

**PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
SHAD AND RIVER HERRING MANAGEMENT BOARD**

**The Marriott Norfolk Waterside
Norfolk, Virginia
October 17, 2017**

Approved February 6, 2019

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1. **Approval of Agenda** by Consent (Page 1). (*Not Transcribed*)
2. **Approval of Proceedings of August, 2017** by Consent (Page 1). (*Not Transcribed*)
3. **Move to accept the Sustainable Fishery Management Plan (SFMP) updates for shad for Connecticut, Potomac River Fisheries Commission, North Carolina, South Carolina, and Georgia, Virginia's bycatch plan, and task the Technical Committee with developing proposed improvements to Amendments 2 and 3 to address SFMP inconsistencies with the management documents** (Page 15). Motion by Cheri Patterson; second by Pat Geer. Motion passes unanimously (Page 16).
4. **Move to accept the 2017 FMP Review of the 2016 fishing year and State Compliance Reports, and approve *de minimis* requests for Maine (both commercial and recreational), New Hampshire, Massachusetts, and Florida for shad; and *de minimis* requests for New Hampshire, Massachusetts, and Florida for shad; and *de minimis* requests for New Hampshire and Florida for river herring** (Page 18). Motion by Roy Miller; second by Justin Davis. Motion passes unanimously (Page 19).
5. **Move to adjourn** by Consent (Page 19).

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	John Clark, DE, proxy for D. Saveikis (AA)
Cheri Patterson, NH, proxy for D. Grout (AA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Roy Miller, DE (GA)
Ritchie White, NH (GA)	Lynn Fegley, MD, proxy for D. Blazer (AA)
Mike Armstrong, MA, proxy for D. Pierce (AA)	Rachel Dean, MD (GA)
Raymond Kane, MA (GA)	Allison Colden, MD, proxy for Del. Stein (LA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Kyle Schick, VA, proxy for Sen. Stuart (LA)
David Borden, RI (GA)	Cathy Davenport, VA (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Rob O'Reilly, VA, proxy for J. Bull (AA)
Justin Davis, CT, proxy for M. Alexander (AA)	Michelle Duval, NC, proxy for B. Davis (AA)
Sen. Craig Miner, CT (LA)	David Bush, NC, proxy for Rep. Steinburg (LA)
Lance Stewart, CT (GA)	Malcolm Rhodes, SC (GA)
Sen. Phil Boyle, NY (LA)	Robert Boyles, SC (AA)
John Maniscalco, NY, proxy for J. Gilmore (AA)	Pat Geer, GA, proxy for Rep. Nimmer (LA)
Emerson Hasbrouck, NY (GA)	Rep. Thad Altman, FL (LA)
Heather Corbett, NJ, proxy for L. Herrighty (AA)	Spud Woodward, GA (AA)
Tom Fote, NJ (GA)	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)	Derek Orner, NMFS

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

Ex-Officio Members

Brad Chase, Technical Committee Chair

Larry Furlong, Law Enforcement Representative

Staff

Bob Beal
Toni Kerns
Kirby Rootes-Murdy
Jeff Kipp

Caitlin Starks
Jessica Kuesel
Shanna Madsen

Guests

The Shad and River Herring Management Board of the Atlantic States Marine Fisheries Commission convened in the Hampton Roads Ballroom V of the Marriott Waterside Hotel, Norfolk, Virginia, October 17, 2017, and was called to order at 8:00 o'clock a.m. by Chairman John Clark.

CALL TO ORDER

CHAIRMAN JOHN CLARK: Due to technical difficulties the first seven minutes of the meeting was not recorded. The Chairman had a Call to Order, went through the Approval of the Agenda, Approval of Proceedings from August, 2017 and Public comment was taking place when the recording began.

MR. JEFFREY PIERCE: (Reading a letter from the Alewife Harvesters of Maine) "...restoration efforts active based on achievable goals. Thank you for your time; signed Landis Hudson, and thank you for allowing me speak".

CHAIRMAN CLARK: Thank you, Jeff. Does anybody else have any comments? Seeing none; we'll move on to Agenda Item Number 4, which is Discuss Shad Stock Assessment Process Recommendations; and Jeff Kipp will take that.

DISCUSS SHAD STOCK ASSESSMENT PROCESS RECOMMENDATIONS

MR. JEFF KIPP: Good morning everyone. Just to remind the Board, at the August Board meeting following the presentation of the River Herring Assessment Update, we mentioned that there were some anticipated challenges with updating the 2007 American shad benchmark stock assessment. We wanted to kind of go back and reconsider that assessment process and how to move forward.

We took those anticipated challenges to the Assessment Science Committee; and had a discussion with that Committee on the assessment process for shad. The recommendation by ASC out of that discussion

was to move to a benchmark stock assessment for American shad. We originally scheduled to provide an update to the assessment in 2018.

But given that recommendation to move to a benchmark, we anticipate now a longer process with a completed assessment in 2019. But that will give us the opportunity to go back and take a fresh look with some new perspectives; and also the ability to incorporate some new data time series that have come online since that 2007 assessment.

Also in addition to that given the change in workload from an update assessment to a benchmark assessment, we will likely be coming to this Board, probably by e-mail, and requesting some additional membership for the Stock Assessment Subcommittee. If there are any questions on ASCs recommendation or the process moving forward, I could take those now.

CONSIDER APPROVAL OF SHAD AND RIVER HERRING SUSTAINABLE MANAGEMENT PLANS

CHAIRMAN CLARK: Thank you, Jeff for that update. We'll move on now to the next item on our agenda; which is to Consider Approval of Shad and River Herring Sustainable Management Plans. We'll have Brad Chase, who is Chairman of the Technical Committee, will present the Sustainable Fishery Management Plans for the six states that have these to be reviewed.

CONNECTICUT RIVER AMERICAN SHAD SUSTAINABILITY PLAN

MR. BRAD CHASE: Good morning. We have six plans to review this morning; they are all updates from plans that were approved by the Board in 2011-2012, and we're going to start with the Connecticut River American Shad Sustainability Plan. This again is a five-year update. It was generated by the Connecticut Department of Energy Environmental Protection.

This plan is specific to the Connecticut River. It's the only river in Connecticut that is open for shad fishing. There is a commercial drift net fishery that occurs in the river; and it's the only river in the state that allows recreational fishing as well. The fishery has mandatory annual reporting for commercial landings, and recreational landings are monitored periodically by a roving creel survey.

The fish are intercepted also at the first major dam at Holyoke, Massachusetts at a fish lift, and a count occurs there by the Massachusetts Division of Fish and Wildlife. It also includes the collection of biological data. Connecticut also conducts the juvenile shad survey; it's been conducted since 1978.

The commercial shad fishery is executed through area gear and seasonal restrictions. It has a season from April 1 through June 15. Most of the permit holders are aging. It is a fishery where there are few participants; and they're not getting any younger. They've seen a lot of variation in the catch, the effort, and number of participants over time.

