some sort of commercial season reduction, states will have to get its implementation plan approved by the technical committee and then the board.

The commercial bycatch options in the draft are on Page 5, Table 4. Just a note, the options are a reduction in bycatch allowance, which is not necessarily equal to a reduction in fishing mortality.

It's just that with Amendment 4, there was an increase in the bycatch allowance to 300 pounds per day or trip, given that there was an equal or greater amount of other fish on board. So the options that the committee put together were basically 25 percent reduction, 50, 75, which led to 225 pounds per day, 150 pounds, 75 pounds per day bycatch allowance.

Again, as Jim noted, some other commercial management options that were discussed at the technical committee level but not fully explored were a bycatch-only fishery where the directed fishery would be closed, and there would be a bycatch allowance.

Another option is directed trip limits; and, as Jim pointed out, states with a trip ticket system already would be able to implement this. There may be others that the board has discussed today that should be included in the draft addendum as possibilities.

Getting into the biological sampling issue, the biggest decision the board will have to make is are these two options, whether to maintain the status quo of making it mandatory to collect the minimum number of samples and making this a compliance requirement, as it is with Amendment 4; or, to make it more a

recommendation that states should collect a minimum number of samples, using this addendum as a guide.

If the board chooses to maintain status quo, making it a requirement, it will have to go through a few other issues that stem from that, and that came up at the last board meeting.

The first issue is actually determining non-compliance, and how we do that wasn't clearly defined in Amendment 4, but this will only apply to non-de minimis states.

Options for determining non-compliance are just failure to collect samples in a given year, failure to collect samples in two consecutive years; other things the board discussed at the last meeting, failure to collect samples in a given year with no good-faith effort to do so, failure to collect samples in two consecutive years with no good-faith effort to do so; or, maybe there's some other option that hasn't been discussed yet.

The next issue, if the board chooses to make sampling mandatory, are the ramifications of non-compliance. Options that were discussed is to recommend to the Secretary of Commerce to close the weakfish fishery in that state.

Another option is to delay the opening of that state's fishery until a plan is approved for collecting samples; or, that states may have to give up its vote on the next management option. Again, there may be some other ramification that was not discussed.

The third issue the board may have to decide is how do states come back into compliance. One option is to actually collect the required number of samples in the following year. Another option is for states to develop a board-approved plan for how they expect to collect the number of samples in the following year, or there may be some other option.

The issues that the technical committee was able to specifically address are some of these details. They recommend that a state-by-state sampling program is established as opposed to a regional approach that was discussed at the last meeting. And this, again, would be for non-de minimis states.

The committee also suggested maintaining the current level of recreational sampling that is currently conducted through MRFSS. They suggested a six-length per metric ton of commercial landings minimum threshold and a three ages per metric ton of

total landings minimum threshold, with a maximum of 1,000 ages per state.

They agreed that the samples could come from either the commercial or the recreational fishery, as long as the samples were coming from the same general area that the fishery is prosecuted in. Basically, if it's an offshore fishery, then the samples should be collected from offshore.

The committee agreed that sampling should be stratified by fishery, by gear, market grade and time of year as best as possible. Again, this level of detail is what the stock assessment demands.

Just a few details on sampling reporting. The plan review team will compile the most recent landings data available by the end of February of each year. I'll send out that information to the states so they have some idea of the projected sampling levels for that year, so they can begin to make plans.

If sampling is required, states will be required to submit by April 1<sup>st</sup> of each year its sampling plan and commitment. One other topic that was discussed at the last board meeting was how do the states or how do we implement such a sampling program?

Some of the suggestions were kind of above the level of the Weakfish Board, and may be even beyond the scope of the draft addendum, but I got the sense from the board that it was important to get this message out to the public that it's very difficult to collect these samples; and if there's any help or suggestions the public has, we would like to take comment during this process.

So, some things that were talked about at the last board meeting was for the commission to apply for a grant from ACCSP to develop a coast-wide port or dealer commercial sampling program, and I don't think that would necessarily be limited to weakfish, but a general commercial sampling program.

Another suggestion was for states or ACCSP to continue to augment MRFSS to again increase sampling. There was discussion about requesting to the NMMS Northeast Fishery Science Center that it begin a directed sampling weakfish program through its commercial fisheries sampling program.

So, again, this was informational and to solicit public comment. That's it. I'll be happy to answer any more questions.

CHAIRMAN DANIEL: Specific questions on the addendum for Brad?

MR. A.C. CARPENTER: On Page 5 there, when you were going through the non-de minimis states, Option 1D for non-compliance, I understand that's two consecutive years even though it just says "in a given year"? C and D are worded exactly the same, but D is for two consecutive years, right?

MR. SPEAR: That's correct.

MR. CARPENTER: Mr. Chairman, I've got one other. Can somebody refresh the definition of "de minimis", because if we're using 2003 and 2004 commercial landings to calculate these reductions, I think we may be de minimis now, and I might want to apply for that.

MR. SPEAR: It's 1 percent of the total coast-wide landings averaged for those two years, 2003-2004. The compliance reports are due September 1<sup>st</sup>, and we'll be going through that exercise determining de minimis.

