

**PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
ATLANTIC STRIPED BASS MANAGEMENT BOARD**

**The Westin Crystal City
Arlington, Virginia
February 6, 2019**

Approved April 30, 2019

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1. **Approval of agenda** by consent (Page 1).
2. **Approval of proceedings of October 2018** by consent (Page 1).
3. **Move to task the TC with providing the Board with a report that shows the reductions in harvest needed to reduce F to F threshold (0.24) and F target (0.197) and also providing one example of recreational bag and size limit combination (if necessary, seasonal restrictions) needed to achieve these conditions a) on the coast and b) in the Chesapeake Bay and report back to the Board in May** (Page 18). Motion by Doug Grout; second by Justin Davis. Motion carried (Page 24).
4. **Move to have staff compose a letter to NOAA Fisheries opposing opening the Federal Block Island Sound Transit Zone for Board review in May** (Page 27). Motion by Pat Keliher; second by Ray Kane. Motion carried (Page 29).
5. **Move to approve changes to Virginia's Striped Bass Monitoring Program** (Page 35). Motion by Rob O'Reilly; second by John Clark. Motion carried (Page 36).
6. **Move to adjourn** by consent (Page 37).

Proceedings of the Atlantic Striped Bass Management Board February 2019

ATTENDANCE

Board Members

Pat Keliher, ME (AA)	Adam Nowalsky, NJ, proxy for Sen. Andrzejczak (LA)
Steve Train, ME (GA)	Heather Corbett, NJ, proxy for L. Herrighty (AA)
G. Ritchie White, NH (GA)	Loren Lustig, PA (GA)
Doug Grout, NH (AA)	Tim Schaeffer, PA (AA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)	Andy Shiels, PA, Administrative proxy
Raymond Kane, MA (GA)	John Clark, DE, proxy for D. Saveikis (AA)
Mike Armstrong, MA, (Chair) proxy for D. Pierce (AA)	Roy Miller, DE (GA)
Sara Ferrara, MA, proxy for Rep. Peake (LA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
David Borden, RI (GA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
Jason McNamee, RI (AA)	Russell Dize, MD (GA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Mike Luisi, MD, proxy for D. Blazer (AA)
Sen. Craig Miner, CT (LA)	Bryan Plumlee, VA (GA)
Bill Hyatt, CT (GA)	Rob O'Reilly, VA, proxy for S. Bowman (AA)
Justin Davis, CT (AA)	Chris Batsavage, NC, proxy for S. Murphey (AA)
Jim Gilmore, NY (AA)	Michael Blanton, NC, proxy for Sen. Steinburg (LA)
Emerson Hasbrouck, NY (GA)	Martin Gary, PRFC
John McMurray, NY, proxy for Sen. Kaminsky (LA)	Derek Orner, NMFS
Russ Allen, NJ, proxy for T. Fote (GA)	Mike Millard, USFWS
	Bryan King, DC

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

Ex-Officio Members

Nicole Lengyel, Technical Committee Chair

Staff

Robert Beal
Toni Kerns
Katie Drew

Max Appelman
Jessica Kuesel

Guests

Karen Abrams, NMFS	Angela Giuliano, MD DNR	Kelly Place, Williamsburg, VA
Bill Anderson, MD DNR	Ed Green, MD Charterboat Assn.	Danny Pritchard
Steve Atkinson, VA SSA.	Zach Greenberg, PEW Trusts	Alan Risenhoover, NOAA
Karl Blankenship, Bay Journal	Brian Hardman, Stevensville, MD	Dan Ryan, DC
Frank Bonanno, CCA	Ken Hastings, Mason Springs Cons.	Alexei Sharov, MD DNR
Josey Cline, ASA	Peter Himchak, Omega Protein	David Sikorsky, CCA
Allison Colden, CBF	Shawn Kimbro, CCA	Marty Simonet, Ches. Beach, MD
Jeff Deem, VMRC	Phil Langley, PRFC	Jack Travelstead, CCA
Kelly Denit, NMFS	Arnold Leo, E. Hampton, NY	Mike Waine, ASA
Chris Diehl, Conowingo, MD	Savannah Lewis, MD DNR	Marcus Wilson, MD Charterboat
Phil Edwards, RI DEM	Chip Lynch, NOAA	
Shaun Gehan, DC	Chris Moore, CBF	

The Atlantic Striped Bass Management Board of the Atlantic States Marine Fisheries Commission convened in the Jefferson Ballroom of the Westin Crystal City Hotel, Arlington, Virginia; Wednesday, February 6, 2018, and was called to order at 2:25 o'clock p.m. by Chairman Michael Armstrong.

CALL TO ORDER

CHAIRMAN MICHAEL ARMSTRONG: Good afternoon folks. I would like to call to order the Striped Bass Board. I'm Mike Armstrong, your Chair.

APPROVAL OF AGENDA

CHAIRMAN ARMSTRONG: You all have an agenda; any improvements, additions? Yes, Toni.

MS. TONI KERNS: If it pleases the Chairman; I would like to give an update on the Striped Bass Cooperative Tagging Program.

CHAIRMAN ARMSTRONG: Yes that pleases me. Okay, any disapproval of the agenda with the added item? Seeing none; it is approved.

APPROVAL OF PROCEEDINGS

CHAIRMAN ARMSTRONG: You all have the minutes from October, 2018; any revisions, any objection to accepting it as written? Seeing none; the proceedings are approved.

PUBLIC COMMENT

CHAIRMAN ARMSTRONG: At this point we will accept brief public comments on items that are not part of the meeting today.

That would include the assessment. We aren't accepting comments on that. Seeing no comments we'll move on.

**REVIEW OF THE PRELIMINARY
ASMFC STOCK ASSESSMENT SUMMARY**

CHAIRMAN ARMSTRONG: The first item is the Review of the Preliminary ASMFC Stock Assessment Summary. As you know, the official approval has not been issued by NMFS from the SARC yet, so this is called a

preliminary review; so Mike, lead us through.

MR. MICHAEL CELESTINO: I was going to start my presentation off with exactly that remark. These results are considered preliminary. I also want to sort of preface the remarks by noting that we brought a number of models to the Assessment Review in November. The Committee put a ton of work into a migration model; and Gary Nelson in particular.

We anticipate the review not accepting that model for management; so we are bringing forward the model that we had reviewed in 2013. With that I will begin the presentation. I would like to start this presentation the same way we started our presentations in Woods Hole in November; with a huge thank you to all of our committees that worked on striped bass, the Technical Committee, the Stock Assessment Subcommittee, and Tagging Committees.

It really takes a village to move through a benchmark assessment; and everyone did an amazing job. I'll start with some of the bridge building that we did to get us to this new model. I mentioned earlier we started with the 2013 stock assessment review model and data configuration. We updated that with data through 2016; including the old un-calibrated MRIP estimates. We then took that same model completely unaltered, and just plugged in the new calibrated MRIP estimates. Then we created a base model with some of the changes that are described on the slide. In particular, again we are now using calibrated MRIP data, and we have some slides that I'll talk about in a couple of minutes.

We extended the plus group from 13 to 15. We reduced the number of fleets from 3 to 2. The previous implementation of this model had a commercial discard fleet that presented some logistic constraints to management. The Assessment Committee over the last number of years, and I think Gary Nelson in particular, was able to partition those

commercial dead discards into Chesapeake Bay and coastal fleets.

We also made a number of changes to some of our indices. For example, we dropped two indices. We dropped the Virginia Pound Net Index. The Committee had concerns related to the single fixation design of that survey. We dropped the Northeast Fisheries Science Center's Trawl Survey.

The Committee had concerns related to low proportion of positive tows; as well as the elimination of inshore strata that were no longer sampled with the vessel change in about 2008 or so. We added an index. We added a Delaware Bay 30 Foot Trawl Survey that was designed to give us some additional information on Delaware Bay striped bass. We added a ChesMMAP Trawl Survey that was designed to replace some of the information that we were losing from the Virginia Pound Net Index.

We also took two indices that were previously modeled as just fitting to the trend in the data; the MRIP Index and the Connecticut Trawl. But as part of this assessment we were able to develop age composition information for those indices as well; so not the model is able to fit to not just the trend, but age proportions as well.

We also made a change to our Young of the Year Survey; so we have a Young of the Year Survey from Maryland and Virginia, and those surveys are ongoing. One of the things we've heard from review panels over the years are they would like to see a single index that represents the Chesapeake Bay as a whole.

As part of this assessment we were able to develop a Composite Index using some modeling techniques that have been used in other species; and so we now have a single bay wide young of the year Index. We also updated female maturity ogive. That work was done by Angela Giuliano and her colleagues at Maryland DNR. Scale and

otolith ages are used and the terminal year for the base model is 2017.

First, I'll start talking about just some of the general catch information. The plot that's on the screen shows number of fish removals by source. The dark blue bars at the bottom are commercial harvest. The white with sort of blue hash marks are commercial dead discards. The gray bars are recreational harvest, and the gold bars are recreational dead releases.

The commercial harvest peaked in 1999 at about 1.2 million fish. You can see from 2004 through approximately 2014, landings averaged about 950,000 fish; and have been generally trending downwards, averaging about 600,000 fish from 2015 to 2017. You may recall that in that timeframe we also had implemented quota reductions as part of Addendum IV. Commercial dead discards, the releases were very low in the eighties, increased through the nineties, peaking in 1998 at about 350,000 fish, and declined through 2010 or so and have been relatively stable since.

Recreational harvest numbers, these are the gray bars. Recreational harvest increased from very low estimates in the 1980s, increased through the '90s, and peaked in 2010 at 5.4 million fish. Harvest has since declined to about 3 million fish in 2017. Then finally, recreational release losses peaked at 2006 at about 5 million fish, declined through 2011, and have been generally increasing since then.

Then the table that's on this plot just shows sorts of mortality; just in the terminal year 2017, and you can see most of our removals are from recreational dead releases in 2017 at just under 50 percent. Recreational harvest is responsible for 42 percent of the removals; commercial dead releases at 2 percent and commercial harvest are responsible for 8 percent of our total removals.

The next plot is just total removals by fleet; just to illustrate removals by our coastal fleet and Chesapeake Bay fleet, and you can see the blue bars at the bottom are Chesapeake, the orange bars above are the coastal fleet, and the Chesapeake is responsible for about 40 percent of the total removals.

I'll go through and describe a bit about trends in recreational harvest and catch; as part of this assessment. This would bring me, I guess to a discussion on the MRIP calibration process. We were one of the first assessments to go through the peer review process with the new calibrated MRIP estimates. The 2006 NRC Review confirmed what many of you were generally aware of that the Effort Survey was becoming less effective over time.

Subsequent work resulted in adoption and implementation of a mail-based fishing effort survey, and that was implemented in 2018. We were able to use those estimates as part of the current assessment. Also as part of that review that review identified some concerns related to the intercept portion of that survey, and so that was able to be resolved as well.

The final estimates that we're using account for changes to the intercept portion of the survey; as well as the fishing effort survey as well. The plot that's on the screen now shows the percent difference between the original un-calibrated estimates and the final calibrated estimates for harvest; which is the top plot, and live releases on the bottom.

The red line going across the top bar in both instances is the average across the time series. Harvest, the percent difference between the un-calibrated estimates and the final calibrated estimates for harvest is about 140 percent. The percent change varied between roughly 50 percent and 400 percent.

Some of those larger percent differences that we see occurred early in the time series.

Catches, harvest was low early in the time series; so small changes on low harvest can result in very large percent differences. But the part of the plot that I'll draw your attention to in particular, is the part between maybe 1995 or so through just before 2010. You'll see the bars are just below the average; and then after about 2010 or so you'll see the percent difference, the calibration accounts for a much greater difference from the early un-calibrated estimates later in the time series. The calibration process honed in on cell phone usage over time; and so with increasing cell phone usage, the calibrated estimates began to grow farther and farther apart from the un-calibrated estimates.