I'll run through the commercial landings here from 1990 to 2016. You can see larger landings at the early part of the time series; and then slight improvements in the recent five-year-plan period. The recreational fishery permits are required. There is a catch limit of six shad. It's an aggregate catch limit for American hickory shad.

Similar to commercial landings, the recreational landings have been declining in recent years. Anecdotal and creel information suggests that the last ten years has shown fewer fishermen participating in the traditional fishery areas. Here is a graph showing recreational landings from 1990 to the present; with sharp declines overall and very stable low landings in recent years. For fishery independent monitoring they have the fish lift at Holyoke, Massachusetts; it's operated daily, and it produces a census count

of fish that are passing, as well as biological data.

Then as I mentioned, they also have a juvenile abundance index of American shad. It's been conducted since 1978, and it's a weekly seine survey from mid-July to mid-October at seven fixed stations, from Holyoke, Mass, down to Essex, Connecticut. What Connecticut has done is they've developed a stop-light approach, and it has three response metrics. The first one is on passage; and this uses the number of adult shad that are passing at the Holyoke fish lift.

It's a proxy for the total run count in the river. The trigger they use for management response is 140,000 shad; it's considered to be a good number, and below that would trigger some management concerns. The second response metric is recruitment; and this is defined as three consecutive years below the 25th percentile of the time series for the juvenile seine survey. This metric provides an early warning of recruitment failure or population decline due to poor stock recruitment. The third response metric is escapement. This is a measure of fishing pressure, when the stock expresses the proportion of total run escaping the fishery to spawn. They've picked a 90 percent as a conservative trigger.

Over time they've had a very high escapement rate. From 1990 to 2016 the median was 96 percent. This is simply the number of fish the fish lift compared to the harvest totals. Here are those response metrics graphically. Here is the fish lift numbers from 1975 to present; where the blue line running across is the metric at 140,000 shad.

What you can see is in the recent years of the previous plan, they've had some nice improvements, and they've been well above this threshold. Here is a juvenile index. The 25th percentile is about a geometric catch-per-unit effort mean of four. You can see a lot of variability here, a lot of fluctuations.

The highest value in the data series occurred this past year; which is good news. Here is the escapement metric; 90 percent is the blue line running across. You can see most years they are well above that with a very high escapement rate; because the fishery is quite small in the river, and large numbers of fish are passing at the lift.

Here is a schematic of the stop-light approach; and it's quite simple. If you have three favorable findings for those metrics then you have a green valuation; everything is a go. There is low risk, low management concerns. If you have a single one of those metrics falling below the threshold, then you have a yellow response; and that will trigger some review of the conditions.

If you have two negative responses it's an orange, and then three you obviously have a red and there will be a management response in response to that. Here is a table that summarizes the results since the last four years of the previous plan. What you can see is for all these metrics they are really well above the thresholds.

There has been one that has fallen below; 2013 the juvenile index was below that trigger. That would have resulted in a yellow card, so to speak; otherwise things have been going very well with this system. To summarize, Connecticut would like to continue using these metrics and thresholds for their sustainability fishery management plan for shad in the Connecticut River.

Again, the last four years of monitoring have only produced one case where they had a threshold below the metric. To summarize counts, the Holyoke fish lift has been increasing, as well as juvenile abundance index in recent years, resulting in strong escapement. The TC reviewed the plan, and we had very few comments.

We asked for a table to summarize benchmarks and responses to be inserted into the plan. We asked for improved language to define what management responses would occur if thresholds were actually exceeded; and this was done. Then the TC recommended the Board approve the plan. I guess what I'll do is take questions after each plan; since we have six, so if there are any questions I would be glad to take them.

CHAIRMAN CLARK: Are there any questions on the Connecticut plan? Seeing none; Brad, would you please proceed.

POTOMAC RIVER FISHERIES COMMISSION

MR. CHASE: The next plan is for the Potomac River Fisheries Commission; and we don't have a presentation on this. It's a very brief plan. Again, it's an update on the previous plan from 2012. It is simply an allowance for the commercial gillnet fishery to have a bycatch of shad in the Potomac River. The previous plan allowed two bushels per day per license holders for both pound and gillnets fishing. They have mandatory daily harvest reporting.

The total catch in 2016 was 1,145 pounds, with a total catch including releases at 3,500 pounds. It's a very modest fishery. There has been a closure to direct fishing since 1982. They have a benchmark which is a geometric mean of 31.1 pounds per net per day that was derived from 1944 to 1952 fishery data; that was adopted by the 2007 stock assessment.

Very simple bycatch fishery, the TC reviewed it. We did ask them to clarify their language a little on what would happen, in terms of management responses if they did have exceedances. Otherwise, the TC recommends the plan be approved by the Board. Any questions on the Potomac River Fishery Commission plan?

CHAIRMAN CLARK: Seeing no questions, oh sorry, Cheri.

MS. CHERI PATTERSON: Hi Brad. I just have a question on what was drafted, indicating that the benchmark goal in the 2007 stock assessment has been exceeded each year since 2011.

MR. CHASE: I think what that means is that they've been above it. Sometimes you use the word exceeded to say that you were below it, but in this case they have been above it in each year since then. They've been doing quite well; and they've had really good improvements in the amount of shad that they're intercepting in their survey. It is exceeded in a good way.

CHAIRMAN CLARK: Are there any other questions? Seeing none; Brad, will you please proceed?

NORTH CAROLINA

MR. CHASE: Okay. Next we have up North Carolina. This again is a five-year update produced by the Division of Marine Fisheries and the Wildlife Resources Commission of North Carolina. North Carolina has relatively large number of shad runs and decent shad fisheries in their state. They have a large amount of spawning areas available to shad before they reach the first main stem dam.

They also have guidance from the stock assessment in 2007 that looked at the Albemarle Sound and Roanoke Rivers, and produced a benchmark for total mortality at Z30 of 1.01. This has been adopted and used. They also adopted this to be a proxy for the other rivers in the state; even though they did not have information for mortality rates in the other rivers.

In general they have a series of survey metrics that they use for the Albemarle and Roanoke System; as well as the Tar-Pam, Neuse, and Cape Fear Rivers. These will remain the same for this update; there will be no changes. I'll call your attention to the female catch-per-unit effort independent gillnet survey, the IGNS.

That is going to come up again in the presentation; and this is one of the indices that they use.

They've had these indices occurring. They also look at female relative F parameters, and they have exceeded the threshold for three consecutive years for the Albemarle Sound. This resulted in management actions to reduce commercial landings. They've had moderate reductions in low landings and total landings for the Albemarle Sound. These were the only required changes or management actions in the river systems from the 2012 plan to the present plan. Recreational creel limits are similar for most systems. They target generally a ten-fish limit that's aggregate for both American and hickory shad, with some changes on that between the four systems.