CHAIRMAN DANIEL: Well, here are the issues that we need to deal with. We don't necessarily have to have a board recommendation on the percent reductions that we want to achieve in this addendum, but I think it would be a good idea to have that. I think we need to make that decision.

I think we need to make a decision as to whether or not to include size limit increases to deal with the issues that Gil and Roy brought up. I personally think that a size limit increase along with increases in the minimum mesh sizes could have significant, positive impacts on spawning stock biomass and also have some carryover effects on other species as well.

Certainly, the sampling level information, we need to have some discussion there, because I don't think it's our intent to have a state that only lands 700,000 pounds of weakfish have to age a thousand weakfish.

North Carolina has probably dominated the aging in terms of numbers, with the exception of Charlie Winner down in South Carolina, who has done it for a lot of different states. The age data information coming out of North Carolina has been 6, 7, 800 fish, and we're considered to be the top producer of ages.

I need think we need to look at that. I think what the board needs to keep in mind and recognize is that this issue is unique, I think, at least from my perspective. We don't have a projection that says if we cut F by this amount, we're going to see this steady increase in population biomass.

There is some science from the technical committee's information that we could put in a complete moratorium and it have no impact on the stock. How comfortable are we with that? So, we have options here, but, certainly, the more moderate approach to collect the necessary information to have another peer-reviewed assessment vetted through a SEDAR-like process certainly could be one of the roads that we want to take on this.

We could go with the moratorium, but it certainly seems to me, based on the unique situation that we face here and the uncertainties associated with any rebuilding success, that we may want to take a more step-wise approach rather than coming in and hitting it all at once and having those significant impacts.

I hope that's not pontificating from the Chair, but it does provide you with some, I think, background on where we need to go and what we need to do.

So, if we could start with the recreational component of the addendum and go through it and say what do we want to look at, what do we want to have in the addendum; or perhaps it would be a better idea to go ahead and make a decision or have some discussion on the percent reductions that we feel like we need to get in this fishery before we move into the others. Pat.

MR. AUGUSTINE: Thank you, Mr. Chairman, two points on Page 7 in the third bullet toward the end. Just a question. We say in the second sentence, "Explore whether Southeast Fisheries Science Center has a similar program." Are we going to ask the public that?

Maybe we should say we are or we should or will explore whether the Southeast Fisheries Science Center has a similar program. That's the only point.

And back to your point, Mr. Chairman, may I make a suggestion that we take this document section by section. You said recreational; I think we should go right into your first recommendation. If you're looking for a motion, when the time is right, please let me know.

CHAIRMAN DANIEL: Vince.

EXECUTIVE DIRECTOR O'SHEA: Thanks, Mr. Chairman. Maybe before you start that, just a comment of where we are in the process. This is sort of the first step to taking action. What's really before the board today is the range of alternatives included in this paper sufficient to go out to public

comment to enable the board, at its next meeting, to then select a course of action on how to respond.

This probably is an up-front pitch to encourage folks to think in terms of giving yourselves maximum flexibility here to allow the process to go forward as opposed to beginning to pare down and eliminate alternatives. Thank you.

CHAIRMAN DANIEL: Thank you, Vince. Eric.

MR. ERIC SMITH: I'm glad Vince offered the comment he did right at that time, because I find the document frames things adequately for me to go comment. I'm more inclined to look at it and see if there are things that are unclear that we need to fix so that it's clear when we go to the public.

In that light, let me ask this. On Page 5, under compliance, Option 2 doesn't read the way the slide read, so, Brad, if you could put that slide up, I just need to know which one is the way it will be.

MR. SPEAR: It will show up in the document as it is now. I was paraphrasing on the slide and may have lost some meaning in the translation, but it will read as it reads in the document.

MR. SMITH: The document is correct, okay, thank you.

CHAIRMAN DANIEL: Bill.

MR. ADLER: Brad, do you plan to put some types of charts or grafts into this addendum that will show, for instance, what are the current catches, recreational and commercial; also, a chart showing the F mortality versus the natural mortality? It would be clear to explain to the public, as they're looking at this.

Also, a chart on the stock status to show how it goes down -- I would like to see the chart that shows how low F is and how high natural mortality is somewhere in the document to further explain why we're doing all this stuff.

MR. SPEAR: Yes, we can do that. I can work with Jim and the technical committee to include that information.

CHAIRMAN DANIEL: Jack.

MR. JACK TRAVELSTEAD: In general, I think the document is pretty well done and frames all

of the options that we need to show to the public. I don't think it's necessary here today to pick a preferred option or a percent reduction in the fishery.

There's so much uncertainty that the technical committee has presented, I think we lay that all out to the public and make that decision when we come back.

But, there is one option in the plan that I have a lot of problems with, and that's the one that Eric just mentioned on Page 5, the Option 2, that eliminates collection of the biological data as a compliance requirement.

I do not see how, with the stock collapsing around us, how we can, at this point, eliminate biological data collection as a compliance requirement.

