

PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
SUMMER FLOUNDER, SCUP AND BLACK SEA BASS MANAGEMENT BOARD

The Westin Crystal City
Arlington, Virginia
August 7, 2019

Approved May 6, 2020

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August 2019

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1. **Approval of agenda** by consent (Page 1).
2. **Move to adjourn** by consent (Page 44).

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ATTENDANCE

Board Members

Nichola Meserve, MA, proxy for D. Pierce (AA)
Raymond Kane, MA (GA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)
Bob Ballou, RI (Chair)
Jason McNamee, RI (AA)
David Borden, RI (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
Matt Gates, CT, proxy for J. Davis (AA)
Bill Hyatt, CT (GA)
Sen. Craig Miner, CT (LA)
John McMurray, NY, proxy for Sen. Kaminsky (LA)
Maureen Davidson, NY, proxy for J. Gilmore (AA)
Emerson Hasbrouck, NY (GA)
Joe Cimino, NJ (AA)
Tom Fote, NJ (GA)

Adam Nowalsky, NJ, proxy for Sen. Andrzejczak (LA)
Stewart Michels, DE, proxy for D. Saveikis (AA)
Roy Miller, DE (GA)
Craig Pugh, DE, proxy for Rep. Carson (LA)
Mike Luisi, MD, Administrative proxy
Robert Brown, MD, proxy for R. Dize (GA)
Phil Langley, MD, proxy for Del. Stein (LA)
Rob O'Reilly, VA, proxy for S. Bowman (AA)
Bryan Plumlee, VA (GA)
Sen. Monty Mason, VA (LA)
Chris Batsavage, NC, proxy for S. Murphey (AA)
Mike Blanton, NC, proxy for Sen. Steinburg (LA)
Marty Gary, PRFC
Mike Ruccio, NMFS
Mike Millard, USFWS

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

Ex-Officio Members

Staff

Robert Beal
Toni Kerns
Caitlin Starks

Dustin Colson Leaning
Lisa Havel
Jeff Kipp

Guests

Sen. Thad Altman, FL (LA)
Dave Bard, NOAA
Julia Beaty, MAFMC
Sam Chin, NOAA
Heather Corbett, NJ DFW
Rachel Cox, NOAA
Kiley Dancy, MAFMC

Tony DiLernia, MAFMC
Arnold Leo, E. Hampton, NY
Charles Lynch, NOAA
Miranda Peterson, Ofc. Rep. Frank Pallone
Thomas Sminkey, NOAA
Mike Waine, ASA
Charles Witek, W. Babylon, NY

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The Summer Flounder, Scup, and Black Sea Bass Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Wednesday, August 7, 2019, and was called to order at 1:00 o'clock p.m. by Chairman Robert Ballou.

CALL TO ORDER

CHAIRMAN ROBERT BALLOU: Okay, I would like to call this meeting of the Summer Flounder, Scup, and Black Sea Bass Board to order. My name is Bob Ballou, I have the honor of serving as Board Chair, and I'm joined as always, or at least as of the past several years by Caitlin Starks, FMP Coordinator, particularly with regard to black sea bass.

We're also joined by our new FMP Coordinator for scup and summer flounder, and that's Dustin Colson Leaning to Caitlin's right. Welcome, everyone!

APPROVAL OF AGENDA

The first order of business is the agenda. Does anyone on the Board have any recommended modifications to the agenda? Adam Nowalsky.

MR. ADAM NOWALSKY: I just wanted to request a minute or so at the end of the meeting to discuss next week's Research Steering Committee Meeting from the Mid-Atlantic Council, particularly as it pertains to RSA, which I think is of interest to a lot of people around the table.

CHAIRMAN BALLOU: Thank you; we'll add that at the end of the meeting under other business. Are there any other recommended modifications to the agenda? Seeing none, is there any objection to approving the agenda as modified? Seeing none; the agenda as modified stands approved by consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN BALLOU: and we're on to the next item which is the approval of the proceedings from the Board's last meeting held May 1, 2019. Are there any recommended changes? Yes, Matt Gates.

MR. MATTHEW GATES: Yes, under the attendance it has, I was at the table for Justin those last few minutes.

CHAIRMAN BALLOU: Very good, so we'll correct the minutes to reflect that Matt Gates participated in the Board meeting as a proxy for Justin Davis. Any other recommended changes? Seeing none, is there any objection to approving the minutes as modified? Seeing none, the minutes as modified stand approved by consent.

PUBLIC COMMENT

CHAIRMAN BALLOU: Now we're on to Item 3, which is Public Comment.

This is an opportunity for anyone from the public who would like to address the Board on any issue that is not on today's agenda to do so. Would anyone like to take advantage of this opportunity from the public?

**REVIEW POTENTIAL BLACK SEA BASS
COMMERCIAL MANAGEMENT STRATEGIES
AND TO CONSIDER INITIATING MANAGEMENT
ACTION TO ADDRESS
COMMERCIAL ALLOCATION**

CHAIRMAN BALLOU: Seeing no hands, we will move on to Item 4, which is to Review Potential Black Sea Bass Commercial Management Strategies and to Consider Initiating Management Action to Address Commercial Allocation. This is a continuation of an agenda item that the Board has been addressing over the past year. Tucked into the meeting materials is a two page memo from me to the Board that outlines the travel of the issue.

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Beginning with the formation of a working group exactly one year ago, and leading to a report from the PDT or Plan Development Team, provided to the Board at our last meeting in May. Further details regarding the travel of the issue are included in the memo, and will be highlighted by Caitlin in her upcoming presentation.

As I see it, the focal points of our meeting today on this agenda item are essentially four-fold. First, to reset where we stand regarding the development of proposed management strategies to address commercial black sea bass allocation, including any new proposals submitted since our last meeting in May.

Two, is to revisit and, hopefully, reach consensus on a goal statement for the pending management action pertaining to commercial allocation, three, to undertake further consideration of the existing suite of options, alternatives, and alternatives including new proposals that have now entered the mix, and lastly to chart our next steps.

That is my outline for how I would like to proceed over the next 45 minutes or so. That's a lot, so I'm going to ask the Board to try to do your best to keep pace with our tight schedule on this issue. It's a hefty amount of work, but my hope and expectation is we can move through everything I just outlined in the time we have allotted. With that I will turn the microphone over to Caitlin for her presentation.

MS. CAITLIN STARKS: In my presentation today I'll start off with a quick overview of the background information on this topic, then review the potential management strategies related to commercial state-by-state allocations that the Board supported at the May meeting, including the TMGC approach, trigger approach, and hybrid approaches. I'll also go over the new proposed options that were submitted to the Board Chair and PDT by Connecticut, and then I'll move to that draft goal statement that

the Chair mentioned, which the Board briefly discussed in May.

Then I'll wrap up with next steps and questions. As a reminder, the development of this topic started in August, 2018, when the Board established the Commercial Working Group in response to a Board motion in May, 2018, to identify actions that would address changes in black sea bass abundance and distribution. The Commercial Working Group presented their final report on commercial black sea bass issues to the Board in February.

At that point the Board established the Plan Development Team to continue fleshing out and analyzing proposed management strategies to address the main issue that the Working Group highlighted, which is that the current allocations, commercial black sea bass state-by-state allocations do not reflect the current distribution of black sea bass along the coast.

After the PDT was formed in February, the Board met jointly with the Mid-Atlantic Council in March to discuss the work that had been done at the Board level on commercial black sea bass, and at that meeting the Council initiated an Amendment to allow for staff resources to be directed towards this issue, and coordinate with the Board on the development of options that might require Council involvement. Following that meeting, the PDT worked on analysis and development of commercial allocation options, and the Board reviewed the PDT's report on those options in May.

At that point the Board chose to continue development of the proposed strategies, except for the quota auction concept, and to come back to the table at this meeting to discuss initiating a management action and additional proposed options. Between then and now, there was some new management options proposed, so I will go through those today, as well as the other options that have been proposed thus far.

Then the Board will be able to consider the goal statement for moving forward with a potential management action on this issue. I'll quickly review each of the strategies that are still on the table for discussion, including those that were presented by the PDT in May, as well as the new proposed options. The first of the options that are still on the table for consideration is what is called the TMGC approach.

Again, this approach was developed by Jason McNamee, based on an approach that was used to address allocations of shared Georges Bank resources between the U.S. and Canada, and the essential components of this approach are that it uses a formula to adjust the state-by-state commercial allocations by gradually transitioning from allocations that are based mainly on historic resource utilization to allocations that are based more on regional resource distribution or biomass information.

The formula for this approach can be manipulated in a number of ways to structure the allocation changes. For example, the weighting of the historic information versus the current stock distribution information, the length of time over which that transition occurs, and the frequency of allocations changes can all be adjusted.

The state allocations that result from this approach would continue to be dynamic over time, changing based on stock distribution information as it is updated, and it wouldn't necessarily mean changes in a single direction. Then lastly, this approach has the ability to include a control rule that would limit the amount by which allocations at the state or regional level could change in a single adjustment, and that can add some more stability to the process.

Up on the screen is an example of that TMGC approach being applied over the years of 2008 to 2015; based on the stock distribution

information from the last assessment. I just wanted to put it up on the screen to jog everyone's memory of how this works, and show how the allocations would change gradually over time and how those changes might not happen in the same direction. But note that this is just an example, and the PDT would need to update this if it were to move forward based on new stock assessment information that we'll be getting in the future.

The next management strategy for consideration is the trigger-based allocation approach. This approach would establish a quota trigger, or a base level of quota that is always allocated using the current state allocations, and then the quota above that trigger would be distributed to the states using a different allocation scheme. The PDT has evaluated several methods for that additional allocation scheme, and the original concept is just to allocate the quota above the trigger evenly to all of the states from Massachusetts to North Carolina, and give Maine and New Hampshire smaller allocation, based on their low participation in the fishery.

I'll come back to the alternative strategies to that method in a few slides. The two trigger levels that were approached with this option were 3 million and 4 million pounds, and the first is approximately based on the average coastwide commercial quotas between 2003 and 2018, but excluding the years where the constant catch approach was used.

The second trigger is approximately based on the highest quota in the time series of 4.12 million pounds. This figure just shows the proposed quota triggers compared to the coastwide quotas from 1998 to 2018, so you can see in how many years the triggers were exceeded. Looking at the 4 million pound trigger, which is shown by the green line, the quota only exceeds the trigger in 2017, whereas for the 3 million pound trigger represented by the yellow line, ten coastwide quotas since 1998 were in excess of the trigger.

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As I mentioned before, after the quota up to the trigger is distributed, based on the current allocations, which is Step 1, there are several sub-options for a trigger approach related to how that quota above the trigger could be distributed, which is shown under Step 2. The first method is the one that was originally proposed, which is the even allocation of the quota above the trigger to Massachusetts through North Carolina, and 1 percent each going to Maine and New Hampshire.

The alternative idea that was put forward by the PDT was to distribute the quota above the trigger based on regional biomass. That would be using information from the stock assessment, if available. If this method were used, the additional quota above the trigger would first be allocated to each region, based on their regional biomass proportions, and then the regional quota would be distributed to the states within that region, which is Step 3.

Under Step 3 you see there are two options for how to do that. The first is to allocate equally to states within the region, and the other is to allocate to the states within each region in proportion to their historic allocations. This is a visualization of the trigger approach as it was originally proposed, with equal distribution of the quota above the trigger, so 10.89 percent each is given to Massachusetts through North Carolina, and 1 percent each to Maine and New Hampshire.

This is a graphic that shows the alternative method using the regional biomass distribution to distribute the quota above the trigger, first to each region and then to the states within each region. Just note here that Maine and New Hampshire are still getting 1 percent each, but that is drawn from the northern region's portion of the quota.

In addition to the TMGC and trigger approach, the PDT also presented ideas on combining multiple options into a hybrid approach. This

could take different forms, but for example a hybrid option might need to allocate 50 percent of the quota using status quo, and the other 50 percent using TMGC or a trigger approach. As a reminder, the PDT commented that when or if a hybrid approach was considered, it would be important to weigh any potential increases in flexibility against complexity and the potential for public confusion, since combining multiple options could cloud the impacts of what each of those different approaches is on the ultimate allocations.

Now I'm going to switch gears and go over the new proposed options that were received after the May meeting. These options were submitted by Connecticut to the PDT, and the first option that Connecticut submitted specifically addresses their low 1 percent allocation of the coastwide quota by increasing it to 5 percent.

The rationale behind this option was that Connecticut has experienced a substantial increase in abundance of black sea bass in their state waters over the last several years that has rendered them particularly disadvantaged by their 1 percent quota. It was noted that this option is intended to be considered as a first step in the process of considering state quota allocation changes, but not in lieu of the other options that have been considered thus far.

The proposed method that Connecticut put forward for changing their allocation to 5 percent is to hold the New York and Delaware allocations constant first, and that is explained in that New York has a similar situation occurring of increased black sea bass availability, and a relatively low quota in their state waters, and thus it wouldn't be appropriate to reduce their allocation.

Then for Delaware, their current allocation is 5 percent, and the option here doesn't seek to make Connecticut's allocation any larger than any other state. The way the quota would be redistributed to Connecticut is by taking one-

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half each of Maine and New Hampshire's quotas, moving that to Connecticut, which adds an additional 0.5 percent to Connecticut's allocation.

Then the option proposes moving some allocation from the remaining states to Connecticut, with the amount that gets moved from each state being proportional to their current allocation. This would add an additional 3.5 percent to Connecticut's allocation, and come out to a total of 5 percent. This table shows how this option would change each state's allocation. The first column is their current allocations by state.

The center is the percent change in allocation by state, and on the left is the final allocation by state. I just want to note here that no state's allocation in this scenario would change by more than 1 percent. The second option that Connecticut proposed is to be considered as an alternative to the previously proposed options, and the idea with this is basically to have a modification of the trigger approach, where the base allocations are adjusted annually rather than remaining static using the current allocations.

The option uses a 3 million pound trigger, while also incorporating some of the spirit of the TMGC approach by having the dynamic adjustment of allocations over time, with consideration of both resource availability and the current allocation regime. The option uses the decision tree that's shown here to allocate quota within a given year.

If the coastwide quota is less than or equal to 3 million pounds the full quota would then be allocated using the previous year's state allocation percentages, and if the quota is greater than 3 million pounds, the first 3 million pounds of quota or the base quota would be allocated using the previous year's state allocation percentages, and the quota above the 3 million pounds would be allocated first regionally according to a proportion of available

biomass in each region. This option proposes the same regions as we've considered.

Then within each region the quota would be distributed to each state according to their existing allocation proportions. The benefits that Connecticut noted for this option include that the 3 million pound trigger approach ensures that there wouldn't be substantial decreases to southern states' state-by-state allocations in the immediate future.

That it directly incorporates data on the distribution of the resource, either from stock assessments of the fishery independent survey data. That it allows the state-by-state allocations to evolve over time as resource availability shifts in either direction. The rate of allocation shift in this option is accelerated when there are higher quotas and it effectively pauses when there are low quotas.