Commercial seasons, they have four different seasons for the four areas, Albemarle Sound, Tar-Pamlico, Neuse River, Cape Fear River and all other areas. The plan is going to be updated with only two changes proposed. The first change is change the way they derive their relative F. They are going to compute it by dividing commercial landings by a hindcast-three-year average of their survey index, whereas the previous plan used the centered three-year average.

They are also going to change the way they addressed the 75th and 25th percentiles in their survey indices; by fixing these values for the five-year period moving forward for the five-year plan. North Carolina also requests that all of the present coastal fisheries for recreational and commercial fisheries remain open, and adopt the same management measures listed in this plan.

A little more information on the female relative F, centered versus hindcast. The centered was used originally because they had only so many years to work with; and with a few more years of data it is better to have a hindcast value to

make use of the previous three years. These graphs show that change that was adopted.

The TC asked for a table that summarized all the metrics, as well as management triggers; and here is that table. You can see they have a fair number of values and thresholds available, relative to most other states. They have a large series of potential management measures that they would adopt if they had thresholds exceeded.

The TC asked for a little more clarification on these, and that was provided. I'm going to run through some of the different systems; in terms of the catch and the characteristics of the catch as well. Here is the Albemarle-Roanoke System. The table is broken down by buck harvest as well as roe. In this system the catch has declined substantially in the previous period.

These are graphs of the different survey indices available for that system. For the Tar-Pamlico River System, you can see a similar decline; not as large in recent years. Here are the indices graphs. The electrofishing survey has declined in recent years. For the Neuse River, here are the harvest rates as well, the Neuse River indices, Cape Fear, a little more stability in harvest than the other rivers, Cape Fear indices.

Future considerations, they would like to consider alternative means for calculating effort from the fishery independent gillnet survey; and possibly incorporate the survey from the Tar-Pamlico and Neuse Rivers as parameters also. They want to consider incorporating uncertainty into their relative F estimate. Right now it's a simple proportion.

They would like to consider the use of alternative modeling approaches that can incorporate environmental parameters; perhaps a generalized linear model to do this. Then consider alternative ways to calculate relative F using recreational catch estimates and total catch from the independent surveys. The

TC reviewed the plan; and we had limited recommendations and comments. We asked them to add that table that was provided. We asked for improved language in Section 3.1 on the application of management responses that occur when thresholds are reached. This was done. We asked for language to show that there are not significant fisheries occurring in unmonitored rivers. This is a theme that will come up again with a few other systems, where there are a few rivers where there is no monitoring occurring; and the TC had concerns over this, because it's not really allowed under Amendment 3, where all rivers should have monitoring occur, to demonstrate whether that harvest is sustainable.

We asked North Carolina to have language that would describe those fisheries in unmonitored rivers; and then we have further discussion on this with a memorandum prepared by the TC later on today. In conclusion, we recommended that the Board approve North Carolina's plan. Are there any questions on this plan?

CHAIRMAN CLARK: Emerson.

MR. EMERSON C. HASBROUCK: I did have a question in terms of that last bullet; add language to show that there are not significant fisheries occurring in unmonitored rivers. If the rivers are unmonitored, how does the state know that the fisheries are not significant? Right, if abundance is continuing to trend down and there are still fisheries; that's going to change the significance of the fishery, perhaps.

MR. CHASE: It's a good question, and it really is a dilemma that we're going to discuss as the morning goes on. Amendment 3 requires that all rivers have sustainable metrics to prove that they can be sustained. If there are no types of measures those fisheries should be closed or catch and release only.

The TC struggled with this; and we asked the states to provide some indication of what was

known for that particular river. Then we have a memo we're going to discuss later on, on what we think should be done to try to improve this situation. It is a bit of a dilemma. It's a bit of an inconsistency right now in the interpretation of Amendment 3 language.

CHAIRMAN CLARK: Are there any more questions about the North Carolina plan? Seeing none; please proceed, Brad.

SOUTH CAROLINA SHAD SUSTAINABLE FISHERY PLAN

MR. CHASE: Next up is the South Carolina Shad Sustainable Fishery Plan, produced by the South Carolina Department of Natural Resources. Their plan reviewed the status of open and closed fisheries. They also reviewed the performance of their sustainability indices and benchmarks in the previous five years.

They also discussed conservation measures and gear restrictions that were put in place in 2013, since the last plan, to reduce the bycatch of sturgeon in their shad fisheries. This map shows the fisheries that were closed for the 2012 plan; they are color coded, and there were six rivers that were closed. This map shows the eight river systems that are presently open; and that have requested to remain open.

Similar to North Carolina, South Carolina has a relatively large number of shad runs, and a large amount of shad habitat. They also do a very good job with their monitoring. Let me run through some of the individual river systems. The Pee Dee River has an open recreational fishery with no closed season; and a creel limit of ten fish per day. They have a gillnet-commercial fishery with seasonal restrictions and no harvest limit. This graph shows that catch-per-unit-effort index of shad, kilograms of shad per 92 meter net per-net hour from 1979 to the present. Then it has a 25th percentile, the annual-mean CPUE, which is used as a benchmark for the time series, a very long time

series, fairly stable in recent years since the last plan has been above the benchmark.

For the Cooper River there is no commercial fishery. There is a recreational fishery that also has no closed season and a creel limit of ten fish per day. They derived their sustainability benchmark from a creel survey that has a recreational fishery index; the 25th percentile of 0.66 shad per angler hour.

You can see this has been well above that benchmark since the previous plan. For the Santee River, they have two benchmarks. There is one fishery dependent, the catch-per-unit effort for the last ten years for their gillnet fishery. They use the 25th percentile of 1.8 kilograms of shad per 92 meter net per hour.

This has been well above the benchmark with some variation in the past five years. This fishery has no closed season recreationally; and it has a commercial fishery with restrictions for their gillnet, no harvest limits. They also have a fishery independent benchmark, which is a 25th percentile of the annual mean catch-per-unit effort from fishery independent gillnet surveys. This has seven shad per 92 meter net per hour, and it's been conducted since 2008.

The Edisto River, this graph is showing the number of permits in the green bars; and then the catch-per-unit effort in the blue with the sustainability benchmark going across in red. It also has a recreational fishery with no closed season, commercial gillnet fishery with no harvest limit, and the benchmark is a 25th percentile of the annual catch-per-unit effort mean for the last ten years of 0.43 shad per 92 meter net per hour.

The Savannah River also has a recreational fishery with no closed season, and a commercial gillnet fishery with no harvest limit; and the benchmark here is shown. It's also 25th percentile of the annual mean catch-per-unit effort for the last ten years, 1.1 kilograms of

shad per 92 meter net per hour. This fishery has been above that sustainability benchmark since the last plan was imposed.

The Black River has only two participants; so it has confidentiality issues. It's a very small fishery. It's similar to the others. The recreational fishery has no closed season. There are no harvest limits for the commercial gillnet fishery, and it also has a benchmark for the annual mean catch-per-unit effort for the last ten years, derived from the commercial harvest.