The plot below that is for live releases and shows a general similar trend. The time series average percent difference between the un-calibrated estimates and the calibrated estimates is about 160 percent; but we see that same trend of slightly below average adjustments prior to 2000, 2005 or so, and then slightly above average beyond that. Again, related to primarily cell phone usage.

The next plot shows catch comparison; so that we can see just the impact the calibration process had. In this plot harvest is plotted on the left; and live releases on the right. I'll point out that the scale of the two plots is different. Please keep that in mind. You can see at the Legend the gray lines; which are sort of really overlapping with the orange lines, are the un-calibrated estimates, and the APAIS calibrated estimates.

This is the completely un-calibrated estimates and the intercept portion calibration. You can see the intercept portion has very minor influence. But when calibrating for the effort survey, our understanding of harvest and live releases really change dramatically. In terms of harvest on the left, the scale is in millions of fish.

Again you can see there is not a lot of difference between the un-calibrated

estimates and the calibrated estimates early in the time series; but that really grows over time. For example, prior to when the calibrated estimates were released, our understanding of how many fish were harvested. The peak harvest prior to the calibration we thought that they were about 2.5 to maybe 3 million fish harvested. After calibration that number is closer to 5 million.

The trends are similar with respect to the live releases. But you can see the scale is quite a bit different; so we initially thought prior to the calibration live releases peaked at about 20 million. After the calibration we think they peaked at about 50 million; based on the calibrated MRIP estimates.

In the interest of time I won't go through all the states. But we did see these same patterns held up among the states. Some states changes were more pronounced in some states relative to others. But the series of plots that are on the screen now show recreational harvest by state. They are oriented from north to south; so Maine is in the top left, North Carolina is in the bottom right.

The scales on these plots are all different among the different states and, again, show the general same trend. Not a lot of difference between calibrated and uncalibrated estimates early in the time series; and generally increases over time. The next plot is the same but now for live releases. The arrangement of states is in the same order. We can revisit these if people have questions; but in the interest of time I'll just sort of gloss over these. Then the final plot I have largely related to catch is catch composition. This is the catch at age broken out by fleet. The Chesapeake Bay is on the left; and the ocean fleet is on the right. The Y axis is year, and it is scaled from earliest in the time series at the top through most recent at the bottom, and the X axis is age; so Age 1 through Age 15 plus.

The sort of take-home message from these plots are you can see that early in the time series, in both instances for the Chesapeake and for the coast, but the pattern is more dramatic in the Chesapeake. You can see we don't see a lot of large old fish in the catch in Chesapeake Bay in the 1980s, so if you look at sort of the top right portion of plot there are no blue circles, which are our representation of catch.

As we move through time though, we start to see more and more fish showing up in those older age classes; as the age composition is expanding, but there is a suggestion in these data as well that we are starting to see a contraction of the age proportions later in the time series as well. I'll go quickly through all of our surveys.

I mentioned earlier the different changes we did for this assessment; so I won't go through those details again, unless there are questions. This plot just shows a sort of spatial depiction of where our different surveys are. I won't go through that and again unless there are questions. You can just see we're covering New York through the Chesapeake.

We have a variety of Age 0 and Age 1 surveys. The next plot is showing our Age 1 plus surveys. I'll just take a second to sort of walk through this a little bit. There is kind of a squiggly line that runs along the coast from Maine to Virginia. That is the MRIP survey that we're using and then the stars are the different surveys that take place, again just to kind of give you a sense of spatially where these surveys are taking place.

The next plot is our plot of young of the year survey indices. Partially in the interest of time I won't go through all of these individually. They largely speak for themselves; but I'm happy to revisit these during the question/answer portion. But you can see New York Young of the Year in the top left, moving left to right the Delaware Bay Young

of the Year, Maryland Young of the Year, then the next row Virginia Young of the Year; and the composite.

Again, for this assessment we're using the Composite Index. We're not using the individual Maryland, or Virginia on its own; we're using the composite of those two surveys. The next plot is our Age 1 Indices. Again, I probably won't talk a lot about these unless there are questions. You can see from these plots that we do see evidence of pulses of recruitment, strong recruitment years. We'll see those kind of reflected in the model estimates of recruitment that we will spend some time talking about.

Then finally the next plot we have is the Age Composition Surveys. Again, I won't really spend any time talking about these. Actually, maybe I will take a second. The MRIP Index we have, we made some minor changes to the way that that index is calculated. I mentioned earlier that Connecticut/Long Island Sound Trawl Survey. We're not just fitting to the trend, now we're fitting to the age composition as well; and so you do start to see a suggestion of a decline in the Connecticut Trawl Survey, and also a contraction of age composition data. The New York Ocean Haul Survey that survey has been discontinued. But it provides great information on age composition; so we've retained it for that reason, the New Jersey Trawl Survey kind of bounces around, the Maryland Spawning Stock Survey also kind of bounces around. Again, we can go back and revisit these if there are questions. But I just kind of want to get them just generally on your radars.

I guess on to the statistical catch-at-age modeling. I mentioned earlier that we're using the same model that was reviewed in 2013 that we did make data improvements that I mentioned earlier. This model is estimating recruitment abundance of our youngest age classes. We're getting estimates of fully recruited fishing mortality,

estimates of catchability for all of our age composition surveys.

We're fitting to four different selectivity time blocks; to help us sort of get a more accurately modeled selectivity with changes in regulations. Again, I mentioned that the data are split into two fleets; again to give us a better handle on estimating selectivity for differences in fisheries between the Bay and the coast.

Onto the results, the first plot we have is fully recruited fishing mortality by fleet. Just in general you can see the gray line is the Chesapeake Bay fishing mortality, the yellowish gold line is fishing mortality along the Atlantic Coast. In general you see that fishing mortality in the Chesapeake is lower than in the coast.

There is a period of very low F in the late eighties. There is sort of an increase through the mid-1990s in both fleets; and then kind of some oscillation and perhaps stabilization of F for the remainder of the time series. The next plot is fully recruited fishing mortality. This is for the stock as a whole.

If you take the individual F s at age for the previous two plots and add them together, and take the maximum F at age that is this plot, so our sort of understanding of coastwide fully recruited fishing mortality. It really sort of recapitulates what we saw at the fleet level. There is a period of very low fishing mortality in the late 1980s, increases through about 1995, and then that fishing mortality kind of oscillates roughly between 0.22 and about 0.3 or so.

The next plot we have is of recruitment. Recruitment is estimated in the model; so the year class is actually one year earlier. But you can see from 1982 through the early 1990s, there is a suggestion of a period of very low recruitment from 1994 representing the 1993 year class through 2004, representing the '03 year class.

There is a period of variable, but relatively high recruitment. After 2004, we see variable but relatively lower recruitment; though there are some stronger year classes, the 2011 and 2015 year classes are relatively strong. The dotted horizontal orange line is the time series average of recruitment.

The next plot we have is our trajectory of female spawning stock biomass. I'll show this plot again with our threshold; which will provide I think some reference, but you can see again this is the result that we largely saw in the previous assessment. There is a period of very low SSB early in the time series. We see a peak in about 1995 or '96, a decrease, a peak again in '03, and then a decline over the last 20 years or so in spawning stock. One of the things we do as part of our assessments is sort of a suite of sensitivity runs; and one very important one for us is the retrospective analysis.

This gives us a sense of just how much parameters might change with the addition of an additional year of data. This plot, on the left hand side we have the actual sort of time series of Age 8 plus abundance, female spawning stock biomass, fully recruited fishing mortality and recruitment. Each line represents a run of the model with one additional year of data removed.

I'll focus more for the plot on the right; which is the percent difference between 2017 and a model run with one year subtracted. I'll focus in particular with that subset on female spawning stock biomass and fully recruited fishing mortality. What we saw; and this was a bit of a difference from the 2013 iteration of this model. We see very little retrospective patterning here.

In the 2013 model our average retrospective, we saw about a 12 to 15 percent difference between the terminal year and some of these peeled, these earlier estimates. In this implementation we see an average over four years of almost 0 percent. But the range is

about plus or minus 2 percent. We see that in spawning stock biomass and in fishing mortality; similar to what we've seen in previous iterations of this model.

We generally tend to underestimate biomass; so that with additional years of data SSB increases; and the opposite is true for fishing mortality. One caveat there is with the addition of one or two years of data. We actually expect with one year of additional data a slight decrease in SSB; and that is a bit of a variance from what we've seen in the past. But it's a fraction of a percent decline that we would expect to see.

One more sensitivity run that I'll describe. I mentioned in my first or second slide the series of model runs we did as part of our bridge building and continuity runs. We started with again the model that was peer reviewed in 2013; updated that with data through 2016, and that represents the dotted green line on the slide. It looks like that is showing up pretty reasonably.

The next step we did was take that exact model unaltered; and plug in the new MRIP estimates, the new calibrated MRIP estimates that I described earlier. That is the red dotted line that's on the plot. We did some additional bridge building along the way; but the other line we have on here is that black solid line. That is our final base run from the model.

Of course one of the biggest things that might jump out at you is if you look at the green dotted line again that's our 2013 model we just updated through the present. The rate of SSB decline is fairly shallow. It predicts a relatively shallow decline in SSB over time. What we see in the final base run is a very steep decline in SSB.

If you think back to the MRIP catch estimates that we saw; we think that a lot of that has to do with the new estimates in MRIP. We see that same signal in our surveys as well. We

see it in a contraction of age composition data in most recent years. I only have one slide on our tag model work; which is just a compromise in terms of time. It's a disservice to all the work that the Tagging Committee did. But we only have so much time unfortunately; but one of the things that we always like to do with the tagging model is sort of use it as a check against our Statistical Catch at Age Model Estimate. It's a great way for us to sort of have confidence that the modeling results that we're seeing out of the Catch at Age Model are reasonable.

This plot shows total instantaneous mortality; so natural mortality plus fishing mortality. For the coastal programs the producer areas and for the Statistical Catch at Age. The Statistical Catch at Age is the black solid line. Aside from the earlier part of the time series where we don't have analogous tag model results, you can see that the trajectory and scale of all of our total mortality estimates are all in the same ballpark; they are actually quite similar.

Reference points, the Board and our terms of reference tasked us to address reference points. We wanted to develop a range of reference points that would address the objectives of the FMP. We explored both model-based and empirical estimates. In this model the non-migration model, the model-based estimates of reference points, and we looked at in particular spawning potential ratio reference points, just weren't providing us realistic estimates, particularly with respect to SSB. The F estimates were realistic; but the SSB estimates were not.

We weren't able to fully resolve. We have some hypotheses, but weren't able to fully resolve why that was. We are only brought forward to the review empirical reference points, and we used empirical reference points based on 1993 and 1995 estimates of spawning stock biomass. The current model is not stock specific.

We're modeling one stock but we're doing that through spatial fleets. We're not able to develop stock specific reference points; but we can from this model develop region-specific guidance. In order for us to fully flesh that out we would need some additional guidance from the Board; in terms of how to split the F up between the coast and the Bay. But we do have that available to us through this model.

To develop the reference points we do projections where we have not altered our methods from the 2013 assessment. From the model we get estimates of 1994 SSB for example, and then through our projections we're finding the fishing mortality that gets us to that SSB over the long term. A number of factors can influence that projection model.

This slide just kind of depicts the things that we changed and did not change. Sex ratio did not change; and that would affect the proportion female for our female SSB estimates, natural mortality was unchanged. Maturity I mentioned earlier that was updated, our maturity schedule, and we have the new statistical-catch-at-age model results. We updated the mean weight to age; and maybe one of the larger changes in the way that we've done the projections is we're using what we're terming a Hockey-stick Beverton-Holt stock recruitment model.

The next slide shows that graphically; which I think will help with sort of the explanation. The plot on the left is our stock recruitment relationship with a Beverton-Holt stock recruitment relationship fit to it. This was done external to the model. But one thing that the Committee acknowledged was that it doesn't seem like we're reaching the asymptote of that recruitment curve; and so the consequence of that is as SSB grows beyond that curve, recruitment can kind of wander off into unreasonable places, give us estimates of recruitment that had never been observed. The way around that what we wound up doing was using the plot on the

right, we're using the Beverton-Holt model prediction of recruitment through median SSB. Then after SSB we're using average recruitment. This prevents that sort of wandering off of high recruitment values that aren't reasonable.

