

**PROCEEDINGS OF THE  
ATLANTIC STATES MARINE FISHERIES COMMISSION  
ISFMP POLICY BOARD**

**The Westin Crystal City  
Arlington, Virginia  
February 8, 2018**

**Approved May 3, 2018**

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1. **Approval of Agenda by Consent** (Page 1).
2. **Approval of Proceedings of October 2018** by Consent (Page 2).
3. **Move to approve the Climate Change White Paper: Management, policy, and science strategies for adapting fisheries management to changes in species abundance and distribution resulting from climate change and to distribute this policy to Sections and Boards for consideration** (Page 8). Motion by Doug Grout; second by Jason McNamee. Motion carried (Page 10).
4. **Motion to adopt the Climate Change Gaps and Recommendation Report and the SAV Policy Report put forward by the Habitat Committee** (Page 11). Motion by Doug Grout; second by Jeff Brust. Motion carried (Page 11).
5. **Move that the Board establishes a working subcommittee to develop direction and policy as it pertains to the protection of right whales in relation to Commission activities** (Page 24). Motion by Pat Keliher; second by Dave Borden. Motion carried (Page 25).
6. **Move to approve; the 2019 shad stock assessment and peer review terms of reference** (Page 28). Motion by Michelle Duval; second by Andy Shiels. Motion carried (Page 28).
7. **Move to convene a Lobster Electronic Subcommittee, with representatives from the Lobster Board, state and federal agencies, ACCSP, and ASMFC staff. The objectives of this subcommittee are to 1. Evaluate the needs for an electronic harvester reporting form based on stipulations in the lobster and Jonah crab FMPs, and individual state requirements. 2. Evaluate various electronic reporting platforms and their ability to be housed with SAFIS, as well as state specific databases. 3. Recommend simple and logical solutions to improve the ease of electronic harvester reporting. This includes evaluating the best way to report spatial location, considering the new requirements to report LCMA and 10 minute squares, and the ability of states to use state-specific sub-areas in state waters. 4. Outline a timeline for development of electronic harvester reporting in the lobster/Jonah crab fisheries** (Page 34). Motion by Pat Keliher; second by Dave Borden. Motion carried (Page 34).
8. **Move to task the Law Enforcement Committee with investigating the enforceability of ropeless fishing in the lobster fishery on behalf of the Lobster Board** (Page 34). Motion by Pat Keliher; second by Dave Borden. Motion carried (Page 35).
9. **Motion to Adjourn** by consent (Page 35).

**ATTENDANCE**

**Board Members**

Pat Keliher, ME (AA)	John Clark, DE, proxy for D. Saveikis (AA)
Steve Train, ME (GA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Sen. Brian Langley, ME (LA)	David Blazer, MD (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Rachel Dean, MD (GA)
Doug Grout, NH (AA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
Ritchie White, NH (GA)	John Bull, VA (AA)
Raymond Kane, MA (GA)	Kyle Schick, VA, proxy for Sen. Stuart (LA)
David Pierce, MA (AA)	Steve Murphey, NC (AA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Michele Duval, NC, Administrative proxy
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Doug Brady, NC (GA)
Jason McNamee, RI (AA)	David Bush, NC, proxy for Rep. Steinburg (LA)
David Borden, RI (GA)	Ross Self, SC, proxy for Sen. Cromer (LA)
Mark Alexander, CT (AA)	Robert Boyles, SC (AA)
James Gilmore, NY (AA)	Spud Woodward, GA (AA)
Emerson Hasbrouck , NY (GA)	Doug Haymans, GA (GA)
John McMurray, NY, proxy for Sen. Boyle (LA)	Pat Geer, GA, proxy for Rep. Nimmer (LA)
Jeff Brust, NJ, proxy for L. Herrighty (AA)	Jim Estes, FL, proxy for J. McCawley (AA)
Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)	Martin Gary, PRFC
Andy Shiels, PA, proxy for J. Arway (AA)	Sherry White, USFWS
Loren Lustig, PA (GA)	Kelly Denit, NMFS
Roy Miller, DE (GA)	

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

**Staff**

Bob Beal	Jessica Kuesel
Toni Kerns	Lisa Havel
Laura Leach	

**Guests**

Mike Asaro, NMFS	Arnold Leo, E. Hampton, NY
Rachel Baker, NOAA	Tom Lilly, Friends of Naticoke River
Chris Batsavage, CCA	Dan McKiernan, MA DMF
Heather Corbett, NJ DFW	Brandon Muffley, MAFMC
Kiley Dancy, MAFMC	Michael Pentony, NMFS
Emily Gilbert, NOAA	Gary Redding, DC
Brian Hooker, BOEM	Jack Travelstead, CCA

The ISFMP Policy Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Tuesday, February 8, 2018, and was called to order at 10:15 o'clock a.m. by Chairman James J. Gilmore.

### **CALL TO ORDER**

CHAIRMAN JAMES J. GILMORE: Welcome to the ISFMP Policy Board. We've got quite a few things on the agenda today; so let's jump into it, but before we begin just some personal notes. Due to logistics at the annual meeting, I never got to thank everybody for electing me Chairman; so I would like to just take this opportunity for that and the honor of leading the Commission.

I would also like to thank Doug Grout. Doug did a great job in the two years that he was Chairman; and he was a great mentor to me. I thought I was ready a couple years ago when I was Vice-Chairman; but really Doug brought me along, so thanks again, Doug and a great job you did. Also thank you for electing Pat Keliher as Vice-Chairman.

I think I couldn't be happier; and I think myself, Pat, and Bob and all the senior staff of the ASMFC is going to make a great team in facing some of the challenges as we move forward, which we do have some challenges. I think we have some unprecedented times at the Commission's 76 year history.

I think that more than ever, as Robert Boyles has said, we really need to hang together if we're going to face these challenges effectively. Just a simple ask, and I think I haven't done this in a while, and maybe some people have never done it. But you really need to go back and just take a step back and look at the Compact.

Look at the rules and regulations, and look at the ISFMP Charter, and again take a fresh look at that. Because we really need to cooperate; if we're going to be successful, and I think the

words in those documents really define who we are and who we should be, and how we should operate. With that I think if we do that and we stick to our principles, I think we'll all succeed as we go forward. Thanks for listening to my gravelly voice and we'll move on.

Well, a couple more things, and I'm going to do this now instead of at the end. We have a couple of departures in the family; first off Mark Alexander, this is his last meeting. Mark is going off to the retirement world; from what I understand. Although every time we say this, the next meeting they seem to be back, Spud.

But in any event, we wish you the best Mark in your retirement. Secondly, and near and dear to my heart, Dr. Duval is actually going to be moving on. She is going to be relocating to the wonderful Commonwealth of Pennsylvania; so she'll be living in southeast Pennsylvania, and will be taking a bit of a hiatus from all of this I guess, figuring out what to do. When she comes to her senses and decides to come back to us; I hope she will do that and we'll welcome you back. But in the interim Michelle, best of luck to you and all the terrific things you've done for the Commission and the South Atlantic Council. We sorely are going to miss you; both you and Mark, so best of luck in the future. (Applause)

### **APPROVAL OF AGENDA**

CHAIRMAN GILMORE: Okay our next item of business is to go over the agenda. We obviously have some changes. We have taken out Item Number 5; in terms of the Virginia appeal on Amendment 3 to the Atlantic menhaden fishery management plan, so that will not be discussed today. Are there other changes or additions to the agenda? Dan. I'm clairvoyant.

MR. DANIEL MCKIERNAN: Yes, I would like to talk briefly about an aquaculture and interstate shellfish seed issue.

CHAIRMAN GILMORE: Okay Dan, we'll add that to other business. Pat.

MR. KELIHER: Yes Mr. Chairman, under other business we need to discuss a tasking motion related to electronic reporting within the lobster fishery; and also to approve the tasking of the Law Enforcement Committee as it deals with the enforceability of ropeless fishing.

CHAIRMAN GILMORE: Okay, we'll add that to other business. Are there any other changes to the agenda? Okay seeing none; we'll adopt those by consent.

#### **APPROVAL OF PROCEEDINGS**

CHAIRMAN GILMORE: The next item is the approval of the proceedings from the October, 2017 meeting. They should be in your briefing materials. Are there any changes to those proceedings? Seeing none; we will adopt those by consent.

#### **PUBLIC COMMENT**

CHAIRMAN GILMORE: Before every meeting we have public comment. I believe we have one individual signed up that wants to make a public comment. However, I caution you we do not have the menhaden issue on the agenda any longer. We're going to limit this. We're not going to have any discussion because of the public comment we had had, but we're allowing one comment. If you're interested in making public comment, please raise your hand. Sir, please identify yourself and your organization; and please limit your comments to three minutes, thank you.

MR. TOM LILLY: Yes, Tom Lilly. I'm with the Friends of the Nanticoke River. We're a small group of folks interested in menhaden near Salisbury, Maryland. I would like to speak to you. By the way thank you, Mr. Chairman and all the members of this Committee. It is indeed an honor to be given this opportunity. Thank you very much.

But the topic I would like to brief you on, so to speak this morning, is how can we protect the schools of spawning menhaden in the Atlantic Ocean? First a couple words about our beautiful Chesapeake Bay. I know you all live on or near the water; you're concerned about it. But let's remember, the Chesapeake Bay is pretty amazing.

It has 40 major rivers that come into the Bay. You're near one right now, the Potomac. We have the Susquehanna, the Manokin, and the South River. Down south we have the York, The Rappahannock, we have these wonderful rivers. Remember, for each one of these rivers there are probably 500 creeks and small bodies of water that flow into them. Then let's not forget all the little bays, the wonderful little bays that we have scattered all around the Chesapeake. Now, while we're thinking about that let's think about the two or three million baby rockfish that are out in these wonderful bodies of water right now.

I'm talking about the small rockfish; the one and two year old rockfish. You know the waters are starting to warm up a little bit right now. These fish are getting active. I don't need to tell you. What are they all thinking about? They're thinking about getting something to eat. They're thinking about eating. They're thinking about finding the little worms, the little baby crabs and the things they need to survive.

The most important thing they need to survive on is the juvenile; the little menhaden are there that God put there to feed them. What we know from the last 20 years is that the supply of those little menhaden that those fish need to survive is dwindling, and has reached terrible rock bottom levels. We know that from all kinds of research.

We know that from guys like me that go out and fish. Don't forget that as that water warms up a little more those fish are becoming more active. They want to put on weight; and they're all searching and competing for food. Sadly, the

small baby menhaden aren't there. Now, why aren't they there? Okay that is controversial.

But one thing's for sure that the reduction industry is catching about 8,000 schools of adult menhaden out in the Atlantic Ocean. Thousands of those schools are being caught before they can spawn. Remember, those schools of menhaden, some of them weigh 25 tons. It's about the size of a tractor trailer load of fish. We don't think about that very often.

But those fish, one of those schools probably has the potential to produce a billion eggs underline again, a billion eggs. If we can protect 100 of those schools, and that's what I'm talking about. We can protect a hundred billion; we can create the opportunity for another hundred billion eggs to come into the Bay.

Okay, now a way to move forward and a way to move forward right now on this, yes. Do we need to do it? Yes, and I have three ways that we can move forward. Number one, this is important. Can we ask Cook Industries, and I guess your representatives are here this morning, to give us the information from the Captain's logs that have the information in the past about where these schools are caught, particularly what time of year they are caught.

Is there a concentration; and what is their condition as to spawning? More importantly, can we ask Cook Industries, and I hope you will answer this Cook Industries if you're here. In the future going forward, can you have your Captains record the GPS locations of the schools, their condition as to spawning?

When you take these fish in to be checked in Reedville, by the Beaufort Lab, the Beaufort NOAA Lab, can this Commission, and I hope you will do this, ask the people down at the lab, Ray Mroch for example. Can they take samples of the spawning condition of these fish; like goes on up in the herring industry in New England? What you've done in the herring industry in New England to protect the spawning fish is a

great example for what can be done here. Now, those are the first two points. We need to get the records. Our scientists, many, many research papers as you know have been done on the movement of the spawn and the currents. Oceanographers have worked on this for years.

But they need the information Cook Industries, as to the locations and conditions of that spawn. That would help them tremendously. Okay as I mentioned, we know that system of closures is working up in New England. I'm asking you Commission, let's do that here and then let's not do it years from now. Let's start thinking about doing it now.

Now is when the Bay needs those fish desperately. Now, if you will agree. By the way, isn't this a win, win; win situation for you commercial people, for you recreational people, for you environmental people. Getting more juvenile fish into the Bay is a win situation for everyone. We should be together on this.