I think the issue that we discussed at the last board meeting was that it should not be a compliance requirement, but how do we deal with it or how do we determine non-compliance. So, the Options 1A through 1E should stay in there. I don't like them, but I can live with them.

But, that's really the gist of the problem to me; not whether or not data collection should be compliance or non-compliance. I would suggest we eliminate Option 2 and just focus on how we determine non-compliance. The rest of the document looks good to me; I like it.

CHAIRMAN DANIEL: Anne.

MS. LANGE: I just have a question on Option 1H, give up state's vote on the next management action. Is that allowed in the Charter? I'm not sure what the question would, but is that permissible even within the commission; and if not, should it be something going out to the public?

MR. SPEAR: It was something that was mentioned at the last board meeting. I did not check if it's possible through the Compact or what it would take to get that to happen.

EXECUTIVE DIRECTOR O'SHEA: I think the states could agree to do it.

CHAIRMAN DANIEL: Okay. Well, before I get to the next one, there was a suggestion from Mr. Travelstead to eliminate Option 2 under the compliance. Does anyone want to speak in favor of keeping that in the document? Eric.

MR. SMITH: I'm not sure I want to speak wholeheartedly as to keeping it in the document, but I do want to be consistent with where I was the last time I commented on this in May.

Since then I am a little more enlightened on what Virginia and some other states have gone through to make sure they met that obligation in the plan. My trouble with that is we could very well set up — it's the precedent-setting nature of requiring states to go back and tell their legislatures that the commission has mandated a biological sampling program that then has to be funded.

I'm a little fearful that will have a radical effect on the commission process and how it's perceived and basically dealt with in the state. I mean, I won't say it's suicidal of us to go home and do that, but it sure does put us in a position of having guided what the legislature decides to do with their money. That's a problem.

On the other hand, I understand that we need data, and maybe that is — and we've had this debate before, so I guess I won't go into it any further. I'm bothered by taking it out entirely.

I could be persuaded by other arguments maybe, but I am very apprehensive of the precedent-setting nature of a plan that requires any state to go back home and say we're going to need new money from the legislature to do this. Thank you.

MR. COLVIN: Just to that point, Mr. Chairman, I would respectfully disagree with Eric's belief that this is a precedent-setting action. I believe that if we look back historically, what we would find is that the first time compliance requirements, including monitoring, were included in an ASMFC plan was in one of the earlier versions of the Striped Bass Plan.

I think it was probably Amendment 3 or 4. We've had those sorts of requirements intermittently included in management programs since then, including weakfish and tautog and probably some others.

MR. AUGUSTINE: Thank you, Mr. Chairman, just a point of clarification. Above that in Table 4, I think, Brad, you said there would be a recommendation of reduction to between 75 and 150 pounds per trip or per day?

MR. SPEAR: It will be per trip or day, whichever is longer. I'll add that.

MR. AUGUSTINE: Okay, because you could end up with 150, 150, 150 if you're going out three times in a day versus 150 — if you have a trip ticket arrangement that's in place, would it be more appropriate to do 150 per day? Otherwise, it seems to me that folks, even though it's a bycatch, could target them.

MR. SPEAR: It's a carryover from Amendment 4, so states have been implementing this requirement at the 300 pounds per trip or day level, and I'm not sure how individual states accomplish that.

MR. AUGUSTINE: Well, we did allow in there that it would be a 300-pound bycatch, assuming you had another saleable fish of up to 300 pounds on board to equal it. Then I would assume that same thing would apply if it were 150 per trip, that we would end up with 150 of other saleable products? Okay, thank you.

CHAIRMAN DANIEL: A.C. and then David.

MR. CARPENTER: On a slide you had a reference to the commercial option of going to a bycatch-only fishery. Is that highlighted in here or is it just — it's in the narrative. Never mind, thank you; but, if we could highlight it as one of the options for the commercial fishery.

And while I have it, I think the document is pretty good, but I do think we need something on size limits in here.

CHAIRMAN DANIEL: David.

MR. DAVID PERKINS: Earlier, we had discussed or questioning whether Tables 1 and 2 were additive or not and looking at trying how to convey that more clearly to the readers and the public and also trying to, I guess, wrap my mind around some more logic — you know, if we do it at 50 percent reduction from Table 1 and you add that with a 50 percent reduction in Table 2, that doesn't really get a hundred percent reduction.

I don't know if there's maybe a formula that combines these two tables that could be included that might take that into account or if there's another way. That would also maybe lend to the flexibility that the states are looking for to how they go about achieving certain reductions.

MR. UPHOFF: The way I would anticipate that would have worked; again, the two tables are to a

degree at this point exclusive because you're either deriving all your cuts from bag limits or all your cuts from seasons in those examples.

But, what a state would do is propose a six-fish bag limit — we have a spreadsheet set up to calculate what the reduction in F would be, and then you make up the rest of it by reducing the season the rest of the way to get to a 50 percent total cut — you know, or what we're presuming to be a total cut in F.

So, the way they're designed now, they're really not additive. They're just sort of the maximum example of one measure; the maximum example of the other. I would have anticipated, and I think the rest of technical committee did, that there probably will be some mixing in order to get the 50 percent.