The next plot is a comparison of a description of our reference points and a comparison of reference points from the previous assessment and the current assessment. Again as a reminder, our threshold SSB reference point is the 1995 estimate of female spawning stock biomass, and the associated F threshold is the fishing mortality required to get to that SSB level over the long term.

The target is 125 percent of the threshold level; and the associated F reference point again is the fishing mortality required to get us to that SSB over the long term. The bottom portion of the table shows again a comparison of reference points. You can see the spawning stock reference points jump quite a bit; and that's due directly to our change in MRIP estimates. But the fishing mortality reference points didn't change substantively.

In the next plot, the next table shows us our stock status. Again, we've explored reference points related to 1993 and 1995, estimates of female spawning stock biomass. The yellow highlight in this table is highlighting '95 in particular. You can see an SSB in 1995 was just over 91,000 metric tons.

Our estimate of SSB in 2017 is about 68,000 metric tons; so we're under that threshold, and we're very certain that the probabilities are listed in the far right hand part of that table. We're very certain that that is the case. The stock is overfished; and the bottom part of that table shows our stock status with respect to fishing mortality.

The F required to get to the 1995 SSB estimate over the long term is 0.24. F in 2017

was 0.31, so the stock is also experiencing overfishing, and again the probability is very high that that is the case. This is the same plot that I showed earlier; just with that threshold value now depicted. You can see F in 2017 is above the threshold; and F has been above the threshold for 12 or 13 of the last 14 or 15 years.

The next plot shows female spawning stock biomass relative to the SSB threshold; again the 1995 estimate of SSB, and again you can see 2017 is below that and has been for the last three or four years. Again, we think a lot of this is from what we've seen with our change in MRIP estimates. Projections, these are similar to the projections I described earlier; but we're just doing now six year projections. We looked at four different scenarios. We looked at a scenario where we maintained; assuming that catch in 2017 was maintained over the subsequent six years.

We looked at three different fishing mortality scenarios; one in which we held constant fishing mortality in 2017 for the subsequent six years, one at which the F threshold, assuming we're fishing at the F threshold for the next six years, and then an additional scenario of fishing at the F required to get us to the 1993 estimate of SSB over the long term, holding that F value constant over six years. The methods for this projection were similar, nearly identical to the ones I mentioned earlier for our longer term projections. This plot is now showing those four different scenarios; so I'll just take a second to kind of walk us through this. Each panel is the SSB trajectory under each of those four projections. On the far left is the constant catch scenario, so assuming that we were catching 7 million fish over the next six years, the panel next to that is assuming we fish at the status quo F, F in 2017.

The panel next to that is assuming that we fished at the F required to get us to the 1993 level of SSB; and the last panel on the right is the projection assuming that we fish at the

threshold. The horizontal blue line near the top of the plot is SSB from 1995. The solid black line is the trajectory of SSB from the projection, and the dotted lines are the confidence interval around that. You can see in each of those four panels the solid line, the trajectory of SSB under all four of those projections.

We do expect female spawning stock biomass to stay below the 1995 estimate of female spawning stock, under the four scenarios that we considered. This plot just shows the probability of being below that SSB threshold. If you look at the blue line in particular across all of those probabilities plotted on the Y axis, the probability is always above 95 percent that our estimate of SSB in 2023 would be below our estimate and below the F threshold. That is the last slide I have so I'm happy to try and answer any questions.

CHAIRMAN ARMSTRONG: I know there are thousands of questions. The first step I think we need to consider is how far we want to go today with this regarded as preliminary. That is up to the Board. We've seen a lot. I will editorialize that the assessment is likely to be the same, when it comes out.

We don't know that for sure. How far do we move? It's clear we need to do something at some point; and I guess we start the discussion now. But I have lots of questions; I'm sure other people have it too. Keep in mind this isn't officially the assessment yet. Question, Mike.

MR. MICHAEL LUISI: Very nice presentation, Mike. One of your first slides showed a list of all the data changes that took place when this benchmark was conducted. You mentioned it I think periodically throughout your presentation; but I would like to get a sense from you as to if you were to weight the significance of the changes, and how they applied to the changes that occurred as a result to spawning stock biomass and F.

You know is there one or two particular data inputs that were adjusted that kind of drove those, what I would consider significant changes to SSB and F? I might have a follow up, Mr. Chairman, depending on the answer.

MR. CELESTINO: That's a great question. I feel like we did a fairly robust, a very robust bridge-building process. The same signal seems to come through if we remove surveys, add surveys. We looked at I mentioned the composite-young-of-the-year index that changed. We didn't see a change as a result of that.

We are estimating recruitment; that's something that's missing from the slide. We're changing slightly the way we're estimating recruitment as a deviation from mean as opposed to a deviation from a Beverton-Holt. We didn't see any impact, a negligible impact from that; changing the maturity ogive, minor impact from that. I don't know if anything jumped out at me as being singularly responsible. The model seemed to be very robust to the changes we made.

CHAIRMAN ARMSTRONG: Go ahead, Mike.

MR. LUISI: I was trying to get to the point that the MRIP recalibrations likely played a major factor in the shifts that we've seen. While I'm absolutely concerned in the declines that we're seeing in spawning stock biomass, and the stock status as it would stand under this evaluation. I'm less concerned about the spawning stock, only because the overfished status or overfishing status is based on the reference point that we ultimately decide to select.

I think this Board needs to have that discussion about perhaps modifying reference points when we get to that point. But I have very great concern that a new element to the data inputs is having such a dramatic effect to the magnitude of what it is we're looking at; specifically that spawning stock biomass that

had been very shallow for years, now seems to be jumping off the diving board. Just some concerns as to one element's impact to this analysis.

CHAIRMAN ARMSTRONG: John McMurray.

MR. JOHN G. McMURRAY: Just in regards to Mike's question. It's my understanding that when you have higher landings and you plug that into the VPA it will return the higher value for SSB, not just F. It kind of evens itself out there. But my question really had to do with the use of 1993 instead of 1995. I'm unsure of why that has happened in this process. I mean the stock was depleted in 1993; it was rebuilt in 1995. Maybe you could provide some explanation there.

MR. CELESTINO: Yes the Committee was responding to the Board task of trying to come up with a range of, a suite of reference points. Our goal was to bring a suite to the review; 1993 seemed like a good year to the Committee for a number of reasons, one the 1993 year class is a very strong year class, suggesting that SSB in that year was sufficient to produce that year class under perhaps favorable environmental conditions. That's how that year was selected primarily.

CHAIRMAN ARMSTRONG: John Clark.

MR. JOHN CLARK: Thank you Mike, and thanks to the Stock Assessment Committee. There was clearly a massive amount of work that went into this. Just kind of following up on some of the things that we've already heard, when I looked it was pulling out of the draft that went for the peer review.

It just seems that when they look at the continuity run and the bridge run, the final SSB is much closer to where the threshold would be. But with this new model, as Mike said, it looks like it jumped off a diving board. It seems like every time the model is improved the stock looks worse. Just curious as to how the threshold changed so much

between like the bridge run and the base model, as you call it here.

MR. CELESTINO: MRIP is we think at play at that as well. Another thing that I think that I remember from our sort of bridge building process, the 1995 estimate does shift a bit, depending on whether we use separate Maryland and Virginia indices versus a composite index. There is a signal that's coming through in the composite index; and that seemed to influence some of the earlier parts of the time series. But over the entire time series we think that it's changes in MRIP that the calibration process is really influencing SSB over the time series.

DR. KATIE DREW: Just to add to that. I think another thing that we had looked at is with the MRIP index we now have age composition information for that. Whereas before, it was just sort of a general, we said it represents this chunk of ages, but now we actually went through and developed an index at age.

You can see a stronger signal in terms of a contraction of the age structure that with those years of poor recruitment you're not seeing that the age structure gets smaller, because you're not having as many fish move into the SSB, and you see that more clearly in the MRIP index now that we have the age structure.

Doing the bridge building run, where you don't include that age structure, things look better than when you do include that age structure. That's kind of part of what's happening is that the model can see that there is worse information on stock status from the age structure of the index.

CHAIRMAN ARMSTRONG: Rob.

MR. ROB O'REILLY: Thank you for your presentation, Mike, and everyone who has been involved in the work. The commercial removals are about 10 percent; and I was just wondering, with them being so low and with

the history of difficulty associated with pinpointing commercial discards. What was gained by going from three-fleet to a two-fleet approach? That is the question.

MR. CELESTINO: One of the main goals of doing that was to address one of the Board concerns from some time ago. That third fleet created problems. I think the Board had considered fleet reference points for a period of time; and the one sort of wrinkle to that approach was having this commercial discard fleet.

If either of the two directed fleets could be in reasonable shape, not overfishing or overfished, but if the commercial discard fleet did require management action it created this sort of perverse scenario where to reduce discards we would have to increase directed catch. It seemed to present an obstacle to management. We were I think largely responding to a request from the Board to help with that management question.

CHAIRMAN ARMSTRONG: Emerson.

MR. EMERSON C. HASBROUCK: Thank you Mike for your presentation. Mike, one of your slides had a graphic showing; I think it was biological reference points and the terminal year SSB and F. I don't recall the full details of that slide; but if you could put that back up again, please? Yes that was the slide. What I'm trying to figure out here is if we're using the new MRIP data, all right the new MRIP data which shows that recreational harvest estimate is whatever it was, 150 percent of what the non-calibrated data shows, right? If the catch was that much greater, than to account for that doesn't the spawning stock biomass have to be bigger by an approximate amount? How is that taken into account in this table, or in the assessment? That's what I'm trying to figure out here.

MR. CELESTINO: That's a great question. Those percentages were for numbers of fish;

so I think one explanation is we wouldn't necessarily see a one-to-one increase based on immature fish. It may be the maturity curve that's accounting for that.

CHAIRMAN ARMSTRONG: Go ahead, Emerson.

MR. HASBROUCK: Thank you for the follow up. But even if that is numbers of fish, then the poundage of harvest is greater; and therefore the SSB had to be greater to account for that additional harvest, right?

MR. CELESTINO: Yes and we do see a pretty substantial change in reference points, in direct response. Not necessarily a doubling, but probably close to about the level of increase. For example, 60,000 metric ton threshold to about 90,000 metric tons, not quite as much, but I don't have a great answer for why it's not a one-to-one change.

MR. HASBROUCK: I don't mean to monopolize the discussion here. But my question really wasn't why is there not a one-to-one. I just didn't know where that increase was coming into account. I guess it was this slide here that I had in the back of my mind. What you're saying then is that for spawning stock biomass for instance. The previous reference point was 57,626 for the threshold; and what's being used to determine overfished and overfishing status. Out of the latest assessment now is 91,436, is that correct?

MR. CELESTINO: Correct, yes.

CHAIRMAN ARMSTRONG: Roy Miller.

MR. ROY W. MILLER: Thank you, Mike. What we're seeing is of course consideration of the stock as a whole. Could you quickly review for me what if anything was done with regard to spawning-area-specific stocks, such as Chesapeake versus Delaware River, versus Hudson River? If those had been broken out, would the results have been different for any

of those systems?

MR. CELESTINO: That's a trickier question to answer; because we don't have final results from the Northeast Science Center. But the short answer to the question is we did embark on a migration model, a stock-specific model that models explicitly the Chesapeake stock, and explicitly a combined or mixed Hudson River/Delaware Bay stock or Delaware River stock.

I'm not sure how much; well I guess I can say objectively what the results were. It did paint a different picture. The Review Panel, our understanding again from our conversations at the review in November were that the Review Panel did not think that model was suitable for management at this point, so I'm reluctant to go too much into those results. But I mentioned earlier the work that the Committee did, and again Gary Nelson in particular did this migration model. It was a tremendous amount of work. Our Committee had great confidence in the model. We wouldn't have brought it forward to the review if we didn't think it was suitable.