There is no reason to fight each other on this; this is something that would help everyone, and we can do it now. We can do it this summer. How do we get started? Staff, I'm asking you. Set a meeting within the next 30 days or 60 days rather on the stakeholders involved. Get them together. Let's sit down at the table; and let's explore the possibilities here. There are a lot of opportunities here to do a lot of good. That's it, thank you so much for listening to me. It's an honor, really. Thank you.

#### **UPDATE FROM THE EXECUTIVE COMMITTEE**

CHAIRMAN GILMORE: Thank you, Mr. Lilly. Are there any other comments on topics not on the agenda before we move on? Seeing none; we will move on to our next item, which is Update of the Executive Committee from yesterday. Mr. Lilly, could you please switch that microphone off? Thank you. I get to do the honor.

For the Executive Committee yesterday we had several topics. The first was we reviewed some updates on ACCSP; which Mike Cahall had done. In your briefing package it gets into the details of Mike's update. But essentially, he went over different issues; particularly funding, data collection, data dissemination, APAIS, and particularly with the data dissemination and collection some electronic advances that we'll be doing in the not-too-distant future. If you have more interest in that again, the details of that are in the briefing document.

Number two is we reviewed the leadership nominating and election process. The last election that we had gone through there were some questions raised about two particular issues; how we were executing the nominating process, and then who actually was eligible to be considered to be Chairman and Vice-Chair of the Commission. There is a document that identifies essentially that whole process. One thing it was unclear as to who was being contacted, and was everyone being contacted.

In terms of the eligibility, up until probably the last election it was generally that only the Commissioners would be eligible to serve as Chair or Vice-Chair. I think the only other addition was permanent proxy. There was generally a limit to maybe some of the people that could sit on the Board that could Chair the Commission. I think there was recognition that there was some great talent around the room that serves as permanent proxies or ongoing proxies. After some discussion during the meeting, a motion was put forward and essentially took both issues on under one motion. The first issue was on the nominating process. We went with the second option, which essentially boils down to the Nominating Committee will contact the Administrative Commissioners of each state, who then in turn contact their legislative and governor appointee Commissioners to make sure everyone is considered, in terms of who would be eligible to be Chair or Vice-Chair of the Commission.

The second issue on eligibility, it was agreed that we would actually add on a little bit; and we went with the second option with that ongoing proxies will now be eligible, but only with the approval of the appointing Commissioner. If we have ongoing proxies now, when we get into the future they will be eligible to be considered for Chair or Vice-Chair of the Commission.

That again was approved by the Executive Committee yesterday. I'll pause here; because I know Ritchie had a comment whatever about. Generally that is under the purview of the Executive Committee, but there is a little bit of feedback as to any feeling on that. Ritchie.

MR. G. RITCHIE WHITE: I was able to attend the meeting. I take exception with the contact going to the Administrative Commissioner. I think each of the three Commissioners are independent and are of equal importance. I think the contact ought to go directly to each Commissioner; and not through the Administrative Commissioner.

Each Commissioner then gets to give their input separately and not a state input; even though the state will vote in the end. It doesn't mean that each Commissioner might have different ideas about who may want to serve or who they believe would be good choices. I also think that the issue was discussed about legislative Commissioner, and then the legislative proxy, and how the legislative Commissioner very often is busy and may not see an e-mail come in, may not recognize it.

Therefore, the legislative proxy might not be told from a legislative Commissioner about this process. I think that when there is contact by e-mail that it ought to go to both at the same time; so that we know that the proxy that is active here is getting contacted, and it doesn't go by the wayside in the legislative Commissioners in their e-mail box. That is my thoughts, and I hope that all Commissioners can participate in this process equally.

CHAIRMAN GILMORE: I've got Doug next. Dennis.

MR. DENNIS ABBOTT: Having made the motion, either I made the wrong motion or you're not quoting the results of the vote. But on Issue 1 and during our discussion, we talked about compiling a list to talk to each appropriate Commissioner; whether it's an ongoing proxy, the legislators, or whatever.

We were strongly in favor of that so that we wouldn't be subordinate to the Administrative Commissioners in voicing our opinion of our interest in being Chair, Vice-Chair or talking about whom we wanted or who we thought might be a good next Vice-Chair. That is my recollection of what I said.

CHAIRMAN GILMORE: I just conferred with Pat. Yes, if you'll recall we had a rather tag team approach yesterday, so I stand corrected. What you said, Dennis is accurate. Just to remind everybody. This now is going to go before the Commission's attorney for review, and I think we're going to probably talk about it at the May meeting to finalize it once we come back. I guess it's a proposal at this point that's been recommended by the Executive Committee.

Again, I think we'll have further discussion on this after we get that review back. The next item was indirect cost rates. As Laura has been telling us; and everybody knows, the indirect cost rates have been going through the ceiling. I know back in my state it's really affecting a lot of the grants we have, and how things are being done.

At this point in time I think, and Laura and Bob have made this pretty clear. We're trying to strike a balance where to keep those as low as possible; to keep most of the money going towards the projects instead of the indirect cost. But there is a balance that needs to be made between that and accounting and audits and things.

Laura and Bob have committed to staying on top of that and keeping us informed as those rates change. The theme still is to keep them as low as possible; but we will adjust them as time is required under legal requirements. The next item was the appeals process. There was some concern. Well, it's funny when people talk to me about becoming Chairman they said, oh never worry about the appeals, they never happen.

Now we seem to be having them on a regular basis. We had been tweaking the appeals process somewhat; and we seem to be using it a lot more now. We've taken another look at it. There was some discussion around the criteria. There are essentially five criteria that an appeal can go forward on.

Specifically during the discussion yesterday, Criteria Item 3 and 4 there were some concerns about maybe vagaries under it, maybe misinterpretations of it, and even possibly under 5. Considering the fact that we're anticipating maybe more appeals in the not-too-distant future, we really needed to tighten those up.

Jay McNamee and Jeff Brust volunteered to expand and clarify on these two points as an initial take. Of course Item 3 in particular is on data; and the information we use in terms of these things. They're going to take a first crack at this; come up with maybe some suggested changes to it, and then we're going to bring it back in the May meeting and we'll have another discussion about if we're going to amend the Appeals Process for better clarification, and maybe better use as we move forward.

The last item on the agenda was conservation equivalency. There was some discussion about some of the requirements that are being under conservation equivalency, and are they actually being applied. Particularly, the Plan Review Team essentially after conservation equivalency

is implemented, is there reviews being done after the fact a year later.

It came up yesterday I guess at striped bass is that if we do these things, are we truly looking at them? The response was kind of a mixed review; sometimes, sometimes not. We really need to look at that a little bit and maybe tighten that up. Once again the overworked Jay McNamee is going to be looking at essentially that particular issue; and maybe some more. Really the one issue was we have to add in sufficient time to review for the PRT to review some of these. If the conservation equivalency truly is working, and that the information that they need to make those decisions, this actually takes a little time to go through.

That's another effort that Jay will look into; and then we'll be bringing that back at the May, 2018 meeting. That was pretty much the end of the meeting; and I'll actually leave it up to Pat, since he took over for me since my voice didn't last very long, so did I miss anything? Are there any comments or questions on that before we move on? Okay, seeing none; Roy, go ahead.

MR. ROY W. MILLER: I hesitate to stop forward progress; but I thought I had a good understanding of where we were with regarding the nomination process. But frankly, the two questions and then the response to the questions have confused me a little. Could you clarify that once again; who the Nominating Team will contact to solicit names for officers?

CHAIRMAN GILMORE: Laura, do we have the motion from yesterday; because that would be the best way just to read the motion the way that it was approved. I don't feel so bad, Roy. Now you're confused too, because I was for a minute or so.

MS. LAURA LEACH: What I got was move that we adopt Number 2 on Issue 1; and adopt Number 2 on Issue 2.

CHAIRMAN GILMORE: Pat's got it first, and then I'll come back to you, Robert.

MR. PATRICK C. KELIHER: Issue 1, what is the appropriate approach to contact Commissioners for nominations, and the motion that was supported was Item 2 under Issue 1. A member of a nominating committee will contact the Administrative Commissioner from each state and request they communicate with the state's legislative and governor's appointees.

Then to clarify to the point that Dennis Abbott brought up; staff will compile a list to ensure that the Administrative Commissioner has that full list of who he needs to contact. Under Issue 2, who should be eligible to serve as an officer? Under Issue 2, Item 2 was chosen. Commissioners and ongoing proxies are eligible to serve as officers. However, the appointing Commissioner must agree to the eligibility of a proxy. Clear as mud now?

CHAIRMAN GILMORE: Are you good, Roy?

MR. MILLER: Thank you.

CHAIRMAN GILMORE: Robert.

MR. ROBERT H. BOYLES, JR.: Mr. Chairman I'm sorry, I missed the conversation. I think I heard the operative point. I think there are some questions that I have regarding some of the legal questions. Did I understand we are going to request legal counsel review of this; and if so, will we revisit this in Executive Committee in May?

#### **REVIEW AND CONSIDER THE CLIMATE CHANGE WORKSHOP WHITE PAPER**

CHAIRMAN GILMORE: Correct on both points, Robert; anyone else on this topic? Okay, moving on the ptomaine twins up here are going to tag team; Toni is going to go off the Review and Consider the Climate Change Workshop White Paper, so Toni, take it away.

MS. TONI KERNS: At the annual meeting I went through the Draft Climate Working Group white paper in full detail; so I'm going to briefly run through it again today. What we had said at the end of the discussion was that folks would sit on the white paper; bring forward any concerns or comments they had to staff, and then we would vote on approval of the white paper here today.

I only received one set of comments from NOAA Fisheries; which we've incorporated into the document, which was included on your briefing materials. Just as a refresher. The Climate Change Working Group was tasked to develop a science policy and management strategy to assist with adapting changes in species abundance and distribution, resulting from climate change impacts.

This white paper was pulled together to provide options to assist Boards and Sections in the management of species that are being impacted by climate change; with the focus on stocks with low biomass and allocation issues. This is by no means a marching order for any Board or Section; it's just there to be used as guidance if they would like to do so.

We should note that none of the options that were analyzed to clarify the pros and cons of them, and that the options that are included in here are not all consistent with federal law or the fisheries management goals identified in the charter in some cases. The list is just a starting point for managers as they begin their discussions on these issues.

The document contains a stepwise approach in looking at how to address these climate change issues. The stepwise approach allows for change in the process throughout time, as we see changes in either species allocations or in the environment. It considers information for stocks at persistent low biomasses.

It asks questions about what are the appropriate level of harvest; how the resources should be committed to continuing monitoring

and managing of the species, looking at status quo of how to address monitoring and management, evidence of a change in productivity to adjust reference points to reflect that change.

If there is evidence that the stock has low to no productivity, is recovery to sustainable levels highly unlikely? For management and monitoring to cease, harvest does not need to continue because it becomes economically feasible. These are some of the options that you can choose from. The document goes to list a series of science requirements that you should have when thinking about these stocks at persistent low biomasses.

It also has a section contained on management for stocks with changing distributions. It has options that look at different types of state-by-state allocations. It has options that look at maintaining state-by-state allocations; but revisiting those allocations based on certain triggers, and there are a series of triggers that are listed. Then lastly it has options for management for moving away from state-by-state allocations. In addition the document has a suggestion to recommend a term of reference for stock assessments for climate impacts on the stock. If there are no impacts then it shouldn't be included in the terms of reference for those stock assessments. Then lastly it recommends a coastwide database to summarize the types of climate related data that is out there. It's not storage of all that data; but just to provide a list for us to have at our fingertips. Are there any questions? I'll try not to repeat what I did last time.

CHAIRMAN GILMORE: Wow, you stumped them, Toni, very good. Doug.

MR. DOUGLAS E. GROUT: Not a question, because I was pretty intimately involved with this. But just Mr. Chairman, do we need a motion to adopt this as a policy that would be sent off to the Sections and Boards for consideration?

CHAIRMAN GILMORE: Yes we do, Mr. Grout. Would you like to offer one?

MR. GROUT: Sure. **I would move that the Atlantic States Marine Fisheries Commission or the Policy Board, adopt the management policy and science strategies for adapting fisheries management to changes in species, and abundance in distribution resulting from climate change as a policy, and to send it off and distribute it to the Board and Sections for consideration in their management.**

If I might add one thing, I noticed Toni that you made a little introduction that some of these may not be compliant with federal laws or the Compact. Do you think that might be something that we should put in the introduction to that as a modification?