The Combahee River is similar to the Black River; only two or fewer participants and it has similar benchmarks for its annual mean catch-per-unit effort for the last ten years. This one is 0.53 shad per net per hour fished. South Carolina would like to consider all open fisheries to be sustainable.

There is a 95 percent of the commercial harvest that occurs in Winyah Bay and the Santee Cooper River System. These stocks have been increasing in the last 40 years, and are relatively stable for the last ten years. The commercial fisheries in the black, Edisto and Combahee Rivers are small, and these stocks in these rivers remain stable but reduced from historic estimates. South Carolina proposes additional protections for these stocks in the form of restricting commercial and recreational fisheries. Here are those additional measures. They would like for those rivers to reduce the recreational bag limit from ten fish per day to five, and reduce the amount of nets allowed in those commercial gillnet fisheries as well. Part of the impetus here is to reduce the amount of sturgeon bycatch.

The TC reviewed this plan. We had several modest recommendations. We want to add a table summarizing benchmarks and responses. We asked to improve the language to define what management responses would occur if thresholds are reached. For the next plan we

asked them to evaluate additional biological and juvenile abundance index metrics to use as plan metrics.

We also asked them to consider joint coordination with North Carolina on the Great Pee Dee River, as well as joint coordination with Georgia on common management responses for the Savannah River. With this we recommended approval to the Board for the South Carolina plan. Are there any questions on the South Carolina plan?

CHAIRMAN CLARK: One over here, Jay, Roy.

MR. JASON McNAMEE: A couple of questions on a couple of, I guess they're calling them benchmarks. I'm just a little confused. They look to be at least on two of them, their red line. It looked to be below where any of the data was. I'm just curious. It's supposed to be a percentile of the landings. Is there other data that's not presented on the graph that is being accounted for? That's my question.

MR. CHASE: It's a good question, and I puzzled on that at first. But what they're doing in most cases, they're selecting the previous ten years. In some cases that's going to raise that 25th percentile up above the whole time series. I think that might be what you're seeing. Let's bring up an example. Do you want to bring up the Cooper River and just take a look at that? If any Board members from South Carolina have any further insight on this, please chime in. But I think it's a case of using the previous ten years to develop that 25th percentile produces that.

CHAIRMAN CLARK: Follow up, Jay?

MR. McNAMEE: Yes. I think this is a good example. There were a couple that were even a little more extreme where that red line is set below where any of the data was represented. I see, so you're suggesting that that red line is set on a subset of those blue dots on there. I

presume in this case it would be some of the earlier time series.

MR. CHASE: Right, and the whole premise, it's the 25th percentile of the data distribution from the series. It's going to be set at that lower quartile to begin with. Then you're going to use the previous ten years to adjust it. In some cases I think it looks to be, it's not where you would expect the 25th percentile to be in some cases.

CHAIRMAN CLARK: Roy Miller.

MR. ROY W. MILLER: I noticed in the presentation some variation in the creel limits. Can you refresh my memory, Brad? What is the guidance in our plan, with regard to creel limits for American shad in sustainable fisheries?

MR. CHASE: In terms of Amendment 3, you're asking the guidance from Amendment 3? I believe that it's up to the jurisdictions to set those creel limits.

MR. KIRBY ROOTES-MURDY: My recollection is that depending on what the SFMP lays out for the benchmarks and their ability to monitor that that there isn't a threshold in which they have to have above or below a certain creel limit. It's really at the discretion of the state, depending on what they say that is sustainable for those systems.

MR. MILLER: Yes, I was wondering. Ten seems to be a common denominator in many systems. I just wondered if there was state-by-state flexibility on that.

CHAIRMAN CLARK: Okay any further questions? John.

MR. JOHN MANISCALCO: Back to the benchmark issue. I guess I'm a little confused. Your benchmark is defined by the last ten years; so is it a constantly changing measure? Yes.

MR. CHASE: I apologize. Could you repeat the question, please?

MR. MANISCALCO: My question, so if your benchmark is defined by the last ten years of data. Is it a constantly changing mark, or are you using that 2005 to 2015 time series moving on for the future?

MR. CHASE: What has happened I think; a number of states have used that as a benchmark that changes with each year. Other states such as North Carolina with a previous plan, they chose to fix theirs for the five-year period. It's the decision of the states to what they do in that case. Jeff just reminded me that there were some concerns about the situation with the 25th percentile for some of these graphs. We asked South Carolina to clarify that with their final plan. This point has been brought up by others as well.

CHAIRMAN CLARK: Any further questions? Seeing none; Brad, please proceed with the shad tour of the south.

GEORGIA

MR. CHASE: Okay, next up is the state of Georgia. The Wildlife Resources Division produced this update of their 2012 plan. They have five coastal rivers with shad fisheries; two are presently open for commercial fishing, the Altamaha and the Savannah River; and there are five that are open for recreational fishing.

But recreational fishing really occurs just in the two rivers the Savannah and the Ogeechee River. There is no recreational fishery currently occurring in the Satilla and St. Marys River, although the plan asks that these rivers remain open. Here is a graph on commercial landings in the Altamaha River from 1980 to the present; and you can see these landings have declined substantially over time, with relatively low landings in recent years.

They also derived estimates of total population size and exploitation rates for a mark-and-recapture study conducted in the Altamaha River. Here are the graphs that show those data. In the red we have the exploitation rate, and in the black you have the population size, the population estimate from the mark and recapture study. You can see this graph is really going the way we would like to see them go; with numbers of fish going up, and exploitation rate going down. Here is the catch-per-unit effort fishery independent index; which is the number of shad caught per gillnet foot per hour. This metric is at 1.11 shad per foot hour. In the recent years of the previous plan, you can see they've been well above that benchmark. To summarize the Altamaha River, they have landings that have been fairly stable for the last 15 years.

The population estimates have been over 200,000 fish in recent years; and the exploitation rate has been below 20 percent since 2010. The independent gillnet CPUE benchmark has remained, or the actual survey results remained above the benchmark in recent years. They would like to maintain the current benchmark and utilize the same for both commercial and recreational fisheries. They propose no regulatory changes in the present plan.

The Savannah River is the only system where they have a fishery dependent index that was developed; and this is from a gillnet fishery, and it's the kilograms of shad per trip, and the benchmark is 25.5 kilograms they use for the Savannah River. It's a more recent series from 2010; oh excuse me this is the electrofishing series, which was developed in 2010, below the new Savannah River Bluff the Lock and Dam.

It's a relatively new series they hope to develop and use in the next plan. To summarize for the Savannah River, they have commercial catch-per-unit effort, American shad has remained above the current benchmark since the last

plan. They have a new electrofishing adult catch-per-unit-effort series they hope to develop for future plans.

They proposed changing the current benchmark to the 25th percentile to be consistent with South Carolina in this shared jurisdiction. They want to change it from 25.5 kilograms per trip to 9.03 kilograms per trip; and to use that benchmark for both commercial and recreational fisheries. They propose no changes for the Savannah River for this plan.