But we needed to convince a Review Panel, and our understanding is that we're not quite there yet with them. Short answer is it paints a slightly different picture; not terrible different on a combined stock basis, but a slightly different picture. I'm not sure how much I can say about it. I certainly don't want to put words in the mouth of the reviewers until their reports are released. I hope that's helpful.

CHAIRMAN ARMSTRONG: Mike or Katie. What will we see next meeting that's not included in this report now? I assume this information will be the same; if it passes muster. What additional things will we see?

DR. DREW: The complete report from the SARC will have a complete description of the migration model that did not pass; as well as sort of the results and the output of that so

that you can evaluate the work that was done for that. But it will also have as well as more details on, we gave you a summary report on the results of this; but obviously the final report will be much more detailed, several hundred pages worth of actual assessment information.

But you will also then receive the Peer Review Panel report; where they will basically explain in more detail why the migration model failed, what needs to be done. They were favorable in the sense of they thought this was a good idea and we should continue to work on it. They gave us additional feedback on how to go forward; in terms of data collection and modeling approaches. That information will be included; as well as sort of an assessment of what they chose as the preferred model. But the numbers that you're seeing are not something that is going to change from that report.

CHAIRMAN ARMSTRONG: Okay and that's very important that what we're seeing now is what we can chew on. Doug.

MR. DOUGLAS E. GROUT: Yes I was curious about; you know seeing that the model is showing that the SSB has been declining for a while. You mentioned that you had gotten the MRIP data split out into age; which is good, and that probably some of the information in that influenced the models output of showing that we're having a decline in recent years, a steep decline in SSB in recent years. Did the other fisheries independent surveys show a similar decline in SSB the fish that are in the SSB age group?

MR. CELESTINO: We did in general see that. The exception that comes to mind is the Maryland Spawning Stock Survey. That probably showed more of a sort of stasis or static. I don't think we saw quite the contraction. But in the other surveys we really did; the Delaware Trawl Survey and New Jersey Trawl, Connecticut/Long Island Sound. We did see that contraction; and

again in our MRIP Index as well.

CHAIRMAN ARMSTRONG: Russ.

MR. RUSS ALLEN: Thanks Mike, excellent presentation as always, and thanks everybody else that is working on this. One of the things that jumped out at me was that 48 percent of the removals for 2017, I believe came from recreational discards. That is kind of disturbing to me, for one. Then just looking at Table 1 in the summary, I see that it's the first time that removals from discards were higher than actual harvest for the recreational fishery since 1998.

My question is did the Technical Committee discuss this, Stock Assessment Committee discuss this, and do you have any thoughts on where that's headed? It's a very disturbing thing for someone who does not like to see dead discards; I mean it bothers me, so if you have any insight on that I would appreciate it.

MR. CELESTINO: Thank you for that question. My memory isn't super clear as to how much the Committee talked about that. My general sense is that we see that increase in recreational dead releases just around the time of implementing Addendum IV. One of the things when we all did our conservation equivalency and we sort of come up with our projections of what we think will be the required reduction.

We are never able to quite account for angling behavior. Some of those things might be at play Addendum IV and some angling behavior that was either unanticipated. Also some strong recruitment classes that are coming through, but I don't know that the Committee talked about it explicitly. My memory is not clear on it.

CHAIRMAN ARMSTRONG: I would think that that is an issue we're going to have to talk about as part of the actions coming up; probably not today, but certainly that is going to be in the package we're going to have to

look at, because we can't ignore 50 percent of the mortality on this start. Ritchie White.

MR. G. RITCHIE WHITE: Kind of to follow along on that vein. Recreational release mortality increased since the last stock assessment; is that correct, and if so then I have a follow up?

MR. CELESTINO: Yes, we are seeing an increasing trend, especially in the last couple of years.

MR. WHITE: Follow up would be can that be an indication of the declining spawning stock biomass; in that there are less legal fish available to catch?

MR. CELESTINO: The short answer is I'm not sure. I think it's hard for us to know all the reasons why fish might be discarded; so I'm not going to have a great answer for you. But I think a combination of cohort younger fish moving through. But I don't have a clear answer for you, I apologize.

CHAIRMAN ARMSTRONG: Jay.

DR. JASON McNAMEE: Mike, great job, you know really detailed report for something you weren't able to detail very much; so I really appreciate all the work that you guys did on that. I'm getting back to what new information we might get at the next meeting. One thing I was wondering about is did we get any guidance? I know you guys looked at the suite of different reference points. Did you get any guidance from the peer reviewers as to – I know they wouldn't pick them for you – but did you get anything that we are going to be able to use when we start thinking about the reference points as they are now, or what they should be?

MR. CELESTINO: Our plan was initially to bring, like I mentioned earlier, the suite of reference points to the Review Panel, and exactly as you indicated not have them select. But we wanted to engage in a dialogue with

them on range and possibly methods. We reached out to the Northeast Science Center. I won't necessarily say they discouraged us from doing that; but it wasn't an explicit term of reference to have a dialogue on that. My personal expectation would not be to receive guidance in the documents that come forward.

CHAIRMAN ARMSTRONG: Mike.

MR. LUISI: Thanks for the second opportunity for a question. I think it's important for the Board to get a sense as to what's coming. I don't know can you put up your composite recruitment graph? Mike, you did a nice job of early in the time series recruitment was very poor. We had spikes in recruitment in I guess it was the mid-2000s; late '90s, 2000s, and now we have a time period where we've had some poor years, but also some strong years classes.

The 2011, the 2015 and I guess that's '15/'16. Could you provide the Board with, as far as inclusion of those fish in the SSB estimate, are there a proportions of those classes that are part of the SSB that we're evaluating now? I can imagine the 2011s are getting very close; if not all the way recruited to the SSB. But the other two year classes I think are going to play a significant role in boosting, to some degree, the SSB in future years. If you can give the Board some perspective on that it would be great.

MR. CELESTINO: Sure, thank you for that question. Our maturity schedule does allow for maturity of some of those smaller fish. But we see very few mature fish at younger ages. As an example, up through Age 4 or 5, we're only at about 20 to 25 percent maturity, so a small proportion in those early years. Those larger two year classes I wouldn't expect a lot of SSB to be reflected from those year classes.

CHAIRMAN ARMSTRONG: Emerson.

MR. HASBROUCK: Thank you Mr. Chairman

for coming back to me. But just based on the question that Mike asked, is there any discussion or projection in the assessment about what's going to happen with SSB when the 2011, when that year class becomes fully mature, which is going to happen fairly soon, and similar question for 2015 year class?

MR. CELESTINO: Yes I think the projections, we did a limited number of projections, but I think that those are exactly the year classes that we're seeing sort of coming through; and we see this upswing in SSB. I'm looking to try to get that slide up in just a second. But I think those are those year classes, we're sort of under these status quo fishing mortalities. We still see SSB increasing, and our suspicion is those year classes moving through.

CHAIRMAN ARMSTRONG: Jay.

DR. McNAMEE: I'll stay on this theme as well. It's important to keep in mind that the recruitment plot and you don't have to sweat. The recruitment plot we just looked at is a model generated recruitment plot. There is a retrospective pattern in recruitment that was one of the more good retrospective in general for the model; but that was of all of the things you looked at.

One of the worse ones, I guess the comment I'm making is we should be careful about how many chickens out of those we count. The other thing that we'll need to pay close attention to when we get to this point, are the recruitment assumptions that go into these projections. Mike, I thought you said you guys used the spline Beverton-Holt model here. We'll have to think about that in relation to some of that recruitment information as well. I think it's good to think forward a little bit; but we should do so cautiously.

CHAIRMAN ARMSTRONG: Rob.

MR. O'REILLY: Mike, I guess this is going to be asked out of just a falling out of the technical

world a while back. I don't know how the statistical-catch-at-age model behaves; in terms of past information. But it seemed one of those figures you had up, not the catch composition picture, but the earlier one which showed that a lot of the change from MRIP.

Where it was 140 percent overall, and I think you commented it went from 40 to 400 percent, depending on where we were looking. A lot of the elevation was before 1993, it seemed, compared to years after that on the harvest. The B-2s looked a little bit different. They didn't have exactly that same pattern. But I guess what I was wondering is does the model, is the impact from those earlier years with the changes of MRIP as substantial as in the later years? In other words, does it carry through? Then I might have a little follow up.

MR. CELESTINO: I think I understand your question. In the statistical-catch-at-age model, our earlier years are our most uncertain years in the model. The plot that I'm looking at, I don't know if we can put this one up. I just want to make sure I'm thinking of the same plot that you are. We're going to try to get it up in just a second. Is this the figure you were thinking of?

MR. O'REILLY: That was the second one. There was one where you had prior to that I thought, where at the top it had the harvest, at the bottom it had the B-2s, and it showed the changes from MRIP.

MR. CELESTINO: This plot.

MR. O'REILLY: Yes that is it.

MR. CELESTINO: Maybe the reason I was thinking of the following plot was I mentioned earlier that the percentages are much larger. I'm going to make sure I understand you. I'll try to answer your question. If I'm misunderstanding it please just let me know, I'll try again. When I think of the subsequent

plot the largest differences are happening, the lines are getting farther apart after 1995 or 2000 or so. The model is making adjustments for all of those. Our estimates of abundance are going to be most uncertain earlier in the time period. But all the catch estimates are making the way through the model. That sort of smaller difference increase, at least in the part of the time period that I'm thinking about is of course reflected in the model. I don't feel like I'm answering your question.

MR. O'REILLY: Let me try to help, because you're nice to give it a shot here. In the upper graph, the before 1993 you have the average line, but then you have what the changes in MRIP caused I think, right in the brown bars?

MR. CELESTINO: Correct.

MR. O'REILLY: It seems to me that it's above average quite a bit in the early years. I was wondering, does that have equal influence in the model as the later years? It seems that you said it's all considered, it does since it's a forward projection model. But where I was thinking was did the, and is it sort of heresy, but do you always have to look at a starting point of data?

You looked at 1982, so for example what would a run look like if you didn't have those higher years, which are clustered more towards the early time series? Do you look at that in any way? I say that because I remember when we started with striped bass there was a DPA in 1996. This is a different model, I understand that. There were probably 13 years of data. We're talking now about 37 years of data.

Are there ways if we know, and I suspect this is the case, if there is also variability from what I've heard presented by Dave Van Voorhees about certain years; that there is still variability that is there some way to look at this differently that if all of a sudden you get beyond 1993. There is somewhat a better

representation. Although I think you could say well in the mid years you're low. Is that something that was even talked about?

MR. CELESTINO: Thank you for clarifying that question. I apologize for getting it wrong the first time. We did talk about as one sensitivity run, rather than doing a retrospective, kind of doing a reverse retrospective. Regrettably we just sort of ran out of time and weren't able to do that. One way that now that I understand your question better, one way that we are accounting for some of this information in the current model is we do have CVs on different years of the catch, so some years of the catch that we're more certain of than others.

We can give the model a little more leeway early in the time series when we may not be quite as certain of catch. That is one way that that can be incorporated into the model. But the more explicit sort of shading off early years was discussed explicitly; and it was part of our table of sensitivity runs. We just weren't able to complete that.

CHAIRMAN ARMSTRONG: John.

MR. McMURRAY: I'm sorry I'm having a hard time following a lot of this. The 2011s, they are fully recruited?

MR. CELESTINO: The 2011s, they would be about seven or eight now, so yes we would expect to see that year class working its way through.

MR. McMURRAY: I could tell you one thing both personally and speaking on behalf of the recreational fishing community. They are not available. I mean certainly there are flashes here and there of those fish. But they are not the panacea everybody thinks that they are. I mean that seems to be pretty clear in the stock assessment; but it's also very clear to those of us that are out there targeting them. They're not around.