MS. KERNS: It is.

MR. GROUT: Thank you.

CHAIRMAN GILMORE: Okay Doug, I think we have the motion up there. Is that correct?

**MR. GROUT: Sure, and if I could also say and to distribute this policy to the Boards and Sections for consideration.**

CHAIRMAN GILMORE: Okay, do we have a second to that motion; Jason McNamee, discussion on the motion, Dr. Pierce?

DR. DAVID PIERCE: I do support the motion. However, I did want to point out one thing that probably is obvious to everyone. But this is an important element of the position taken by the group that put this document together, referencing Page 3, where under management options for stocks at persistent low biomass on Number 3.

When we have some evidence that a stock has a low to no productivity and recovery to sustainable levels is highly unlikely. Then every Board is going to be faced with a rather difficult

choice. We either say, according to this document a permanent moratorium in harvest occurs, until it becomes economically, how does it read? A permanent moratorium is put in place, or harvest continues until it becomes economically unfeasible. Tough choices, and a tremendous demand or an obligation is put on those who provide us with the science, who provide us with answers, who have to provide us the answers or try to give answers to the five questions under science requirements.

I just wanted to point out that when we determine that a particular stock has that low to no productivity; and we have to make a choice then between a permanent moratorium, or to let them go until it becomes economically unfeasible. We have to have some answers to those five questions. It's a tremendous demand on those who provide us with the science. I hope that we'll be able to get some answers to those questions.

I'm not optimistic; but nevertheless, it's a very frank description of what's going to be required for us to make that distinction between a moratorium or just let it run until it becomes economically feasible. Thanks to the group that put this together. They did a good job; and they're very frank in terms of the choices we're going to have to make based on good science, which I hope we'll have as we address some of these stocks, maybe one being southern New England winter flounder.

CHAIRMAN GILMORE: Good points, Dave. I think between winter flounder, as you mentioned, and weakfish, it does become frustrating that you see you're out of compliance, because you've maintained a very modest fishery to collect data. But then it's very difficult to get the data, because you can't find the fish. It's a very good point. Adam.

MR. ADAM NOWALSKY: I appreciated the opportunity to be part of the group; and glad to see that the body as a whole is prepared to utilize it. I would just offer that at the end of

the introduction the last sentence says; the lists are thus intended to provide a starting point for managers as they discuss the management options.

It would be my request that when this be distributed to Boards and Sections that that be highlighted, and it be made clear that these are not mandates given to those Boards and Sections, it's meant to be hey, we've already done the legwork for you for some ideas that you could pursue in this. Just so we don't wind up with questions about why aren't you following that document that was sent to us?

CHAIRMAN GILMORE: Good point. I think we can add that in. Ritchie White.

MR. WHITE: To David's comments. We're very close to being there with northern shrimp. We're in our fifth year of moratorium; and clearly wrestling with how many more years. You don't have reasonable recruitment, and with fishermen saying gee, let us have a chance at what's left. I think we're going to be making a decision using this at some point in the next few years.

CHAIRMAN GILMORE: Jeff Brust.

MR. JEFF BRUST: Just to Adam's and Dr. Pierce's points. I'm wondering if we leave the term distribute this policy. Are we constraining ourselves to just the options that are in this document; or are we using this as a guidance document with potential options for where we want to go, but not necessarily the entire menu? If not, should we perhaps change that to; to this guidance document?

CHAIRMAN GILMORE: Well, Jeff I think that was the intent all along. This is a guidance document; and I hope to God we never stifle ourselves, where if we can come up with some creative solutions to any fishery that we would tie ourselves to a policy that we couldn't get out of. Again, I think it was originally envisioned as a guidance document. That's what it is. I would

be reluctant to change the title at this point; unless anybody disagrees. I think it stands for that as it is. Go ahead, Jeff.

MR. BRUST: I'm just wondering, does the language in the motion itself constrict us; and to distribute this policy to Boards and Sections.

CHAIRMAN GILMORE: Doug, do you want to consider changing that to guidance instead of policy?

MR. GROUT: If it makes people more comfortable. Again, I can see a policy can be a guidance document at the same time. I don't think it's something we have to – well and the title is Policy and Science Strategies, so that is where I was coming from. Clearly these were guidance documents.

If you come up with something that we haven't thought of, great, and I think we should even modify this document if there is a new idea about how to handle things, I think that would be great. That's my thought, talking the same. But if it makes the Board more comfortable with it saying guidance document, I'm willing to change it.

CHAIRMAN GILMORE: Well at this point I think it's on the record now that you've pretty much identified it as what it is. Why don't we leave it alone; so we don't start changing some of the wording in the document? I think it's pretty clear it is a guidance document; and trust me, back in my state when you say the word policy, lawyers all get involved. I can understand the sensitivity. But I think it's pretty clear on the record what we have right now; any other comments on this? Dave.

MR. GROUT: I can support this as a guidance document. I think it's well done. But I would just note that I think as we try to implement these provisions, we're going to have to continually tweak these and add and delete to the group. Given the discussion we've had over the past few days about weakfish and some of

these other stocks, and southern New England lobster.

Where we already have a strategy in place to downsize, right size the industry to the available size of the resource, we're going to have to just kind of customize our responses; based on a lot of the biological facts and industry economics. I think these should be guidance and flexible is the point.

**CHAIRMAN GILMORE: Yes understood, Dave, I agree; other comments. Okay, well let's maybe do this simply. Is there any objection to the motion? Okay great, seeing none we will adopt the guidance/policy/whatever we're going to call it, as a unanimous consent.**

#### **HABITAT COMMITTEE REPORT**

Okay we're going to move on to our next item; which is a Habitat Committee report and Lisa Havel is going to lead us in on that discussion. Lisa, whenever you're ready.

MS. LISA HAVEL: I'm going to be presenting on two different documents that the Habitat Committee has produced; since we last saw you back at the annual meeting. Hopefully you all will approve them today.

#### **REVIEW AND CONSIDER CLIMATE CHANGE GAPS AND RECOMMENDATIONS REPORT**

DR. HAVEL: The first one is our Climate Change Recommendations Report, Task 4.6.2 of the 2017 ASMFC Action Plan.

It says to identify gaps in state coastal regulatory planning regarding climate change impacts; and make recommendations to increase resiliency. That is what this report is doing. It builds off of the 2016 summary of state initiatives that address climate change that we presented last year to you. State initiatives were grouped into eight different categories.

Since I have a little more time today I'm going to read through this quickly. The first one is established working groups or legislation to reduce carbon output. The second is establish working groups or legislation to respond to climate change threats. The third is produced reports on climate change.

Number four is assesses and monitors the effects of climate change. Five is has mechanisms for collaboration among agencies and other organizations. Six is addresses climate change and planning documents. Seven is has responded to climate change on the ground; and eight is includes climate change in outreach efforts.

Each state has implemented between one and eight of these initiatives; and four states have implemented all eight of them. At a minimum, all states addressed climate change in their state wildlife action plans. We notice that there are opportunities for more on-the-ground response depending on the state; also more opportunities for working groups or legislation to reduce carbon outputs, as well as to respond to climate change threats, and more opportunities for collaboration and outreach.

The report includes lists of recommendations; and these fall under three different categories, energy production and use, science and monitoring, and increasing resiliency. The report also includes additional literature and links to climate change initiatives along the coast; including a lot of information from NOAA and the Department of the Interior.

There is also a summary of the initiatives taken by each state.

#### **REVIEW AND CONSIDER SUBMERGED AQUATIC VEGETATION (SAV) POLICY REPORT**

DR. HAVEL: The second document that we produced was an update to the Submerged Aquatic Vegetation SAV Policy; 2017 was the 20th anniversary of the Habitat Committee's

Submerged Aquatic Vegetation Policy. In 2017 the Habitat Hotline theme was SAV.

The Habitat Committee also reviewed and updated the 1997 Policy Document. The Habitat Committee reevaluated the policies recommendations and importance; and determined that the policy is still relevant, arguably more important now than ever. They left the goals largely unchanged from the 1997 version; with the primary goal being to preserve, conserve, and restore SAV where possible, in order to achieve a net gain and distribution and abundance, and prevent further losses. There were six key components to achieving the goal of this policy; and these components did not change from the previous version. They are the assessment of historical, current, and potential distribution and abundance of SAV, protection of existing SAV, SAV restoration and enhancement, public education and involvement, research, and implementation. The policy was updated based on emerging issues and new information.

Emerging issues include aquaculture and climate change; which has changed a lot over the last 20 years. New information includes more up-to-date information on what's going on in the Chesapeake Bay; the goal of restoring 75,000 acres by 2025. There is more up-to-date information in the background information section, the policies, and also the recommended actions.

The policy also includes a summary of initiatives taken by state and federal partners; as well as SAV contacts for each state. I also wanted to add that the Artificial Reef Committee is meeting jointly with the Gulf States Marine Commission at the end of this month; so I'm happy to take any issues that you may have to that committee when I go as well, if there is anything you want to discuss about that. With that I'll take any questions on either of these two documents.

CHAIRMAN GILMORE: Great report. Questions for Lisa on either one of these reports, I guess the clickers wore everybody out this morning. We're going to need a motion to adopt both of these, the pleasure of the Board if someone would like to offer a motion. Mr. Grout.

**MR. GROUT: I would, hold on a minute, move to adopt the Climate Change Gaps and Recommendation Report; and the revised Submerged Aquatic Vegetation Policy Report put forward by the Habitat Committee.**

CHAIRMAN GILMORE: Do we have a second to the motion? Jeff Brust. Is there any discussion on the motion? Is there any objection to the motion; I'm sorry, David, did you have a comment?

DR. PIERCE: No, only that with regard to the Submerged Aquatic Vegetation Policy I'm glad to see that we're updating it. Certainly in my state there is high priority on regaining some areas; eel grass notably, you know planting eel grass, trying to regain that which has been lost over the years.

We've had some modest success regarding that; plus we're also very much engaged in some ongoing efforts to identify and protect eel grass beds, especially from the variety of different fishing gears. This updated Submerged Aquatic Vegetation Policy is quite consistent with what we're doing in state; and I can use this updated policy as a way to further our ongoing efforts, and to defend our ongoing efforts.

CHAIRMAN GILMORE: That's a good point; same thing in New York, we have a lot of aquaculture interests now. This is really helping steering those locations away from aquatic vegetation. **Are there any other comments? Seeing none; is there any objection to the motion? Seeing none; we will adopt that by unanimous consent.** Our next item is actually lunch break; but we're going to keep working

until we get to 12:00 o'clock, and we'll stop at that point.

**NORTH ATLANTIC RIGHT WHALE FIVE-YEAR  
REVIEW AND REINITIATION OF ESA ACT  
SECTION 7, THE FISHERY BIOLOGICAL OPINION**

CHAIRMAN GILMORE: Our next item is the North Atlantic Right Whale Five Year Review and Reinitiation of Endangered Species Act Section 7, the Fishery Biological Opinion; and Mike Asaro is going to come up and lead that discussion.

MS. KERNS: We had Mike come to the Policy Board instead of just the Lobster Board; while this is definitely a significant issue for the Lobster Board, this reinitiation will affect other species as well. It is something that the Full Commission will want to be aware of and fully abreast of the tasks that are ongoing for this.

CHAIRMAN GILMORE: I'll take this opportunity for one quick announcement. I found a really beautiful pair of sunglasses in the elevator; so if you dropped them come up and claim them. But you'll have to identify the interesting band on the back, which I'm not going to read. If not, we'll raffle them off at the end of the meeting.

MR. MICHAEL J. ASARO: Thank you all for the opportunity to be here today to speak to you on right whales. My name is Mike Asaro; I run the Marine Mammal and Sea Turtle program for the Fishery Service Regional Office. I would like to hit a few topics this afternoon, or this morning. One is to talk about the **Right Whale 5-Year Review**; it's a document that we issue under the Endangered Species Act.

There will be three components to that; one is a summary of recent right whale biology, and I'll also touch on some management actions that are underway, and some that are planned for the future too. At the same time I'll talk about the fisheries consultations under Section 7 of the ESA. Then lastly I'll talk about the Atlantic Large Whale Take Reduction Team activities

planned for this year; under the authority of the Marine Mammal Protection Act.

But first just a little bit of background. A 5-year review is required under the ESA. It's something we do as a follow on from the Right Whale Recovery Plan. Essentially there are a few different parts to it. One, it's meant to look back at the last five years of endangered species research; in this case right whales.