Lastly that the overall changes from year to year in the state allocations would be moderate, because only quota above that 3 million pounds trigger would be shifted in any given year. That wraps up the review of the potential management strategies for commercial allocation. Up on the screen here are next steps for the Board.

First, as the Chair mentioned, the Board will consider a draft Goal Statement for a management action addressing black sea bass commercial allocations, in order to enable the Board and PDT to focus on further development of those strategies that best align with the Board's goals. Then if desired the Board could consider initiating a management action.

If that is the case, it would be helpful to specify which management strategies should be included in that document, and the type of management document needed may also depend on which options the Board wants to consider. Lastly, it would be potentially useful to consider a timeline for developing any management action.

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For example, if an addendum were initiated today a draft document could be developed by the PDT over the next several months, with options the Board would like to consider, and then those options could be reviewed at the meeting with the Council in October, or at the Annual Meeting in October. It's important to note that at that time at the joint meeting the Board will also be able to review the operational assessment. That may be something to consider as well.

Then in December the Board could potentially consider a document for public comment, and if it were approved then the state public hearings could occur in January and February of 2020. Depending on the timing of those hearings it probably would not be possible to approve a final document until May 2020 at the earliest. At the earliest, implementation of any changes would probably occur in 2021.

For the purpose of starting off the Board discussion, my last slide here is that draft Goal Statement that was offered up by the Board Chair in May, and considered briefly at the end of the Board meeting in May. With that I can take any questions.

CHAIRMAN BALLOU: We'll take questions but only burning questions; because we're going to be circling back to I think a healthy discussion on the options and alternatives in just a minute. I don't want to kind of get too far ahead of ourselves with that discussion. But are there any questions for Caitlin that are burning ones that any member of the Board wishes to broach right now?

I don't see any hands up, so I'm going to take that as willingness to kind of pause. I think again, we're going to be circling back to the entire substance of her presentation in just a few minutes. Let's circle back and start with the issue of a Goal Statement.

As a reminder, again reiterating essentially what Caitlin just said, the report from the PDT, which is included in today's meeting materials, set forth an initial analysis of management options and alternatives suggested by Board members, and also highlighted several decision points the Board may need to consider in selecting the most appropriate options for further development and inclusion in a management document.

The first such decision point involves an articulation of the Board's goal. Quoting from the report with some minor paraphrasing; "First defining the Board's intention in considering changes to the black sea bass state-by-state allocations is important to help guide the Board and focusing on the management strategies that best align with the objectives the Board seeks to meet."

I am feeling compelled to be responsive to that recommendation from the PDT and am therefore hoping that this Board can take up this issue at this point today. As a reminder, and again to reiterate what Caitlin just said. At our last meeting a straw man example was presented, and that's what's up on the board right now to seed the Board's consideration of the issue.

It's now up to the Board to provide input on whether this statement is acceptable as is, as a draft, noting of course that we're just talking about a draft Goal Statement. This could well be a process that runs over the next, and probably would be a process that runs over the next several months, with several opportunities for further review and analysis of not only the options and alternatives, but the Goal Statement as well.

This is not final decision making time, but it is I think time to try to reach consensus on a draft Goal Statement, and a series of options and alternatives that align well with that statement. I don't see this as an action item to be voted on, rather just looking to achieve consensus on

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some language that can be carried forward in the ongoing development of a draft management document. I'm now going to open the floor to comments and suggestions from the Board on this matter. Does any member of the Board wish to weigh in on this? Rob O'Reilly.

MR. ROB O'REILLY: This is sort of a longstanding request, and it's not shared by me alone. But back when we looked at the recreational options for allocations for 2018 I think, so back in 2017, I had a request to instead of the 2011 to '15 data or the 2006 to 2010 data, back to 2001. At the time we found out that North Carolina didn't have that data for the very early years. I was always stressing abundance. I don't see abundance and biomass as synonymous. You have abundance here, but with some of the options biomass is talked about. I do like the idea that you have abundance there. You know that's my comment, but how about later on when we talk about the TMGC approach and everything else? I think we should keep in mind that there is a difference between the two. I think even earlier today Tom Fote brought that point forward about, you know you need to consider the stock abundance, both in the northern and the southern areas. I just wanted to make that comment.

CHAIRMAN BALLOU: Additional comments. Suggested changes, yes Stew Michels.

MR. STEWART MICHELS: We have some concerns about using the term fair and equitable in this goal statement as it kind of implies that what we had before was not developed in a fair and equitable manner. It was developed initially in a way that is consistent with many of our other fishery management plans, just something to note there.

CHAIRMAN BALLOU: If you don't mind, I'm going to challenge you. Do you have a suggested alternative? Would you be

interested in striking that or perhaps modifying that portion of the language?

MR. MICHELS: I do have a suggestion. We could strike the "to provide a fair and equitable" and replace it with something like it balances the current scientific information on resource distribution.

CHAIRMAN BALLOU: I want to capture that thought, and I'm going to see if Caitlin got that. Did you get what Stew just suggested, or would you like him to repeat it? Can you please repeat that Stew, because I really want to capture the suggestions, or you can walk it over, whichever is easier. He'll walk it over, okay. We do have one suggested modification, and I'm really looking now to kind of pull together any other suggested modifications or any offer of support for the language as written. Nichola Meserve.

MS. NICHOLA MESERVE: I had a hunch that fair and equitable might strike some of us, or might be problematic with the Goal Statement, and had a similar thought as Stew, in terms of you could strike that part and still get to what we're really trying to is better align the allocations with the scientific information. You can do that by just striking part of it so that it says; consider changes in commercial black sea bass allocation that better align allocation with the current scientific information, yada yada up there.

CHAIRMAN BALLOU: Thank you that seems very clear in terms of your suggested change, to basically strike everything after allocation that is striking to provide fair and equitable access to the resource by, and then having the sentence continue that better aligns allocation. I think I understand well that suggested change. Any other suggested changes or modifications? I'll go to Matt Gates first and then Adam Nowalsky. Matt.

MR. GATES: To get through the fair and equitable access. I see how the scientific information can be used to distribute a little

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differently north and south, but how that would then be broken out by states within the regions to be more fair and equitable. I'm not sure how the scientific information will be used in that way. I would like to see, I think those terms fair and equitable kept in there, so that it's talking about state specific issues.

CHAIRMAN BALLOU: Thank you for that. Adam Nowalsky.

MR. NOWALSKY: We heard this morning, for those of us that were here, a report from the LGA Committee about discussion about reallocation. One of the comments that came out of it was that the infrastructure that has developed over time based on allocations is probably the biggest inhibiting factor to allocations, due to the economic harm reallocation could potentially cause.

We had a lot of discussion about it. I understand that this proposed statement as it's here, includes this last part about due consideration to the economic needs and interest of coastal communities. I think it's important to note that a lot of that infrastructural oftentimes extends beyond the immediate coastal community itself, both within jobs, transportation, logistics, freezers, baits, et cetera.

This issue of allocation, we have to address that. I don't think this statement goes far enough in addressing that. Furthermore, the concept of aligning allocations with updated scientific information or resource distribution in abundance. We are hitching our cart to the assessment as it stands right now that there is very real potential that the next assessment may not provide the information about the distribution in various regions as we've had it for the last couple of years.

That is a tremendous concern for me, and with that information it prevents me from being onboard with the consensus of supporting this as written. I would therefore offer a

modification that was passed on; I believe from John Clark, we're sorry he can't be with us today, dealing with a terrible family tragedy. John, if you're listening, our prayers and thoughts are with you.

His suggested edit was to consider adjusting the current commercial black sea bass allocation using the current distribution and abundance of black sea bass as one of several adjustment factors. I would put that alternative out there as an option. I can read it again; I can bring it up front as needed.

I think that allows us to not be tied specifically to economic needs of coastal communities. I feel confident that in most all of the work we do we consider what the economic impacts would be, existing infrastructure, while highlighting the fact that we will consider distribution and abundance in whatever form we get it. But it's not the centerpiece of our reallocation strategy.

CHAIRMAN BALLOU: Tom Fote, did you have your hand up? I think it was. Do you still want to weigh in?

MR. THOMAS P. FOTE: Yes. After listening to Adam, I'm just sitting here thinking of how many times we decided something at one meeting and then changed completely at a meeting three years later, and it happens all the time. Look at what we just did with the MRIP numbers, basically on summer flounder.

We readjusted almost all the quotas based on what they think is the best data we have at this present time. Who knows what that data will show in five years, and we might have to readjust everything else. I'm not ready. I have problems with that language, and fair and equitable that doesn't belong in the statement at all. I mean we're always sitting here trying to decide what the allocations with the consensus of all the states involved. We try to do the best job. But it's always fair and equitable, because we're working it out amongst ourselves. I'll leave it at that.

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CHAIRMAN BALLOU: Other comments, thoughts. That was a healthy and impressive discussion. I think it helps sort of frame things a bit. We have as I see it sort of three suggested changes; that which Stew Michels suggested that which Nichola Meserve suggested, and that which Adam Nowalsky suggested.

Now the challenge becomes how do we work through this? We could either look to try to see if we can find consensus on a Goal Statement that addresses some of the suggested, or even all of the suggested changes, if possible, or we could vow to take this up at another meeting, and just keep kicking the can down the road.

I don't want to force the issue, but I think it's an important issue to try to see if we can come to terms with it sooner rather than later, because to me it seems that it helps keep us on track, in terms of moving forward in a way that's consistent with the Board's intent. This is about the Board's intent. I'll take a few more comments. Mike, I thought I saw your hand up. Mike Luisi.

MR. MICHAEL LUISI: If I may ask a question of Adam through you. Adam, I was tracking what you started with, and I thought you were saying that the word scientific information is a limiting factor, so it's hitched on to the assessment. Did your new language correct for that to allow for other sources of information? Is that where you were going, not being specific to just the assessment as a basis for this allocation potential redistribution?

CHAIRMAN BALLOU: Adam.

MR. NOWALSKY: I think the language that is getting up on the board now, current distribution and abundance without specifically referencing scientific information, which I think sets the expectation that scientific information is coming from the Science Center from an assessment. The reality is scientific information

could be just about anything we're willing to accept.

But when I see that scientific information that is generally what we're referring to is the assessment, if you will. The language that is offered as an alternative, current distribution and abundance, yes it may use part of the assessment information, but I think it would potentially use other information we have available. Again, not to say that is non-scientific. In my opinion, scientific information referred specifically to the assessment.

CHAIRMAN BALLOU: Mike, did you want to follow?

MR. LUISI: Yes, Mr. Chairman. I share that same concern so that was a good clarification for me.

CHAIRMAN BALLOU: Maureen Davidson.

MS. MAUREEN DAVIDSON: I wanted to ask Adam. In your modification here, you said one of several adjustment factors. Will the other adjustment factors be identified in the Goal as well?

CHAIRMAN BALLOU: Adam.

MR. NOWALSKY: I don't necessarily think it has to be part of the Goal. I think the statement as it's offered as an alternative could stand by itself. It would then be up to this Board and the PDT to determine what additional items would be included. The TMGC approach certainly highlights with its dials a number of those.

One of the concerns with the TMGC approach I share with others is that there are so many of those dials. We could spend an extended period of time addressing them all. Perhaps this would give us the opportunity to look at them, say thank you for bringing them forward, these are the ones we want to incorporate in our management action for decision making.

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CHAIRMAN BALLOU: Go ahead, Maureen a follow? No, okay. I actually, I'll just offer my thought. Adam, when I heard you just say, I think and I'm not sure if I got the words right, but leave it up to the PDT to determine. I'm not sure that that is fair, in that I think the PDT is looking to the Board for guidance on what factors should govern the development and analysis of the options.

With this language as I see it, it could well be interpreted by the PDT that the only options or alternatives that should be considered are those that adjust using current distribution and abundance as one of several factors. Leaving open the question of what other factors might be considered appropriate and valid?

I just want to put that out there, and if the Board feels that this is adequate, and gives enough guidance to move forward with this process that is the Board's prerogative and wish, so be it. But I just wanted to sort of I think echo what I heard Maureen saying, and that is does this leave open the question of what other factors the PDT should be considering in their analytic work. Go ahead, Adam.

MR. NOWALSKY: I thought I had expressed in my response to Ms. Davidson. If I didn't I'll clarify now that it would be incumbent upon the Board to work with the PDT to decide what those adjustment factors would be. When we initiate a management action, we will oftentimes provide direction for the scope of options we would like in the document. We don't typically come up with the options ourselves, sitting around the table. Now we do have some of those options presented to us directly, from one state in this case.

But we will typically say do X, Y, and Z. Develop options to address these concerns. I think this Goal Statement stays use current distribution and abundance as one of, so we know that is one of the factors, and we then need to in directing the development of an addendum to

identify what those other factors are here today. Clearly existing infrastructure, past allocations would be another one. Maybe we stop right there, maybe we can hash out some additional ones in initiation of a document to develop those options.

CHAIRMAN BALLOU: Maureen.

MS. DAVIDSON: I'm a little uncomfortable with the changes that we're making right now. When we started describing what the goal of our addendum was going to be we were looking for changing the allocations of black sea bass, and there are states who are looking for what I would describe as a more equitable portion of the coastwide quota. We're not asking that we all have the same, but we are asking that we can get more, okay so that we can be closer to the other states.

I think the word equitable should be up there, because that is a goal for some of the states in changing the allocations of black sea bass. I am also concerned that we are having other adjustment factors that I don't know about. I don't know what they could be. Okay my concern here is to sit here and work with and negotiate so that we can have more equitable distribution of black sea bass, especially for some of the states who have very small portions.

CHAIRMAN BALLOU: Good discussion, other input, other Board comments on this? This might be a tough one to resolve. I'm not sure exactly how to suggest we try to resolve it. By the way, let me ask Stew. You had offered some language that I don't necessarily see up here right now. Do you feel that you would like to add a third approach, or do you feel that one of these two options addresses your concerns?

MR. MICHELS: Thank you for asking, but I think my concern is addressed in what Adam suggested.

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CHAIRMAN BALLOU: That helps in the sense that we now have essentially two proposals. I think I heard Adam suggesting that he might be open to adding to his recommended change, which would be the lower of the two here on the screen, maybe by adding in socioeconomic needs and interests as an additional factor. But that still leaves us stuck on the issue of fair and equitable. What is the wish of the Board? Mike Ruccio.

MR. MIKE RUCCIO: Thinking about this last part and the discomfort about the specificity of what the adjustment factors would be. Perhaps a compromise way to move this forward is to say that those adjustment factors will be identified, either as part of the development of the process, or as the process moves on.

I can understand and sympathize with it being left open ended, but I think it's more an acknowledgement that we don't want to have this be solely predicated on just potentially the survey information that comes from the Center, and if there are other factors to have the capability to grab those, and to consider those.