MR. CELESTINO: Yes and forgive me, so our

selectivity curves in the Atlantic coast, we do assume full selectivity at Age 13, 14, or 15, and so those would not be fully selectable. That should generally jive with your observation, not fully selectable but partially selectable.

CHAIRMAN ARMSTRONG: Mike, to that point. Can you see the 2011 year class moving through the catch-at-age as a strong year class?

DR. DREW: I actually was just looking at this before. Yes you can, if we can go back to that figure actually. I think what we see in the catch at age lines up with what John was saying; which is that you can see, so you see the bigger bubbles are more fish in those age classes than in those years.

You can see on the ocean side you can see the 2011 is a bigger set of bubbles moving through, relative to what is around them. However, I think it is for sure not as abundant as I think that's the 2003 year class above that is much larger. Yes we do see them. They are more abundant than some of the other year classes, but they are not as you were saying the panacea for SSB.

CHAIRMAN ARMSTRONG: Are there any more questions to the assessment? That is a lot of information.

DISCUSS NEXT STEPS FOR STRIPED BASS MANAGEMENT

CHAIRMAN ARMSTRONG: We move to the next item, which is discussing the next step. Clearly there are next steps needed; but I'm uncertain which way we go here. Do we charge the TC with some more projections? Under all the projections they provided, under all the scenarios through '23, we don't come close to the reference points that are proposed.

Do we charge them with looking at some other things? What F do we actually need to

think about achieving to get the SSB? Are these the right SSBs that we want going forward? Are we looking at an addendum, are we looking at an amendment? But if we don't ask for something now and get it started, we've lost three months already. We really need whatever we do to be in place by the next fishing season. I would suggest we move on something today and open to suggestions. Ritchie.

MR. WHITE: Actually I'll start with a question for Max. What is the wording in the plan that requires us to take action when the stock is overfished and overfishing is occurring? What is the wording?

MR. MAX APPELMAN: I don't have the exact wording in front of me; but if we were in a position to accept the results that would trigger four of the management triggers, two of which are related to fishing mortality, two of which are related to SSB. Those that are related to fishing mortality require reducing F to the target within a year. Those related to SSB charge the Board to increase SSB to a timeline that they need to choose. There are some restrictions on that timeline length.

CHAIRMAN ARMSTRONG: Follow up.

MR. WHITE: A management action can accomplish both those by addendum?

MR. APPELMAN: Yes.

CHAIRMAN ARMSTRONG: John.

MR. CLARK: Also a clarification. On the amendment, if I understand it, if we were to change the reference points at that point we would have to go to a new amendment, right? The actual 1995 SSB is part of the Amendment 6.

MR. APPELMAN: Actually there is a lot of flexibility in the Adaptive Management Section of Amendment 6. I was just reviewing this prior to the Board meeting. Almost everything is covered in the addendum process; except for management objectives

and goals. Just about everything else can be done through an addendum; including reference points.

CHAIRMAN ARMSTRONG: In regard to timelines, we are in such a different spot that was never covered in any addendum or amendment. As of last assessment the stock was doing okay. We had some concerns. With brand new data the entire assessment has changed; to no one's fault, but we've pulled back the curtain and the Wizard looks quite different now. The timelines, you know we need to think about that. Mike.

MR. LUISI: The Wizard is old and tired now. I think Ritchie, I think his back and forth with Max was exactly what we should task the TC in evaluating; which is let's take the current amendment framework that we have. Determine whether or not if we were to accept the terms that were just reported to us; did triggers get triggered?

If so what is the consequence of that before the Board? I think that is completely acceptable; as far as a tasking to come back before the Board, so that we can understand what the management implications are for those decisions that we'll have to make the next time we get together. I do want to just provide my opinion as a word of caution; to stepping back in time and kind of redoing Addendum IV, which I wasn't on the Board at the time, but across the board states were required to take reductions through a paper and pencil exercise.

Five years later, it doesn't seem as if what we did a whole lot of good as far as recovering the stock. I feel as if we're in a different place and time right now. Amendment 6 was developed back in the time period when we had a super abundance of stripers in the ocean. We no longer have that based on this assessment.

I would be supportive of a more comprehensive look at all of the elements

that are in Amendment 6 for potential change; which would be goals and objectives, trigger mechanisms, reference points, time periods. All those elements, I think we need to reconsider them. You know we did a survey a year or two ago; I don't remember when that was. But there was a clear indication that the Board was kind of split; as far as do we want to have a super abundance of large striped bass in the ocean, or do we want to have harvest as part of that as well?

I do think that we would be foolish to go back; and this is kind of to Russ's point and Ritchie's point earlier. If you look at the last five years, it's the last five years where our dead discards have been greater than the actual harvest in the recreational fishery. That is a really big problem. We can say all day that we want to reduce F.

Let's reduce F. But if we don't succeed by solving a problem, we're going to be right back here again five years from now when the next assessment is done, because we have exacerbated the problem by increasing size limits, creating situations where fishermen have to cull through 20, 30, 40 fish before they can keep one.

We did that and I hope we don't do that again. I would think that through an amendment or an addendum process, we could be more creative in our approach; to try to solve the problem, which is kind of the focus of that problem would be on dead discards. Ultimately we're taking down removals to accomplish what it is we need to accomplish.

I foresee a little bit of a longer time period. Maybe it can get done before the beginning of next season. I hope that we don't act as a Board swiftly, and find ourselves making the same mistakes we made five years ago. Based on the review of this assessment we really accomplished very little.

CHAIRMAN ARMSTRONG: Doug.

MR. GROUT: Obviously one of the issues we have here is we don't have the final peer reviewed stock assessment here. But we're anticipating getting that shortly, hopefully. What I would like to do is make a motion that will propose to task the TC with some very basic tasks; just to start getting information of what the impacts are from this assessment, what we could potentially need to do just as a minimum with this assessment, based on what's currently in the management plan.

Not start an addendum at this point or an amendment, but let's get some information so that we can see what the impact of this is and maybe a single idea what we might need to do. I agree discards is an issue. I don't see that discards have exceeded harvest in the last five years, but certainly in 2017 it was very evident that we were heading in that direction.

With that said I have a motion; and I want to caveat it that this tasking of the TC, the work is only to begin after we receive the final benchmark assessment, the report and the peer review of it. But to task the TC with providing the Board with a report that shows the reductions in harvest needed to reduce F to F threshold and F target.

When I'm referring to that I'm referring to the ones I saw up there based on the 2015 SSB, was it 0.24 for the threshold and 0.197 for the target. Then I would also, I don't want to over task the SSC with providing a suite of seasons, size limits. But I would like to see an example, just a single example for each, what it would take to reduce the harvest by that amount. My motion goes on to say also provide one example of recreational bag and size limit combination, and in parentheses say if necessary, seasonal restrictions needed to achieve these reductions a; on the coast, and b; in Chesapeake Bay, and to report back to the Board in May.

CHAIRMAN ARMSTRONG: Is there a second? Justin Davis, second. Discussion, Doug Ritchie.

MR. WHITE: Question, would it make sense to also add the appropriate percent reduction in the commercial quota? That is a question to Max or the Chair.

MR. APPELMAN: I'm sorry; I was talking with my crew over here. Could you please repeat the question?

MR. WHITE: Sure, does it make sense to add to this the appropriate reduction in commercial quota, corresponding to the motion?

MR. APPELMAN: If you wanted to add that I'm sure you could. What I was just talking about with my group, if you will, was when it comes to providing one example of a bag and size-limit combination. I mean as we know right now there are a plethora of different regulations implemented across the coast; especially Bay versus the rest of the coastal fisheries.

I don't know; I mean they could certainly put an example together, but I fear that that comes in front of the Board and you guys look at it and say that's nothing what we wanted to see or there are a million combinations that they could put together. I'm looking for a little more direction for them.

MR. GROUT: I'm not saying that this is something we're going to put in a plan. All I'm trying to do is show the Board and show the public about an example of what kind of changes might be needed to accomplish those reductions in F to the threshold and target. You can pick anything, I don't care; you know I prefer bag/size limit.

But if you need to go to a seasonal restriction coastwide and this would be like a coastwide because we have different regulations in the Chesapeake Bay than we do along the coast.

Just give us one example. I know this Board can come up with hundreds of different combinations we want them to look at. But that is not the point right now. The point is for us to visualize, and the public to visualize what kind of things it is going to take to accomplish this, just one example.

MS. NICOLE LENGYEL: Doug, a couple other things that would be helpful for the Technical Committee. One is a timeline, so the triggers in Amendment 6 specify F to the target within one year. If we could add a timeline to the motion, perhaps, and also probabilities, if you recall back in Addendum IV that 25 percent reduction in Addendum IV had a 50 percent probability of achieving F to the target. Does the Board have a certain probability they're comfortable with?

MR. GROUT: Two thousand twenty, 50 percent probability, just to get you going.

CHAIRMAN ARMSTRONG: Doug, would you anticipate SSB projections associated with those?

MR. GROUT: It could. I mean we could pile on them. But my goal is what's it going to take to end overfishing in a year?

CHAIRMAN ARMSTRONG: In a year. Okay so that's where we get to 0.197 may not be enough to get us back very quickly. There may be a restoration F we need to move to; as horrendous as that sounds.

MR. GROUT: That may be a further thing that we would have to, a restoration for SSB may be in the future; but let's get the first thing on the table, at least from my perspective.

CHAIRMAN ARMSTRONG: Okay and this is going sort of how I thought it would be. We only planned on three hours, and this is an eight hour meeting we're leading up to, so we do have to watch the time a little bit. But we have a second, so comments on Doug's motion. I have a couple already; Justin, good,

Emerson.

MR. HASBROUCK: In Mike's presentation, did I understand it correctly that there were a couple of different sets of reference points that were suggested and we're waiting for feedback from the peer review about those suggested reference points, or did I misunderstand?

MR. CELESTINO: There are two reference points that we brought forward. We brought a 1993 and 1995 SSB and 125 percent of 1995. But we don't anticipate getting any feedback on alternate reference points, only on stock status determination relative to 1995 SSB.

CHAIRMAN ARMSTRONG: Go ahead, Emerson.

MR. HASBROUCK: I could probably answer my own question by looking through the reference documents here; but I'm going to ask it. Might that F threshold and F target change based on the peer review, or are they probably going to remain the same, because if there is a chance of them changing, then we may want to change this motion.

MR. CELESTINO: Our expectation is that the numbers won't change.

CHAIRMAN ARMSTRONG: Jay.

DR. McNAMEE: You've already covered part. I was going to also suggest we needed a risk probability, and so we got that the 50 percent is a good starting point. I also feel a sense of urgency and a sense to kind of get moving here; but I thought Mike's comments were good as well. I think we want to really think this through.

I think what Doug has offered is a good start; to kind of get a sense of this. The one concern I have is about the one regulation example. I'm kind of thinking about what that might look like; and I think it's just going to be

alarming. I don't know what value we get out of that. I can see just the discussion to get to that one example. We're saying TC, give us one. They're going to have a battle at the TC to figure out what that one is going to be that comes to us. I'm not pushing this too strongly at this point; but that might be something we might think about peeling out of this motion. Just getting this very basic information of what is it going to take to get us back to the reference points that we have already?

Then I think at our next meeting we'll have a lot more information with which to offer more guidance; because that's what I'm truly struggling with. I feel a need to get moving on this; but I have no idea what guidance to provide the Technical Committee at this point, because we don't have a lot to work with.

CHAIRMAN ARMSTRONG: Doug, would you consider an amendment?

MR. GROUT: I would be more than willing if someone wants to make an amendment. My goal, clearly on the coast we're at one fish, so it's going to be difficult to change the bag limit. Can you raise the size limit high enough to accomplish this or not? I have no idea. That would be a very simple thing for them to do. Okay, how far up on the size limit do we have to go; the coast or in the Bay, just as an example?

Then my concern is saying, okay we've got to take a 25 or a 30 percent reduction in F to get to this point or we need to reduce harvest by this million fish. The public and we are not going to have any concept at all about what it takes to do that. That is my purpose in trying to see if there is a possibility that they could give us a simple example, even if it's just changing the size limit in the Bay and the coast to get to these things.