At the same time it's supposed to summarize the biology of what we've learned about the species in the past five years; and also summarized the past five years management activities, and then lastly look ahead for the next five years, and plan management priorities in the coming 5-year period.

The biological findings of the 2017 5-year review that we finalized last fall was – and I'll get into these topics in more detail – it's a low rate of reproduction for right whales, prolonged calving intervals, declining population abundance, the continued mortality from both ship strikes and entanglements, and pretty significantly some changes in prey availability, and with that increased transboundary movement and risk. Of course the review confirms the species status as endangered.

Here is the major biological finding I would say over the past five years of right whales. This is a new method for modeling abundance of right whales. The top chart, if you can see it, it's basically the modeled estimate of right whale abundance over time. You can see there are two lines there; and the two plots diverge pretty greatly in recent years. You should know for many years right whales showed such high site fidelity in places where we would expect to see them each year; that we could essentially fly aircraft over where right whales aggregate, and using photography and our ability to identify every individual right whale, basically get a photograph census of the entire population.

Because right whales came to the same areas each year, it made the process relatively easy. That is unique for large whales in this country. Right whales are the only species for which that was the case. You can see starting in 2010 however; that changed pretty significantly. It's a theme with right whales; just overarching theme of change since 2010.

A lot about what we thought we knew about right whales in terms of where we would expect them to be, and how we would expect them to behave has changed significantly since 2010 in particular. You can see the lower plot that drops off pretty precipitously; that would be the abundance if we had continued the old method, basically, relying on photographs to take a census of the population.

What that was telling us during that time is that right whales; well it could have been two things. It was either right whale weren't returning to the areas where we would expect to see them; making the census method no longer applicable, or there were fewer right whales, one or the other.

Richard Pace, he's the large whale statistician out of the Northeast Fisheries Science Center; developed this methodology to assess right whale abundance statistically, no longer relying on the minimum count methodology. What he was able to conclude that in fact the changes we've been observing are attributable to both a distribution change and also a population decline.

You can see that's the upper plot in that top figure. The study also concluded that the probability of a decline in right whale population since 2010 is 99.99 percent; so we're very certain that there is a decline happening, but in the middle of it and complicating that signal, is also this changing distribution.

The lower figure I'll just point out; this has been the case for many years of the right whales, but

it's worth repeating that the right whale population as a whole is about 40 percent female. This is pretty significant. We know right whale females are much more susceptible to human interactions and mortalities from entanglements in particular, but also ship strikes; given their increased movement down to the calving grounds off of the southeast U.S.

Over time this population has had fewer and fewer percentage female; now about 40 percent. Of those females in the population, about 100 of them are reproductively capable. This is a plot showing per capita human interactions from the NOAA Fisheries stock assessment reports that are published each year.

You can see a general trend of decreasing ship-strike mortalities; particularly in response to the ship-speed rule that was put in place in 2010. We saw as predicted in the development of that rule, slowing vessel speed has had a pretty significant reduction in ship-strike mortalities over the past decade. Over the same period there has been a pretty significant increase in entanglement mortality as well; up over 1 percent of the population dying of entanglement each year, at this point. I'll mention that the numbers here are observations. There is no systematic observer program for right whale mortalities. Everything is really opportunistic; with no sampling methodology or observer program or things like that.

It's basically what we can see; which we're fairly certain is a conservative estimate. Over time as well and here is a figure taken from a paper by Amy Knowlton at the New England Aquarium; you can see the number of entanglements over time has increased, particularly in the past 20 years in general.

The severity of entanglements has also increased, and that correlates pretty highly with the type of entanglement configuration; that is the more complex entanglement configurations

that right whales are dealing with, the more likely they are to result in serious injury and mortality. At the same time here's just a visual depiction of how the scar coding works with right whales; to get a sense of whether an entanglement would be considered minor, moderate or severe.

At this point about 85 percent of the right whale population has entanglement scars; in any number of these categories. This scarification assessment methodology has been updated over time for many decades. What we've seen is basically just a steady increase in the percentage of the population that has entanglement scars.

The old number was 83 percent; now with the most recent update as of last fall is now 85 percent. You can see in that bottom photo the severe entanglement. In that category that's an entanglement that is likely to kill the whale. Also over time, particularly since 2010 as well, we've seen a pretty significant decrease in right whale calf production.

The trend is moving downwards, and down to five calves observed last winter. The last I checked as of a couple days ago there have been zero calves down off the southeast U.S. this year; and we're more than half way through the calving season. There have been a couple of right whales that have traveled down to the calving grounds; but as of yet no calves seen.

Related to that as the number of calves that we're observing is going down steadily each year, and that is the red trend line you can focus on over time going downward. The number of right whale females that we would expect to be able to reproduce; given the number of years generally between calving events, it should be about three years.

But the interval is getting longer; up to seven years at this point. What we have now is a population, as I mentioned, about 100

reproductively capable females. Nearly 80 of them at this point, we would expect them to be calving at any given winter, but they're not. That number is increasing over time too; the blue trend line upward.

There is also a pretty standardized health assessment methodology; looking at a number of factors, again based on photography of right whales, assessing blubber thickness, blowhole condition, presence of orange sciaenids, a host of other different factors that you can use to assess the health of right whales and give a health score. This research is done at our New England Aquarium. What we've seen over time over the past 30 years has been a general worsening of health conditions for all right whales in particular. But what we've noticed that if you break it out demographically, females seem to have the lowest health scores; and reproductively active females seem to have the worst of all. Some recent research has attempted to get a better understanding of what the impacts of a chronic, long term sublethal entanglement is on right whales.

These are entanglements that don't necessarily kill a whale immediately; because we know that is rarely the case. Because right whales are so strong, they are rarely ever anchored in place like say a minke whale could be. Generally right whales become entangled and drag gear away for weeks, months, or years at a time. A focus of research in the past five years has been looking at what the sublethal effects of that entanglement could be; particularly the energetic cost of the drag on right whale of gear.

This is a pretty significant paper that looked into that; which was published in 2016. The conclusion was that the energetic cost of entanglement for right whales is basically the equivalent of a female's energetic expenditure to undergo reproduction from calving down in the southeast, traveling down to the calving grounds, and then a full year of lactation and travel back up to the waters off of New England,

so a much more energetically costly factor than we had ever considered before.

Here is a photo showing just visually how that health assessment methodology has done for right whales. This is the same whale in both photos; and the sightings are exactly a year apart, about. You can see the whale on the bottom is entangled. There is a line coming out of its mouth. You can see the pretty obvious deterioration in health over the year that this whale was entangled; the presence of orange sciaenids, a concavity behind its blowhole, evident of a significant loss of blubber, scarring, rake marks, et cetera; a pretty significant decline in body condition.

Piecing all these things together, where the research has emerged most recently is looking at the correlation between declining health scores and the disproportionately affected reproductive females, and the correlation between those two factors and what we're seeing now is a pretty significant reduction in right whale calving over time.

It is an important thing about that back in the context of this figure; because what we know about right whales is, look at the period before 2010. That's pretty significant growth. There doesn't appear to be a significant increase in fishery interactions that would necessarily warrant the population to turn at such a significant inflection point there in 2010 downward.

Right whales are extremely resilient; and have been subject to ship strikes and entanglements for decades. Yet as you can see here, it showed pretty good growth over time. In the period since 2010, the reason for the decline largely is because of this lack of calving. Right whales just haven't been replacing themselves at the rates seen in previous years; and that's pretty much what we can attribute this decline to.

I will add. The study period in this analysis here was 2010 to 2015; which took the number of

right whales from 480 down to 453. The methodology was updated in 2016; using the same model and the number went down to 451. Then the model will be rerun this October with 2017 data. But based on what we were able to observe in 2017, which I'll run through here. We can count on that number going down even further. Last year there were 17 dead observed right whales; 12 of those were up in Canada in the Gulf of St. Lawrence over the summer, while their snow crab season was going on in the Gulf.

Of those 12 whales up in Canada, 7 necropsies were performed. Two died of entanglement and four died of blunt force trauma, and one was unknown. There were also five dead whales off of Massachusetts and around the Cape and the Islands as well, floating. One was inside Cape Cod Bay; that was a ship strike on a one-year old.

The other four were severely decomposed, floating. One was 100 miles east of Cape Cod on Georges Bank. The other three were down floating by the Islands. These were severely decomposed animals. Not much is known about how they died or where they died. The cause of death on two of those is pending; with some evidence of entanglement.

But it's not necessarily conclusive, because as I said, a lot of them have entanglement scars so it's unlikely that that necessarily killed them. One was blunt force trauma; as I said in Cape Cod Bay, and then two are unknown. There are also nine live entanglements observed in both U.S. and Canada last year.

It was five up on the Gulf of St. Lawrence, and then four in U.S. waters as well. Then you may know, just a couple weeks ago there was a dead right whale entangled seen off of Virginia Beach. A necropsy was performed on that animal. The cause of death was the chronic entanglement.

We were able to retrieve the gear from that animal; and it was shipped up to our gear storage warehouse in Narragansett, Rhode Island, where our gear team is starting to take measurements and analyze the gear. There doesn't seem to be any necessarily obvious clues on where, when, and how the entanglement occurred; but our team is giving it a look now, to see if there are any leads we can follow to try to get a better sense on where that whale was entangled.

Some of the long term recommendations of the 5-year review, I'll just go through this quickly. It's getting a better understanding on the energetic stressors on right whales; including sublethal entanglement, but also on the changes in environmental conditions and prey availability in around right whale habitat.

There is also some research showing a pretty significant distribution of copepods, which are right whales primary prey, in and around the Gulf of Maine and in the Gulf of St. Lawrence as well. Given right whale size and the species they forage on, when they're not reproducing they're spending pretty much their entire time foraging.

Right whale behavior and where and when we see right whales is predicated largely on where copepods are too. Trying to get a better understanding on where copepod distribution may be taking right whales; and if in that movement they're either spending more energy foraging than they had before, or if that change in movement is taking them into areas of higher entanglement in ship strike risk as well. Looking at how we can best allocate resources and efforts to get a long term cross-regional plan for monitoring right whale population trends and habitat use. Using the array of shipboard, aerial and passive acoustic survey tools that we have currently deployed and being used throughout right whale range, to get a better idea of where these animals are, and possibly to the point where we could even predict where they are based on certain environmental conditions.

That follows along too with prioritizing funding for the variety of surveys; so we can understand where and when right whales are in as near real time as we can get it. Then pretty significantly, analyzing effectiveness of the regulations we put in place under the Marine Mammal Protection Act over the past two decades, and also the Ship Speed Rule over the past ten years.

To see what role those regulations have played in right whale recovery and how effective they've been at each iteration of those rules; which I'll go into in a little more detail here. Then again, related to the Section 7 process, which I'll talk about is analyzing the effects of commercial fisheries on right whales as well.

Some things currently underway, we are engaged with our counterparts in Canada, both Transport Canada and Fisheries and Oceans Canada, as part of a Bilateral Right Whale Working Group. The Canadians have been pretty open and sincere; especially their Minister of Fisheries and Oceans Minister LeBlanc, about their willingness to implement both shipping and fishing measures in prep for their upcoming season here this spring to prevent a repeat of the mortalities that happened last year.

We have a new in the Regional Office a Right Whale Recovery Coordinator that is Diane Beauregard; some of you may know her. Her job is going to be to get a better understanding of some of those larger risks and energetic stressors of right whales; including the potential effects of climate change on right whale prey, and how that's changing distribution.

She'll be forming a new Right Whale Recovery Team. We'll be looking at some outside expertise in areas related to climate and oceanography; to get a better sense of how we can incorporate those factors into our management, and understanding what role environmental variables pose in all this. Then lastly is reinitiating our fisheries biological

opinions under the ESA; which I'll talk a little bit about here.

Briefly, Section 7 of the Endangered Species Act, for those of you who don't know it requires federal agencies to ensure that the actions that they authorize, fund, or do don't jeopardize the existence of endangered species under the ESA, or destroy or adversely modify species critical habitat. Just in general sense, here is a little decision tree on how the consultation process goes for our purposes here. We're just following that lower path.

It's important to note that in the case of the commercial fisheries, the FMPs that we analyze looking at right whales. It's kind of unusual in that the Fisheries Service is both the action agency and the consulting agency. With the action agency to the extent that we issue the FMPs, and with the consulting agency to the extent that we are charged under the ESA to make sure that the FMPs don't jeopardize endangered species. At the end of the day this does result in a formal consultation; which it has in many iterations over the years, and that's what we're reinitiating now, a formal consultation. We announce just part of this 5-year review; we're reinitiating consultation on a number of FMPs. You can see them all listed here; it includes American lobster, and the last biological opinion and consultation done on the lobster FMP was in 2014. The so called batched fisheries, all those fisheries rolled into one consultation you can see there, and then also the Atlantic deep sea red crab as well.