But I do also think it's important that they be clearly identified, and that there is agreement on those as kind of the suite of things that might be used moving forward. Not having that I think would be very difficult for people to understand and follow, and even know what their year-to-year allocations might be. I think there is a potential compromise there to say however you want to phrase it, but those additional factors will be identified, or as of yet to be identified additional factors. But kind of with that understanding that they will come out of the process at some point, and be understood.

CHAIRMAN BALLOU: It sounds like Mike, if I understand, you're suggesting that that latter proposal, the bottom one on the screen, might be sufficient in that yes it leaves it open ended, but that those additional factors can be determined as the process moves along that

you would be comfortable essentially with that language at the bottom of the screen right now.

MR. RUCCIO: Well I guess what I was suggesting is actually to include that language that those factors will be determined and identified through the process, so that it is somewhat constrained.

CHAIRMAN BALLOU: There it is, just magically appearing; I think language that reflects what you just suggested. Now we're looking at two different approaches, and continuing to take input from the Board. Eric Reid.

MR. ERIC REID: I think at this point I prefer the second alternative, because I am concerned about the ability to collect scientific information, especially in southern New England going forward. The landscape south of where we are, is going to change substantially over the next few years because of the wind farms, and we don't know what the Services ability to collect scientific information in those areas is going to even be.

About this time tomorrow you're going to hear the Science Center say they can't even take the Bigelow into those areas. What that does to our updated scientific information is tremendously uncertain in my mind, so I would prefer the second one, because it is a little bit more vague in that discussion.

CHAIRMAN BALLOU: What I'm hearing on this issue of fair and equitable, and Matt I do want to allow you to weigh in on this. But I sense that what I hear from several members of the Board is that fair and equitable is more of an outcome, more of an output than an input. It's sort of like once you go through the process of working through the various factors that will be considered.

Assuming those are appropriately considered and factored, you end up with a fair and equitable outcome, as opposed to trying to use fair and equitable as a yardstick going in,

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because how do you measure fair and equitable? I just want to throw that out as a way to say that maybe we're achieving it, or seeking to achieve it without actually saying it. Matt, did you want to comment on that or any other issue?

MR. GATES: Yes. Also addressing the current black sea bass allocations are an output of the Goal Statement too. I think I could get onboard with that second one, if we included some kind of reference to fair and equitable. I think without it, we're sending the message that we're not interested in fair and equitable in this. I would propose adding after adjustment factors to achieve fair and equitable access to the resource.

CHAIRMAN BALLOU: Matt is suggesting, I believe, that that last statement as written with an additional modification of fair and equitable access to the resource being an important factor to be considered, and should be explicitly stated, as I understand your recommendation. It sounds like we're down to close to something that might be considered a consensus with this one key issue being the one that I think there might be some disagreement on, and we might have to vote on this. But I don't want to spend the entire afternoon on this, so let's see if we can come to terms, but I see at least two more hands, and I'll go to Maureen first and then Tom, Maureen Davidson.

MS. DAVIDSON: I would ask that we add the word equitable, and maybe not include fair since fair might seem to be a little subjective. I think equitable; you know where we're trying to go. Okay for certain states we're trying to get more fish to put us on more equal footing with other states. Fair, eh, I could work with equitable if my colleagues in Connecticut don't mind.

CHAIRMAN BALLOU: I see nods of yes from the Connecticut delegation, so it sounds like we could strike fair and just leave it to achieve equitable access to the resource as something

that we seem to be coming to agreement on. Tom Fote, did you want to add anything else?

MR. FOTE: Yes, we wouldn't be in this problem if we actually had a quota that was based on what the resource is. I mean we basically have not been able to do that for the last couple years, and we also could have done that easily that we proposed 15 or 20 years if the quota went up we would allocate the extra quota equally among states.

But that's not what we're talking about here, and it's not fair and equitable to take from one of the fishermen from one state and just, I'm going to give it to the fishermen of the other state. That is not fair and equitable to me, because I didn't cause this problem. What's causing the problem is that NMFS has not raised the quota. It is how you perceive what fair and equitable is in the fishermen's eyes.

CHAIRMAN BALLOU: Understood. Let's see if we can maybe wrap by seeing if there is any objection to moving forward with the language that is the second piece here on the screen, the lower piece. I'll read it into the record if I get approval from the Board as our draft Goal Statement. It doesn't bind us in any way.

It doesn't mean that this is not subject to further modification and change, but at least it gives us something to move forward with. That is my thought and I wanted to see if the Board was comfortable with that. But I see Maureen and Joe Cimino, so I'll go to both of those. I will go to you next Maureen.

MS. DAVIDSON: I just have one tweak, and I have a red pen too, so I'm really restraining myself. Instead of additional factors, could we just say these adjustment factors will be identified as the process moves forward?

CHAIRMAN BALLOU: Okay so that reflects what you just suggested, I guess it's up to the Board to decide whether that is consistent with how

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the Board feels as a whole. Joe Cimino, did you want to comment?

MR. JOE CIMINO: I feel the need Mr. Chair, thank you. I really try very hard not to. I was okay with this for a bit, and now you know it is stated on the record that we're trying to get everyone on equal footing, and we totally lost the consideration for socioeconomic impact. I can no longer support that.

CHAIRMAN BALLOU: This is the challenge here is how explicit we get versus whether we leave it sort of open ended to be determined. But that is hitting the nail on the head, in terms of the challenge of doing it. I'm happy to go to Maureen again, but I also want to make sure that I'm not missing anyone else.

I don't see another hand up, so I'm going to go to Maureen, and then we're going to try to see if we can figure out how we want to move forward on this. If the Board wants to park this and just does not feel comfortable moving forward today, so be it. I don't think that is a good idea, but it's really up to the Board. Let me go to Maureen, and then I see Adam, and then I really do want to try to wrap this, because we have lots of other business to do today. Maureen.

MS. DAVIDSON: In response to Joe's comment. I would be happy to add consideration to socioeconomic needs and interest of coastal communities, absolutely.

CHAIRMAN BALLOU: Adam.

MR. NOWALSKY: I would prefer, in discussing with my other New Jersey delegates, we could get behind this without the addition that was just offered, and replace equitable with more balance.

CHAIRMAN BALLOU: Adam, I'm sorry. I get the replace equitable with more balance. The other suggestion that was just is that these

adjustments issue? I'm sorry, what were you speaking to that you cannot support?

MR. NOWALSKY: I was suggesting that with the change from equitable to more balanced, we would not need the inclusion of the term socioeconomic needs and interest of coastal communities that was just offered.

CHAIRMAN BALLOU: We're very close if not there. I just wonder if when we say, these adjustment factors that is different than saying additional factors. It means that it is these factors identified in the previous sentence. Maureen, I just want to make sure that you are strongly urging that we modify as we now see it. Maybe I'm getting too in the weeds on this. Are you comfortable Maureen, with the language as proposed? I'm going to put you on the spot.

MS. DAVIDSON: Yes. These adjustment factors are referring to the one of several adjustment factors that would achieve the more balanced access to the resource.

CHAIRMAN BALLOU: Okay. Is the Board comfortable moving forward with this as a draft Goal Statement, subject to further review and analysis as the process moves forward over the next several months? Is there any objection to adopting this as a draft Goal Statement at this relatively early stage in the process? Seeing no objection, we will move on to the next issue, which is the Consideration of Options and Alternatives. Caitlin I think did an excellent job summarizing where we are with regard to the existing set of options and alternatives as well, the new proposals that have entered the mix. In essence, I think we have right now before us a status quo option, a TMGC option, and that may have some sub-options associated with it.

At trigger option, and I think the trigger option would have several sub-options, including at what level the trigger should be, either 3 million or 4 million pounds, as well how the surplus would be addressed, either evenly distributed

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or distributed in accordance with regional biomass, as proposed by Connecticut in the proposal they submitted this past May.

Then a standalone, I'll call it Connecticut Bump-Up Proposal would be the fourth category. I believe that's what we have before us right now. I would like to get Board input on whether those constitute a robust set of options and alternatives that you would like to see the PDT further develop, or whether there are any recommended changes or additions to the suite of options and alternatives that the Board has before it right now. Bill Hyatt.

MR. WILLIAM HYATT: I believe you have an additional one that we've brought forth today that I would like to have put up on the screen if we could.

CHAIRMAN BALLOU: Sure, let's do that now, so if Caitlin or staff, I'm sorry, could put up.

MR. HYATT: I think this was written in terms of this being a motion, but that doesn't need to even happen, as I understand it. The idea here is that we wanted to bring forward an additional option for consideration, get it on the table. It reflects a lot of the formal discussion and the informal discussion that has taken place, last meeting and even so far this meeting.

I also believe that it sort of reflects the spirit of the discussion that took place at the LGA luncheon yesterday. What this is and you can read it, but basically it's a proposal that unfolds in a series of layers. First off it recognizes the investment in existing fisheries that is in place. It calls for no changes for anything under 3 million pounds.

It recognizes the sort of broad support for the trigger approach over other approaches that have been discussed previously. It addresses specifically the inequities that were brought forth in the PDT report, and it addresses those

by addressing them for only above and beyond the 3 million pounds.

It then subsequently speaks to the need to make adjustments based upon changes in distribution with anything in addition to those initial two layers. All we're doing today is saying that our thinking has coalesced and matured some, based upon the discussions that have taken place around this table, in the corridors, et cetera, and we would like to add this to the list of options that the PDT is considering going forward.

CHAIRMAN BALLOU: I'll look to staff. First of all, I think Caitlin has a qualifying question, and I also want to make sure that the record is clear. I realize I did not read that Goal Statement into the record. I don't know if it's necessary, it wasn't a motion. I'm seeing Toni Kerns shake her head no, so we captured that Goal Statement. I just want to make sure the Board is clear. I didn't read it into the record, but we have it and it will advance as the Board worked through it in the form that the Board worked through it. Now we have a new proposal from Connecticut up on the Board, Bill Hyatt just summarized it. Caitlin, you have a clarifying question.

MS. STARKS: I just wanted to clarify on this new proposed option whether the intent is to, like in your previously proposed option, continue to update the base allocations on an annual basis, or to start from scratch every year with the current allocations as the base, and every year using whatever quota is available above the trigger to increase the allocations to New York and Connecticut.

MR. HYATT: The intent of this proposal is to allocate that first 3 million based on historical distribution, and to not change that going forward.

CHAIRMAN BALLOU: Let's take up any comments, questions regarding this new

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proposal offered by Bill Hyatt. Nichola Meserve.

MS. MESERVE: I can see the need to address Connecticut and New York in a slightly different way than others, based on the work that was in by the Working Group and the PDT. However, I don't know at this point is 5 percent the right amount for Connecticut? Is 9 percent the right amount for New York?

In both this concept as well as the separate one just for Connecticut, 5 percent you know I would hope that those are up to 5 percent and up to 9 percent for those states, so that as we move forward potentially with these options, there can be some additional justification and some rationale for those percentages for those states.

I believe that Connecticut is 5 percent, which is based on that being the second lowest percentage for Delaware. It wasn't based on participation levels or whether that's going to provide similar trip limits and open season length as other states that they are adjacent to or along the coast. I hope that we can understand this as up to those percentages.

CHAIRMAN BALLOU: Additional comments, Bill Hyatt would you like to respond?

MR. HYATT: Yes, absolutely correct regarding the 5 percent. The intent was to bring us up to the next lowest state. I'll just say that there are numbers in there, but the concept is more important than the numbers per se.

CHAIRMAN BALLOU: Adam Nowalsky.

MR. NOWALSKY: I'll build on that last statement that Bill just offered about the concept is that I don't object to the concept of a baseline, and then give some quota to states. I don't feel prepared to make a decision today, whether these numbers and only these two states should be the focus.

I would be more comfortable if this was changed to reflect that middle piece, to say that if the quota was over 3 million pounds the excess quota may first be given to some subset of states in some percentage, before being distributed to the other states. I would be more comfortable specifying this generically as opposed to specifically.

CHAIRMAN BALLOU: I think that works well at this stage of the process, because as we all know we're not here to approve a draft addendum yet. We're here to inform the PDT in their ongoing work to develop these options, and give them as much guidance as we can. I actually find quite a bit of commonality between the specificity offered in this proposal, and Adam your suggestion.

That the concept is what seems to be supported fairly broadly, from what I can tell so far, but not necessarily these numbers. Again, I think you and Nichola were both sort of speaking to that same issue. I trust that we're capturing this, and this is exactly the kind of helpful information that we can provide to the PDT for their continuing work. Rob O'Reilly.

MR. O'REILLY: I agree with those last comments by Adam, but at the same time I'm not willing to say there is a baseline. I believe even you said, Mr. Chairman that the 3 and the 4 million pound triggers were still alive. I think we're jumping the gun to assume that it's going to be the 3 million is the more reasonable baseline. We don't know that yet.

We'll soon have the results from the assessment, and we are expecting good things, I think everyone is. You know if we can just not be specific on the 3 million right now, you know that might be a little bit better as well. Again, I understand that that was sort of a historical basis. The 4 million was based on 4.2 million, the highest.

That is the reason that trigger approach was submitted. I can see where the PDT with

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Option 2 has come up with sort of maybe a refined way to look at the trigger and the TMGC at the same time. But right now, I think I would like to work around the idea that the baseline is going to be 3 million pounds.

CHAIRMAN BALLOU: Duly noted. I think again that is consistent with the general direction that I sense that this Board is looking to go in. We're not at this point settling on any specificity with regard to baseline. We're noting that there may well be, and in fact probably should be sub-options for those baselines, and then whatever that baseline may be, there are various sub-options to address how that surplus would be addressed.

I sense that we are evolving, in terms of our development of our conceptual approaches to these options and alternatives, and I do sense we are making headway with these very good comments. Are there any other comments that any member of the Board would like to offer on the suite of options and alternatives that have been presented to date? Nichola Meserve.

MS. MESERVE: With regards to the trigger and the second step, I think it is, of how you distribute the quota above the trigger level. I'm very much more interested in the PDTs recommendation that that be based on the distribution of the resource, which is also what we just talked about with our Goal Statement and not the equal shares to every state along the coast. I don't understand how that approach of equal shares to all states is responsive to the Goal Statement that we tentatively agreed upon at this point.

CHAIRMAN BALLOU: I take your comment to be a suggestion that that suboption that would distribute the, surplus I'll call it, above whatever the trigger is equally should be struck as a suboption that you're not supporting that as a viable alternative.

MS. MESERVE: Correct.

CHAIRMAN BALLOU: Is there any member of the Board who feels strongly that that should be kept in as a suboption? We have one hand up. Maybe at this point, let me ask. We have one hand. It certainly constitutes a minority at this point. This is fine. I'm not trying to challenge anyone, but I'm also trying to get a sense of direction here.

If we leave it in we leave it in. Adam Nowalsky's hand went up when I asked the question, so we have one member of the Board urging that we keep it in. If there is other support we will keep it in. If there is only one member of the Board that supports it we need to consider that and I will have to look for a consensus. Rob O'Reilly.