But if you can't do it, you know I gave them the second option of well maybe we need to put in additional seasonal restrictions. I know

we're going to be having lots of discussions about this in the future; but you can tell me we've got to cut it by two million fish, and that means nothing to the public.

CHAIRMAN ARMSTRONG: It sounds like change is not in the works. Would you like to make a motion like that to change it? Okay. John Clark.

MR. CLARK: I'm opposed to this. I think we know what this will turn out. It's going to be drastic, it's going to be alarming, and it's going to really create expectations in the public that things are so terrible we have to take drastic action now. I think this is the time, we know we're going to have to take action. This is the time to start an amendment process; where we rethink our management options, we look at different reference points.

We kind of go back to the drawing board, as Mike said. We've had five years of a 25 percent cutback. It hasn't done the trick so far, so maybe we just need to rethink the whole process. I think without having the TC report, we know it's going to be pretty drastic, especially if we're going to try to get to that target F in one year.

CHAIRMAN ARMSTRONG: Roy.

MR. MILLER: I just wanted to potentially add something to the mix that this motion might cover. We're putting all of the reduction in harvest. We're using the reduction in harvest to achieve the targets and the threshold. What if, I'm harking back to the comment that Russ Allen made regarding recreational discard mortality being higher than harvest mortality.

What if we were to attempt to reduce recreational discard mortality, and make that part of the mix? How much could we expect to reduce recreational discard mortality? Is it enough to even consider trying to do? I'm thinking of Maryland's proposal over the past

couple years to reduce recreational discard mortality using innovations like circle hooks and educational awareness; that kind of thing.

CHAIRMAN ARMSTRONG: Katie or Mike to that point. I know it gets really complicated; because a million Age 2 fish is a lot less fishing mortality than a million Age 8 fish. I'm not saying this now. I think it's something we need to look at. Do we know the age structure of the discard?

DR. DREW: We do have information on that. We rely on some MRIP sampling for that. They do have observers on headboats measuring the size of fish that are thrown back alive. We do have information from angler logbook programs; where people tell us measure the fish they would throw back versus the fish they keep.

We do have information on the size structure of the discards. I would also say we definitely, when we do this analysis we look at we assume when we do the bag and size limit analysis for striped bass that if we raise that size limit from 28 to 30, then those fish that will be thrown back, and a certain amount of them will die.

That goes back into we account for that recreational discard when we count for the total mortality of the removals that those regulation changes will accomplish. But I think the question of how do we reduce. The other thing to keep in mind with striped bass is we release about ten times as many fish as we actually harvest.

Even if you convert 50 percent of those releases to harvest that is more than the recreational dead discards, because only about on the average over the coast 10 percent of them die when they're thrown back alive. But I think the question of how do you balance that out, especially with strong year classes moving through, is something that the TC would consider when looking at

these bag and size limit analyses.

CHAIRMAN ARMSTRONG: Ray, did you have a comment? Okay, Mike.

MR. LUISI: I'm going to need to get a privacy screen on my iPad; Roy I think is reading my notes directly that I'm typing to myself. But I wanted to make a similar point to Roy's, and maybe change the wording Roy in such a way. I understand the interest in actually converting the dead discards into harvestable fish. But what if through this TC process we get a sense as to what effect discards would have by increasing size limits. If we're going to have one example on the coast and one example in the Chesapeake Bay of increasing size limits.

Is there a way technically to estimate how many more fish you're now going to have to interact with and have as part of your B-2s, so that stakeholders can understand that by increasing size limits you're ultimately just creating more dead discards and exacerbating the problem. I think if we can add it to that.

I don't know where it fits in there; perhaps after providing one example of recreational bag and size limit combination, if necessary seasonal restrictions, and effect on B-2s or effect on live releases. I think it would be helpful for the public to know what those estimates look like, what those scary estimates look like.

CHAIRMAN ARMSTRONG: This is kind of like a David Pierce motion at this point. Should it be a separate motion? Doug, would you be amenable to adding that?

MR. GROUT: Someone can gracefully add that into the motion without violating the Pierce Rule, I would be glad to. It sounds like, by what Katie just said that is going to be part of the analysis anyways. As long as in the report you can explicitly bring that out. That's what I thought it was. Yes, I agree we should see that kind of information too.

CHAIRMAN ARMSTRONG: Mike, do you see some language you could add to this that would satisfy you?

MR. LUISI: If it's going to be part of what's reported as it's already stated; that's well beyond technically what I understand what we're going to get back, what the feedback we're going to get. But if we're able to see where the 32 inch, 1-fish bag limit in the ocean under this scenario. If that is the scenario we have.

If we're able to see based on an estimate of how many new live releases that we're going to have as an effect of that that would be ideally what I would like to see, as well as in the Bay. If it's already packaged in there then there is no reason to complicate this anymore than it already is. If it's in there then fine; I'll absolutely support the motion moving forward. But I have to ask Katie or Nicole or somebody.

CHAIRMAN ARMSTRONG: There is a piece, and I'll ask Katie to comment. The piece about how many are you going to have to discard to get to the new size one. That's not what you're talking about.

DR. DREW: That is obviously much harder to do; because it depends on the size and age structure of the population. I think it is something the TC is interested in pursuing; and has been talking about internally when we do these kinds of calculations. I think the fact that we know you're interested in that means that we will try to provide some analysis that can address that question. Obviously we can't guarantee that this is the exact number that you have to go through; but I think we can sort of take that into consideration as we do these calculations.

CHAIRMAN ARMSTRONG: John.

MR. McMURRAY: A question and then a comment. I want to be clear before I support

this that this puts us on track for on the ground potential management action in 2021, I'm sorry, 2020.

MR. APPELMAN: That all depends on what kind of document we're initiating down the road; amendment or addenda. An addendum is obviously more streamlined, an amendment takes a little bit longer, and it also depends on the time of the year that actual final approval of that document would be if that's at the beginning of the year versus more mid-season. Some fisheries could already be operating.

MR. McMURRAY: You could have just said yes. This does put us on track should we go the addenda route, and that is good to hear and I can support it. But I also wanted to respond to some of the comments around the table; particularly the fear that this is going to be drastic. I would just add that this is a really important fishery.

It is to a large extent driven by availability, not necessarily how many you could put in a cooler, but how many fish are around. With that said; in the grand scheme of things, I'm pretty sure that if we have to go up several inches in size and not mess with the bag limit that is not going to be catastrophic.

What is going to be catastrophic is if that availability continues to decline; particularly for the part of the recreational fishing community that targets these fish from the beach, which is both culturally and economically important. If we continue down this road, and if we don't keep the promises that we made in Amendment 6 that is what's going to happen. We're going to be in a really bad situation. I would encourage the Board to go this route, but to try to take action expediently.

CHAIRMAN ARMSTRONG: Rob.

MR. O'REILLY: I've heard two board members talk about, and if maybe necessary a seasonal

closure. Since Amendment 5 there hasn't been a lot about seasonality in this fishery, about truncating seasons when there has been problems with the stock. I just hope that that gets a pretty good look, because we're hearing about discards; raising size limits all the time in my mind is really not that effective.

I hope that the use of seasons gets a pretty good characterization, because if your seasons close you may have catch and release that's about it. You may have recruitment once your season opens; because everyone is in fervor to go out and fish. We understand that as well. But that's nothing such as always having as much season as possible.

I understand that that is what the fishing public wants; they want the longest season possible, no matter what the species is. But at the same time we have some testimony through this last Addendum IV that size limits may not be the way to go all the time. Yes it went to one fish, but in a lot of cases I remember the information from some of the coastal states were one fish would be okay. You know there is certainly a lot of catch and release too. I hope that's not an add-on, I hope that's right up there in the front row with size limit changes and bag limit changes. I hope the Technical Committee can advise us just how much that's been used in the past since 1995. I don't think a whole lot. But I mean if we're truly going to be conservation minded it may be that size limits aren't the way to go.

MS. LENGYEL: Seasons is something that we have not looked at before; and it's not specified in Amendment 6. It is something that we can look at; if the Board wants us to look at it, but that is something that will be more work and more detailed. It will have to be done on a state-by-state basis, because the seasons in all the states do vary quite a bit right now. I'm not sure we will have that ready by the May meeting; but it's definitely something that we can look at if the Board

desires us to.

MR. O'REILLY: May I respond?

CHAIRMAN ARMSTRONG: Go ahead, Rob.

MR. O'REILLY: I'm aligned with Doug's idea that we just want to get some glimpse here. We want the public to know that this is something being taken seriously; no expectation for any final results or anything else like that. I just don't want it to be neglected by the time we really start to work on this.

CHAIRMAN ARMSTRONG: Justin, then Dennis.

MR. JUSTIN DAVIS: This is a question for the Technical folks. I'm wondering if this motion would be more appropriately worded reductions and removals; because what we're really trying to capture here is how many fewer fish we will need to remove to get down to that F threshold, and obviously as we change size limits we might be increasing discards. There is mortality associated with that. There has been concern expressed about that around the table. I'm just wondering if that little change in wording might help sort of capture that dynamic better.

DR. DREW: I think the Technical Committee would have interpreted that at harvest as removals; but if the Board wants to be more specific, it certainly wouldn't hurt us.

CHAIRMAN ARMSTRONG: Dennis.

MR. DENNIS ABBOTT: Not assuming, but with the importance of this issue and assuming that we come back in May and make a decision to start an addendum. In order to get regulations in place by 2020, that gives us maybe eight months. Is it possible that we can get that done in that time, and would it be necessary or a good idea to consider having additional meetings to expedite this, in

order to have a finished product by the end of this calendar year?

MR. APPELMAN: Talking about an addendum here? Assuming the Board initiates an addendum in May. That timeline would have no hiccups along the road. Final approval would be in October of this year.

CHAIRMAN ARMSTRONG: Question Max. If time and area closures were part of it, can that be an addendum, since they don't seem to be in the toolbox yet?

MR. APPELMAN: Yes, but I'm going to check right now just to verify that response.

CHAIRMAN ARMSTRONG: Okay to the motion; anymore discussion? All right hang on just a second.

MR. APPELMAN: Yes.

CHAIRMAN ARMSTRONG: All right let's vote on it, all in favor raise your right hand; sorry, yes please caucus. All right are we ready? All in favor of the motion raise your hand; keep them up please. Okay, against, nulls, abstention. The motion carries 15 to 1. All right, well we've got the ball in motion. Does anyone have any other discussion of next step for striped bass management? Jay.

DR. McNAMEE: Just real quick a question for Nicole or Mike or Katie, one of you guys. Does the Technical Committee need any guidance at this point as to what your recruitment assumption should be; or are you just going to roll forward with what you've used to this point? You're going to have to run a projection to do this, right? Do you need guidance on that assumption, or any other?

MR. CELESTINO: I guess the answer depends. We would probably move forward with what we've presented as our preferred recruitment scenario as part of the peer review. Unless there is interest from the Board in an

alternate scenario; because I should mention for completeness that we did actually bring two recruitment scenarios, one random draws of recruitment and one with the hockey stick recruitment that we showed.

We did the random draws of recruitment as a sensitivity analysis; not as our preferred run. Unless the Board was interested in something different we would move forward with our Plan A, hockey stick recruitment relationship that we showed earlier.

CHAIRMAN ARMSTRONG: Andy.

MR. ANDREW L. SHIELS: Just before we leave this, perhaps the most disturbing thing that I think a number of people around the table agreed to was the dead discards to the recreational side. I am asking, expecting, hoping that the stock assessment, the final report will include the what, when, where and what sector those dead discards occurred in. Is that expected to be in the report?

MR. CELESTINO: We would expect the plots that we showed will be in the report; the table that are in the briefing materials, unless you're referring to something different.