The last time we underwent this process to produce these biological opinion, the conclusion was that these FMPs were not likely to jeopardize the continued existence of right whales, or any other ESA listed species. Just to give you a sense of what a biological opinion is; and this is the process that we're just starting underway now.

It's basically just a detailed explanation of what the action is; in this case the fisheries, status of

the species, in our case focusing on right whales as well. Then the environmental baseline, meant to capture the climate change issues, the changes in right whale distribution, potential risks right whales are now facing in Canada that weren't considered before.

Then the specific effects of the proposed action, basically layering on what potential effects each of these individual fisheries might be layered on top of that environmental baseline, to look at the cumulative effects. In putting it altogether making the jeopardy conclusion, so you know, where will fisheries after this consultation is completed and the analysis is done, do we have evidence that these fisheries will jeopardize the existence of right whales or other endangered species?

Then in Step 9 they can include things like reasonable and prudent measures for cases where it's not a jeopardy finding; and those can be recommended tweaks or acquired tweaks to a action meant to minimize some of the effects of endangered species, or in the case of a jeopardy conclusion it's reasonable and prudent alternatives, so alternatives to eliminate jeopardy.

If the conclusion is that the action is jeopardizing the endangered species, a reasonable and prudent alternative would be measures that can be put in place to eliminate jeopardy. In that instance we have a few things that we have to consider. One is it needs to be implemented in a manner consistent with the intended purpose of the action.

If the intended purpose of the action is a fishery management plan, a reasonable and prudent alternative can't be, no fishing, because then we've changed. It's no longer in the manner consistent with what the action is proposing. It must be consistent with the scope of our agencies legal authority under ESA or MMPA.

Then it must also be economically and technologically feasible. This is one of the rare

instances where the ESA directs us to consider economics too, in this case. Any reasonable and prudent alternative must be both economically and technologically feasible. I'll just give you a brief update on what the TRT is up to; but first just a little refresher. I know there are a lot of TRT members here.

Bear with me as I go through a little bit of history; just to make sure people get an understanding of some of the work that's been done here over the years. The Atlantic Large Whale Take Reduction Team, it's our oldest and largest TRT in the country. It was established in 1996 after the MMPA was amended in 1994, creating this entire process, and the purpose is to develop a plan to reduce takes for not just right whales, but also hump back whales and fin whales, and to a lesser extent minke whales in trap pot and gillnet gear, all fixed gear fisheries in U.S. waters on the east coast.

The goal is to reduce the serious injury mortality to below the potential biological removal level. The PBR is a calculated value considering the species population size; whether it's endangered, a number of other factors, and gives you a number, the number of animals that can be removed from the population without jeopardizing its sustainability.

For reference, for right whales over the 20 year period the PBR has been basically 0 or 1, or around there, so very, very low. You just get a sense of the team membership, as I said it's a large team, because it affects so many different fisheries and geographic locations along the east coast, 61 members.

Over time, I won't walk through the timeline step by step, but I will just say the initial Take Reduction Plan established things like weak link requirements 20 years ago. There was some gear marking and closures initially too. Then the first major rulemaking after that was the 2007 Sinking Ground Line Rule, and then most recently the 2014 Trawling-Up Rule, meant to

cut down on the number of vertical lines in the water.

Again, just to show you graphically the geographic scope of the regulations contained in this plan. These are for trap pot gear; it basically covers all of the U.S. EEZ on the east coast, and again all the managed areas for gillnets as well, so the scope of the regulations are very large. What has the Take Reduction Team accomplished?

In 2007 with the Sinking Groundline Rule that went into effect in '09, that rule basically amounted to removing 27,000 miles of floating groundline from the water column, by laying it down on the bottom. Then in 2015, as part of the trawling up strategy, the number of end lines was cut down by a little over 2700 miles.

Also part of the Take Reduction Plan we have a number of closures along the coast; in total area of about 32,000 square miles for both trap pot and gillnets, up off of New England and down off of the calving grounds in the southeast. You can see geographically where those closures are; on the top left the Massachusetts Restricted Area trap pot closure, smaller gillnet closure in Cape Cod Bay, the Great Salt Channel closure for both trap pot gear and gillnet, and then closures off of southeast U.S. calving grounds.

We also have universal requirements as part of the Take Reduction Plan; like weak links and a gear marking scheme requiring different colors painted or taped, or anyway attached to vertical lines based on gear type and geographic location fished, because as I said right whales are hardly ever anchored in place.

When we do recover entangling gear, either through disentanglement at sea or if a dead whale washes ashore. The gear marking is intended to give us a better sense of where, when and how the gear was deployed. Coming up in 2018, the Take Reduction Team has done a lot over two decades; in some pretty

significant rule makings. Given what we're seeing with right whales most recently, the Take Reduction Team is coming together this month and for the next six months in two subgroups; smaller working groups of the team that are meant to do some fact finding on some of the ideas that we've been hearing most recently on potential mitigation measures, should they be needed at some point in the future.

The two measures are reduced-breaking-strength rope, so called weak rope for vertical lines and then we've also included a closer look at gear marking in there as well. Just on the earmarking, I'll say that we require three marks each a foot in length at the bottom third, middle third, and top third of an endline for fixed gear fisheries.

With that strategy, still about 60 percent of the rope that we recover is unmarked. We've asked the subgroup to look at alternatives to our current gear marking strategy; that may result in a higher percentage of marked gear being recovered in the future. Then the second subgroup will look at ropeless fishing.

It's something we've been hearing more and more about over time; most recently especially the Woods Hole Oceanographic Institution hosted a ropeless fishing workshop last week, where a number of prototypes were on display. We've asked a subgroup to look at this issue; to get a better sense of what do we mean when we say ropeless? What technologies exist, and where might the technology be headed in the future?

More on ropeless fishing in a minute, but just first on the 1700 pound breaking strength rope. This comes from some research by Amy Knowlton at the New England Aquarium, looking at the breaking strength of gear recovered from entanglements. Basically what she observed is rope that breaks at 1700 pounds or less is hardly ever, if ever, recovered from entangling gear.

More severe entanglements occur as rope strength gets higher; thereby reducing the ability of a large whale, right whale in this case, but also any large whale, to break free once becoming entangled. This is the idea that's been put forward. You know we have a lot of questions about both of these technologies.

We're asking the Take Reduction Team to ask some focused questions and get answers; before we can bring it back to the full Take Reduction Team for discussion. Just to get a sense of what some possible technologies on ropeless fishing are that we've been hearing; either bottom-stored rope or pop-up buoys, things like that. Variable buoyancy traps are an idea that we've heard, and also ship-based retrieval systems are also something we've heard.

Again, the ropeless options that we've seen are largely in prototype phase. When we think about ropeless, it's important not to be thinking about ropeless tomorrow, it's what might the future hold for the development of these ropeless technologies. These TRT subgroups are going to be focused on feasibility.

Technological feasibility, does the technology exist, or in the case of ropeless do we have any certainty on whether it will develop over time and what might that development look like? Functional feasibility, will it work? For weak rope, we have a lot of concerns about the functional feasibility that we would like the fishing industry, the fishermen and industry representatives on the Take Reduction Team and the subgroups to help us answer these questions. It's likely that there are areas where 1700 pound rope just will not work; for a variety of reasons. Safety is an important one there too.

It's getting a better sense of, are there areas where it might be a good idea to use this? Are there areas where it just would be just a bad idea? Answering all those questions, and then of course economic feasibility too, is it cost

effective? For in the case of weak rope, you know what manufacturers produce 1700 pound breaking strength rope?

Is it available? What are the costs; getting all this information for the Take Reduction Team? It's important to emphasize that. You know we aren't in rule making. These aren't decision-making subgroups. The Take Reduction Team throughout its 20 year history has spent a lot of time researching gear modifications and new technology.

This is nothing new. We know these ideas have been put on the table; and we're hearing about them, and we know we'll hear more about them. The plan here is to get the Take Reduction Team members asking really focused feasibility questions, to do some fact finding to present results to the full Take Reduction Team later this year. Are there any questions?

CHAIRMAN GILMORE: We've got time for a few, Doug Grout.

MR. GROUT: That was very informative. One of the things, when I first brought to our Law Enforcement the concept of ropeless, they almost had a heart attack, because of the concern they had on how that would affect their ability to enforce, not only the whale protection measures, but also other fisheries management. Where in this feasibility – you have technical, functional and economic feasibility considerations – would those kinds of questions be addressed?

MR. ASARO: Absolutely. I should add a major part of the subgroup work will be looking at not only enforceability, but also gear conflicts too. That is just a natural question we need to get answers to as well. We'll have OLE representation working as part of the subgroups too. These are issues that the subgroups will have to work on too; and get answers to, if there are answers.

CHAIRMAN GILMORE: Ritchie White.

MR. WHITE: I think another important piece that the states of Rhode Island through New Hampshire are presently talking about is enforcement. At the present time there is no platform to enforce, to haul lobster gear or crab gear out in federal waters; especially Area 3 getting some enforcement from state vessels in the near offshore Area 1.

I think this need to be a priority; because you have existing regulations in place that we don't even know if they're being used, because there is no enforcement and no checking. I think that needs to be a high priority and it's going to take a large vessel and a bunch of money. I think there can be workings with the state and the Service; you know to try to accomplish this.

MR. ASARO: You are absolutely right. We have a full Take Reduction Team meeting planned for this fall. Between now and then we have our Productive Resources Law Enforcement liaison working with his contacts, to pull together a working group to get right at the issue that you bring up. Hopefully we can have some work done on that; and some finding to share with the Take Reduction Team, and hopefully a plan forward when we meet later this year.

CHAIRMAN GILMORE: Mr. Vice-Chairman.

MR. KELIHER: That was a great presentation, Mike. You did answer part of my concern when you said the OLE will be interacting with the subgroups. Do we discuss that at our meeting at GARFO, this larger group, because I think because of the way the subgroups are broken out and the TRT works? I think it's really important that other law enforcement components and agencies are part of that process.

They are more familiar with the issues of hauling gear; and what the gear is. Quickly to your slides, Mike you did a per capita mortality slide; and it showed what looked like substantial increases in entanglement. It looked like a broad-brush approach. Is that

Area 1, Area 3 lobster only, or is this including Canada? We know a lot of the mortalities associated with the Canadian Fishery were included. Is that also included in that slide?

MR. ASARO: Yes, my apologies. I should have clarified. These are the mortalities reported for the entire species throughout its range in both U.S. and Canadian waters; as reported by our stock assessment reports. Yes, U.S. mortalities, Canadian mortalities, all mortalities throughout its range are reported there.

MR. KELIHER: Just one last question. Obviously 2017 was a bad year for right whales; but you also had unusual mortality events with other species, including minke, a lot of strandings in both Maine and Massachusetts, and some mortality associated with that. Is there any link here between the species? We're focused right now on right whales because of the uncertainty with rulemaking, obviously. But is there a broader environmental factor out there that is really a part of this; besides the manmade issues?

MR. ASARO: Yes. We currently have three unusual mortality events declared for right whales, humpback whales, and minke whales most recently. I will say the UME Investigative Teams haven't gotten together yet to look through all the data to see if there might be an underlying cause.

I will just say from my look at things; both right whales and humpback whales, a majority of the mortalities were from human causes. Then with minke whales were a little bit different, where we're seeing more pathological causes of death there with minke that we haven't seen with humpbacks or right whales.

CHAIRMAN GILMORE: The bad microphones keep following you, Pat. Dr. Pierce.

DR. PIERCE: Thank you for your presentation. It was very comprehensive; much appreciated. You did note at the beginning of the

presentation that work is being done to evaluate environmental conditions and prey availability that might have some impact on the health, effects on reproductive success. You noted that the calf count is way off. Is there any information that would provide some insight as to what proportion of the deficits of calves can be attributed to entanglements, or to other causes such as reduction in forage?

I mean forage is incredibly important; as we all know. They go where the copepods are; Cape Cod Bay, notably. If their distribution is changing because of a lack of copepods, or copepods are elsewhere. That can have a huge impact from the health of the females, and on their ability to calve on the reproductive success. What can you share with us regarding that particular issue?