For the Ogeechee River they have electrofishing survey that looks at the catch of shad per hour; and they're developing a sustainability benchmark since 2010. Again, it's a recent series. They hope to develop this for use in future plans. The Ogeechee River is open only to recreational fishing. They had no survey data prior to 2010.

Now they have the electrofishing survey. They would like to utilize a benchmark from this survey at the 25th percentile. The proposed benchmark would be 3.7 shad per hour. They're proposing no regulatory changes for the Ogeechee River for this plan. For the Satilla and St. Mary's River, they've been closed to commercial fishing for a long time.

They are technically opened for recreational fishing due to statewide regulations; but there is no evidence of any activity occurring in these two rivers. They have occasional surveys that are conducted that do not find shad typically. This was an issue where the TC felt that to have these fisheries open they would need to have a sustainability fishery plan for the rivers.

Georgia disagreed and felt that it wasn't practical; that it would require changes to their regulations. They asked to have these rivers remain open. Here is another case where we have rivers that are open to fisheries, but there are no sustainability metrics. We are going to

ask the Board to consider how we can connect this problem with Amendment 3 language.

For the Georgia plan the TC reviewed it. We have a few recommendations. We discussed in detail again this whole question of having an open fishery with no monitoring or sustainability metrics. We asked Georgia to improve the language on their adaptive management for cases where their benchmarks would be exceeded.

We asked them to add a section for future objectives that included development of biological metrics such as length, age, and juvenile abundance indices that could be included in the next plan. With this we recommended the plan for approval by the Board. Are there any questions?

CHAIRMAN CLARK: Okay seeing no questions, Brad would you please proceed with Florida?

MR. CHASE: Sure.

CHAIRMAN CLARK: Excuse me, Virginia.

VIRGINIA

MR. CHASE: All right we're near the end here. Virginia is a plan that has no presentation; it's a very simple plan, very similar to the Potomac River's plan, where it simply allows a commercial bycatch in their gillnet fisheries, in the James, York, and Rappahannock Rivers. This has been approved since 2006, to allow for this minor bycatch to occur when shad are caught incidentally in fisheries for striped bass, croaker, catfish and other species.

They have a cap of 30 permits that are allowed, so it's a very small fishery. The bycatch is sampled by VIMS routinely. They bycatch harvest since 2011 since the last plan has been 4 percent of the total harvest; with 90 percent of total harvest going towards research and stocking efforts. At 4 percent it's a very small

amount of the overall total harvest in a closed fishery.

The 2015 harvest estimate was 1,185 pounds of shad; which was estimated to be 332 fish, and 22 of 29 issued permits had landed some shad. This was a case of simply asking to maintain this bycatch allowance. The TC reviewed the plan; and our comments were quite limited. We just asked to have language inserted that would indicate that there is monitoring of the permittees to ensure there was not targeting occurring for shad.

There was some concern at the TC over whether there could be direct targeting with this plan. We asked, some language was inserted to ensure that there would be monitoring to prevent this, and that measures would follow if they identified some permittees as targeting shad under this plan. With that we recommend that the Board approve the shad plan. Any questions on the Virginia plan?

SUMMARY OF TECHNICAL COMMITTEE RECOMMENDATIONS

CHAIRMAN CLARK: Are there any questions? I don't see any; so Brad, you wanted to then summarize the TCs recommendations here?

MR. CHASE: All plans were recommended for approval by the Board; and the TC did generate a memo that summarized our concerns on a couple issues that were common to these plans. That was over the issues that I mentioned of having rivers where harvest was proposed to be open; with no sustainability metrics or no sustainability plan for that particular river.

Amendment 3 really doesn't allow for this. Amendment 3 directs states to close those fisheries or have catch and release only for recreational fisheries in those cases. Several states argued that they had these remote rivers that were not easy to monitor; with little evidence of recreational activity occurring, and

that it wasn't really practical to start a survey series to develop these sustainability metrics. The TC felt that we should come back to the Board; and ask the Board to consider directing the TC to look at this discrepancy, and develop ways to try to improve this. That is in the memo that we have for you.

Also at the same time, we felt there was some inconsistent application of the stock assessment recommendations for developing benchmarks related to mortality estimates. We felt there was a need to try to improve the standardization of the way benchmarks were developed; and to utilize the recommendations from the stock assessment on using mortality estimates.

Let me summarize the request the TC is making to the Board. We're asking the Board to task the TC with meeting in person to develop proposed improvements to Amendment 2 and 3, in regard to the following items. The management and monitoring of rivers with low abundance in harvest of shad and river herring, Number 2, to develop standardization of sustainable fishery management plan requirements, in terms of their content, the metrics, and the management responses to exceeding thresholds, Number 3, incorporation of stock assessment information into these plans, and develop discussion on timelines for renewing plans.

There was some discussion on whether we should adjust our timelines. Right now we're basically following a five-year plan for renewing these plans. We're also asking for looking at the clarification of de minimis status; and how it pertains to the sustainable fishery management plans.

There was some discussion that if a state has de minimis status that they should be able to maintain recreational fisheries in some of these fisheries that do not have monitoring. Again, review the number of years of data that is

required before developing a sustainable fishery management plan. I think we've been using ten years as kind of the window to use a data series or a survey that could be acceptable for a benchmark.

But Amendment 3 and Amendment 2 really don't specify that; and it's been something we've just been adopting, so we wanted to get some clarification on that as well. These items, the TC feels all should be addressed. We think we probably should do this through an in-person meeting in the coming year; but that would take the direction from the Board for that to happen.

CHAIRMAN CLARK: Thanks, Brad. Are there any questions for Brad about the memo or the TC recommendations? John, go ahead.

MR. MANISCALCO: In the sustainable fishery plans that you reviewed. I think only North Carolina utilized an assessment-based F. I was just wondering if there are other states that utilize assessment based, say reference points in their management, and if you think the current state of science is good enough to support its use in management elsewhere.

MR. CHASE: It's a good question, and I think the upcoming benchmark stock assessment is going to look at that closely and assist with this. I think even North Carolina has a relative F that is used, which is a proportion; and they have this one F in one system. It is really something that was recommended in the 2007 stock assessment, and it really hasn't come to be. In most cases the data really isn't there to have age-structure mortality estimates produced. I think I can safely say that is going to be a goal of the stock assessment update to address that.

CHAIRMAN CLARK: Okay next question is Justin.

MR. JUSTIN DAVIS: I just wanted to speak generally in support of the memo to the Board

from the TC. I think given that we're five years into this process, it's a good idea to take the opportunity to sort of streamline and improve this process with these sustainable plans. I definitely think that this idea of sort of especially making sure that the management responses in these plans are more clear is a great idea.