MR. O'REILLY: Since I presented that trigger approach to you in February, I certainly support it. I think that at some point the decision will have to be made as to which option, but I certainly do support it, and I support it on the basis that we don't know yet what that baseline is going to be. There may be states that do need a little bit more than just the unequal sharing of the overage beyond the trigger. I'll support it.

CHAIRMAN BALLOU: Let's keep it in. I'm going to suggest that we not vote on this. I don't think it's the appropriate time to vote on it. I guess I'm looking for Board input and we're getting that. To the extent that there are members of this Board that wants to keep options in, I think it's only fair to do so. David Borden.

MR. DAVID V. BORDEN: I'm a little confused. You said we're going to keep this in, and I understand that and don't object to it. But Nichola made a specific suggestion that was different. There is no reason you can't add that as another alternative to this.

CHAIRMAN BALLOU: Well I do think we have actually several sub-options now that would address the surplus in different ways than equal distribution to all the states. It stays in as a

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suboption, but paired with several other sub-options that address the distribution of that surplus in different ways.

MR. BORDEN: I'm still confused.

CHAIRMAN BALLOU: Well I don't want anyone to be confused. I think we have at least three sub-options right now, with regard to a trigger approach, maybe four, because the first suboption is what should the trigger be? Should it be 3 million, should it be 4 million, what is that baseline?

The next set of sub-options involves what happens to, I keep using the phrase surplus. I'm not sure if that is the best phrase, but I'll continue to use it for consistency. How does the surplus above whatever the baseline get addressed, in terms of its distribution? I think we have one option that it be distributed equally to all states. I think we have at least two other sub-options that distribute it in a different form. One would be based on regional biomass, and then in accordance with current allocations after a regional biomass breakout is done. That would be the Connecticut proposal that Caitlin spoke to.

We've had a third proposal suboption provided today by Connecticut, which would tweak Connecticut and New York allocations first, and then move on and do an additional allocation. I think we've got, let's call it at least three ways to skin the cat being proposed for how that surplus should be addressed.

Nichola had suggested striking the first one. We heard some opposition to that. I'm suggesting it be kept in, even though there is opposition on the part of some. But I think we've got a pretty good, robust suite of options now that cover all of the issues that people have spoken to, and seem to be concerned about.

It certainly makes the final decision making process and will make that a very challenging

issue, because we're going to ultimately have to come to terms with it. But my sense is that the document now seems to be bracketed fairly well. I should say not the document; the issue seems to be fairly well bracketed, lending itself to the development of a document. That's my sense as Chair, but I certainly would take any other Board members recommendations for how better to do this. Mike Luisi.

MR. LUISI: I agree with what you just said. I think we have a couple different paths to take. One thing I would like to leave open, in thinking about this. If we allocate the surplus based on distribution, based on abundance or biomass, it might be good to keep the options open to allow the southern states to handle what they receive differently from the northern states and how they receive it. Because if the northern states could then hybridize their redistribution of the surplus, perhaps to address Connecticut and New York's issue, without taking that extra from the southern states. It could be a way to accomplish it all. If the quota goes high enough it probably will, just another thought.

CHAIRMAN BALLOU: Okay, so Caitlin has just given me a sense as a member of the PDT that she feels that she has enough to go on right now. I didn't mean to cut off the discussion. I just wanted to let you know that we're developing a comfort level up here, and I certainly want to make sure the Board concurs before we move on to another agenda item. But I sense that we are getting close to a point where we might be able to move on, but I don't want to cut off the discussion if anyone has additional suggestions, Nichola.

MS. MESERVE: With regards to Step 3 and equally within the region. I would hope that there could be another suboption that would treat New Hampshire and Maine differently, because they're not really declared interested in the fishery, so not an equal share for those two states.

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CHAIRMAN BALLOU: I think Caitlin has a thought on that. Caitlin.

MS. STARKS: I'll just clarify that the regions that are considered here are Massachusetts through New York, and then New Jersey through North Carolina. Maine and New Hampshire have been treated separately in all of these different examples, and will continue to be treated separately, I would think.

CHAIRMAN BALLOU: Okay, so here is what I would like to suggest as a way to wrap this agenda item. How would the Board like to move forward? One track would be to take all of the discussion that occurred today, convey it to the PDT, have the PDT go back and work on the document, a second version of the document that was first reported out in May.

Have that available for our joint meeting with the Mid-Atlantic Council in October. At that meeting with the Mid-Atlantic Council at the table with the Board, present the document in its form at that point, and invite input from the Mid-Atlantic Council as we had agreed to do on this issue. Based on how that discussion goes, the Board could potentially be in a position either at that meeting or at a meeting immediately following, to convene and initiate a management action.

That would be Option A. It would be a path I would recommend. Option B would be to initiate an action today. I don't know if we're ready for that but it certainly is the Board's prerogative. How would the Board like to proceed? Does anybody have any objections to the first track that I laid out? Mike Luisi.

MR. LUISI: I was going to say, Mr. Chairman that I would support your Option A. I think it brings everybody that's involved in black sea bass management, not only here at the Board but at the Council together to have a very informed discussion. I think it's an opportunity for the folks that are doing the federal

management to participate in helping develop some of this as well.

CHAIRMAN BALLOU: Mike, let me just ask you, particularly given your role as Chair of the Mid-Atlantic Council. Would you feel that it would be appropriate for scheduling purposes, to have the Board have a Board only meeting scheduled at the joint meeting to follow the discussion with the Mid, to potentially take up the issues at that same meeting, or do you think.

I'm asking you but I'm really asking this entire Board, or do you think we ought to just take it in a more limited way, where we only at that meeting broach it with the Mid-Atlantic Council, get their input, and then when do we reconvene as a Board after October, at the Annual Meeting? Ah, so at the Annual Meeting we could then.

Now that I think about it that actually makes sense that we would not have a standalone Board meeting or request to the Mid that we have a standalone Board meeting at the joint meeting. Rather, we would meet jointly with the Mid, get their input on this issue, break, reconvene at our Annual Meeting, which is I think just a couple weeks later, and potentially take up this as a possible management action. Does that work? Mike, do you have a thought on that?

MR. LUISI: The joint meeting there would be no action, and then the Board would take up the action at the Annual Meeting if they choose to do so. That sounds fine. I also don't think that there is an issue with having a full blown discussion as we're convened jointly, and then having a Board action be considered at that time, and only Board members around the table would offer their vote. The Council, it already initiated an Amendment. Depending on how that conversation goes a couple things could happen. The Council could try to insert itself more heavily in the process through making modifications to its amendment that was

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initiated earlier this spring, for the purposes of having staff participate.

I guess you and I can talk. We can work with staff and try to figure out what's the most clean way to do it. It's cleaner to me if everybody is together when the action is done, or when it's initiated so that nothing is changing. All the information in front of you as of that day is what's going to move forward. If you have a separate Board meeting after the joint meeting, anything could change. There could be insertions, deletions, you know before the Amendment or Addendum begins just a few thoughts about process.

CHAIRMAN BALLOU: I think those are good thoughts. I'm going to go to Toni Kerns, and then I've got two more hands on the left. Toni.

MS. TONI KERNS: I think if we do that latter option that you just described, Mike we're going to need a serious amount of time on the agenda in October for that. That would just be a request if that is the direction that we go, because I think this Board will probably deliberate for an additional amount of time, which may not be viable in the Council's agenda. I have no idea. But I leave that to you as the Chairman.

CHAIRMAN BALLOU: I think that's really an important point.

MR. LUISI: I haven't been voted back in yet, we'll see.

CHAIRMAN BALLOU: I do think that is the crux of the issue. Is there enough time and opportunity at the joint meeting for this Board to reconvene and deliberate over the initiation of an action? I think we can leave it up in the air and just work it out between now and then, unless any other member of the Board has a strong feeling one way or the other. Let me go to Bill Hyatt next.

MR. HYATT: My thinking on it is a little bit differently. You don't know what you're going to get for input from the Council, and I think having a little bit of time, and it's not a lot of time, between that meeting and then the Annual Meeting to sort through that and for people to discuss it and bring it home and discuss it is a good thing. I would opt the other way around, and that for the focus of the joint meeting to be to gather input, have discussion, and then to illuminate and formulate it for the annual meeting, what is it a month later or so.

CHAIRMAN BALLOU: Yes. Just two weeks later. Tom Fote.

MR. FOTE: One of the conversations we had yesterday at the Legislative Governor Affairs meeting was basically talking about the fact that joint meetings like we're going to have in North Carolina on summer flounder, about as far away from those fishermen as possible we can get, because summer flounder at the southern range where we're going for the meeting is also wasn't on a lot of people's agenda that we were going to be there in October. The other thing is, when you have a Board meeting down there you're missing a large part of the Board, and basically a large complement of ideas going on there, because State Directors are all there, because most of them serve on the Mid-Atlantic Council. They have to be there. But the Governor's Appointees and the Legislative Appointees, like Adam sits on the Council, he's there also.

But I look around sometimes. Emerson and I are the only two Governor's Appointees besides the people that actually sit on both Boards that are there, and we're missing a lot of the states. We're a caucus vote. We have three Commissioners that basically have to come to a decision in the state to basically go, otherwise it's a null vote or it's a no vote or whatever.

That's missing when you get to these joint meetings, and we need a better way of doing that. We used to have, every once in a while they would come to our meeting, the Council

and basically do that. We need to start doing that if we're going to do major decisions, so all the Commissioners are here.

I mean it is getting costly also on the Commission, I think of the bills that we basically pay, because Durham is not making it easy. We're going to have to fly, rent a car. To get to there is not an easy location. If we're going to do joint meetings, we need to do like it was supposed to be in Philly, which is close to airports, people can fly in and get out in the same day, not waste another day on the end and the other day on the end. I want you to really consider that Mike, and I know you do and appreciate where I'm coming from on this.

CHAIRMAN BALLOU: Emerson, do you want to jump in?

MR. EMERSON HASBROUCK: I don't always agree with Tom Fote on issues around summer flounder, sea bass, scup and other species. But I fully agree with what Tom just mentioned.

CHAIRMAN BALLOU: I think we'll certainly take to heart everything that was said and I think between leadership and staff we'll look to work out those logistical issues. We will definitely take this up at the joint meeting with the Mid-Atlantic Council, but we'll discuss is how we follow up with regard to the Board and its efforts to launch a management action, which is not a given of course.

But it would be the next step in this process. Thank you. We've gone over a little bit but not too much. I knew this was going to be the most challenging part of the agenda, but I really credit the Board for really working hard and thinking through these important issues. With that I'm ready to turn, unless there is anyone else looking to weigh in.

**UPDATE ON THE MANAGEMENT STRATEGY
EVALUATION PROJECT FOR THE SUMMER
FLOUNDER RECREATIONAL FISHERY**

CHAIRMAN BALLOU: I see no hands, so I'm going to move on to the next agenda item, which is an update on the Management Strategy Evaluation Project for the summer flounder recreational fishery. That update will be provided by Dr. Jason McNamee to my left from the great state of Rhode Island, and Dr. McNamee the floor is yours.

DR. JASON McNAMEE: Now for something completely different. Jeff, you got me down there? I talked to this group about this, I think back in December, and so this is an update. I've peeled out a lot. This is based off our presentation I gave to the Monitoring Committee last week. I peeled out a lot of the background stuff, because I think you all had, or at least most of you had seen this already. I've got some extra slides at the end if people need more detail on what Management Strategy Evaluation is, or that sort of thing. I can go to that but I'm going to try and go quick. I was only supposed to do 20 minutes, and I'm awful about keeping on time, so I'll do the best I can to get through this.

The name of the project was the Evaluation of F-based Management for the Recreational Summer Flounder Fishery. The objectives of the project were to test the performance of different management approaches for the recreational summer flounder fishery, to show the relative value of both what we're doing now for management versus some other approaches, and looking at how those satisfy management objectives.

Then another component of the project was to provide decision support tools to assist in the application to setting specifications for summer flounder. The components for the project, there were a couple of other projects that were similar that the Mid-Atlantic Council had sponsored. One was done by Dr. John Ward. That was more of a specification setting type of a project.

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The group was called PMAFS; the two primaries were John Weidemann and Mike Wilberg at the time, but they did a Management Strategy Evaluation, an MSE. We tried to build off of those two previous projects. What we're doing is we also created a Management Strategy Evaluation. We're using an operating model for summer flounder that includes recreational fishery dynamics.

I'm going to talk a lot about that in this presentation. We use that to compare alternative management approaches, and so we developed these tools. We'll have an MSE product and an interactive web application to assist the Monitoring Committee and the stakeholders in this fishery, and the Board as well.

It will provide a way to explore likely consequences of different management alternatives. The specific approach is we're using Management Strategy Evaluation. I think I get a nickel every time I say that during this presentation. But we use MSE to test the performance of current and potential alternative recreational management approaches to the summer flounder fishery.

The intent is to show the relative value of our current approach, and some variance of that approach, and some alternative management approaches. The idea is to look at some metrics and see how you perform with those different metrics. The ones that we're focusing on, maybe I'll pause for a minute.

In a Cadillac version Management Strategy Evaluation you'll do things like you'll have stakeholder workshops where you get feedback from your stakeholders from the industry, from whomever, on what they think the objectives and goals should be for these various fisheries. Well this was too small a project to do that sort of thing.

What we did was based on our experience with this fishery we thought stability, so that stability

in regulations from year to year was an important metric to look at, yield, and preventing overfishing. Kind of standard ones that hopefully you agree are important. Those are the metrics that we're going to investigate for this project. But you know an extension of this could be taking this project and the tools developed during it, and doing something a little broader, a little bit more along the lines of the MSE Handbook that was developed by Andre Punt and others a few years back.

We're testing a limited number of management alternatives. The first is status quo. This is that approach that we use annually for summer flounder in setting specifications. We generally take different data sources and cobble them together to our best ability to predict what's going to happen next year, and just sort of repeat that year after year.

That is what we're talking about with status quo. Then we have these strategies that we're calling risk based, and Dr. Fay and I have been talking a little bit about that term risk-based. It's not quite right, but the gist of it is we're trying to incorporate the uncertainty that we know is in this system, so the uncertainty in what happens with our management in the out year or the uncertainty in the MRIP information, all of those sorts of things.

We're trying to do a better job of accounting for that uncertainty. Not necessarily changing regulations if you're within some bounds of those uncertainties. That is what we're talking about with this risk based approaches. In the case of status quo, we wouldn't necessarily change because our point estimate from MRIP was above or below the RHL in that given year.

If it was within the envelope of uncertainty we would stand pat for that year, and we wouldn't make a change unless we went outside of whatever the bounds of uncertainty that we want to associate with those different metrics. Then we have F-based management. I got a really good comment during when I gave this to

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the Monitoring Committee, and the gist of it was it is all F-based management. What we're doing now is F-based. That's completely true.