MR. ASARO: You're right that is exactly what the Section 7 process will analyze; from the baseline and looking at layering on the potential effect to the fisheries. You're right. Clearly right whales are moving now than they were before, and there is an energetic cost to that movement. The question becomes, are they finding a food source suitable enough for them to replace the energy stores lost during increased movement, if that maybe the case? We know right whales are capital breeders. We know reproduction occurs when females are fit.

If they're not fit for a variety of reasons, either human caused or environmental conditions, then reproduction won't occur. We're in that situation now. But you know exactly as you bring up, it's trying to piece together how the story unfolds; in terms of what changes in distribution might mean for right whales, both in terms of their food source and hypothetically if right whales are moving more into areas like the Gulf of St. Lawrence, where we didn't necessarily see them or expect them in the past.

Is that movement, well A is there an energetic cost to that movement? Are they finding a food

source once they get there that is suitable to replenish the energy lost? Then on the other side is have they now moved into an area that is a higher risk of either ship strike or entanglement? All these questions are part of the consultation process.

DR. PIERCE: Very good. I hope you actually have the data necessary to evaluate again the food source and effects on the productivity of this important species. I'll mention that with regard to ship strikes. Obviously in my state we're quite concerned about that. We know that the federal government has the speed limit on vessels over 65 feet.

We're in the midst now, my agency. We're in the midst of implementing some speed limits on vessels under 65 feet; just to provide some additional measure for protection, slow these vessels down when right whales are present in our waters. High priority issue and I am glad to see that all these initiatives are underway.

CHAIRMAN GILMORE: Actually Mike, I'll jump in here because I have a question. The data indicated that I guess with that 10 knot speed restriction on those larger vessels the ship strikes have dropped significantly. Is that consistent across the U.S.? Secondly, is there more that should be done on that aspect of it; even though it has come down?

MR. ASARO: Yes that's a really important question. We know in some areas, a lot of projection went before the rule was developed, looking at areas of high risk and what the projected risk reduction would be in areas where the risk was the highest, like on the shipping lane going into Boston. It was projected that the speed limit would reduce ship strike risk by up to 90 percent; and we're pretty confident that happened. If you look in the Mid-Atlantic, ports throughout the Mid-Atlantic, the speed restrictions are a lot smaller, kind of radiused outward off of ports.

Our thinking at the time was that right whales were using the Mid-Atlantic as a migratory route between the feeding grounds up north and calving grounds in the south. What we've learned most recently is that there are essentially the entire east coast is right whale habitat nearly year round, including the Mid-Atlantic.

I haven't looked into specifics on whether the rule, if there is data warranting the rule could be amended or the speed restrictions could be revised. But as it stands now, the data in the resulting decade after that rule show it's been highly effective; and an even shorter term experiment I'll add too is when the mortalities up in the Gulf of St. Lawrence occurred last summer, the Canadian government and Transport Canada drew a big box and instituted the 10 knot speed restriction up there and the ship strikes mortality stopped then pretty much instantly.

CHAIRMAN GILMORE: Andy.

MR. ANDY SHIELS: Just very briefly. With a population estimate of 450 individuals, at what level of decline would a jeopardy decision be likely?

MR. ASARO: That's difficult to answer. I mean the process that is underway now in the early stages, as I said we'll get to that point. It's hard to know. I mean just a bigger picture going back to the trajectory of right whale population growth. You know we were at lower numbers than this; and we've had periods of decline before. It's analyzing specifically what do the numbers mean today?

What does this decline since 2010 potentially mean for the recovery of the species? It's difficult to answer. I mean that's what the consultation process is meant to give us an idea of. But just in a larger context of right whale history, we were at fewer than 300 right whales and recovered, under many of the same threats too. It's a difficult question to answer without a

deeper dive into watching that consultation process unfold.

CHAIRMAN GILMORE: Eric.

MR. ERIC REID: I just have a question about noise. We're not increasing our fishing effort, at least that's what you indicated. I don't know about ship traffic. But it seems to me we've increased our noise; especially off of southern New England with seismic testing. Whales hear at a pretty low frequency.

Seismic testing is at a pretty low frequency. I mean to me, excess noise can prevent you from doing a lot of things in life. But if you can't hear, especially a ship coming at you, you know you're more susceptible for ship strikes, or maybe you're moving where you used to go because you want a nice, quiet place. But that is something I really think needs to be looked at; is the amount of noise humans are making off the coast, and what that effect is on these populations, because my position is that increased noise is substantial. It's just something for you to think about.

MR. ASARO: I'll just add. You know a lot of work has been done looking at the potential effect of ocean noise on right whales; both on their behavior in particular, but also on their level of stress hormones. You know right whales in general, because they spend so much of their time near shore with a lot of shipping around them.

A lot of human activities nearby and noisy waters have pretty high levels of stress hormones pretty much all the time. What we haven't seen is a clear behavioral response based on noise; or what the implications of the high levels of stress hormones have on right whales. But we know they're there.

A pretty significant research study was going on in 2001; looking at the presence of stress hormones in right whale fecal material. It was occurring before and after September 11, 2001.

If you recall, shipping activity stopped after September 11th, and just fortuitously this study was going on. What it showed was a pretty significant drop in stress hormones nearly instantaneously in right whale fecal matter.

CHAIRMAN GILMORE: Dave Borden.

MR. DAVID V. BORDEN: Two quick points; first off Mike, excellent presentation. I was particularly pleased to hear that you and the new Regional Administrator are moving forward with this suggestion to form a subgroup to address the enforcement concerns. I think that's a key part. It's not the only part. I think everybody understand that.

But if we can't solve that problem in the near term, I think it's going to erode our ability to modify any of the other measures. Then the second point I would make is this whole process is going to have a profound impact on all of the fisheries, all of the fisheries with vertical lines between the Canadian border and Florida; a number of which this Commission obviously regulates, in conjunction with our partners in NOAA.

I think the Commission leadership needs to talk about ways that the Commission can actually interact in the process. A number of us are already members of the NOAA team that's working on the issue. But we're going to need a slightly broader discussion at some point.

CHAIRMAN GILMORE: Good point Dave and we'll be talking about that after Mr. Abbott speaks.

MR. ABBOTT: Getting close to lunch. Has there been any consideration or look into the United States Navy using active sonar's along the east coast, and their effect on whales?

MR. ASARO: The answer is yes. I don't know specifics, so things like Navy activities undergo the same Section 7 process that we're undergoing on the fisheries. The Section 7

consultations for those activities are done out of our Headquarters Office. I'm not an expert on those; but the same process that I described to you looking at the effects of the fisheries, goes into looking at Navy activities too as part of the consultation. You know looking at the environmental baseline, specific effects of the action walking through that same process.

CHAIRMAN GILMORE: Okay, following up on Dave's points, sorry, Doug.

MR. DOUGLAS HAYMANS: Just one quick question. Are you seeing the reproduction issues with the other species of whales, or is just more specific to the right whale?

MR. ASARO: That is a difficult one to answer. For right whales, because they give birth off of the coast of Florida, really far inshore in clear, calm waters. It gives us the ability to see every single calf that's born; and that's unique to that species. There aren't other comparable species; where we can see essentially every new entrant into the population. It's a really unique situation for right whales.

CHAIRMAN GILMORE: Okay Toni, do you want to talk a little bit about where we go from here in coordination?

MS. KERNS: Following up on what David said. Megan Ware is on the Take Reduction Team for the Commission. She's sitting on both of the subgroups, and then will sit on the full TRT team meetings as well. Typically when Commission staff sits on the TRT, we are there just to present information and facts.

That is typically because all the states don't necessarily agree on a position for issues to be brought forward to the TRT from the Commission itself. A question to the Board as we move forward and this may not be something that can be solved today. But as we move forward on this, if the Board is wanting Megan to advocate certain issues, then we'll be needing direction to do that.

We'll need to figure out a way to give her that direction if we want to move forward. We could either pull together a subgroup of interested Commissioners for making recommendations to Megan, or making recommendations to bring them back to the Policy Board, so that Megan can then bring those forward.

The hard part there will be that at times I don't think that a Policy Board meeting will quite align with meetings that Megan will be going to. Sometimes she may need some direction outside of our quarterly meeting process. It's just something to think about, and sort of my question to you all is how should we move forward?

CHAIRMAN GILMORE: Pat.

MR. KELIHER: Thanks for that Toni. I think we do need a subgroup to work on this. Dave Borden and I and others, and Ritchie and particularly we've talked a lot about the enforcement components. There is going to be a tasking motion later for the Law Enforcement Committee, in regards to enforceability of ropeless fishing. There is as Toni said earlier, we're here as a Policy Board because this covers many of our species that are managed here at the Commission. **I am going to make a motion now to address this by moving that we establish a working subcommittee to develop direction and policy as it pertains to the protection of right whales, in relationship to the Commission activities.**

CHAIRMAN GILMORE: Let's get that up there. Do we have a second to that motion? Dave Borden. Do you have any suggestions on who would Chair this?

MR. KELIHER: Dave Borden. From a practical standpoint I think what we probably ought to do is just suggest to have Toni just send an e-mail out seeing if we can get volunteers, and make a determination from there. I would love to see Dave do it. I would be happy to Chair it if

needed. But the Committee can determine that when it's established.

CHAIRMAN GILMORE: Dave.

MR. BORDEN: This is such a big issue, Mr. Chairman, we may need two Chairs.

CHAIRMAN GILMORE: Yes that always works well. Okay, any discussion on the motion? Seeing none; any objection to the motion? Oh, Michelle, sorry.

DR. MICHELLE DUVAL: Far be it for me to stand between people and their food. But, just a cautionary note that there are already state representatives on the Take Reduction Team, so this kind of gets back to what Toni brought forward that not all the states are going to agree. It seems like I know there is a lot of concern right now with regard to the lobster fishery.

Certainly the Lobster Board is going to have a lot of discussion about this. You know we've had I think our own concerns in the South Atlantic with regard to right whales and fishery interactions; and spent about three years at the South Atlantic Council trying to address that in a mutually acceptable manner. I just want to make sure that the working group is sensitive to the fact that there is already state representation on those TRTs.

**CHAIRMAN GILMORE: Good point, Michelle; any other comments? Okay, any objection to the motion? All right seeing none; we will adopt that by unanimous consent.** I think it is good; Toni can send out an e-mail and solicit some membership. Toni.

MS. KERNS: There are two calls that are coming up quite quickly. Megan and I can sit down and maybe talk with David and Ritchie and Pat to start; to see if we think we need to get some immediate feedback to her for those two calls, and if so I might ask for your volunteerism very quickly. Then I think we can break for lunch.

CHAIRMAN GILMORE: I think we're at the point now; unless anybody objects that we'll break for lunch. Out in the lobby, so please let the Commissioners and proxies go first; because they have to eat quick and come back. We've got a few more things to get done. The food is out in the lobby and have at it.

(Whereupon a recess was taken.)

**REVIEW AND CONSIDER APPROVAL OF THE  
2019 SHAD STOCK ASSESSMENT AND PEER  
REVIEW TERMS OF REFERENCE**

CHAIRMAN GILMORE: Okay, our next item on the agenda is Review and Consider Approval of the 2019 Shad Stock Assessment and Peer Review Terms of Reference. Jeff Kipp is going to go through a presentation on this. Jeff.

MR. JEFF KIPP: The Shad and River Herring Board obviously are not meeting during this meeting; and we have our first in-person workshop for the shad benchmark assessment process scheduled for early March. I'm here on behalf of the Shad and River Herring Stock Assessment Subcommittee, and Technical Committee to present the terms of reference for the assessment.

The terms of reference for the stock assessment process, these will generally look familiar to everyone who has seen TORs before. I'll go through these rather quickly. The first is; define and justify stock structure. Characterize age and repeat spawner data by stock; and identify utility of data source, provide descriptions of methods, any changes to methods and associated peer review literature.

Describe validation experiments of available and available samples. Where possible explore reader consistency, potential bias in agreement statistics. Where possible explore use of correction factors; when consistency in method or reader was not maintained. Characterized precision and accuracy of other fishery dependent and fishery independent data used

in the assessment; including nontraditional data.

Characterization should include the following; but is not limited to provide descriptions of each data source. Describe calculation and potential standardization of abundance indices. Discuss trends and associated estimates of uncertainty. Justify inclusion or elimination of available data sources. Estimate bycatch where and when possible, summarize data availability and trends by stock.

If possible develop models used to estimate population parameters and biological reference points; and analyze model performance. Recommend stock status as related to reference points; if available. Evaluate other potential scientific issues. Compare trends in population parameters and reference points with current and proposed modeling approaches.