I do think that we want to make sure though that in this effort to standardize the approach to get more prescriptive, to tie it more closely to the stock assessment, that we don't make it so rigid and prescriptive that it doesn't allow for states to sort of use the best available information they have to define whether their fisheries are sustainable. For instance, I found Georgia's argument that they had eight years of creel data from a couple of these rivers that showed the fishery was very small or nonexistent.

Mandating that they start monitoring those rivers on an annual basis isn't likely to change that picture. In Connecticut we have a similar situation, in which we conducted annual creel surveys on the Connecticut River for a number of years; which documented pretty well that the shad fishery had declined at very low levels. We have staff, who are on the river every spring, would notice if there was suddenly like a three or four-fold increase in the number of shad fishermen out there.

I do think that we want to, as we look to improve this process, maintain some latitude for states to be able to sort of if they don't have annual monitoring data, and feel like it would be an undue burden to take on those programs that they have an opportunity to present their best available information of the Technical Committee, and that the Technical Committee has the latitude to take that into consideration and make a determination on whether the fisheries are sustainable.

I think we have to keep in mind that the sustainability metrics aren't truly sustainability metrics in the truest sense of the word; they are metrics for appropriately precautionary management. I think we just need to make sure as we improve this process, we try to maintain some latitude here for states to use the information they have.

MR. CHASE: I agree. If I could just follow quickly, I think the TC felt that the first round of plans that were developed in 2011 and '12, were really done, it was the beginning of the process, and in many cases the information was all that was available to use either count data or catch-per-unit-effort data. At this point the TC feels that it's time to revisit the process; and see what we can do to improve the standardization.

CHAIRMAN CLARK: The next question is from Jay.

MR. McNAMEE: First, I'll commend the TC. These weren't necessarily stock assessments, but it was a lot of information to synthesize; so nice job with all of that. It looked like a big piece of work there, so good job. I will echo support for the Technical Committee recommendations. I think they all make a lot of sense; and in fact echoed a lot of the thoughts I was having as we were reviewing. I've got two comments, quick comments, because I think Justin covered a lot of it already. I will also acknowledge that I'm coming off the bench here on this Board. Mark Gibson usually sits in this seat; so I'm maybe not as up to speed as Mark would be. But again, I will support the need for some consistency in the metrics.

I understand that the information available is diverse; and you're doing the best you can with it. But I think there are thematic things throughout that you could probably pull together; and get a little more consistency. One of the other things that I noticed is linking the metrics together where possible.

An example would be if you have recruitment metric, rather than setting a blind quartile for the benchmark, looking at that recruitment amount and matching it up with a relative abundance index, and finding those spots where it looks like that was a good level of recruitment to feed into the population. Just as an example that would be more of a, not quite an assessment, but trying to link it into a population dynamics type context.

MR. CHASE: A quick follow to that. One of the things the TC has been considering is asking for the use of generalized linear models to try to improve the datasets; and bring some of these different indices together in those types of models.

CHAIRMAN CLARK: The next question is from Michelle.

DR. MICHELLE DUVAL: I think just echoing some of what Justin said earlier about the TCs request for tasking. I think maintaining the flexibility for states to use the best information available; recognizing the diversity of information that is available throughout these different areas. I think having been around for the development of the sustainable fishery plan concept.

I absolutely support looking at trying to establish some consistency with how these plans were presented with the content that's within them, with thresholds for a given metric potentially standardizing some of the management responses. But I think my concern is just that any attempt to dictate, here are the metrics states should absolutely use, is really going to squeeze us into a corner where we may not be using the best information that we have available.

I would just ask the TC to keep that in mind. Then I think with regard to fishing activity that may or may not be occurring in unmonitored rivers. That really boils down to how you define a system. I think in the case of North Carolina,

the plan that we have submitted is no different, with regard to the systems than the plan that we originally submitted back in 2012.

I think we're probably one of the states where we've actually had to take significant management action in of our systems in the Albemarle system. You saw our commercial season went from eight weeks down to three; because we hit some of the management triggers that we had set up. I would say that in terms of the areas where there is clearly zero to limited harvest, whether it's commercial or recreational occurring, and there is no spawning activity occurring.

We need to really keep in mind how we're defining a system here. I think with regards to issues like the Pee Dee River, you know we put forward in our plan that we would be more than willing to complement the measures that South Carolina has set up as a result of their monitoring; because their monitoring is occurring downstream of where any recreational fishing in the inland waters of North Carolina would be occurring. I think another voice that needs to be brought into the conversation as the TC debates this, is the Virginia Department of Game and Inland Fisheries; because a similar situation is happening with the Virginia stretches of the Meherrin, the Blackwater, and the Nottoway Rivers, which all flow into the Chowan in North Carolina.

Our staff reached out to some of our colleagues at that sister agency; and they really weren't aware that this change had occurred that if there was not monitoring occurring in some of these areas that harvest was supposed to be closed. I would recommend reaching out to folks at that agency; so that they can be a voice in this conversation as well. I guess finally, in terms of the incorporation of the Z-30 benchmarks that came out of the previous stock assessment.

I would ask that the TC go back and reread some of the minutes from the Board conversations that occurred back in 2008, as we were discussing this. Because there was a lot of conversation about the utility and uncertainty in some of those Z-30 benchmarks; particularly with regard to determination of natural mortality, particularly with regard to what we can control in terms of fishing mortality versus mortality that's occurring from other human-induced activities.

We had a pretty robust debate about that around the table. I would just note from the peer review report that it states that although the review panel considered the Z-30 benchmark sufficient for the region-wide comparisons presented in this assessment. This reference point is not directly linked to the management issues from many of the populations.

The Review Panel encourages the development of population-specific reference points appropriate for the alleviation of the threats that exist for many of these populations. I think there is a lot of information out there that the TC is going to need to consider as you all embark on this conversation.

CHAIRMAN CLARK: Brad, any of those things being considered by the TC already?

MR. CHASE: Very good recommendations. I think we've got some homework to do; and I think the TC shares those concerns. I think it's a good time to revisit this and see what we can do to improve the process.

CHAIRMAN CLARK: Okay next is Lynn.

MS. LYNN FEGLEY: I also echo support for this; particularly for any state that may want to consider how to allow some modest harvest. Having some consistency would be very helpful, but my question pertains to process. The TC will go and conduct these reviews, and come up

with recommendations. Would we then be looking at an addendum to implement some of these things; or where do we go after we hear back from the TC?

CHAIRMAN CLARK: Kirby, do you want to respond to that?

MR. ROOTES-MURDY: The timing of all this really needs to be looked at relative to the upcoming stock assessment that Jeff laid out. We have kind of a two-part process. The TC, as Brad outlined, would like to get after this sooner rather than later. But in terms of a change to the management program, probably the best time to get after that would be following the upcoming benchmark stock assessment. At that point, as we always do, the Board would consider possible management action. That is where a potential change, either through an amendment or an addendum would be probably most appropriate.

CHAIRMAN CLARK: Pat.