If we had an idea perhaps of the bag limits that states might consider, we could put together a table of the bag limit/season combinations. It's just that it gets — you know, you end up with a table that's got infinite possibilities and it can get complicated.

MR. BOYLES: Thank you, Mr. Chairman. Just briefly, despite what the MRFSS data suggests, there is not much of a directed fishery in South Carolina. Brad, let me make sure I read this correctly.

What you're telling us is de minimis states would only be required to implement the recreational bag limit, but the sampling, the seasons, all those other things for those of us in de minimis status are not required; is that correct; am I reading that correctly?

MR. SPEAR: That's correct, that's the way it is laid out in the document right now.

CHAIRMAN DANIEL: Roy.

MR. MILLER: Thank you, Mr. Chairman. I don't need to repeat the reasons that I felt that there should be some size limit minimums included in this public hearing document.

But, for the reasons you stated and I stated and perhaps others have stated, I would recommend that we have some options in there, even if they are not quantifiable in terms of their impact on F. I would like to see a suite of options in there, like 14 inches, 16 inches, maybe 18 inches as size minimums.

CHAIRMAN DANIEL: That's been the general tenor around the table. Is there any objection to adding size limits into the recreational and commercial? Mark, to that point.

MR. GIBSON: Yes, to that point. We can put them in there, but I don't understand what the public or managers are going to do with them if they don't count towards F reductions.

In order to make them meaningful, you have to develop a whole other set of standards, not F-based standards such as eggs-per-recruit standard, spawning diversity, age-structured diversity, those kinds of things.

I don't object to your having some size limit alternatives in there, but I just don't see what they would be measured against, how we would judge a state's proposal, given what you have right now in terms of F reduction currency.

CHAIRMAN DANIEL: I know when we're dealing in a lot instances with stock status determination criteria and we've got a certain F over Fmsy or B over Bmsy, and we're trying to reduce F down to some target level so that we're no longer overfishing and we're in a rebuilding scenario, then these types of percent reductions in F are meaningful.

Is that the case here, and do we absolutely have to get percent reductions in F; or, would it be possible to take a more moderate approach on the reductions in F concomitant with a size limit increase?

I think that's something that the board needs to really seriously consider because of the issues that we've brought up in the past. Increasing spawning stock biomass and recruitment, while it may not be an F-related issue, it's certainly a positive stock condition.

I don't disagree with you, Mark. I don't think you can add a seasonal closure and a bag limit and a size limit to get some reduction in F, but it may offset the need to go with, say, a 50 or 75 percent reduction or even a moratorium.

So, if that's something that the board wants to pursue, I think we need to have some discussion in the affirmative or in opposition to looking at size limit increases, because that does seem to be an interest around the table. Pat.

MR. AUGUSTINE: To that point, no. I think we're getting off the beaten path. We've pretty well beat this thing to death. We have come up with some very strong recommendations and comments positive to this document in its present form.

With the exception of those two or three items that were asked to be considered to be added, I didn't see

an overwhelming nodding of heads to say, yes, go ahead and put it in the document.

I think, quite frankly, we're at a point in time to make a motion to approve this document; so, when you're ready, Mr. Chairman, I would like to so move.

CHAIRMAN DANIEL: Well, let's put that on the table; and then if there are folks that want to amend that motion to add additional items, then we'll have that flexibility. Mr. Augustine.

MR. AUGUSTINE: With that said, Mr. Chairman, I would move to approve Draft Addendum I of Amendment 4 to the ISFMP for weakfish for public review.

MR. VITO CALOMO: I'll second it.

CHAIRMAN DANIEL: I've got a motion from Pat Augustine and a second from Vito. Any discussion on the motion? Vito.

MR. CALOMO: Thank you, Mr. Chairman. I also think, like Jack Travelstead and Pat Augustine, that this is a pretty well laid out document.

I do agree on one thing to make it a little more user friendly to the public, as suggested by Bill Adler, to have some graphs in there. A picture is worth a thousand words, as we know, and to have some graphs in there to make it a little more friendly to the public, but other than that, I think it should go forward.

And to comment a little more, it may be premature, it was very interesting today to sit here, because I haven't attended a lot of the weakfish ones because we really don't catch but very few weakfish in the Commonwealth of Massachusetts, but this has taken on a life of its own in comparison to dogfish that we have at least a thousand fold more.

We have a plan that's really restrictive, and this is a fish that's the best available science and even from the fishermen that this species is hurting a great deal, so we need to take some real strong action to preserve this, because the science suggested it. Thank you very much, Mr. Chairman.

CHAIRMAN DANIEL: Thank you, Vito. I am going to go back to my list now. Gil.

MR. POPE: Thank you, Mr. Chairman. On Table 4, I would like to ask the question as to how Table 4 relates to reductions in F or overall Z? In other words, the recommendation is between 75 and a

hundred pounds per trip. What is that equal to as far as a reduction in either F or Z? That's my first question.

The second question, in Table 3, I notice that seasons are being mentioned. Were there any options as to using pounds landed, say, a 25 or a 50 percent reduction in the commercial poundage landed? I was surprised that I didn't see anything like that in there.