What we're talking about with F-based management is we're kind of jumping up a level in what we're using to dictate whether we need to make regulatory changes or not. In the case of status quo we're using our MRIP estimate of catch versus the RHL, so we're kind of down at the lowest level of the information.

When we're talking about F-based management now we're jumping up to the stock assessment. If you take your information, plug it into the stock assessment and you've not gone above your F-reference point, then you don't change. That is what we're talking about with F based management, kind of jumping up a level into the stock assessment, and that's what's dictating whether or not we need to make management adjustments in any given year.

Again, a risk based approach to that just includes the uncertainty. Then the final thing that we're looking at is we're trying to make these comparisons across different spatial scales. Right now we're in kind of a regional approach with summer flounder. We've been state by state in the past and we've also been coastwide in the past.

We're going to take a look at those to see if we can determine any differences in these management approaches at those different spatial scales. These alternatives will be compared and contrasted across those different management units, and I skipped over that last bullet, and I'll get to that in a minute. But first for the Management Strategy Evaluation a couple of quick things, you've got an operating model and an observation model. They are conditioned on an age structured operating model, so in other words we have basically a stock assessment under the hood, and that is what is generating your information about what the population is doing.

Just for reference we used the most up to date, the last I guess we were still calling it a benchmark summer flounder stock assessment, we took the parameters from that. That is what informs this stock assessment. I'm trying to get that as close to reality as possible. The operating model projects numbers at age, it's subject to recruitment variability, and given removals from the commercial and recreational fisheries.

That's all very much like what we do in our existing process. Then there is this observation model that generates data from the operating model. That is what feeds over into the management side of the Management Strategy Evaluation. Those observations are used by one of the different management procedures, to provide a new catch level, and it loops, and so that is what is going on in the MSE.

One of the big components, and one of the ones I think will have some, you know the Management Strategy Evaluation is something we'll present to you. You will get some information from it. But within the MSE is this recreational fleet dynamics model, and that is something that will likely have relevance beyond, well I hope will have relevance beyond the MSE project.

The aim with this part of the model is to emulate the response to regulatory changes. How does the total catch at size change when you adjust management measures? We used MRIP to populate, to inform that model. Again, this extends some of that previous work that was done. This one most closely mimics the work that John Ward did.

What are we doing within the model? We are turning the same dials as we all turn at our annual specification setting. We've got bag limit, we've got minimum size, and we've got season length in days. That is what we're using within this recreational fleet dynamics model to elicit that change in the following year.

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The map on the right just shows you the management unit. New Hampshire and Maine, they have data in the MRIP dataset. I had included them at first, but we've dropped them out. They're not here anyways, so I'm not going to explain why. A little bit about the model. What we ended up using was a Generalized Additive Model.

The things that are in the model are there is an interaction between minimum size and the length at harvest, which makes sense that those two things should interact. As you increase your minimum size regulation, you would hope that that has some effect on your harvest at length. We have state in there as a factor, we have wave as a component of the model, season and bag.

All of the dials that I just talked about a moment ago that is what is in the model, and those are things we can plug in there to get a harvest estimate. The reason for using a GAM is it allows the inclusion of non-linear effects. You'll see what I mean, I think on the very next slide. This is just a wonkier part of the output of the model. There are some plots on the right hand side with squiggly lines, but that's what I was talking about with regard to non-linearity. I'll focus you in on one of them. Bottom left hand plot is the effective bag limit. It's got this interesting sinusoidal shape. I'll suggest that you could ignore the beginning and the end of it, because there is so much uncertainty that's generally a flat line.

But what you see is the effect is as you increase bag limit there is an increasing effect as you go from 2 up to about 8, and then it flattens out after that so you can go 8, 9, 10 fish in your bag limit and it doesn't matter too much. Overall the effect is not very significant in the model. That's something we generally know that bag limit doesn't have a strong effect until you get down to really low numbers.

The point of all of that is that is represented here in the model. All of the model effects

make logical sense. I think the Monitoring Committee thought so as well. This first slide is showing you the effects of harvest. There is an increasing effect on harvest with regard to bag limit, as I just mentioned.

Season length increases to a point, and then kind of flattens out. If you have a really short season that affects harvest, makes it lower. But once you get to about 30 days it kind of doesn't have an effect after that and the reason is most people don't go fishing every single day. There is some point where you kind of satiate that curve.

Then minimum size and harvest at length, it increases from low lengths up to about between 14 and 18 inches, where it peaks and then it drops down again. That also is a logical effect. Here are the same plots, but this time for discards, not only am I modeling harvest I am also modeling discards. I'm modeling them with separate models.

If anyone is interested as to why, we can talk about that. But I'm going to skip over that for now, because I'm probably a little too long already. The same model structure for discards, all of the same elements, and this model as in the harvest model, and here again we get some logical responses from the model.

There is a decreasing effect on discards with regard to bag limit. What that means is as bag limit goes up discards go down. That makes sense. You can keep more fish that you encounter. Season increases discards kind of like harvest, but flattens out more than harvest, so that is the top right plot there, and you can see that one really flattens out.

Then minimum size and discards, it increases, peaks at a much lower level between 12 and 14 inches, and then drops again, and so that all makes sense. Then wave, I skipped over on the last one. Wave in the colder months it has a lower effect, meaning less harvest, peaks in the warmer months, and then drops back off.

All of that is just meant to give you some assurance that the model gives some reasonable responses to these various factors. That was one of the issues we had as a Monitoring Committee with some of the previous work that was done. Some of the effects from the modeling approach that was being presented to us didn't make sense to us. That didn't appear to be the case this go-round. I thought I would produce a couple of plots to show you now, getting back to this. We're calling some of the discussions that we had with Dr. Ward; I wanted to look at the effect on harvest and discards. On the plot on the right, what you have is minimum length along the bottom. That is your minimum size.

Catch along the Y axis, and then the different colored lines are different bag limits. Generally, as bag limit goes up harvest goes up. But it's not a giant effect; it goes up a little bit. But what you see is as the minimum length increases, as you increase that minimum size regulation, it goes up to about 15 inches, and then drops off, and that is exactly why we raise minimum size as an effort to decrease harvest.

That is the effect, and so that's being represented in this plot. That's harvest. If you then add in discards what you get is the opposite effect, so as you raise minimum length you get an increase in discards. Again, the bag limit effects how that happens in the opposite direction, so the smaller the bag the more discards there are.

Those two things make sense. Here's something which is potentially important for this Board to consider. When you take those two effects and combine them together, what you see is your effect from raising minimum size as an effective tool for decreasing harvest; it's a good tool for that. When you factor in discards it's not so effective, because now you've got a bunch of removals that are occurring that aren't occurring in your harvest.

They are happening because your discards are dying when they go back in the water, and it really flattens out that effect. I thought I would highlight that one. I thought it was interesting the Monitoring Committee also was pretty jazzed about that one. I need to keep moving along here. The Monitoring Committee, I had shown them and talked about this model a little bit.

What they said was "all right sounds like a good idea, but show us how it performs relative to the past data". That is what I did. I basically went, ran the model back on periods of time where we know what the MRIP estimate was. I went back to 2012. What you're looking at in this plot along the X axis is the different states.

New Jersey on the left, North Carolina all the way over on the right, the number of fish harvested is the Y axis. The box plots represent the output from the model. Again remember, I can generate uncertainty with this model. You've got these box plots that represent the uncertainty in the estimates from that GAM model that I described.

The red dots are the MRIP estimate for that year. You can see for New Jersey in 2012 it doesn't do very good, but for all of the other states the red dots fall on that box plot, so they're falling within the uncertainty of the model estimate. That is decent performance. What I found, I ran it in each subsequent year, but just to cut down on the presentation here I'm just putting in the final year.

What you see is it improves as we got closer and closer to the most recent period of time. There in New Jersey, you know that red dot is now well within the box plot there and the other states all are as well, so pretty good performance with regard to this retrospective analysis. Generally the model, this recreational fleet dynamics model performs well. It seems to improve in the most recent period of time, and hopefully will continue to improve as we keep plugging in more data as we go along. This

feature of the recreational fleet dynamics model can be used in a control rule to account for the fact that there is uncertainty, not only in the MRIP estimates, but also in our management.

You could use that box plot and develop a control rule around that. We want to use 50 percent of the uncertainty in that information and we won't change management if it overlaps with what our recreational harvest limit should be, and that sort of thing. Okay, a couple of quick slides on comparing now the actual MSE information.

We still have some more information to kind of collect and put into the report. But we wanted to show you something. We're presenting this to the Mid-Atlantic next week. We should have the report together, hopefully in the next day or so to get out. I'm sure this Board will receive that report as well.

But I'll walk you through this pretty quickly. The top left plot there. Sorry, this is the output from the Management Strategy Evaluation. This is now comparing the different approaches to each other. The X axis on these plots are the different approaches, F risk-based approach, the F-based approach without that risk part, the RHL approach, which is our status quo, and then the risk-based version of that. The X axis is the same for each of these plots.

What you see with regard to meeting some biomass metrics is they perform pretty much exactly the same. That is your current biomass relative to the biomass target. You want that to be right around 1, these are right around 1, and you can see there is basically no difference between the different approaches.

When you look at catch, so this would be the yield idea, you can see that again when you look at the center of the distribution they all perform equally well, but the RHL and the RHL risk-based approaches have more uncertainty associated with them, so they are riskier approaches than the F-based approach.

Bottom left hand, now it is risk of overfishing, so this is F relative to your F target. Again, pretty comparable as far as the center of the distribution, but more uncertainty with the status quo approaches. Then finally the actual SSB produced by the different approaches, much like the very first plot I talked about, pretty comparable across the different approaches.

Here is a look at some probabilities. Your probability of being overfished is low for all of the approaches, but it's a little bit better for the F-based approaches. A little bit, they're both pretty good. Then when it comes to overfishing they are pretty comparable. We're starting to generate some good information.

This at this point is looking at it at the coastwide level, and so in the final report you're going to get that spatial breakout along with some of the other metrics, and a little bit more refinement in the information. We got some good feedback from the Monitoring Committee on these risk-based approaches as well. Those might change some of these outcomes if we change. We were using a pretty, I'll call it liberal, control rule, and so if you tighten those up a little bit it could change the performance of these different approaches.

There is an interactive web application. Jeff let's do this. Let's skip over this slide. I will sum up, and then we'll come back to it and see if we can make this work. Final slide here, the recreational fishery fleet dynamics model, it appears to represent the reality of what occurs in the fishery pretty well.

We could entertain using this in parallel for setting specs next year. In other words, we should keep doing what we're doing, but now we can run this approach alongside it and see how they perform, and it will give us a level of comfort that we're not doing something that is wildly different, and you know will give people some comfort that this new approach is good or

not. You know we can kind of test them in parallel.

Again, we would need to think a little bit about how to use the uncertainty. In the discussion of the report I just talked about I'll have a little section on there with my thoughts on that. Hopefully it will spur some discussion on how to use the uncertainty in this control rule concept.

We'll finish up the report, we'll test those different scopes, and we also worked in some feedback from the Monitoring Committee, and again we're presenting that at the Mid-Atlantic next week. Actually let's go one more slide just to say thanks to everyone and then jump back up. I talked about this interactive web application.

Jeff, if you can, I don't know click that see if it works. Oh, it worked. Now live on the web, there is a shiny app is what these things are called. Basically the Monitoring Committee, and so eventually I hope you all can get your hands on this and tinker around with it as well. Right now I have this on the free, R studio server, which has limits on it.

I want to make sure that the Monitoring Committee gets enough time to tinker with this, so we're not going to give it to you guys yet. But eventually we'll make it available to everyone, once we figure out where we can kind of park this on a server where you guys can access it. But right now on the web is this shiny app.

What you can do, Jeff if you click the first box and click on Rhode Island, then click on the next box and put 180,000. The next box down is just a number of simulations that you want the model to run. You can leave that, Jeff. It is Jeff down there still, right? Then minimum size Jeff, just a little slider, we're at 18 inches.

Bag limit is at 6, so slide that over to 6, and then let's close Wave 2, because we're not open, so slide that one all the way back to 0. Then all the way down at the bottom Jeff, if you scroll down

is a run prediction. If you click that button hopefully there will be a bunch of numbers there. That is if you scroll up to the top is a table of harvest at length by wave. You get this information, and I'm going to add in a little summary table as well that kind of condenses that. Most people don't care about the harvest at length, necessarily. Then if you click the next tab over, the one that says model prediction plot. That is that little box plot again. You can adjust your management measures. The box plot again is going to represent the output from the model, and the red dot on there is going to be your target for that year. You'll be able to see what that set of management measures, how that did relative to what your target is.

Then the other two tabs there is just some of the stuff I showed you in the slides, so that is the model summary and the model summary plots for those inclined in that way. That's it. We've got that tool. That's ready to go. I will also add in discards. I don't have that in there yet. But the interactive web tool is also developed and live, and ready for the Monitoring Committee to use. Sorry, I know I went really long. I am done, Mr. Chair, and happy to take any questions.

CHAIRMAN BALLOU: Thank you very much, and I am sure I speak for everyone on the Board in indicating how impressive this work is, and how potentially applicable it is to the efforts we undertake to manage our recreational fisheries in a way that comports with what we're trying to achieve, consistent with our goals and objectives. It really does seem to be a very progressive way forward, and I appreciate all the hard work that you and Gavin have been putting into this. Questions for Jason, yes Mike Ruccio.

MR. RUCCIO: First is to reiterate your thanks on this. This is tremendously impressive, and I wonder when you find time to sleep. Two questions, one is when you were speaking about the model simulations for overfishing,

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they seemed to have a really high probability that overfishing would occur.

But when you looked at this kind of using the retroactive data, we haven't been overfishing. I'm not sure what the question is here. Do you have a sense as to what drives the simulations to show that high probability? The other question is what would it take to operationalize this for black sea bass?

DR. McNAMEE: Really good observation. I was going to mention this at the time, but I always talk too much anyway, so I decided to skip over it. The reason why those are at 50 percent is we basically applied a 50 percent uncertainty approach to it. That has to do with how we operationalize how we were using those different strategies within the model.

It's a factor of that. Those would improve if we said change management when your uncertainty is only 30 percent of whatever. That will improve based on the control rule that you apply to it, but good observation there. The Monitoring Committee I think, someone also asked this question already on black sea bass and scup.

I did a little version on scup. That one didn't perform as well. It was an earlier iteration of the GAM that I had done, so I've learned a lot since then. I think I can improve on that. But for the case of scup, it was also the fact that we were trying to drill down and do like a separate model for party and charter, a separate model for the general fishery.

As you know once you kind of start parsing the data up even further it can impact the results of your management, because the uncertainty increases. That was scup. I think scup I have some optimism that that might be a useable one. Then black sea bass I haven't tried yet. There is no reason that this approach couldn't work for black sea bass.