MR. PATRICK C. KELIHER: I'll try to be brief here, because a lot of the things have been said. But the key point is flexibility here. I think states that would like to have a modest recreational fishery, in the case of Maine, is important to then not have any burdensome, costly measures put in place for monitoring those fisheries. For the case of the state of Maine, we've got roughly four areas where we have directed fisheries. We have a two-fish bag limit. If you saw all of these creel limits listed here were all ten-fish bag limits.

I think there needs to be some ways to address that. I would also say that I was looking back in the notes; and it looks like Maine had only requested de minimis status for our commercial fisheries. But in fact the letter that we sent in May was to request de minimis status on our commercial and recreational fisheries; as associated with biological data and collection of

that data. I just want to make sure that that is clear as well.

CHAIRMAN CLARK: Do you want to respond to that, Kirby?

MR. ROOTES-MURDY: Yes thank you, Pat. That communication might not have been fully conveyed to all the staff, as we've had some turnover. When we get to the FMP review, please be sure we'll have that noted but we can address that then.

CHAIRMAN CLARK: Cheri.

MS. PATTERSON: Yes I would like to make a motion. I would like to move that the Board approve the six SMFPs that were just presented. Do you want me to read that?

CHAIRMAN CLARK: Is that your motion?

MS. PATTERSON: Move to accept the Sustainable Fishery Management Plan Updates for shad for Connecticut, Potomac River Fisheries Commission, North Carolina, South Carolina, and Georgia; and task the Technical Committee with developing proposed improvements to Amendments 2 and 3, to address SFMP inconsistencies with the management documents.

CHAIRMAN CLARK: Do we have a second? Pat Geer. Discussion of the motion. David.

MR. DAVID V. BORDEN: To the maker of the motion, does this include the requirement for the states to implement the Technical Committee recommendations; which were put up on the Board on a river-system-specific basis? In other words, they had language changes that they wanted implemented as part of the proposal.

CHAIRMAN CLARK: Cheri.

MS. PATTERSON: It's my understanding that they did make those changes. Am I incorrect? When they resubmitted the plans they had made those changes?

MR. CHASE: Yes in those cases, and the one question mark remaining is over what to do with rivers that are unmonitored, but have harvest.

MS. PATTERSON: However, that is being addressed through the TC process.

MR. CHASE: Correct.

MS. PATTERSON: Okay, thank you.

CHAIRMAN CLARK: Okay, further discussion? Seeing none; oh, Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: I think staff added Virginia to the motion after Cheri read it. We may want to make sure that the maker and seconder are comfortable with Virginia being included as well.

MS. PATTERSON: I'm very comfortable with that.

CHAIRMAN CLARK: Pat. Very good, are there any objections to the motion?

MR. ROOTES-MURDY: **I would just like to perfect the motion. We have SFMPs for Connecticut, Potomac River Fisheries Commission, North Carolina, South Carolina, Georgia; and then Virginia is a bycatch plan, so it's not their SFMP, just so the Board is clear on that.**

CHAIRMAN CLARK: It looks like it is being modified again. Are the maker and seconder? Okay. Roy.

MR. MILLER: Mr. Chairman, as long as we're going to be technical with the motion, wasn't

the Potomac River Fisheries Commission plan a bycatch plan as well?

CHAIRMAN CLARK: Good question. Okay, we've got another change.

MR. ROOTES-MURDY: Just to clarify. The Potomac River Fisheries Plan I believe is an SFMP and not a bycatch plan.

CHAIRMAN CLARK: Okay is this our final motion? The maker and seconder are good with this. **Are there any objections to the motion? Seeing none; then the motion carries unanimously.**

CONSIDER APPROVAL OF THE 2017 FMP REVIEW AND STATE COMPLIANCE REPORTS

CHAIRMAN CLARK: Now we're on to the next agenda item; which is to consider approval of the 2017 FMP Review and State Compliance Reports, and Caitlin Starks will take that.

MS. CAITLIN STARKS: Hopefully this will look familiar, as you all just went through the 2015 FMP Review at the last meeting. This will be the FMP Review for the 2016 fishing year for shad and river herring. To start we have a figure here of the commercial landings from 1950 to 2016, for river herring and American shad.

As you can see there are steep declines starting in the '70s with stable low catch for the most recent years for both species groups. This is in part due to the moratoria implemented in Amendments 2 and 3. For shad commercial landings the states with landings remain Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia. For river herring states landings were from Maine, New York, Maryland, and South Carolina. In 2016, a total of 239,067 pounds of American shad were landed; which is a 50 percent decrease from landings in 2015. There were 100,079 pounds

of hickory shad landed, which is a 35 percent decrease from 2015, and 1.97 million pounds of river herring were landed in 2016, which is 2 percent less than 2015 numbers.

South Carolina and North Carolina had the highest landings of American shad, respectively, and river herring I won't disclose, because it's confidential. Moving on, several states are conducting passage counts that are required by Amendments 2 and 3 for river herring and shad. These are occurring in Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, Pennsylvania, Maryland, and South Carolina.

The total coastwide river herring counts were 5.51 million fish; and for shad 540,917. It's a 44 percent increase for river herring compared to 2015, and a 12 percent decrease for shad compared to 2015. Several states are also participating in stocking efforts. In Maine, Massachusetts, Rhode Island, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, and Georgia, there are stocking efforts being conducted.

In 2015 there were 23,535,342 shad stocked of hatchery origin; and this represents a 9 percent increase from 2015. There were also 974,728 alewife stocked in Maine, though these fish were wild caught and transported upstream to spawning areas; but were not hatchery raised, and therefore are not addressed in the FMP review.

As part of the annual compliance reports the states also report any sturgeon interactions with the shad and river herring fisheries, and in 2016, 147 interactions were reported in total; and these occurred in Rhode Island, Connecticut, New Jersey, the Delaware Bay, PRFC, Virginia, North Carolina, South Carolina, and Georgia.

All of these sturgeons were released alive with the exception of two fatalities, which occurred in North Carolina. Several states have

requested de minimis status for their shad and river herring fisheries. For shad these states are Maine, New Hampshire, Massachusetts, and Florida; and for river herring just New Hampshire and Florida. These states all qualify for de minimis status and the PRT recommends approving these requests. In the review of the compliance reports the PRT did not encounter any other compliance issues. That is all, so any questions?

CHAIRMAN CLARK: Are there any questions for Caitlin? Michelle.

DR. DUVAL: Not a question, just a comment about some of the information that is in the FMP Review. At the top of Page 6 in the review, there is a sentence in there that says recent commercial landings continue to decrease, despite North Carolina restricting the commercial harvest of river herring in 2015. Then the next sentence notes that river herring landings were reported from North Carolina. North Carolina didn't have any river herring landings in either 2015 or 2016; because we've actually had a no harvest provision since 2007, not 2015.