In Table 1, example, state-by-state bag limits, it was mentioned that you couldn't correlate the bag limits except for on a coast-wide basis and that you couldn't make heads or tails of it if you tried to do it on a state-by-state basis, especially with size limits.

Yet, at the same time we're still going to maintain something that was put in place, I guess, 16 inches here, 13 inches here and 12 that was done with really no basis in fact, but was just basically done on a regional basis again and done for non-scientific reasons is the only thing that I can conclude from what I've heard today.

So, if we're going to go with one size fits all as far as bag limits along the coast where it's either strictly four for everyone or one for everyone, why shouldn't we come to some consensus as to what's a wise size limit for everyone? Thank you. Those are my questions.

CHAIRMAN DANIEL: Well, in your first question, it was explained that the bycatch allowance was just a 25 percent of 300; 50 percent, et cetera; that it wasn't an F-based reduction; that we're just looking at paring back the bycatch.

I don't think we have the information extant to say what the actual reduction in F would be from those reductions in the bycatch limits.

Your second question on the commercial reductions, if you'll look at the paragraph below Table 4, it does provide for the flexibility to look at states with trip ticket systems, have the potential to develop trip limits, so we would be able to come up with a trip limit, if that was your question and point. It wasn't, okay. Then I can't answer that one.

And for the first one, then, that would be -- and your last question, I think that's certainly something that the board would have the flexibility to do after public hearing, if they wanted to make a consistent size limit coastwide. But I didn't get your second question, then, if it wasn't on trip limits.

MR. POPE: All right, I'll make it simple then. In Rhode Island we have 96,000 pounds average over three years, say, landings. Why wouldn't it be a 25 percent or a 50 percent reduction in the commercial landings in pounds, which would be very measurable, which I think would be just common sense. It's how we do a lot of our other fisheries as well.

Seasons would be less accurate because you don't know when they're going to show up. They show up late, they show up early, so seasons to me would very inaccurate. Thank you.

MR. SPEAR: If I understand you correctly, Gil, I believe you're basically talking about an option for setting a state quota, essentially, or a TAC, and that's certainly a viable option for the weakfish fishery. It's just nothing that has ever been discussed in prior amendments or at the board meetings.

MR. POPE: No, it would be a temporary to add to this. It wouldn't be permanent unless you wanted to make it so, but it would be just in the meantime just like the bycatch in Table Number 4. It would be just something that's just thrown in to make it more interesting, I guess.

CHAIRMAN DANIEL: Vince.

EXECUTIVE DIRECTOR O'SHEA: Thanks, Mr. Chairman. My question is sort of a general sense of the board on the compliance on Page 5.

We spent quite a bit of time during the last board meeting talking about dealing with the issues that I think it was states two years ago did not do their biological sampling, you know, what's the response to that and how do you deal with something that didn't happen two years ago.

There has been a lot talk around the table of the importance of collecting biological samples; and when I've talked to the scientists, in fact, they're saying those states that are on the fringe of the stock may really be giving critical information versus the states that are right at the center of the stock where there's really high abundance of the fish.

So, where I'm going with this is we've listed a number of options, but it seems to me they all fall in the trap of having us deal a year after the fact that something didn't happen. My question is, is there anything else we could put in this?

Is the board interested in putting something else in that forces us to confront the issue of not collecting before the season starts, with an idea that that might help and encourage states to do the collection.

Keep in mind that the Policy Board has committed to putting in measures in our management plans to impose a penalty on delayed compliance with the management plan, but we haven't adopted any of those yet.

So, the idea might be that by a certain date before the season starts, that a state would be required to come in and make a commitment to collect samples, and is the board interested in trying to elicit that commitment from the states?

And if the state can't make that commitment, then would there be some sort of action that could help encourage the state to go in that direction? But, the list of options we have here right now, quite frankly, seem to me to just put us in the same box two years later, the samples didn't get collected, and, oh, well.

And, again, this is not trying to be punitive to the states. It would be, is there a way to put some force in that would help make the argument back home of the importance of getting the resources to collect the samples.

It's an open-ended question for the board. I don't have a strong feeling one way or the other, but I think it would be helpful if all of you at least had a discussion about it. Thank you, Mr. Chairman.

CHAIRMAN DANIEL: And there are provisions, I think, in here, if sampling is required, to require states to submit a plan for collecting that data by April 1<sup>st</sup> of that year. It may also be possible to tap into the ACCSP information. The states are supposed to be putting this information -- uploading into the ACCSP.

I know a lot of the states that do a lot of aging keep a very simple Excel spreadsheet program together where you can just send off the samples that you've collected in the first quarter, second quarter or whatever.

And, if you get a state that gets to the second quarter and still hasn't submitted a report yet, that's a one-column Excel spreadsheet, then that may be a trigger to call that state up and say, "Hey, what's going on?"

But I think we can use everything that's in ACCSP to sort of keep a follow-up on this, and, certainly, the lead biologists in the states keep up with this, I hope,

and that way you can have that information followed through.