MR. SHIELS: What I want to be able to know, when we get to this question is I want to know where along the coast in what fishery, whether it's in the ocean or in the bay, the discards occur so that we can have an understanding. Doug was indicating we need to understand what this means to the public. I think that would be very helpful to know which part of which sector and geographically, and whether it's on the coast or in the Bay these discards are occurring, so we can kind of wrap our head around that which is the most disturbing of all the issues I think that we have been presented with today. That's what I'm requesting.

MR. CELESTINO: We believe that most of that is in the report; and if it's not we'll make sure it's included as part of the report from this motion.

CHAIRMAN ARMSTRONG: Anything else before we leave this agenda item?

MR. APPELMAN: Yes, so I just wanted to highlight that it's pretty clear that there is going to be a management document soon being developed. We have a development team; and I would appreciate the Board to look back at those members and just verify that those are the right folks for this management document. There could be any range of issues considered in there. Please look back and let me know if there should be any changes.

CHAIRMAN ARMSTRONG: Do we need to do anything to reenergize them, or charge them to reorganize at this point or they're just sitting dormant waiting for our orders? Excellent, can you send out an e-mail perhaps and remind us to look at our PDT members. Ritchie.

MR. WHITE: This is a suggestion to the formation of the meeting for May. I would leave a big chunk of time for this meeting in May.

CONSIDER PROVIDING COMMENTS TO NOAA FISHERIES REGARDING THE PROPOSED MEASURE TO LIFT THE BAN ON RECREATIONAL FISHING IN THE FEDERAL BLOCK ISLAND SOUND TRANSIT ZONE

CHAIRMAN ARMSTRONG: So noted. Our next agenda item is revisiting Providing comments to NOAA Fisheries Regarding the Proposed Measure to Lift the Ban on Recreational Fishing in the Federal Block Island Sound Transit Zone. The question is, it was originally, I think, we would kick the can down until the official review is out. Given what we've seen as a Board, do we know enough to provide comments to NOAA at this point? Mike.

MR. LUISI: To answer your question directly, I think we know enough. But I think that it's a

more strongly worded message once it's been committed to by the Board, and we're on solid ground. It's my understanding and this again. Maybe we should have a two-day meeting in May. It's my understanding that everything is on the table still; and even the model that Gary Nelson had worked on is something that we're going to get a report on and have to debate.

I think the Board needs to select its preferred path, and then based on putting some solid ground under any further actions then I think that message is just more strongly worded from the Board rather than on an updated however it was worded in the agenda, an updated preliminary review of a stock assessment report.

CHAIRMAN ARMSTRONG: Sure. I wonder if we can short circuit it by having a motion or consensus for staff to craft a strongly, if we have consensus of the Board saying, and I don't know we do, saying no you shouldn't open that; some letter to that effect rather than spending here wordsmithing. Can staff do that?

MR. APPELMAN: I'll just remind the Board that when we looked at that ANPR that came out last fall, the Board decided to write a letter to NOAA Fisheries stating just that; that we're going to wait until the final results come out to provide a formal comment or recommendation regarding Block Island Sound. The Board essentially has already done that and I think what Mike was just saying is we're still in that boat, we're waiting for those final results to come out. I think that has already been checked off the list, from my seat at least.

CHAIRMAN ARMSTRONG: Well I'm not sure. We just said hang on don't do anything. We haven't provided a letter saying hell no, or yes sure go ahead with it, right? That's what Derek maybe you could advise us. That's what you're looking for, a letter from this board?

MR. DEREK ORNER: I guess in the ideal world, yes. I think we were planning back in the annual meeting in October, the assessment would be final for this Board, we would have heard the presentation. We can provide comment from the Board back to NOAA, so we could go forward and make some decisions on directions to go. I guess the hesitation and waiting until May now puts another three months into that process.

I'm not sure if that timeline still fits or how we would move forward; considering the fact that as Katie mentioned the numbers and the trends, everything in the assessment aren't necessarily going to change. We'll get more detail in the assessment reports come May, but the trends and the status are there. As a Board can we have that discussion? Maybe provide and get that off the table now, understanding that come May it's going to be a long meeting.

CHAIRMAN ARMSTRONG: I think I would prefer to get it off the table now. Ritchie.

MR. WHITE: Question, then follow up if I may. This proposal would increase mortality; is that correct?

MR. APPELMAN: I can't answer that. The proposal is to consider opening up recreational fishing in Block Island Sound in that transit zone. How that translates to F, I don't know.

CHAIRMAN ARMSTRONG: Generally if someone wants to get an area more than they are at now, there is going to be more availability and larger harvest, I think we could probably assume.

MR. WHITE: Any increase of mortality at this point, I would be opposed to until after we figure out where we're going, so I would oppose it at this point. If they want to wait, May when we kind of figure where we're headed the answer might be different. But

right now if they're looking for an answer I would oppose it.

CHAIRMAN ARMSTRONG: Justin, I'm sorry Jay, one of the J's.

DR. McNAMEE: That's okay, I've been called worse. It is interesting. I thought Mike originally was saying let's wait, maybe. I'm having a little trouble following. But I would be in the camp of waiting to May. It's closed now, so waiting doesn't impact that part of it. The difficulty that we have is we've also been saying in Rhode Island; let's wait to see the outcome of the stock assessment.

We have not had an opportunity to say hey the stock assessment is out; here is what it said. I think we have a general sense of what it's going to say. I don't disagree with that. But I also don't see the harm in waiting until May. I think it's probably going to be a pretty quick agenda item. I don't see us laboring over this too much; based on what we learned today. But what we've not been able to do is kind of go back out and say the stock assessment did not look good, you know in our area. I would like an opportunity to be able to do that.

CHAIRMAN ARMSTRONG: Okay how about a hybrid to save a little time. If we have consensus with this Board, we'll charge the staff to put a letter together that it can bring forward for the next meeting, so it will be a five minute discussion. Then we can put it to bed. Is anyone for opening up that area? Emerson.

MR. HASBROUCK: Yes, and the reason I'm supporting that at least as of now is that the information I have is that it's likely not to increase fishing effort. But what's going to happen is there is going to be the same number of boats. This is primarily charterboat fleet, oh and also private boats. The same number of boats fishing in that area that are fishing there now, it's just that right now they are densely congregated on either

the New York side of that transit line or the Rhode Island side of that transit line.

This will allow that fleet to just disperse and not be fishing right on top of each other. It may not or likely will not increase fishing effort. Relative to that I am wondering if anyone has any information; or if the TC could provide it to us. Was there a reduction in recreational fishing effort when the EEZ was closed, and if so by how much, and that's for the whole EEZ.

DR. DREW: To the question about did closing the EEZ reduce fishing effort. I think that is something the TC could look at for the MRIP data; recognizing it's not perfect, but we do have some information on total number of trips, as well as directed trips and where those trips happen in the ocean. We could look at that if that is something the Board was interested in.

CHAIRMAN ARMSTRONG: Emerson.

MR. HASBROUCK: I think it might be interesting to see that; because we're looking at kind of the reverse of that now. The entire EEZ was closed, so what impact did that have on recreational fishing effort? That might give us some indication; in terms of might there be an increase in fishing effort if we open up this very tiny little sliver of the EEZ, which is probably equal to less than I don't know, 100th of 1 percent of the area that was closed.

CHAIRMAN ARMSTRONG: Okay, we're a little bit at loggerheads then. **I would propose we entertain a motion to write a letter opposing opening it.** If it wins by a majority, staff moves forward with that. We see it in May and the states can also offer up individual opinions by letters, either supporting that or opposing it. Would anyone like to make a motion? Pat Keliher.

MR. PATRICK C. KELIHER: I move we do what you just said, Mr. Chairman. Would you like clarity?

CHAIRMAN ARMSTRONG: Would anyone like to second what I said? All right, we have a motion by Pat Keliher, do we have a second, Ray Kane, discussion, Emerson.

MR. HASBROUCK: I'm not going to support this motion for the reasons I just previously stated, as well as for the fact that whatever the outcome is of our future discussions based on a new stock assessment, harvest is going to be constrained by whatever it is that we come up with.

We're going to constrain recreational harvest by size, season, bag, a whole variety of things that might come out of the final discussion here. That effort is going to be constrained, and it's probably going to be lowered anyhow. I don't see how this is going to increase overall fishing effort on the resource.

CHAIRMAN ARMSTRONG: David and then Dennis.

MR. DAVID V. BORDEN: Just a question. I mean the directive is to compose a letter. It does not say submit a letter to NOAA so is the intent to compose a letter and then circulate it to the Board to bring it back at the May meeting? At the May meeting, review at May meeting, okay, all right sorry about that I missed that.

CHAIRMAN ARMSTRONG: I believe our intent is to compose and we'll vote again at the May meeting. Dennis.

MR. ABBOTT: Conversations we had at the last Board meeting and this Board meeting is the whole exercise is simply to legalize an illegal fishery. It's been brought out quite clearly that there is a fishery going on there; and we want to legitimize it. Therefore, I don't think that's a good thing, and therefore

I support the motion.

CHAIRMAN ARMSTRONG: John.

MR. McMURRAY: I support the motion too for obvious reasons; but it shouldn't be lost on the Board that Congress also issued another directive to open up the entire EEZ. I'm not sure where we are on that; maybe Derek can provide some insight there. But we may want to kill two birds here, and include our opposition in the letter.

CHAIRMAN ARMSTRONG: Derek, would you care to weigh in on that?

MR. ORNER: No. Yes the second item moved forward in that language, well the first one the Block Island Sound was to move forward and consider it at that point. The second one was upon completion of the stock assessment to work with the Commission to consider opening the EEZ, so the entire coastwide EEZ. That will be coming at some point.

I figure that is something that we can pick up after we have review of the assessment itself in May, so we may even push it out a little bit further. Whether that goes through the whole AMPR Rule Process, or if we can all consider it here, and based on the results we don't go forward. That is I think up for the discussion and consideration at that point.

CHAIRMAN ARMSTRONG: Andy then Emerson.

MR. SHIELS: After the October meeting when we heard this news that there was two parts to this, the transit zone and then the wider discussion of opening the EEZ. I felt the need to pen a letter on behalf of the Pennsylvania Fish and Boat Commission, and the Pennsylvania delegation, and I did meet the deadline and it did show up online on the Federal Register, I guess that's what it is.

There is no reason why you can't send two letters. You can send a letter now. You sent

one already, you can send another letter. You can send three letters. I sent a letter and I reserved my own opportunity to send an additional letter later if I like. I'm concerned. You know we don't necessarily have a dog in the fight on the transit zone.

But we do have a dog in a fight on the EEZ as a whole; and I'm concerned about the way this is moving along kind of almost discreetly and covertly that well, we'll address this part, and then maybe we'll address the larger part later some time. None of us could predict that the Federal shutdown was going to occur not long after those comments were registered. We've lost the opportunity for the stock assessment to be ready today; which also has put back our opportunity to comment, by having the stock assessment in our hand.

My recommendation is if it's the will of the Board, or the majority of the Board at this time is to send a letter now re-expressing your concerns about the transit zone, and what else might be on deck, and then reinforce that with information on the stock assessment when it comes available, where you can hone in and make it a more finely tuned letter. My concern is that this is kind of by being stretched out; maybe the importance of it might be lost by a little bit.

CHAIRMAN ARMSTRONG: Emerson.

MR. HASBROUCK: With your permission, a question through you to Derek if possible.

CHAIRMAN ARMSTRONG: Please.

MR. HASBROUCK: I'm just wondering where NMFS is with the issue of the transit zone, opening up the transit zone. Is NMFS just waiting for a response from this Commission before they move forward; or is NMFS at some other point in their consideration?

MR. ORNER: Looking back in the audience I'm not quite sure how to answer that one,

Emerson, mainly because with the lapse in appropriation we haven't been in the office for a month and a half, basically since this all started. I personally have not had conversations to see exactly where NMFS is or NOAA, you know Secretary level is in making any decisions, which is kind of my push when I was talking to Mike before was to try and get something moving here, so when that does come we have a response from the Commission.