I think there might be some confusion that in 2015 we actually removed a discretionary harvest provision that the Director had that allowed for extremely minimal harvest, the four days surrounding the Easter weekend to provide herring for festivals. That discretionary harvest provision was removed. The maximum amount that had ever been harvested under that very narrowly permitted discretionary harvest provision was 1,800 pounds in any one year. I think there is some language that I can work with staff on to correct that statement there on the top of Page 6.

CHAIRMAN CLARK: Do you want to respond to that, Caitlin?

MS. STARKS: Thanks, Michelle. I can definitely work with you on that.

CHAIRMAN CLARK: Then we had a question from Pat.

MR. KELIHER: I just want to confirm that Maine's request for de minimis status was for both recreational and commercial.

CHAIRMAN CLARK: Thanks, Pat. Are there any other questions? Justin.

MR. DAVIS: I just have a sort of process related question. The Plan Review Team is conducting the Fisheries Management Plan Review, and then the Technical Committee is reviewing the Sustainable Fishery Management Plans. I'm just wondering to what degree is that process coordinated; or how is it sequenced? Was sort of the Technical Committee doing the SFMP Reviews before the Fisheries Management Plan Review?

CHAIRMAN CLARK: Do you want to respond to that, Kirby?

MR. ROOTES-MURDY: Sure thing. This year is kind of unusual, given that the SFMPs have not been annually reviewed. This is the first time we've done that in a while, with many of the states seeking to update their plans and get them kind of recertified in that way. We did have the PRT go through and look at compliance reports, and then we did a conference call having the Technical Committee go through each of these SFMPs this year.

As you can see in the meeting materials there are some notes about how both in the Plan Review Team's look at the compliance and the TCs look at the SFMPs, there were notes on the SFMPs between those two groups. But again, this is kind of an unusual year where we don't normally have that kind of joint review or separate reviews of the same plan.

CHAIRMAN CLARK: Does that answer your question, Justin? Okay, are there any further questions? Cheri.

MS. PATTERSON: Yes, on Page 13, the PRT is looking for clarification from the Board as to whether it's the intent of Amendments 2 and 3 to reinstate recreational fishery monitoring coastwide; and if so should there be some sort of template. Can you indicate how much of a recreational fishery there is that would institute the need for a large, wide scale, creel survey template; understanding that the MRIP Survey is problematic in this venue?

MR. ROOTES-MURDY: Yes, I think one of the things the Plan Review Team kind of struggled with is that we know that there are a number of states that have recreational fisheries; but we don't have a great handle on what the catch is in a number of those systems. Moving forward, both in considering the next upcoming assessment, trying to better account for that either removals or biological sampling that could be benefited from looking at those systems more, is something the PRT was trying to get a better handle on, if we were to go down that road. But as you've noted, MRIP does not sample shad and river herring well; and therefore we can't really use that as a basis these days for assessing them.

CHAIRMAN CLARK: Follow up, Cheri.

MS. PATTERSON: Well, I think it might be difficult for some states to put together a coastwide creel survey. I think that that is not the intent of Amendments 2 and 3; to reinstate one coastwide. Where do we move forward with this conversation?

MR. ROOTES-MURDY: I think similar to the question that was raised about when a management change would happen, with regards to shad, coming out of the next benchmark stock assessment would be probably the best time to look at the current state requirements for monitoring, and maybe consider it then if that is the pleasure of the Board, but timing wise that would probably be the best venue to do so.

CHAIRMAN CLARK: Okay, I had another question from Michelle.

DR. DUVAL: Not a question, Mr. Chairman but just a comment specifically in regards to this topic; in terms of a creel survey template. In North Carolina we've worked with our partners at the Wildlife Resources Commission; our sister agency. Our staff has worked with their staff beginning in 2010-2011 to expand our creel surveys up into the estuarine and up into the freshwater portions of all of our river systems that you saw in the Sustainable Fishery Plan for shad.

It's specifically because MRIP was not sampling those fisheries very well, so we feel like we do have reliable recreational harvest information in those systems. I guess I would just note that one of the two systems that the TC was concerned about in our plan as being unmonitored, we have excellent creel sampling there.

There is zero recreational harvest in the system. I guess I would just note that as this conversation moves forward, as Cheri said, that there is possibly a template that the Plan Review Team of the TC could look to; and I would encourage folks to reach out to the TC members from North Carolina in that regard.

CHAIRMAN CLARK: Are there any further questions, discussion? Seeing none; we'll entertain a motion. Roy Miller.

MR. MILLER: I move that we accept the review of the fishery management plan for shad and river herring for the 2016 fishing year; with the corrections so noted by Board members today.

CHAIRMAN CLARK: Thank you, Roy, do we have a second? Justin. Roy, would you modify that for the de minimis?

MR. MILLER: **Sure, I'll read it again. Move to accept the 2017 FMP Review of the 2015**

fishing year and state compliance reports; and approve de minimis requests for Maine, New Hampshire, Massachusetts, and Florida for shad, and de minimis request for New Hampshire and Florida for river herring.

CHAIRMAN CLARK: Justin, are you okay with the changes? Okay good. Are there any objections to the motion? Oh, excuse me, I'm sorry, Pat.

MR. KELIHER: I just want to make sure that it's clear; because it says something different in the document that I'm reading that my request was for commercial only, and it was for recreational and commercial. I want the record to be clear on this.

CHAIRMAN CLARK: I will just turn that over to you. Kirby, is that clear from this that it includes both recreational and commercial?

MR. ROOTES-MURDY: To clarify. If it would be helpful, we could specify that in here that it is both commercial and recreational for Maine if that is your pleasure.

CHAIRMAN CLARK: If we can make those changes are the maker and seconder of this motion okay with that? Both are in agreement. Okay. **Oh, and are they also okay with clarifying that it's 2016 not 2015? Okay, good. Are we settled with this motion right now? Good. Now, are there any objections to this motion? Seeing none; the motion is approved.**

OTHER BUSINESS

CHAIRMAN CLARK: That brings us to our final action, which is Other Business/Adjourn.

This really isn't another business item, but Kirby pointed out to me in the Supplemental Materials there was a sheet outlining the activity level for this plan. I think it's over there at the table also, but it shows that this is a highly active plan right now. There are a lot of tasks that are being assigned to the Technical

Committee and the Stock Assessment Committee. I guess other than making the Board aware of that are there any comments you would like to make about that, Kirby?

MR. ROOTES-MURDY: No. We've moved to include this information for all the species boards, so please be sure to look at that in the supplemental materials. But given today's discussion, it is just important to note that with the change in the upcoming stock assessment, and then this TC tasking that that will continue to elevate maybe a shad and river herrings task to what we've been calling kind of a high activity level. Just to be cognizant of that for future shad and river herring discussions.

ADJOURNMENT

CHAIRMAN CLARK: Is there any other business to come before this Board? Seeing none; the Board is adjourned, thank you.

(Whereupon the meeting adjourned at 9:27 o'clock a.m. on October 17, 2017)