So, I think we can deal with that problem, Vince, but I agree with you, I think we don't want to wait and two years hence still not have the data. I've got a bunch of hands up. I've got Jack; then Roy and Bill.

MR. TRAVELSTEAD: I have a question of Jim Uphoff; and then depending upon his response, I might have an amendment to the motion.

Jim, in a relative sense, how much of the uncertainty in the models and everything that you have presented today is related to the fact we do not have full biological sampling from all the states? How much of that uncertainty goes away if we really did have the kinds of sampling we need?

MR. UPHOFF: Currently, the model we're relying on is based on aggregated biomass, so it's not that much of a problem by using this rescaled F.

But, if you want to go to an age-structured model, and if there's another one out there, then I don't know how to quantify the uncertainty, but you have a major sector of the catches, which are primarily New Jersey and New York that have quite different size limits, and we are trying to apply size information, maybe from Maryland or even Virginia, to characterize the size distribution of those catches, and if you're running an age-structured model and if it's running off of a catch-at-age matrix and so on, then it's probably serious considering there are older fish that may be under-represented.

So, it may characterize the mortality as higher. It's very difficult. We haven't done any sensitivity analysis, I would say, with what we have to really be able to characterize that. The way we've gotten around it is going to aggregated biomass.

There was at least some discussion that maybe a bigger, more complex age-structured model may not necessarily be the solution, but most of the technical committee is still supportive of trying something.

So, I don't know, that's probably not much of an answer. That's an accuracy instead of a precision question; and if you knew how accurate you were, then it wouldn't be a problem. Did that help?

MR. TRAVELSTEAD: I guess so. Mr. Chairman, I would like to offer an amendment to the motion that we eliminate Option 2 on Page 5 and to rewrite that section to make it clear that we will continue to require the collection of a minimum level

of samples, but refocus the discussion on how we determine non-compliance.

CHAIRMAN DANIEL: Motion by Jack Travelstead; second —

MR. AUGUSTINE: Can we make it a friendly amendment; otherwise I'll second it.

CHAIRMAN DANIEL: Sure, if that's acceptable as a friendly amendment.

MR. AUGUSTINE: Is that okay, Mr. Calomo?

CHAIRMAN DANIEL: It's all right with Vito. Okay, we have that amendment. Roy.

MR. FREEMAN: Mr. Chairman, I have a question on that specific amendment.

CHAIRMAN DANIEL: Okay, to that point, Bruce.

MR. FREEMAN: Going back to striped bass, we've had a number of states doing a number of sampling, and that plan was predicated on the fact that we had supported various programs — supported states to accomplish various programs.

As time went by, that monetary support was reduced and eventually it became a burden on the states to supply that information. It seems to me that same relationship should occur in this particular plan.

We are in the position of having told the board that we simply don't have the means to complete the sampling. It is an important fishery to us. We'd like to be able to do it, but in order to do this, we're going to have to give something else up, which may be striped bass, which is also a compliance issue. So, it puts some of us in an impossible situation. It appears that we all agree the information is necessary and we want to collect this, but there needs to be some support from the commission at least in the early years to get this off the ground, and it simply doesn't exist at the present time.

CHAIRMAN DANIEL: Roy.

MR. MILLER: Thank you, Mr. Chairman. I just want to say one more word, if I may, about size limit minimums. It's true that this draft does not provide a justification for size limit options. As Mark Gibson pointed out, that justification would have to be added.

We don't have it in front of us, and it would delay this process. I believe that was, reading between the lines, some of Mr. Augustine's intention for moving the process along in the absence of size limits.

I do think we're going to hear about them in public hearing. The public is used to them; they saw them from the previous amendments; and sooner or later we're going to have to respond to that. I just wanted to say I'm content to go along with this particular motion just to move things forward. Thank you.

CHAIRMAN DANIEL: Thank you, Roy. I've got Bill Adler.

MR. ADLER: Roy mentioned some of it. The idea that I had was it's my understanding that if this goes forward this way to public hearing and comes back to the board, that basically we can't say what about changing minimum sizes or size limits because we didn't take it out to public hearing. That's the way it would work?

CHAIRMAN DANIEL: That's my understanding. Brad or Bob.

MR. ROBERT E. BEAL: I think it goes back to conservation equivalency as we talked about earlier. If the board decides on a 50 percent reduction, then the states would have the option of using either the bag limit that's in the table, the seasonal closures that's in the table, or go home and craft something that's a hybrid of potentially seasonal closures, minimum size and bag limits to achieve the 50 percent.

So, just because it's not included in the tables in the document, those tables are essentially illustrations of ways that the reduction can be met. They're not mandating the states to use those options included in the table.

MR. ADLER: If I may, so, therefore, the conservation equivalency provision is in here, and I can understand what Bob said. The other idea that I was getting at is the board itself wouldn't come back and approve a size change, per se. They would wait for the state to come in with some type of a conservation equivalency; that's correct, right?

CHAIRMAN DANIEL: Well, that's what staff is telling us, that we would have that option. Is that misleading to the public to not include it, then? If you're going to consider it, and you're going to develop a compliance plan that includes a size limit increase, I'm a little taken aback by that response, I guess. Bob.