If outcomes differ, discuss potential causes of observed discrepancies. Compare reference points derived in this assessment with what is known about the general life history of the exploited stock. Explain any inconsistencies. Explore climate change impacts on the species. Explore predation impacts on the species.

Discuss all known anthropogenic sources of mortality and productivity by stock. If a minority report has been filed, explain majority reasoning against adopting approach suggested in that report. The minority report should explain reasoning against adopting approach suggested by the majority. Develop detailed short and long term prioritized lists of recommendations for future research; data collection, and assessment methodology.

Highlight improvements to be made by initiation of next benchmark stock assessment. Note research recommendations from the previous assessment that have not been addressed; and those that have been partially or fully addressed. Recommend timing of next

benchmark assessment and any updates if necessary; relative to biology and current management of the species. I'll now go over the terms of reference for the Peer Review Panel during the peer review of the assessment. These are generally similar to the terms of reference for the assessment; only they're to evaluate what the Committees have done through the assessment.

Evaluate choice of stock structure. Evaluate the thoroughness of data collection; and the presentation and treatment of fishery dependent and fishery independent data in the assessment, including the following but not limited to. Presentation of data source variance, justification for inclusion or elimination of available data sources, consideration of data strengths and weaknesses, calculation or standardization of abundance indices, estimation of bycatch.

Evaluate the methods and models used to estimate population parameters and biological reference points, including but not limited to; evaluate the choice and justification of the preferred models. Was the most appropriate model chosen; given available data and life history of the species?

If multiple models were considered evaluate the analyst's explanation of any differences in results. Evaluate model parameterization and specification. Evaluate the diagnostic analyses performed, including but not limited to sensitivity analyses to determine model stability and potential consequences of major model assumptions.

Evaluate the methods used to characterize uncertainty in estimated parameters. Ensure that the implications of uncertainty and technical conclusions are clearly stated. If a minority report has been filed, review minority opinion and any associated analyses. If possible make recommendation on current or future use of alternative assessment approach presented in minority report.

Recommend best estimates of stock biomass abundance and exploitation from the assessment; by stock for use in management if possible, or specify alternative estimation methods. Evaluate the choice of reference points in the methods used to determine or estimate them. Recommend stock status determination from the assessment, or if appropriate specify alternative measures for management advice.

Review the research data collection and assessment methodology recommendations provided by the TC; and make any additional recommendations warranted. Clearly prioritize the activities needed to inform and maintain the current assessment; and provide recommendations to improve the reliability of future assessments.

Recommend timing of the next benchmark assessment and updates if necessary; relative to the life history and current management of the species. Prepare Peer Review Panel terms of reference and advisory report summarizing the Panel's evaluation of the stock assessment, and addressing each Peer Review term of reference.

Develop a list of tasks to be completed following the workshop. Complete and submit the report within four weeks of workshop conclusion. This is an abbreviated version of the stock assessment schedule; with all the in-person meetings here. Obviously today we are presenting the terms of reference. We have a data workshop scheduled for March 5 through the 8th. We'll have a methods workshop in October, an assessment workshop tentatively scheduled for February of 2019, and then the Peer Review workshop we anticipate in August of 2019, with the results of that assessment and peer review presented during the annual meeting in 2019. If there are any questions on the terms of reference or the schedule for the assessment, I can take those now.

CHAIRMAN GILMORE: Thanks Jeff, good report; questions. Jason.

MR. JASON McNAMEE: Yes, Jeff. Just one question, there is a reference point term of reference. It's my understanding that the shad is kind of this amalgamation of a bunch of kind of sub-stocks, and you do your best to assess them. But I'm guessing some will be data limited approaches. Do you think that that reference point term of reference is too restrictive? I'm thinking that you might not be able to develop a reference point in some of these instances; but maybe will be able to offer a recommendation on catch advice, rather than a reference point.

MR. KIPP: Sure yes. I think we tried to include, if possible, to try and capture that. We think that there may be some stocks pining on what our stock structure determination is; where we may be able to develop certain reference points. Whereas, there may be other stocks that are much more data limited; where we may only be able to provide advice on trends, and that type of information. Similar to what was seen for a lot of the river herring stocks in the last river herring assessment update. We try to keep it vague; so it doesn't hold us to providing reference points for each individual stock.

CHAIRMAN GILMORE: Are there other questions for Jeff? Michelle.

DR. DUVAL: Just one quick one. Jeff, can you remind me what the terminal year of data is for the assessment?

MR. KIPP: Yes, the terminal year will be 2017.

CHAIRMAN GILMORE: Are there any other questions for Jeff? **Okay this is an action item; so we're going to need a motion to accept, go ahead, Michelle.**

**DR. DUVAL: So moved, Mr. Chairman.**

CHAIRMAN GILMORE: Okay, it's going to be an imaginary motion for a while; until we get someone to type it, and Andy you're seconding

that imaginary motion, great. Okay, move to approve the 2019 shad stock assessment and peer review terms of reference. It's a motion by Dr. Duval and seconded by Mr. Shiels.

**Is there any discussion on the motion? Is there any objection to the motion? Seeing none; we'll adopt that unanimously.** Thanks Jeff.

**BUREAU OF OCEAN ENERGY MANAGEMENT  
UPDATE REGARDING RENEWABLE LEASE  
STATUS AND FUTURE LEASING**

CHAIRMAN GILMORE: Okay, we're ready to move on to the Bureau of Ocean Energy Management Update Regarding Renewable Lease Status and Future Leasing; and we have Brian Hooker, who is going to do a presentation on that. Welcome Brian and whenever you're ready have at it.

MR. BRIAN HOOKER: Good afternoon. Thanks for this opportunity to give the Policy Board an update on the status of renewable energy leasing; and our environmental studies on the Atlantic. This is part of our general strategy; to try to keep Commissioners informed about what the status is of projects, and where we are with some of our environmental studies as we've promised to do in our ocean plans, the Mid-Atlantic ocean plan and the northeast ocean plan. What I'm going to do is just kind of leave this map up here for a little bit.

Where we are is that we've had 7 competitive lease sales, 13 leases actually issued, and then we have 1 lease auction anticipated for early 2018; and there is a proposed sale and there is some development for that. That is for; I don't know if you can see, oh you won't be able to see my cursor. But that's for the two areas in Massachusetts wind energy area that weren't leased in the previous auction.

Moving down the coast, in the Gulf of Maine some of you may be aware that there was an application received for a right-of-way through the Gulf of Maine for a cable installation. That

was to bring Canadian hydropower to the state of Massachusetts. That project wasn't selected by the state of Massachusetts in the latest round of solicitations. However, the developers still indicated that they want us to still proceed with that what we call a competitive interest, determination of competitive interest in that Gulf of Maine right-of-way.

They still might see a Federal Register notice asking for notice and comment on that right-of-way through the Gulf of Maine. Moving further south into the first of, I guess the eastern most lease area in the Massachusetts wind energy area; that is Vineyard Wind. Right now their surveys are ongoing.

They are about to ramp up some surveys this spring. They did submit a construction operations plan in December; which is undergoing review. This is our kind of first construction and operations plan since the Cape Wind project, which you may have noticed in the news there. We're processing a relinquishment request for that particular lease.

Anyway, so there should be a notice of intent to prepare an EIS this spring; so that's the next step in that process, once we determine that construction operations plan is complete. It will be of a notice of intent to prepare the EIS to kick off the EIS process for that construction operations plan. Moving west, Bay State Wind still has surveys ongoing.

They've had their site assessment plan approved; which was for two meteorological buoys, and we're anticipating a construction operations plan from them in late 2018. Continuing west is the South Fork Wind Farm. Again, surveys are ongoing. This is the Deepwater Wind project. The site assessment plan for that one was approved in October, 2017, and we do anticipate a construction operations plan in 2018 for that project as well.

As I mentioned earlier the Massachusetts un-leased areas, areas still that are west of

Nantucket Shoals there; there is a proposed sale notice currently under development. Continuing westward, we have the Empire Wind lease area that the lease holder is Stat Oil. Early planning is still underway. There is a SAP Survey Plan that was submitted in November; that's still under review. They hope this spring to begin doing some surveys in the Empire Wind lease area. Also, in New York Bight as I've briefed the Mid-Atlantic and the New England Council recently. We're in the process of developing a call for information for additional sites in the New York Bight. This is a map that was shared with the New York Task Force. It was actually, New York Task Force involved adjoining states as well.

This is still under development. It's not clear if this is the actual areas that will be in the call for information; but what we're doing is wanting to solicit more information on how these areas are used, and what may be compatibility issues for the purposes of leasing for offshore wind energy development.

Again, that call for information will likely be this spring. Continuing to move further south and through the New Jersey wind energy area, the northern site there is owned by a leaser U.S. Wind. We're still anticipating a site assessment plan for the deployment of potentially just meteorological buoys in 2018.

The Orsted Energy, the ocean wind site below south of that they have completed their SAP surveys, and their deployment of their meteorological buoys is currently undergoing final review. We also anticipate that we might receive a construction operations plan from them in late 2020. Continuing down into the Delaware lease area, the Skipjack Wind Farm has a SAP term ending in December 2019, and we anticipate a COP later in 2018.

They were one of the finalists for the Maryland offshore renewable energy tax credit; and then further down into the quote of Maryland Wind Energy Area that was U.S. Wind. That SAP is

also nearly complete. They are hoping to actually build a meteorological tower. That is one of the few sites where, I think actually the only site that they're proposing to build an actual meteorological tower. We expect to wrap that up this year.

Continuing down is the Coastal Virginia Offshore Wind Project. It was formerly known as VOWTAP; that is the Virginia Department of Mines, Minerals and Energy, along with Dominion, and the ORSTED have kind of revived that research assessment plan. That is for two turbines offshore Virginia.

That RAP is actually already approved; we're just undergoing a review of any changes that they've made. Primarily they proposed changing the foundation type for those two turbines; and we anticipate undergoing that final review, and then they anticipate construction in 2020 for those two turbines.

The Virginia Commercial Lease Area, the larger lease area adjoining the study site. We anticipate buoy deployment there, not until 2020. Then continuing further south, off of North Carolina, the Kitty Hawk lease site. That was awarded to Avangrid Renewable, on October 10, 2017, with an effective date of November 1, 2017; and so they're just getting their act together, as far as determining their timeline and when they want to pursue activities, like site assessment plan activities in that area.

BOEM most recently regarding that area, most recently had a task force meeting on December 7, in Virginia Beach, where both the CEVOW project and the Avangrid Renewable site were discussed. As just another BOEM program note. As you're probably aware of in the news, the oil and gas side of BOEM is in the process of developing a draft proposed program for 2019 through 2024. They have been holding several meetings up and down all over the country in state capitals.

Lastly, the Atlantic G&G Seismic Survey permits. There are five permits that are being processed for incidental harassment authorizations; and those IHAs are likely looking to be approved probably early this spring. Moving on to some of our studies, I just want to highlight some of the studies that we're doing. We are continuing to do some work around with our ventless trap survey around Cox's Ledge.

We just finally posted a benthic habitat mapping study that we did for all the wind energy areas. That was done with the Northeast Fisheries Science Center out of Sandy Hook. Again that's on our completed environmental studies page; and that report is now available as of just a couple weeks ago.

We're continuing a lot of work on fish telemetry between New York, Delaware, and Maryland and Virginia. Those reports should be available in the coming year. We're also anticipating the release of the final report on electromagnetic fields on lobster, skates, and crabs that was done in Long Island Sound by the University of Rhode Island.

Then lastly, we have funded and we are starting to get some preliminary results in on some of our study that's done with Woods Hole Oceanographic and Northeast Fisheries Science Center; looking at the sound of the construction noise generated at the Block Island Wind Farm in state waters, and how that affects black sea bass and longfin squid.

Again, these are in tank studies right now, but hopefully we'll be able to do some more empirical work offshore in the future. With that I'll open it up to any questions you might have; and hopefully touched upon all the questions you might have.

CHAIRMAN GILMORE: Thanks Brian, great report; questions for Brian? Jason.

MR. McNAMEE: Thanks for the report. One question I have is with regard to rules about

fishing. I'm wondering if within these areas, would there be fixed gear fishing allowances, mobile gear allowances, or are those sorts of things going to be determined by the companies that end up picking up the lease.

MR. HOOKER: No, each company is required to do a navigational risk assessment that the Coast Guard will evaluate. But at this time though there has been no indication by the Coast Guard or BOEM or anyone that there would be any prohibition on fishing activity of any kind, once the wind farm becomes operational.