I think there is higher uncertainty in MRIP for black sea bass, because of the nature of that

fishery. But long story short, we can give it a run and see how it does. It's just a matter of plugging in instead of the summer flounder; you just plug in the same information. I would need a grid of the historical regulatory regime in each state, along with the harvest and off we go. Data wrangling is the hardest thing there. That was probably the part that took me the longest with this summer flounder one is trying to figure out what we the states have been doing over the years. It's not an easy thing to figure out necessarily. That is the challenge, but after that it's built in, so it's fairly simple at that point.

CHAIRMAN BALLOU: I'll go to Emerson Hasbrouck next.

MR. HASBROUCK: Thank you, Jason for all your work on this MSE and for your presentation. This is really great. It's a pretty slick tool, very interesting. That shiny app that is on the web, I think is going to be very useful as well. I think it's great, and in addition to Mike's question about will you be able to do this for sea bass. Would you be able to do this for striped bass for tomorrow morning especially that plot that combined removals by harvest and discard, right?

Of course I'm only joking about doing it for tomorrow morning, but it would be helpful to have this for other species as well. I do have one question on one of your slides; it was the one that had four different sets of box-and-whisker plots it was towards the end of your presentation. I don't remember what the title of it was.

DR. McNAMEE: I think it was that comparing performance alternatives slide.

MR. HASBROUCK: Yes. I think so, yes. Yes that one. Let me take a look at it on my screen. All of the black dots that are above the 75th percentile there, and go all the way up to the top, are those outliers? What are all those

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black dots? That is the first part, and I have a second part of the question.

DR. McNAMEE: Yes. Maybe I'll jump way back and say no by tomorrow morning. But I think it could be applied to striped bass. The same thing, it's again a data wrangling issue, but after that the approach, and it may or not work for black sea bass or striped bass or whatever. But it could be tried.

Now to this question, good question, these are classic Tukey box-whisker plots right, and so that doesn't mean anything. What they represent, the box itself represents the first and third quartiles of all of the different runs. In this case the whiskers capture what the parameters of this configuration of the box-and-whisker plot says is within the range of the data, and then the dots represent outliers.

You're exactly right there. I think, in this case outlier is not the right. It's based on a formula, what designates you as an outlier relative to something that is in the normal range of the data. But there are other ways that we could represent this. We could put a 95th percentile around it or something like that.

There are lots of different ways we could use this uncertainty information here, box-and-whisker plus something people are used to seeing, and so that is why we've used that here. But there are lots of ways to visualize that. But here they are per the Tukey definition they are outliers.

CHAIRMAN BALLOU: Emerson, would you like to follow up?

MR. HASBROUCK: Yes it was a two part question, so that was the first part. The second part is again for the same slide, and these box-and-whisker plots. For each of those four sets of plots, each of the different model runs in there, they are all very similar, right? The means are within, I mean they're almost the same and they're within each of the other box

plots. Is there no statistical significant difference between any of these? That's kind of what it looked like from that bar graph that you showed as well.

DR. McNAMEE: I think it's a fair question. I would say to not use this in kind of like in ANOVA type of an analysis, where you're trying to see if they are significantly different from each other. I think what you're trying to get a sense of here are tradeoffs between the different approaches. There is uncertainty around those tradeoffs, and so that is why we kind of represent it with these box plots.

But you know what you're looking at are tradeoffs, and so if you look at the catch plot your tradeoff is they all perform pretty well, when you're thinking about the dark line in the middle is the median or mean would be another thing you could put in there. In this case it's the median of the data. They're all relatively close to each other, but there is higher uncertainty in the RHL approaches.

That might be something that's important to consider. That is one answer to your question. Another is the one that we weren't able to get in here in time for this meeting is stability is going to be an important one, and that one I don't think is going to look the same amongst the different approaches. There is still more of the story to come on this stuff.

Final point, which I may have said, and I'm sorry if I'm repeating. We applied a very specific and very potentially liberal use of the uncertainty here, if we constrain that that will also affect these plots. Again, there is more to this story. You'll have to wait for the report, which hopefully we'll have out to you all pretty soon. In the short term you're right. On the coastwide level there is not a lot of difference by way of your central tendency with all of these different approaches. There are some differences with the uncertainty associated with them.

CHAIRMAN BALLOU: In the interest of time I'm just going to allow one more question. As that question is being asked and answered, I would like to invite Dr. Stevens to come up front so we can move right into the next agenda item. Adam, you had a question?

MR. NOWALSKY: Yes thank you. I appreciate the efforts. Every time I see this, through no fault of your own, I'm left with a feeling of I'm not worthy, but truly appreciate it. One of your slides indicated you suggested reality of what occurs is a question of angler behavior is something that comes up often.

I'm wondering if this model incorporates angler behavior, in the sense that the realities of those who fish know when you go out on the water if you achieve your bag limit through a size limit that is attainable, you will often stop fishing and minimize discards. Does this model provide that and if so what was the source of the data for doing that calculation and consideration?

DR. McNAMEE: Yes thanks Adam, great question. I'll try not to dance around it too much. That behavioral response is in there if that is represented in the MRIP data, because in the end that is the only information that is in there is the historical dataset of MRIP, harvest at length, and discards at length relative to the regulations that were in any given state in any given wave.

There was no special piece of information that we kind of plugged in there to inform that part of the model. It's done purely based off the MRIP data. If MRIP was capturing that effect then it's in there. If it's not then that is not in there. One addendum to your question is I did test this, not this exact question but a similar question came up during the Monitoring Committee discussions.

Some folks wanted things like average wind speed in a given year to be added in as a factor, or some notion of availability. What can we plug in there to represent availability? That's something we talk about a lot. I tested a couple

of different things in the model. None of them came up as significant enough to leave in there.

The reason I think that's the case. I didn't test wind, sorry. I do intend on going back and testing that. I did test water temperature as one. Then this idea of availability, I tried RHL and SSB and things like that. I think the reason there was a disconnect between significant effects in the model and those factors is because of the change in MRIP.

In other words, we were making regulatory adjustments in all of those early years based on MRFSS; you know the old MRIP data. That changed. Everything got recalculated, but that still doesn't change what we were looking at at the time in history, and changing. I've gone beyond your question a little bit.

But I thought you might be interested. You know we did try and add in some other stuff; to see if that would help soak up some of the variability in the model. Beyond what I showed you is in the model there wasn't much value in the other things that we did plug in.

CHAIRMAN BALLOU: Great, that's a wrap. Thank you Jason, really appreciate your presentation and all your good ongoing work. We look forward to keeping tabs on this project as it continues to develop.

ACFHP/MAFMC REPORT ON BLACK SEA BASS HABITAT UTILIZATION IN THE MID-ATLANTIC BIGHT

CHAIRMAN BALLOU: We will now move on to our next agenda item, and that is a presentation by Dr. Brad Stevens from the University of Maryland Eastern Shore, regarding a recently completed three-year study on black sea bass habitat utilization in the Mid-Atlantic Bight. Dr. Stevens welcome, the floor is yours.

DR. BRAD STEVENS: Thank you. I'm going to have Jeff change the slides for me as I go through this. We did this project with funding

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from the Atlantic Coast Fish Habitat Partnership and with also support from the ASMFC and the Mid-Atlantic Council, and just completed it and submitted a report. I'm going to tell you about that. We call the project Hab in the MAB, because it's about habitat for black sea bass in the Mid-Atlantic Bight.

I did this work with four different graduate students who really deserve the credit for doing all the hard work, while I just cracked the whip. Our study goals were to look at the relationship between fish abundance and benthic community structure, to study the trophic ecology of black sea bass that is what they eat and the relationship of that to reef characteristics. We did a small experiment on the effective habitat connectivity by creating a small artificial reef, and following what happened when we did that. This weaves in with a study of gorgonian coral called sea whips, which was started separately but then became a part of this project in which we studied the age and growth and damage to sea whips.

Early on we found when we tried to study in natural reefs that they were too deep for scuba diving. Most of them are beyond 120 feet. We dove on a few of them, but didn't have enough time to do anything when we got down there. We focused this study mostly on artificial reefs, which consist of mostly shipwrecks, intentional or otherwise, and ranging in age from recent, like one year old to over 100 years old.

They are scattered up and down the Delmarva Peninsula. How do we do this? In order to estimate fish abundance we used camera systems. We put GoPro cameras on an underwater tripod. We set it up next to where the fish were, let them run for 30 minutes then pulled them up and counted fish in the frames.

I've been doing this kind of underwater video work for about ten years. Initially we started just dropping cameras randomly where we thought there was habitat. Most of the time we

didn't see anything, unless the camera randomly landed in the right spot. For this study we went to where the habitats were. We placed the tripods at the habitats and pointed them towards the fish.

In this frame there are actually about 12 fish. You probably can't see them, they're just little gray splotches, and you have to watch a couple of frames to see them move before you can actually see them. But there they are. The next slide, in order to look at benthic community structure we used a camera quadrat, which is just a frame with a camera over it, and we swam along these reef structures and wrecks.

This is my little hand drawn map of one of the wreck sites, and placed the quadrat down every meter, and took a bunch of pictures, and then randomly selected a dozen of those to analyze. We also went out into the sandy bottom away from the reef and wreck sites, and photographed those and placed our video tripods out there as well to get estimates of fish abundance away from these wrecks.

Here are some examples of the types of things we see in the quadrat photos. The long stringy things are gorgonian sea whips. The orange things are sponge, and the little white puffy clouds are a type of stone coral. The one on the bottom right is what the sand looks like. If you get away from the wreck it's just sand and shell and no substrate.

We boil all that down with a type of multivariate comparison, and it tells us a number of things. Each of these points is one of our camera frames, and they are all aligned in a multi-dimensional space defined by the abundance of five different types of organism, which include sea whips, hydroids, mussels, stone corals, and something else, sponges.

It's kind of hard to explain this, but basically what it says is some of these sites like the one that's at the bottom are associated with sites where there are mostly hydroids (that's what

your HY stands for). The ones at the top are mostly associated with sea whips. The ones on the far right are mostly associated with mussels. It's interesting to note that the sea whips and the hydroids are at opposite parts of the spectrum, because they represent community succession. As these reefs are first placed down they get covered with hydroids, and then after a while they are replaced by mussels, and then after a while a long living stone corals and sea whips take over.

We can separate each of these sites by the abundance of the different things on them. Then we brought in the fish abundance data, and compared it to the coverage of these sites by different species. What we find is that only the sea whips are associated with fish abundance. None of the other organisms really were associated with the presence of fish abundance.

We never saw fish out on the open bottom over open sand away from the reefs. If you look at this graph it shows the increase in fish abundance with the increase in the sea whip coverage. We can categorically state that sea whips are an important habitat component for fish. We created a small artificial reef using these things called oyster castles by stacking them into pyramids, and placing about 30 of these structures between two sections of a reef.

The question was if we build it, an artificial reef, will they come? The secondary question is if the fish do come to this reef, do they come from another adjacent reef or not? We have two sites. We have what we call an impact site, which is a wreck that was separated into two sections, and we placed about 30 of these pyramids between the two sections, and another wreck that was divided into two sections where we did not place a reef.

We called that our control site. Then we monitored the fish using our camera tripods, and we set the tripods on the wreck structures.

We also set them on the open sand between the wreck structures before we built the reef and after we built the reef. Here is one of the reef structures on the bottom. There are three fish on there somewhere.

You're not seeing them. Oh well. Jeff, press your enter button. There they are. You can barely see them, but there they are. We repeated this in three months in both years. There are a lot of results, but this one figure sort of sums it up. Let me walk you through this. The impact structure at the top is the parts of the wreck that are structured, and they have fairly high abundance of fish both before and after we created our reef.

The control structure is the structured parts of the wreck. At the control site they both have fish before and after we created the reef, slightly lower abundance than at the impacted site. The bottom that says control open is the open sand bottom at our control site in the two years before and after constructing the reef. It doesn't change.

The red arrow highlights the line that goes from a triangle that says impact open. That is the site where we constructed the reef before we built it, and it goes up to the point at that same location after we built the reef. What it shows is that if you build a reef the fish will come. It also demonstrates that the other sites did not change.

This is not due to an environmental change, and it did not apparently pull fish away from those other sites, because their abundance didn't change, in fact it went up slightly. This brings us to sea whips. We noticed during our dives that a number of sea whips showed some damage. We spent some time photographing these and estimating the amount of damage, ranging from hardly noticeable to completely 100 percent tissue stripped off, overgrown by fouling organisms. We also noted that some of these are impacted by fishing gear, ropes, fishing line.

I've picked up enough 8 ounce lead sinkers to start a gear shop, I think.

These sites are not fished by commercial fishermen, because they're rough bottoms, they're wrecks. People don't want to set traps there. They are fished heavily by recreational fishermen. We found the average damage was about 15 percent of these structures, but didn't vary significantly between our sites.

Moving on to the study of food habits, I had a graduate student that looked at over 400 fish and studied what they were eating. To nobody's surprise, the dominant group is arthropods, and most of those are cancer crabs. We looked at both the artificial reef sites we've been studying and some natural reef sites, and the results were pretty similar.

The only real difference is that at the artificial sites they tend to eat more crabs, and at the natural reef sites they tend to eat more mollusks and annelids. Now I note that what they're eating are not organisms that live on the reefs. They have to leave the reefs to find crabs or worms or mollusks. They're probably not feeding during the daytime. They may be going out in the dusk.

We also compared these results to fish stomach data collected by NOAA during 15 years of their trawl surveys up and down the east coast, and the data were almost identical. Fish like crabs. Now, we also took tissues from fish and from some of these organisms, and looked at stable isotopes. These are basically just heavy versions of nitrogen and carbon.

Because they're heavier they are not metabolized, they tend to stick around in the bodies and get passed on to predators. This shows a bunch of different organisms that the fish feed on, with mussels and scallops bivalves down at the bottom there about trophic level 3, and then crabs and shrimp in the middle, and then black sea bass at the top, and some sand dollars way over to the right.

This shows that these different organisms have different trophic levels, and when we look at the fish themselves what we see is this. There are four groups here, two of the groups are just adult or rather large and small fish, and the other two are the artificial and natural sites. What we're finding is that there really isn't much difference in the trophic level where these fish are feeding.

There is more of a difference in the right to left position, which has more to do with whether they're eating pelagic prey versus benthic prey. We don't know really what causes that but it may have something to do with the structure of the reefs. While we were doing this we were also doing several other studies.

We were looking at the impacts of black sea bass traps on benthic habitat, especially the emergent epifauna like gorgonians that was funded by the NOAA Bycatch Program. Following that we began a study of age and growth of gorgonians, also funded by the NOAA Bycatch Program. A few years earlier than this we did some video surveys of the Maryland Wind Power Area in this same region, with funding from Maryland DNR. I just want to show you a few slides of that because it's related. The impact study, which I talked to the Council about several years ago, showed that fish traps rarely land on biological structure. When the fishermen are setting a string of 20 traps the reef size probably only covers one or two of those traps. Most of the traps are not landing on the reef.