MR. BEAL: I think simply a paragraph in the recreational and commercial sections that highlight the states will have the option of employing conservation equivalency. Under conservation equivalency, the states could choose and go through the suite of management measures that the states could choose, and include size limits in that suite of management measures.

You let the public know that the options are out there for the states to mix and match a little bit and come back with a scientifically valid reduction plan.

CHAIRMAN DANIEL: But as I understand from the discussion around the table, there is a hesitancy to use size limits because that's not a reduction in F, so it's ultimately going to be the determination from the board as to whether or not an increase in the size limit serves as an acceptable proxy to reductions in F.

I mean, I don't want to go back and come up with a compliance plan that includes a size limit that's not going to be acceptable because it doesn't reduce F. If you've got some insight there, Jim, that would be great.

MR. UPHOFF: I don't know how much insight this is. I have something here that I've run through very quickly. Of course, this isn't vetted through anybody. It's a length-simulation model that I've used in the past to look at weakfish.

Plugging in the best estimate of current growth conditions and the different size limits -- and this is at equilibrium -- under the current natural and fishing mortality rates, the current SSB per recruit would be, in this, 2.3 percent. If you imposed an 18-inch size limit, it goes up to 2.6 percent.

So, as a proportion of what you have, it's a lot, but as a proportion of what you need, it ain't much for raising the size limit because of the size contraction of the stock. I don't know if that's helpful, but kind of in a quick sense, that's kind of where things are in framing your discussion.

CHAIRMAN DANIEL: Mark.

MR. GIBSON: This amendment is fine with me. If you want to be involved in this fishery, you've got to get some samples. I mean, we're buying 200 - - if you want to get 200 samples, that's 2,000 pounds; a buck a pound, that's \$2,000.

When the dealer calls and says he has them, get the samples, and they send me a bill. It's as simple as that. If we can find them, anybody can find them.

If I support this, I wanted to understand from the maker of the original motion, much of which is still intact, is it my understanding that we're going to clarify -- we're going to add the important items we discussed?

There's going to be clarification on how you combine the bag limits and the seasons. It's understood that those are in there, those changes are going to be made? Okay.

CHAIRMAN DANIEL: I believe so, and I was going to make that point as well. I think there is general consensus around the table that we do want to clarify those and have examples of combined bag limits and seasons, without objection. Eric.

MR. SMITH: Very quickly, I'm going to oppose the motion, although in principle, I agree with a lot of what I'm hearing. Again, Vince was doing his job as executive director to put issues in front of us to think about, and I appreciate that.

But, the way he characterized what we could do in this kind of circumstances is why I'm apprehensive. Consider the fact that you could, at the beginning of a year, be required to put forth your plan to collect your biological samples.

A month later you have a staff vacancy that you didn't anticipate, and the state has a hiring freeze, you could have your fishery closed. I don't think we should be putting ourselves in those kinds of positions. Thank you.

CHAIRMAN DANIEL: Gil.

MR. POPE: I'll support the motion, but I still don't see the correlation in, if any, these tables. If I remember correctly when we decided on minimum size inches in Table 1 -- I've forgotten how many years ago it was now -- I don't think they were conservationally equivalent.

It seemed to me that the scuttlebutt at the time, we went around and we just kind of picked and chose what we wanted. That was basically the way that this was done.

So, when I look at Table 1 and I look at Option 2 or Option 3, and everything goes to 4 and everything goes to 1, based on the first column, minimum size, I just don't see the correlation in that. I think we're

not doing this scientifically enough, to be honest with you.

I'd like to see things done a little bit quicker, and, if possible, have a 50 percent reduction in the next year or two years in commercial landings or in your recreational measures that you have in your state as to really doing something. But, the way that it's presented to me here, I don't think we're really going to be doing much. Thank you.

CHAIRMAN DANIEL: Gordon.

MR. COLVIN: This is not an objection. This is by way of laying something down that may or may not get raised in public review, may or may not be part of any deliberation that we have subsequent to public review and comment.

Some of the states at the present time have measures in place that are more restrictive or more conservative than what is required by the current amendment. Table 1, Option 1, status quo, identifies those as the status quo.

If folks will recall, the use of more conservative regulations as the benchmark from which we measure where we go has been proposed in the past and has been very controversial.

Because of how it ends up playing out here in terms of kind of options that are standard coastwide, I think it's much less of an issue than it has been in the past, but, nonetheless, it is an issue with respect to the size limits alone, because they are presumed to stay in effect, and that may well be raised.

And kind of just to lay it out, the concern that has been expressed in the past is that if states are put in the position where they are disadvantaged and their fisheries are disadvantaged as a result of making the choice to be more conservative, then making that choice will become more difficult, and that is not something we want to promote.

Again, we'll see how this plays out, and I'm just kind of putting it on the table for folks to think about.

CHAIRMAN DANIEL: And I would be remiss if I didn't bring up the fact that this same exact issue occurred in 1996 with Amendment 3 when North Carolina had a 42 percent reduction when 33 percent was required.