In the case of Block Island Wind Farm, there were zones during construction, when there is active vessel movement around the construction area that prohibited some other vessel movement in that area. But we looked at Block Island Wind Farm as like the example of how work and fishing is completely allowed within and around those turbines.

CHAIRMAN GILMORE: Are there other questions for Brian? John Clark.

MR. CLARK: Thank you for the presentation, Brian. How much time does each lease holder have to develop these sites, before they either have to renew or the lease is terminated?

MR. HOOKER: Generally they have a five-year site-assessment lease term. They can ask for an extension of that five-year lease term prior to when you're supposed to submit a construction and operations plan. You have to be showing due diligence; and work on the leasehold. There are steps in place to ensure that we issue leases and they just don't sit there idly; that there is some activity occurring with those leases.

CHAIRMAN GILMORE: Are there any other questions for Brian? Jason.

MR. McNAMEE: Brian, you had mentioned there are during the construction phase and they're building the turbines, there is a need to

close the area so that the work can get done. Is there any thought to, so I'm thinking about the Block Island example again. In the ramp up to construction they identified impacted fishermen in the lease area.

They developed a, I'll call it a compensation program, for lack of knowing what the actual term was. Is there any guidance or plan from the federal government to have that be a requirement; as these areas are being built, to develop some sort of mitigation is the word, mitigation plan for these areas for displaced fishermen?

MR. HOOKER: Sure, we have guidance on how to comply with information requirements on the socioeconomic status of fisheries in the area; and how your activities may be impacting those entities. That generally won't occur until the EIS process, if there is a significant impact in how they intend to mitigate it.

That will be part of that NEPA process. There is no specific requirement per say for the compensation of lost fishing opportunity from construction. However, that is one thing that we'll be looking closely at with the review of these construction operations plans and in the EIS process. I will stress we do have guidance.

I mentioned we have that guidance document that really stresses the importance of developing a fisheries communication plan, and to ensure that that communication is happening and that the information provided in the construction operations plan is reflective of, they know what their potential impacts are to fishermen in that area. That is what the objective of those guidelines are; so that nothing is a surprise when it comes down later that they may be impacting some fisheries operations in a negative fashion.

CHAIRMAN GILMORE: Eric Reid.

MR. REID: Mr. Hooker, how are you? Can you tell us what the Coast Guard has to say about all

this? There are real concerns about the effect of wind turbines on radar, and of course vessel movement and the safety of that. Can you tell us what kind of advice you've gotten from the Coast Guard, and what your response to that advice might be?

MR. HOOKER: We get advice from Coast Guard throughout the process; whether it's on the initial siting of the areas that we want to lease. They do red, yellow, green maps of like where they think heavy concentration of vessel traffic and how offshore wind may or may not be compatible with that level of use.

But as I mentioned earlier, when we get down to the individual project level, their role really comes in that navigational risk assessment aspect. That is prepared as part of the construction operations plan, and that's reviewed by the Coast Guard directly. Through that process they can provide advice and feedback to the developer.

As a matter of fact they have a navigational circular. They have their own guidance document on how to prepare that and how they intend to use the information in that document. Some of that can happen more directly between the developer and the Coast Guard as well.

MR. REID: It's the Coastguard. You know there are a lot of issues beyond navigation; including things like Homeland Security. Is that advice from the Coast Guard binding, or is it just advice that doesn't necessarily have to be followed? When you look at what's going on south of the Vineyard; then maybe you can remind me how many turbines are potentially capable of going in that area, just the sheer transiting capabilities of, not necessarily recreational guys or small commercial boats.

They may not be affected so much, but the larger boats that go through that area to get offshore are going to be substantially affected, depending on what that looks like. That's my

question. Are the Coast Guard's advice binding, and how many turbines can go into those areas south of the Vineyard?

MR. HOOKER: As I said, they make recommendations as far as some of the early planning process. Those are nonbinding recommendations. But I think when we get into individual project specifics as part of that navigational risk assessment. I think that is binding on the developers; as far as like what their determinations is regarding that navigational risk assessment, whether it's acceptable, and the measures they have in place are adequate to ensure the navigational safety of the area.

Regarding the number of turbines that that area could support, I don't have a number on what the total could be. As you know the markets are driven by what the individual states have set, and the renewable energy targets, and how much they plan on purchasing. It's ultimately dependent upon the states renewable energy goals.

MR. REID: Thanks for that. I'm sorry, I get three bites, because that's against Mr. Abbott's directions, but anyway, yes he's not here. I've heard the response about market and all that Mr. Hooker, we both know that. But the question is, given the spacing between those turbines, how many can go into those areas and how far apart do they physically have to be? It's not very far.

There is a zone around those turbines that has to be considered. That is my question. How many can you put in there given the spacing between those turbines? It's a big number; it's not like seven. I've asked that question before, and everybody is afraid to answer me. But maybe the next time I see you, which will probably be pretty soon, maybe next week. I would like somebody to tell me that number.

MR. HOOKER: Thanks, I'll see if I can put something together for you.

CHAIRMAN GILMORE: Dave Borden.

MR. BORDEN: This just follows up on the point that Eric raised. You know this came up at the Mass Lobstermen's Association meeting; where they had some of the wind companies come in and give very good presentations on what was going to happen in that southern area, south of the Vineyard and south of Nantucket.

What I kind of struggle with is the same issue that Eric is trying to get at. I want to know what the aggregate number of towers is that's going to take place in all of the build out areas, not one specific area. I've talked to some people; I talk about the potential for 10,000 or 15,000 wind towers out there. I think one of the things that this body, along with the Councils has to deal with is aggregate impacts. We need to know that number.

CHAIRMAN GILMORE: It's a good point, Dave and I think it's technically covered under NEPA. There is a cumulative impact section of that. Unfortunately, I think the practice over the years is that you just look at projects that are currently proposed; you don't look at potential for the next 30 years. I think that's something that maybe needs to be addressed as we move forward; anyway, Andy.

MR. SHIEL: I just want to point out something. We're dealing with natural gas in Pennsylvania; and first we had the pads and the drilling sites, and we permit those and we oversee them. But what we're dealing with now are the pipelines that connect all those drilling sites; and there is a lot more impact with the pipelines, because of what they cross and where they go then there is with the drilling sites.

I would assume the same thing would be true. You have to connect all of these wind power generators with cables. They're probably going to be interconnected. In terms of your impact on ocean bottom, it's going to be more than just where they're physically sited; it's going to be the root that the cables take how many

cables if there are 10,000 or 15,000. I would say similar to what Eric asked. In a future presentation if there is any way to kind of scale that for us that would be appreciated.

**NON-COMPLIANCE FINDINGS/  
OTHER BUSINESS**

CHAIRMAN GILMORE: Okay I think we've had some good discussion on this. Thanks, Brian, for your update. I'm sure we'll be talking with you, and keeping my office busy. Anyway, thanks for coming down. That brings us down to **other business. We don't have any noncompliance findings.** Can you actually read that Toni? I can't read your writing.

MS. KERNS: He has to read my writing. Dan, you wanted to bring up the shellfish seed initiative shipment activity.

MR. MCKIERNAN: Yes thank you Toni, I'll be brief. Back in October or early November, David Pierce wrote a letter to Bob Beal; looking for the Atlantic states to get involved with some oversight of shellfish seed issues. Quickly the statement of the problem is we want to get ahead of what we are seeing as unauthorized aquaculture operations receiving seed; usually sent to hobby farmers.

As this aquaculture industry matures, we're getting pressure, and we see the need to sort of professionalize the industry, and to make sure that people who are not authorized aquaculturists aren't receiving seed. What I hope will happen in the future. I understand Louis Daniel is reconvening a shellfish transport committee as part of an aquaculture initiative. Maybe you can clarify that. But what we would like to do is ask the states to work together to hold their instate hatcheries accountable.

If that hatchery is going to ship seed to an out-of-state farmer that farmer would have to have permission from the state to receive it. Because if a hatchery in another state sends seed to a Massachusetts unauthorized farmer, I don't

have a permit to sanction at the hatchery side, and I don't have a permit to sanction on the receiver's side. We would be looking for the states to work together to establish some kind of standards.

MS. KERNS: Louis is currently working on the aquaculture RFP, and when he finishes that up, which I think closes in about another month or two, then we would reinvigorate the Interstate Shellfish Committee, which has not gotten together in many, many, many years. What I can do is send David's letter out; because I'm not sure if that went to the full Policy Board or not. Then ask for membership for that Shellfish Committee, and then we'll get that Shellfish Committee working on that task that was in the letter from David.

MR. MCKIERNAN: Thank you.

CHAIRMAN GILMORE: Next one is Pat wanted to raise an issue on the Electronic Data Working Group. Pat.

MR. KELIHER: Yesterday at the Lobster Management Board, a motion was passed that would institute 100 percent harvester reporting within a 5-year period, with a strong emphasis on electronic reporting. At the time it was thought that it would be tasked between the Technical Committee and the Commercial ACCSP Working Group. That is not necessarily the right committee.

In discussing with staff and a few members of the Lobster Management Board, I crafted a motion, and I think if you could get it up on the screen. **Mr. Chairman, I would move to convene a Lobster Electronic Reporting Subcommittee; with representatives from the Lobster Board, the state and federal agencies, ACCSP, and ASMFC staff.**

**The objectives for the subcommittee are to (1) Evaluate the need for an electronic harvester reporting form, based on stipulations in the lobster and Jonah crab FMPs, and individual**

**state requirements. Evaluate various electronic reporting platforms and their ability to be housed within SAFIS, as well as state-specific data bases. Recommend simple and logistical solutions to improve the ease of electronic harvester reporting. This includes evaluating the best ways to report spatial locations; considering the new requirements to report LCMA's and 10-minute squares, and the ability for states to use state-specific subareas in state waters, and outline a timeline for the development of electronic harvester reporting in the lobster and Jonah crab fisheries. If I get a second, I will give further justification if needed.**

CHAIRMAN GILMORE: Seconding the motion, Dave Borden. Go ahead, Pat.

MR. KELIHER: The purpose of the subcommittee is obviously to guide development and implementation of electronic reporting in the fishery. Obviously it again is prompted by the finalization of Addendum XXVI and 100 percent harvester reporting. In the end I want to make sure that we have a very good, user friendly product for the industry.

If we're moving into the state of Maine with 100 percent reporting; we're talking about adding a lot of harvesters and a lot of data points, considering the amount of trips that are going to be made. I want to make sure we do this once; and when we do it, we do it right.

CHAIRMAN GILMORE: Discussion from the Board. David Pierce.

DR. PIERCE: I wasn't here at the Lobster Board discussions; so I really can't comment on that outcome. But I'll just ask a simple question which is, this is a long motion. Pat has given a lot of thought to this. I just want to make sure that it's completely consistent with what the Lobster Board did yesterday, and that there is not some accidental deviation from the conclusion of the Lobster Board through the vote that it took yesterday.

CHAIRMAN GILMORE: Let me go to the Chairman of the Lobster Board and see if you think it's correct.

MR. STEPHEN TRAIN: As long as I'm not accused of accidentally agreeing. I believe it fits the tone of what was discussed to the motion made. I just don't think we gave an exact tool and how to get it done.

CHAIRMAN GILMORE: Dave Borden.

MR. BORDEN: I note that the length of this motion was modeled after one of the more illustrious members of the New England Council, Dr. Pierce. He has his own name for motions; they call it a Pierce motion, if it extends past 5,000 words. I totally support the motion; but I would hope that the staff would have the flexibility to scale this Committee down so it doesn't become a monster, unless somebody disagrees with that. Make it as small as you can; but keep it effective.

CHAIRMAN GILMORE: I think we can handle that Dave. Good point; other comments? **Okay is there any objection to the motion? Seeing none; we will adopt that unanimously.** We have one more business point, which is a tasking to the Law Enforcement Committee. Pat.

MR. KELIHER: Yes, I think the Lobster Management Board yesterday. **The motion was approved to task the LEC, Law Enforcement Committee, to look into the ability to enforce the concepts surrounding ropeless fishing.** That motion needs now approval by the Policy Board.

CHAIRMAN GILMORE: We have a motion up. Motion by Mr. Keliher; do we have a second, Dave Borden. **Is there any discussion on the motion? Is there any objection to the motion? Seeing none; we will adopt that unanimously.**

**ADJOURNMENT**

CHAIRMAN GILMORE: Is there any other business to come before the ISFMP Policy Board? Seeing none; we will stand adjourned.

(Whereupon the meeting adjourned at 12:45 o'clock p.m. on February 8, 2018)