But when they pick up those traps they drag across the sea floor, and then they go over the reef and they start impacting structure. Most fishermen will tell you the traps come straight up off the bottom. They don't. Maybe the first one does, but it drags maybe ten seconds. Trap Number 20 is dragging about a minute.

The drag time increases steadily with the number of traps that they're pulling up. When these traps are dragging they run over corals

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and sea whips, and they can break them off. This really was the instigation for our study of sea whips. We wanted to know how old these things were, how long does it take them to recover?

To do that we cut sections of them. We counted growth rings, just like you would with tree rings. This was a master's thesis of another one of my students. We found that they could grow up to 20 years. Most of them were in the 7, 8, 9 year old range, which suggests that there must have been some episodic recruitment about eight years ago.

The lack of really any number of small ones suggests that they're not recruiting regularly, it's very episodic recruitment. They probably recruit when storms wipe out other things that are living on these substrata, and it gives them some space to settle. I got an extension of this project funding as Lisa mentioned earlier this morning, and we had tagged some corals two years ago. We put these little tags on the bases. That is one of our sites there on the left.

Notice it has no mussels growing on it. The year previous it was covered with two-inch mussels. By 2017, those mussels had been wiped out. We went back this month to go try to find those and re-measure them. We couldn't find any of our tags, because they had been totally overgrown by a two-inch layer of little half-inch mussels.

But once we started digging those away we started finding the tags, and we were able to re-measure them. I don't want to get into the specifics of that because we're not done with it, but surprise, surprise they were not growing. They were actually losing length. This next slide has two lines on it.

But the line on the left shows that some of the smaller ones are actually increasing in length, but the line on the right shows that the larger ones are actually losing length up to 10 or 15 centimeters, because the tips are breaking off.

This was kind of unexpected, but it may be how these things grow.

The growth rate increases up to a certain size, but they're always subject to damage from wave action and other things. At some point the damage rate overcomes the growth rate. This is an interesting and kind of unique finding, I think. The last bit of this is that we had done some digital camera sled surveys in this same area, and actually in the wind power area a few years ago using a camera sled. In that area we didn't find much in the way of reefs. We only looked at a small portion of it, but enough to say that there wasn't much habitat there to be displaced by wind turbines. To wrap this up, the conclusions we come to are that black sea bass are really tightly structure oriented. We never saw them more than about a meter away from structure. They're always associated with some structure on the bottom.

The reefs and wrecks in the Delmarva area vary a lot in community composition, which may be related to their age. Most of the vertical structures provided by sea whips, and sea whips were the only organism there that was a good indicator of fish abundance. But the sea whips undergo degradation, either due to fishing impacts or natural breakage, we're not really sure.

Our little experiment with reef shows that increasing habitat can probably increase fish populations. We know that black sea bass love to eat crabs and a few other benthic invertebrates, and they're probably foraging away from the reefs to get them. Their preference for the reefs just probably has to do more with shelter than food. I'm not going to go into wind power, because that is not my purview. I'll stop there and take questions if you have any.

MR. NOWALSKY: Caitlin, do you want me to take over as Vice-Chair until Bob comes back?

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VICE-CHAIRMAN NOWALSKY: Thank you very much, Brad. We'll turn to the Board for questions of Dr. Stevens. I saw Bill and then we'll go to Roy Miller.

MR. HYATT: You showed and talked about the damage done by recreational fishing. I think you tossed out a number of 15 percent for an area that you had looked at. Is there any indication that the level of damage that is done by recreational fishing that you observed had any type of quantifiable impact on the densities of fish that would be supported, or any facet of ecological function in that area?

DR. STEVENS: Let me restate. We don't know that recreational fishing causes that damage. We know that there are corals that are damaged, and there is some recreational impact present. Most of the damage, I can't say that it's caused by fishing. It could be natural; it could be caused by fishing.

What I didn't tell you was that we did an ROV survey in another paper that was published as part of our trap study that showed that corals in areas that were commercially fished were also damaged, and their damage rate was about 35 percent, so it was double what was present in the areas that are only recreationally fished.

I'm not blaming fishing for those damage rates. We don't know what causes them. It could be related to fishing, maybe some of it is. I can't say that most of it is. But your question was can we relate it to fishing level? No, because we really don't have the data. We can't say how much fishing goes on in any particular location. I would love to have that kind of data.

CHAIRMAN BALLOU: Are there any other burning questions? I'll take one more question. I'm just going to take one more question, just in the interest of time, Emerson. I'll go to Marty.

MR. MARTIN GARY: Brad thanks for your presentation. I've dove out there quite a bit off of Ocean City myself, the whole Delmarva, and I

never see fish. Anybody that dives never sees fish away from the structure. Maybe you can't make this leap of faith, but my curiosity has me. Do you have any perspective you could share on that age-old conundrum, the question of aggregation versus production of these structures?

DR. STEVENS: It's an age old question, and I think it's kind of a species question. When we created structure we had fish that weren't there before. It didn't draw fish away from other structures, so where did they come from? They also didn't appear out of nowhere. What we think is happening is when these fish are juveniles, first they go into the coastal bays as one-year olds, and some of them go into Chesapeake Bay as two-year olds.

When they come out of there and go offshore, they're looking for a place to stop and rest. If those places are occupied by other fish, what do they do? I don't know, maybe there is no place for them, maybe they get eaten. But if there is all of a sudden a place that didn't exist before, they can go there and they are not being chased away by the dominant males.

We think to some degree that the fish that were occupying that new space were new recruits that had come in, found a place that wasn't already established by dominant fish, and settled there. I would say that is going to add to production. It didn't produce the fish, but it gave them a place to be where they weren't going to be subject to predation.

CHAIRMAN BALLOU: Thank you for that answer and thank you for that question, Marty Gary, whose name I did blank out on for a moment. Adam, I appreciate your jumping in. Was there someone else who had their hand up?

MR. NOWALSKY: Yes, I had recognized Roy Miller as the second speaker.

CHAIRMAN BALLOU: Thank you, so we'll end with Roy Miller.

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MR. ROY W. MILLER: Actually when you posted conclusion Number 3 there, you answered my question, because I was wondering if it was the height of the sea whips that made them valuable as habitat, and it appears that is your conclusion, so thank you.

DR. STEVENS: I'm sorry, I couldn't see who was speaking, where are you. Oh, I'm sorry. We think that the vertical structure has a lot to do with why the fish are there. This conclusion is being made by other people who study coral in other types of reefs, and it's really the interstitial space created by that structure where the fish like to hide.

On a flat structure they can hover over it, but they don't really have any place to hide. When you get a vertical structure like a tree, then you have branches that they can go in among. That is really hard to quantify. We can measure the height of these things, but it doesn't really measure the space that they create. I have a little one and a half minute video that I put on this. I don't know if you want to take time to show it, but I think it shows this pretty well.

CHAIRMAN BALLOU: Let's do one and a half minutes, go ahead.

DR. STEVENS: It's narrated, so you can stick the microphone up next to the computer.

CHAIRMAN BALLOU: Apparently we're unable to support the file type.

DR. STEVENS: It was a Mac thing.

CHAIRMAN BALLOU: Tony DiLernia, I'm going to give you just a brief opportunity to ask a question, and then we do need to move on.

DR. STEVENS: I'll put it on YouTube in a week or so and send a link.

MR. ANTHONY DiLERNIA: The three most common materials that are used for artificial

reef construction seems to be steel, wood and concrete. Have you seen any difference in the aggregation of species as we look at those three different bases for artificial reef construction? Have you seen a change in perhaps the type of encrusting invertebrates that attach to each of those substrates, and/or have you seen any changes or differences in the types of species that aggregate around those three different substrates?

DR. STEVENS: We didn't classify the reefs by their construction type. Most of them were either steel or wood wrecks. None of them were concrete. I can tell you the oyster castles were not the best idea, because after a few storms they started to fall apart. I think the wooden wrecks, wooden wrecks come apart, and even though they fall apart and things that grow on them would fall off as well.

One of the sites where we had the highest density of fish was a wreck that wasn't any bigger than this little table. I think recreational fishermen were not finding it, because it was so small. But you could sit there on the bottom and count 100 fish within a few feet. I don't think it's the type of material so much as it is the structural space that it creates.

We've seen where concrete pipes were laid down as part of an artificial reef, and within a few years they were totally buried in the sand, and then they become useless. We didn't look at steel like the subway cars, but steel disintegrates and will fall apart eventually too. We didn't test; you know what's the best structure, the best structure would be something that creates a lot of the interstitial space for fish to hide, and will remain intact for a long time and won't cause any harm to the environment, whatever that is. We don't know yet.

CHAIRMAN BALLOU: Thank you very much, Dr. Stevens. We very much appreciate your presentation and the excellent work that you and your students and colleagues have been

doing, and look forward to hearing back from you in the future. With that we will move on to our next item.

PRESENTATION ON DISCARD MORTALITY

CHAIRMAN BALLOU: We are running late, so we're going to have to move through these last two items fairly quickly, maybe in abbreviated form, so without further ado I'm going to turn the microphone over to Caitlin for a presentation on discard mortality.

MS. STARKS: I'll try and make this as fast as possible, skip the outline. Just as a reminder, the topic of discard mortality has come up often over this past several years, and it was specifically identified as an important issue in the Strategic Plan for Reforming Recreational Black Sea Bass that was presented to the Board at the spring, 2018 meeting. Then in May 2019, per the request of several Commissioners, it was agreed to have it as an agenda item for this meeting. While the initial focus for the meeting was recreational black sea bass discard mortality, the Board may also wish to address other areas or fisheries, so I put some information in on those as well.

These are just the general areas that the Board may wish to think about some more. I'll leave them up here for a second, but I'm not going to explain them all. But essentially there are different discard related issues for each species, as well as each fisheries sector, and within those there are different components being the assumed discard mortality rate and the actual amount of discards for each fishery.

Before I get into some figures and information on discard calculations and mortality rates in each fishery, I do want to note a caveat with the data, which is that I used for recreational black sea bass and commercial black sea bass here, unpublished data from the Northeast Fisheries Science Center. That includes updated commercial and recreational data, which are being used for the assessment.

I wanted to just give more updated information from what's available in the last stock assessment, which is why chose to use those data, and hopefully they will be consistent with the information that comes out of the operational assessment. The purpose of the figures is just to show general trends. Try not to get attached to any specific numbers.

With that said, for the assessments dead discards are estimated for each sector and species by multiplying the assumed mortality rate by the estimated number or weight of discards. The assumed discard mortality rates are determined through scientific research, and established in the stock assessments.

Then the discard quantities are estimated differently for each sector. The recreational discard estimates come from MRIP, while the commercial discard estimates are produced by gear type based on bycatch reporting, observer data, and VTR data, and the details on those methodologies are in the stock assessment report, so I won't go into the weeds on those.

This table shows you discard mortality rates by species and sector, as well as the average percent of total removals contributed by dead discards from 2015 to 2017 on average in pounds, and total removals is equal to pounds of harvest and dead discards combined. In the first column you have the assumed recreational discard mortality rate for summer flounder is 10 percent, and for scup and sea bass it's 15 percent.

In the next column you can see the recreational dead discards from 2015 to 2017 accounted for an average of 14 percent of total removals for summer flounder, 3 percent for scup, and 15 percent for black sea bass. Next is the assumed commercial discard mortality rates for each species, and those are 80 percent for summer flounder, 100 percent for scup, and for black sea bass it's 100 percent for trawl and gillnet discards, and 15 percent for pots and hand

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lines. In the last column you have the contribution of the commercial dead discards to the total removals, and those are 7 percent for summer flounder, 23 percent for scup, and 8 percent for black sea bass.

This figure shows you the black sea bass landings and dead discards from each sector as a proportion of the total removals, which again is the sum of recreational harvest, commercial landings, and dead discards for both sectors. In the graph each of the lines represents a percentage of the total removals, so those all sum up to 100 percent, and the filled teal area is equal to the total removals in pounds.

Over the time series of available data for black sea bass, there has been a general trend of increased discards in both the commercial and recreational fisheries relative to the total removals. In the last few years the proportion of black sea bass commercial discards, which is shown by the yellow line has increased, while the proportion of recreational discard, which is the green line has remained higher than the commercial discards, but relatively stable.

Then this figure shows you commercial and recreational landings and dead discards for summer flounder in pounds, and all of those colored lines add up to the black line, which is total removals. For summer flounder the proportion of total removals that come from commercial and recreational discards have also increased in the last several years, and those are shown in the orange and green lines.

You can see it from the black line, which represents total removals that the increasing discards proportion is more related to the total catch trending downward, along with decreasing catch limits in the last several years. The total amount of commercial and recreational discards, which again are orange and green lines here, have generally decreased in the last several years as well.

Focusing only on the black sea bass recreational discards now, dead discards have been of a

particular concern recently, and some of the main points that have been brought up are that the total number of discards from the recreational fishery have increased, and therefore the dead discards are also increasing with that assumed 15 percent mortality rate being fixed since the last assessment.

There are concerns that these discards are significant enough to have an impact on the stock, and that they also are considered regulatory discards in some cases that could be potentially avoided or turned into harvest. There has also been concerns that that 15 percent mortality rate might not accurately reflect the true discard mortality rate for black sea bass, and one recent study that addressed this is the Rutgers Study on black sea bass rod and reel discard mortality that was funded through the Mid-Atlantic Council's Cooperative Research Program.

That study was completed last year, and the results showed that at 45 meter depths the mean mortality rate for unvented black sea bass was 52 percent, and the mean mortality rate for vented black sea bass was 21 percent. For more details on the breakdown of those findings, the report was provided in the materials for your reference.

This figure shows the recreational black sea bass total catch, which is the shaded teal area, and compares that to the amount of harvest discards and dead discards. It's important to note that this figure is in numbers of fish rather than weight, and it's for Massachusetts through North Carolina, just because it was difficult to get that Cape Hatteras split. You can see here that for black sea bass recreational harvest in numbers of fish, which is the dark blue line, has remained relatively close, give or take to 5 million pounds since about 2000. However, looking at the green line, which is discards, you can see that the number of fish discarded in the recreational fishery has generally been increasing over the time series. That can largely be related to the changes in recreational

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measures, including minimum sizes, possession limits and seasons.

Assuming a constant 15 percent discard mortality, you would have a similar increasing trend in the number of dead discards, which is the yellow line. The number of dead discards toward the end of the time series has been relatively close to the number of fish that have been harvested. For the estimated pounds of discards, the trends look a little bit different.

In this case both estimated harvest and discards in pounds have increased, and therefore so has the estimated pounds of dead discards. When compared to number of fish what this seems to say is that over the time series the average fish size of harvested fish has generally increased, which makes sense since size limits have increased as well.

To bring that back around to the estimated discard mortality rate, some studies have indicated that larger black sea bass can experience higher discard mortality rates, so if that holds true and the average size of the discarded sea bass has also increased, it could mean that in reality maybe the discard mortality rate has increased over time.