We have had a 10 percent additional reduction since 1996. In 1997, when North Carolina brought that forward to try to get some relief south of Hatteras, it

was said that until the stock was deemed recovered, there would be no credit for folks that took additional management measures, and that we would not be able to offset that additional 10 percent that we've achieved for the last almost ten years.

So, I agree with Gordon a hundred percent, but it appears that North Carolina, on the commercial side, and New York, on the recreational side, have taken those additional measures, and, certainly, those will be some things that need to be discussed and considered as we move forward with this addendum.

The question has been called. I just want to make sure everybody is clear that the only thing the motion does is it eliminates the opportunity not to sample the catches. It does not include a size limit in the alternatives. I'm still unclear as to how that will be dealt with in our compliance plans if we elect to use a size limit.

We will have some clarifying tables in there for the combination bag and season requirements. And per several recommendations, we will have the graphics that Mr. Adler brought up and discussed, which I think would be a good addition to the document. A.C., last word.

MR. CARPENTER: Many times before in situations like this, there has been an effort on the part of the staff to have a rewrite submitted one last time by mail before we go out to public hearing. Is that going to be standard practice here as well?

CHAIRMAN DANIEL: It will now. Vince.

EXECUTIVE DIRECTOR O'SHEA: Let me just think for a minute. We need 30 days on the street before we start holding public hearings. Again, you haven't decided yet, but we're aiming the next time for the board to meet in New Jersey at the annual meeting, October 30<sup>th</sup>.

So, I guess, before sort of agreeing to this, I just want to make everybody aware of what timelines are and what your desires and expectations are going to be, Mr. Chairman.

CHAIRMAN DANIEL: And the turnaround from the board is going to have to be quick. I mean, you're going to have less than a week to review this and respond back to Brad or me or whomever, with your acceptance of the thing.

If we run into a major roadblock, I'm not sure what you do in that regard, but, certainly, Brad can have the draft addendum ready in the next couple of

weeks, get it out to us, give us an opportunity to look it over real quick, and then move forward with the public comment, if that satisfies everybody.

**The motion is to approve Draft Addendum I to Amendment 4 to the Weakfish Management Plan for public comment, with the removal of Option 2 on Page 5. Rewrite the biological sampling section to require states to collect a minimum number of samples.**

Do we need to caucus on this? Okay, caucus.

(Whereupon, a caucus was held.)

CHAIRMAN DANIEL: All right, everybody ready? All in favor of the motion, signify by saying aye; opposed; abstentions. The motion carries.

MR. FREEMAN: Louis, we opposed the motion, and the reason we did is because of our dilemma for the biological sampling. It's not that -- we, obviously, feel the fishery is very important and the information is necessary. We just need a way to do that sampling, and the state of New Jersey doesn't have that way at the present time.

Let me ask a question relative to the presentation that was given by Jim. That information is not flowing in this statement of the problem. There was a suggestion that there will be some words added to that.

I'm not sure how extensive those words would be, but I believe, in this instance, because of the uniqueness of this issue with high natural mortality and fishing mortality declining, that it's a new way we approach management, and there needs to be an explanation to the public because they're going to be confused.

And either the statement of the problem needs to be expanded and that explained; or, the commission needs to put out a document, just a background document, on the weakfish fishery, where we thought we were going, where we are going and what the problems are.

I think it would help the public. I would prefer seeing such a background document completed and provided to the states where we then could get it to our press media for public coverage, as well as some of the fishing publications, both commercial and recreational.

So, I would request a background document from the commission that would be provided prior to the public hearings.

CHAIRMAN DANIEL: Robert.

MR. BOYLES: I would like to just reiterate, Louis, what Bruce pointed out. Spud and I are sitting over here talking. Regardless of what this board decides to do, politically, we have a limited number of chips that we have to play with our elected officials.

This one is going to be tough for those of us who don't really have much of a fishery, to go and get regulatory changes. So, the more education we can do, as Bruce has pointed out, I think the easier it's going to be, particularly, for those of us where I think probably three-quarters of our fishermen aren't going to know what a weakfish is.

CHAIRMAN DANIEL: Well, I'm going to ask staff to address that issue and the timeline and whether or not we are able to put something like that together. Vince.

EXECUTIVE DIRECTOR O'SHEA: My suggestion would be that we craft together more of a press release type of document that would then enable the board and the states to all be on the same page as to sort of what the problem is in layman's terms and why we're considering this type of action.

I think that would be better than trying to tinker and build it into the addendum at this point. We could work with Brad, Bob and Tina to put something together. I think the first stop will be with New Jersey.

Since they suggested it, let them look at the first draft for us and see if we've got it right, and then share it with the rest of you and get consensus on it. That's what I would suggest, Mr. Chairman. We'd be happy to do that.

CHAIRMAN DANIEL: Thank you, Vince. Without objection, then, does that satisfy everybody? Are you happy, Bruce?

MR. FREEMAN: That would be fine, really.

CHAIRMAN DANIEL: All right, is there anything else to come before the board, any additional business, anything else? If not, we are adjourned.

(Whereupon, the meeting was adjourned at 11:15 o'clock a.m., August 16, 2005.)