Switching gears a bit I want to go quickly over how estimated discards affect the catch limit specifications for these species. I know everyone is aware that expected discards are taken into account when establishing those annual catch limits or ACLs for the commercial and recreational fisheries, but the process differs a bit by species.

For black sea bass expected discards for the upcoming year are produced first by dividing the Acceptable Biological Catch or ABC into the expected landings and discards based on the most recent three-year average of the relative proportions of landings and discards. Then the amount of discards is divided between the commercial and recreational sectors based on the most recent three-year average of the

proportion of total discards from each of those sectors.

The resulting expected discards for each sector are then subtracted from the annual catch targets to determine what the commercial quota and recreational harvest limit are. This approach assumes that the relative proportions that are used in those calculations of landings to discards and discards between the two sectors will be similar in the future as it has been in the past.

I'll just note that using that approach is a policy call from the Council's Monitoring Committee, and it's not an FMP requirement. For summer flounder and scup the stock assessments actually project the landings and discards separately, so we get projected commercial and recreational discards used to establish the catch limits from those stock assessments. There is a flow chart in the memo I provided on discard mortality that will walk you through the discard calculations for summer flounder for 2019.

If you want to look at that process in more detail and the numbers that come out of it that is there for you. Then I hope that very quick review of the information on discards was helpful, but to get the Board into a discussion on this topic I put up some discussion questions. First, are discards or discard mortality issues a priority for the Board at this point, and if they are it would be helpful for the Board to define which species or sectors or different areas of those the Board would like to address. For example, is the more important issue to address discard quantities or discard mortality rates?

If the Board chooses to pursue the discard mortality or discard topic, it would also be important to think through what the best approaches would be for addressing the specific issues that are of interest, whether that's developing or changing policy or regulations to reduce discards or discard mortality, implementing education programs, or funding

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research to get at better information on discard mortality. With that, that wraps it up for me. I can take any questions.

CHAIRMAN BALLOU: Thank you very much, I think that was an awesome presentation given the time constraints, and I know how much work you put into pulling that together, Caitlin, so thank you so much for that presentation. My sense, given the timing on this issue and given the magnitude of the issue, it's an issue that could well lend itself to a daylong workshop, and here we are constrained by just a few minutes left in our scheduled agenda. By and large what I'm thinking and I will entertain some comments and questions, but only a limited number.

What I'm thinking is that we could use this slide as essentially a homework assignment for the Board that between now and the Annual Meeting, all members of the Board might take some time to think through these discussion questions and come back ready to take up these questions, and think about how the Board may want to move forward with an issue that I think is probably as important if not more important than just about any other issue that we deal with.

It's an issue that we talk about all the time, we agonize over all the time, but we really don't act on it as I see it. I'm not aware of really any specific FMP provisions that address discard mortality. Whether or not that's just because it's a negative externality that we just have to live with and swallow hard on, or whether it's just an issue that is very challenging and requires a Board like this to be able to roll up its sleeves and go at it.

I would like to think the latter. I would like to think that there might be some opportunities here. It will take some time as I see it. I sort of view this as a recurring agenda item that might take a year or so to kind of work through, think through and develop, or maybe not. Maybe it can be dealt with in short order.

But I do want to first credit those members of the Board who have asked for this issue to be brought forward, B thank Caitlin for teeing it up, and really that's all we were able to do so far today, and C look forward to a more robust discussion with this Board when time allows. I don't think we have the time today, but with that said I'll entertain a few comments or questions. Tom Fote.

MR. FOTE: June 15 was the Jersey Coast Fluke Tournament, a tournament we've been running for 25 years or more. I fished this year. I haven't fished in many years, because it was in August and I'm usually always at a meeting. But I fished this year. We were one of about 25 boats up in Sandy Hook that was fishing together. On my boat there were not a lot of bent rods, on all the boats around us there were guys grabbing nets, releasing fish and basically we were not what they were looking at. I surveyed some of those folks, because I knew who the guys were, at the awards ceremony. We had two fish that we caught on our boat, and we released both of them because we were fishing in New York waters and it was 18.5 and 18.5, so we released both fish. The other boats I questioned they had 32 releases, 42 releases, 39 releases.

What was the difference between the boat we fished on and those boats? We basically all had 7-0 hooks on, because I tied all the rigs, and said you're fishing with me in the tournament; here is what we're fishing on. You think about it, if there are 20 boats out of there and most of them are fishing with the small hooks, they had almost 600 releases, the average hook.

How many fish did they kill, 60 fish? If they had been fishing with 7-0 hooks, how many fish would they have caught? You can do the math what is 10 times 2, it's not a lot of fish. There is the difference that we're looking at. Now my other question is if I got surveyed when I went back, and they said well how many fish did you catch?

I said well we only caught and released two, and the other guys said 30, so that means I'm showing a lack of abundance of fish in the area. How does that basically come into the issue? There are a couple of questions there, but I figured I would just bring it up, because that is a personal observation this year, which was pretty dramatic I think.

CHAIRMAN BALLOU: Other comments or questions? I see one hand in the audience, and I will go to the audience. But I first want to make sure the Board has an opportunity to weigh in. After I take the comment from the audience I'll go back to the Board and see if the Board is comfortable with the approach that I had suggested. I did see your hand up, yes Dr. Stevens, please come forward. There is a public microphone right here if you don't mind, right at the corner of the table, right where Kirby is I think setting you up.

DR. STEVENS: My group also just completed a study on discard mortality in the commercial fishery in Maryland, and we have a paper in publication. I didn't come prepared to talk about it, but I can tell you that it was a lot higher than that 15 percent. We could come back and talk about it at another time if you're interested, or I could send you an advanced copy possibly.

CHAIRMAN BALLOU: Yes to both. Certainly the advanced copy if you could provide that to Caitlin that would be very helpful. I think we're in an information gathering stage now, a data summary and presentation stage right now. I don't think we have the opportunity today to really start to get into the sort of ways forward that this Board might want to pursue.

But again, I would like to suggest that we bring this back before the Board at our next meeting, giving everyone an opportunity to think a little bit more about it. I liked the way Caitlin teed up these discussion questions. I'm thinking of

starting with these questions at our next meeting on this item.

Does that make sense to the Board? Does everyone agree that this is an issue worth pursuing, if only for the purpose of vetting some of these issues, and thinking through ways forward? I have a whole bunch in my head, but I'm not going to take time now to offer them up. I have a feeling that everybody around this table, and I'd almost like to go around the table and ask. Maybe we'll do this at the next meeting for everyone to offer their thoughts on if they had their druthers. What would be some things that we might want to pursue that might help minimize discard mortality, convert more discards into landings, and do the sort of thing that the community has long urged us to do, and that is try to find ways forward that address this very difficult issue?

Granted it is a difficult one. I'm going to take the body language from around this table to indicate a support for that way forward. With that we will conclude this agenda item today, and move on to I think we just have one more, actually two more with Adam Nowalsky's addition, I know that's going to be brief.

**PROGRESS REPORT UPDATE ON THE
RECREATIONAL MANAGEMENT REFORM
WORKING GROUP**

CHAIRMAN BALLOU: We will move on to Item 8, which is going to be a brief Progress Report Update on the Recreational Management Reform Working Group, and I believe Caitlin you have a brief presentation. Caitlin.

MS. STARKS: I'm actually going to cut this down from what I had previously put together for the interest of time. I'll just go over again what the Recreational Reform Group has been focusing on, and what the work to date has been, and then lay out the plan for moving forward. The focus of the Steering Committee, which was a product that the Board and Council agreed to form in March at the joint meeting to lay the

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groundwork for starting to work on some of the main recreational management reform issues that have been discussed so far.

This Steering Committee has met twice since the March meeting, and they've really focused on further development of ideas and information gathering related to the idea of increasing management stability and flexibility while reducing the year-to-year workload that is required for evaluating and establishing measures on an annual basis.

When this group is discussing flexibility it's been related to the idea of recognizing the bounds of confidence or the uncertainty surrounding the recreational harvest estimates and projections, in order to possibly get away from the perpetual chasing of the point estimates and catch limits that are set. Then in terms of stability, the general goal is to move toward multi-year rather than annual specifications, thereby hopefully reducing some of the abrupt fluctuations in management measures that this Board has brought up as a concern.

Then the last key component has been getting at how to better align this specification cycle and the process for evaluating and adjusting measures with the stock assessment. To date over the two Steering Committee meetings, the group has made progress on compiling information and putting higher level concepts down into draft form.

This work has been broken down into several key areas, and the first of those is identifying what the limitations of Magnuson Stevens are, or what the bounds are that NOAA has to work within, and next has been identifying what the limitations of our FMP allow, and whether an amendment or other types of management documents would be required for certain changes.

Then there has been development of a framework that would allow for management to be linked to stock status through the use of

control rules, and also how to most appropriately incorporate MRIP uncertainty into this management process. The group has also worked on identifying other types of fishery dependent or independent information that could be used as "signposts" to indicate changes in the stock or the fishery between when we get stock assessments. Then lastly, the group has spent time thinking through the process and timeframe that would be necessary to actually implement the desired changes that have been discussed.

That's a very brief overview of the different areas that this group has been working on. Just as a reminder, the Steering Committee right now includes staff from NOAA, from GARFO, from ASMFC, and from the Mid-Atlantic Council, as well as Board Chair, Vice-Chair, and Council Chair, and Rob O'Reilly as well, Demersal Committee Chair, so all of the leadership on that group is included.

For the next steps, because these areas are still under development and not ready for full Board and Council discussion, and because both bodies are not here at the table today, I won't go into depth on them. But this slide just lays out the next steps that we anticipate, so today the idea was just to have the Board review the work to date.

Then next week the Council will be doing the exact same thing, and then from now until October the Steering Committee will continue to meet and develop those ideas on recreational reform strategies. The idea is to present those in more solid form to the Board and Council at the joint meeting in October. That is all, and I assume if Mike Ruccio would like to add anything he may.

CHAIRMAN BALLOU: Well I'll certainly add something, and that is to just reiterate how enormously impressive the work that this group has been undertaking has been. Mike Ruccio, Emily Gilbert from GARFO, Adam Nowalsky, Mike Luisi, Rob O'Reilly, Caitlin, Julia Beaty and

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Toni Kerns, and then just during our last call we were joined by Tony DiLernia.

It's been a really incredible experience working with this group who has been brainstorming on how to work through these issues in ways that I think will resonate with this Board. I think when we report out, which as Caitlin indicated we hope to do at our October meeting. Hopefully you'll see that there are some promising opportunities to get ourselves out of that annual chasing the RHL box. Promising, challenging, it may take some time to develop and implement, but it's just been a really gratifying experience to see so much hard work and effort put into this.

Again, I really want to single out Mike Ruccio and Emily Gilbert from GARFO, who really have been doing yeoman's work on this issue, and again we've had numerous calls. We have several more scheduled, we've been really trying to keep our feet to the fire on this, and I know I'll give Adam or Mike or Rob, or anyone else.

Mike Ruccio as well an opportunity to jump in if you would like to add anything now. There was not intent to have a discussion on this issue, but I certainly want to offer an opportunity. If any of you would like to offer anything that's fine. If not, and I don't see any hands going up, we'll just let you know that what you just heard is what's going on, and we look forward to more to come. Mike Ruccio.

MR. RUCCIO: Thank you for your description of the work we've been doing. One of the things that we recognized in our last meeting as a group is that we need to schedule time so that this effort doesn't fall by the wayside. Moving forward we're going to be meeting every two weeks. We'll have a standing time, and so we are very hopeful that we'll be able to bring you a straw man in either October or December. I know the October agenda is very full, so we're going to have to look and see if we fit well with

what's planned for there, and if not there then December.

In the interim I think there is a tasking for all of you, and that is too, given just the general premise of what we've described now on numerous occasions, I want to make sure that we don't get so far into our development that we miss something obvious that you think is important. We're trying to really kick the tires and think about the process; think about ways that we can better incorporate what the status of the stock is as we move forward.

But if you have suggestions, if you want to talk in more detail about what we've identified so far, what some of the control rules are, I'm happy to have that conversation with you either here today before I catch a plane, if the thunderstorms haven't delayed me, or give me a call at the office.

I would love to talk about this, because we really don't want to get to that point where when we're unveiling what the straw man is. Someone goes, oh well you guys didn't talk about X. You know because this is very much from the ground up, just trying to spitball ideas and think conceptually through how these things might work.

There really is no idea that is too far afield to consider at this point. But my cautionary note that I've told to the Working Group numerous times is that this process will not inherently create more fish into the system. Some of the limitations that we have to work with we're still faced with, so we still have to have some type of target that we're working towards. We have to have some description of measures that we expect are going to get us there.

But we think there are numerous flexibilities that we can look at on the front end, as well on the tail end for accountability that might help us move from kind of the process that we've been involved with. I think you've heard me say that

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on numerous occasions, and I promise it is coming.

It's taking its sweet time to build, but I think we're more focused now than we were heading into the spring for a loan notwithstanding. I think we have a process to really bring something concrete to you, so I hope you'll engage with us in the interim and look forward to giving you hopefully a good straw man this fall.

CHAIRMAN BALLOU: Great, thank you so much for that. Is there anything else on this issue?

OTHER BUSINESS

CHAIRMAN BALLOU: Seeing no hands we are down to other business, and under other business I have a brief report from Adam Nowalsky on the Mid-Atlantic Council's Research Steering Committee. Adam.

**REPORT FROM THE MID-ATLANTIC COUNCIL'S
RESEARCH STEERING COMMITTEE**

MR. NOWALSKY: Listening to the rain and thunder and watching the lights flicker, I think if anybody wants to gather with Mike for dinner, he is probably going to be here for that. I just wanted to take a moment. Next week is part of the Mid-Atlantic Council, on Tuesday the Research Steering Committee will be meeting that I will Chair.

That meeting will be held from 9:00 a.m. to 12:00 o'clock noon time. When we last met for a webinar we had invited members of this Board to participate in those discussions. I'm bringing this up as we intent to discuss RSA. We're going to talk about a review of our past RSA work. We're going to take a look at some work we've done in evaluating how research is conducted with other councils, and then we intend to have a discussion about the New England RSA Review that just completed, take a look at their report, and then discuss what a path forward for RSA in the Mid-Atlantic might look like. I will extend to this Board and any

other Commission members, an invitation to attend that meeting. Feel free to come, sit at the table, and take part in the conversation. Any Committee actions that come out of that as a vote you wouldn't be able to vote on, but given the interest in the past by the species this Board manages, everyone is invited to partake in those discussions. Thank you.

ADJOURNMENT

CHAIRMAN BALLOU: Thank you Adam, is there any other business to be brought before the Board? Seeing no hands is there any objection to adjourning? Seeing no objections we are adjourned. Thanks so much.

(Whereupon the meeting adjourned at 4:00 o'clock p.m. on August 7, 2019)