CHAIRMAN ARMSTRONG: Any more discussion on the motion? Caucus needed, okay take a minute to caucus. Is everyone ready? Again the motion is to just compose the letter. We will vote on sending it in May. New York, are you good, all right all in favor raise your hand. Okay opposed, abstain, null. All right it passes 15, 0, 0, 1. Mike, I guess you are up.

REVIEW OF MARYLAND'S CONSERVATION EQUIVALENCY EFFECTIVENESS REPORT OF 2018 RECREATIONAL MEASURES FOR THE CHESAPEAKE BAY SUMMER AND FALL FISHERY

MR. LUISI: Is it okay if I say on the side of the table here? Okay, I did prepare a presentation; a few slides, so we can wait until that comes up. What I'm going to present to you are some of the highlights for our Conservation Equivalency Effectiveness Report that the state of Maryland committed to last year; upon approval of a Conservation Equivalency Plan.

If you all remember, we had an issue in Maryland as a result of increasing the size limit from 18 to 20 inches as a result of Addendum IV; exactly what we were talking about before we were experiencing huge numbers of discards. We wanted to address that concern through proposing to the Board a plan which established a 19 inch minimum size; and required that non-offset circle hooks be used with bait fishing.

We also committed to providing this report here at the winter meeting; and trying to gather relevant information on compliance and other things that we were working on as part of our program for this meeting in 2019. It's hard to believe a year has passed since we were here discussing that.

What I'm going to cover, and I'll do it very quickly, and I want to also thank Max for putting this on the agenda for only ten minutes. I'll probably go about nine, and then answer any questions that you have, so thank you, Max. I want to talk to you a little bit about what our current gear regulations are.

I'm pointing that out because they differed just a bit from the discussion that we had at the Board meeting last year. I'm going to go over some outreach and education efforts, enforcement and compliance, and then we did a little bit of an analysis, 2018s MRIP data were preliminary at the point when we were working on this still.

I do want to go over an analysis that we conducted; which I think you'll appreciate the results. Okay so the current gear regulations in Maryland apply to fishermen that are chumming or live-lining. A person engaging in this activity during the periods of May 16 through December 15, and May 16 through December 15 of 2019, shall only use a circle hook.

A circle hook is defined as a non-offset hook at the point turned perpendicularly back to the shank. You'll see the examples of what a circle hook isn't and is as it applies to the regulation. Where things changed slightly, and we discussed this I think back in maybe at the annual meeting.

We talked a little bit about this. But when we went to implement the rule, bait fishermen kind of pushed back a little bit. Folks that were fishing for other species that were not striped bass thought that implementing a circle hook across the board was going to

impact them; not only the fishermen but the tackle shops.

Those of you who are in the business of implementing new regulations in your state, sometimes we have to consider the gains versus some things that you might not be able to accomplish. We would have lost the whole program had we tried to push requiring for all bait fishing the use of circle hooks. You'll see the rule there. I don't need to read it to you. We are allowing for the use of J hooks for bait fishermen. However, we did describe the prohibition on treble hooks through this process; so treble hooks are no longer allowed in Maryland. Moving on to education and outreach, we conducted, you know we phased in a series of education and outreach programs consisting of e-mails to hundreds of thousands of e-mail addresses. We had staff doing industry seminars.

We were all over Facebook and Twitter, radio interviews were conducted throughout the year, and we produced a large amount of just hand-out material that we were giving to folks that were working through the APAIS program, as well as the tackle shops and other places of interest, state parks and places where people were going to be engaging and fishing to kind of get the word out that the rule was going to change for next year.

Moving on to enforcement and compliance, our Natural Resources Police Office in Maryland conducted saturation patrols over the summer. Those saturation patrols were mostly focused on the charterboat fishing activity; and the report from NRP was that it was nearly 100 percent compliance with the use of circle hooks during those patrols.

Field Officers also reported at the end of the season that they had no real issues throughout the year. It wasn't quantified in any way; but reports through their superiors indicated that they did not have a problem with compliance for the use of circle hooks

when chumming and live-lining in 2018. Through the ACCSP program and our APAIS program, we also were able to acquire some information throughout the year.

We had 872 anglers, provided answers to extra questions that we asked as a part of that program. We worked with the folks at MRIP and through ACCSP to develop a technique; so that extra questions that you ask were asked, they were not added to the federal form, and we made sure staff weren't slowing down the acquiring angler interviews.

When things were a little slow and people had a little extra time at the end of the interview, we had staff asking additional questions about the use of circle hooks in your fishing activity. Four hundred of those 872 anglers were not chumming or live-lining or using bait; so they were using some form of an artificial lure.

Those individuals for the remaining anglers that were chumming, we had 94 percent compliance rate based on their answers. Live-liners had a 97 compliance rate based on the answers that they gave during this interview. Others that used baited hooks, 30 percent were using circle hooks, but they were not chumming and live-lining.

Because of that J hook requirement we were just assuming that the rest of those anglers were using J hooks. The numbers and more detail about those interviews you can certainly find in your report. Here is the last thing I want to go over with you. What we did was we did an updated.

Our original proposal had an analysis; and that analysis indicated that there were going to be no additional removals as part of the program. We were going to be converting dead discards into harvest; and overall the total removals were going to be around zero, with a range which was all part of the calculation. In order to do that we had to make some assumptions based on the use of

artificial lures and bait throughout the waves from Waves 3 through 6. On the left hand side of that table you'll see what our guess was. We guessed that in Wave 3, 42 percent of individuals would be using artificial, and 58 percent of anglers would be using bait. Based on the information we were able to obtain from the APAIS program, the actual values are on the updated side.

In Wave 3 we guessed 42, we determined 41. We guessed 58, and we determined 59. You can see that table as you go down. That was the one that was right on point; but we were close. However, we wanted to go back to the original analysis, and rerun the analysis with the updated values. We also had to update the proportion of bait anglers using circle hooks. Our original proposal assumed 100 percent; because we had started the program and started the rulemaking process expecting not to allow for J hooks at all with the use of bait.

Because we did not go forward like that we had to change our proportion to reflect that change in our rules. Those are the new values that went into the analysis; and I think the next slide is the last one, which shows the results. What you'll see is that under the original proposal the proportional change in dead discards was expected to be reduced by 28 percent; with a range of minus 31 to minus 24.

The updated analysis with all the new values indicated that we didn't get there. We didn't get as far as we wanted to, as far as the proportional change in dead discards. The new analysis would indicate that we reduced the dead discards by 12 percent, with a range of reduction of 14 to 10. As you read across the table, we get to total removals. This was a large portion of our analysis.

You know we came to the Board and said, you know there is a range of total removals being minus 8 percent, or it could be anywhere from minus 8 to 7 percent increase in total

removals as part of our original analysis, with an average of zero. What the update in analysis would indicate is that we now have a new range anywhere from minus 1 to 13 percent increase in total removals, with the average being 6.

Looking at that I think that since that 6 percent increase in our updated analysis falls within the range that was presented in the original analysis, I would say that we got as close as we could with our program. With that said, we felt that the program was successful. We have rules in place to continue with this program for 2019.

It will start on May 15, and carry on through December 15. That regulation has a sunset provision; which would require us to go back and resubmit new rules for the future. Our expectation right now is to continue on in 2019; as I'm discussing here with you. Unless I can think of something else that comes up through maybe a question that is all I have. Maybe one more slide, yes that's it. I'll take any questions, Mr. Chairman.

CHAIRMAN ARMSTRONG: Per the motion this was an informational presentation. It doesn't have an action associated with it; as always if the discussion leads to an actionable thing or whatever, so discussion or questions. Ritchie.

MR. WHITE: Questions for Max. Could you read the language that the Technical Committee reviewed, and what the Board passed for the conservation equivalency, and how that compares to what was implemented?

MR. APPELMAN: Read the language from the motion that the Board passed for the conservation equivalency measures?

MR. WHITE: The proposal that the Technical Committee reviewed and then the motion that was passed.

MR. APPELMAN: You'll have to give me a

second to look that up. Thank you, Jess. That is the motion that was approved by the Board at the February, 2018 meeting, if I'm correct. I see you're reading it. Do you want me to read it?

MR. WHITE: Follow up. The Technical Committee did not review including J hooks for bait fishing; would that be correct?

MR. APPELMAN: Correct.

MR. WHITE: We don't know whether the Technical Committee I believe told us they couldn't say whether this met the conservation equivalency or did not. I believe that was the report; if I'm not wrong. If that is correct then adding J hooks to bait fishing, could that have changed the Technical Committee's response?

MR. APPELMAN: I'll try to remind the Board of the debate that took place in February. Let me back up and say that I believe the recommendation from the Technical Committee is they did not endorse any of the measures that were proposed in that conservation equivalency proposal; primarily because they couldn't figure out that baseline for conservation equivalency, due to the measures that are listed in Addendum IV, specifically that there is no base measure in Addendum IV for the Chesapeake Bay fisheries.

It is simply to achieve a particular reduction from 2013 levels. I would have to look back. The point is that there was no default measure to compare these changes to. It was more of a reduction that had to be implemented through Addendum IV. There is a lot there, but does that clarify?

CHAIRMAN ARMSTRONG: Chris then Loren.

MR. CHRIS BATSAVAGE: Thanks for the report, Mike. Mike, in your presentation it showed that 30 percent of the anglers using natural bait were using circle hooks. Were

you able to figure out from those surveys what those anglers were targeting; since it was the APAIS surveyors? I didn't see it in the report right away. I didn't know if that information was available.

MR. LUISI: Because we, no, the answer is no. Some of the reasoning behind that had to do with the actual federal survey itself and the responses that we got from people that were out just fishing. Staff told me that they could only provide this level of detail; and so that 30 percent that is in the report, so of 390 anglers, 119 reported using circle hooks. The others were expected to be using baited hooks. There is really no way to break that down into any other level.

CHAIRMAN ARMSTRONG: Loren.

MR. LOREN W. LUSTIG: Thank you Mike for a very interesting report, I really appreciate it. You had mentioned that the Maryland DNR Police had analyzed only those charterboats, and not private recreational boats for the data, is that correct?

MR. LUISI: That is close to correct. During these patrols where they left both sides of the Bay and kind of hit the fleet all at once so people couldn't leave, most of the boats fishing those days were charterboats. However, there were recreational boats also inspected; but it was much fewer than the charterboat fleet.

MR. LUSTIG: Just a follow up. Certainly when you approach a hundred percent compliance that is very gratifying. I would love to see what the data would show if your officers had a chance perhaps this summer to analyze more thoroughly private boats. That would be very interesting data. I would presume that a law breaker would be disinclined to submit feedback in a questionnaire. Only those who are complying with the law would do that I believe. Additional data would be very helpful, and I do thank you.

MR. LUISI: Yes as I mentioned, the plan is to continue with this in 2019, and expand upon it. One of the things we would like to expand upon is the distribution of circle hooks throughout the interactions that we have during our outreach and education campaign; as well as continuing to work with NRP to get feedback from them from the field. That is all part of what we expect, information we'll expect this year.

CHAIRMAN ARMSTRONG: Pat.

MR. KELIHER: I feel like there was an agreement to do one thing and something else was done here. They did not meet the intent; and did not meet the intent of what the original proposal was, which is troubling to me. I'm not sure where to go from here, if they are only really affecting about 50 percent of where they were supposed to be going.

They're not in compliance with what we agreed to. I don't want to pick on Maryland; because I thought this was a good thing that they were doing. I still applaud that they're moving in the direction of using circle hooks. But it seems to me if we're going to do it you've got to go all the way.

CHAIRMAN ARMSTRONG: Mike.

MR. LUISI: I appreciate the concern. We, I, those of us at the Department also talked about this a lot as we went forward. I know that I've mentioned this to the Board before. The chumming and live-lining fleet was the focus of our attention. That was where we wanted the action to happen. We can't specify to the species level; if you're fishing for striped bass. We don't have the authority to do that so we tried to craft it in the best way we could; knowing that we would get an enormous number of anglers who participate through the portion of the year to catch striped bass in Maryland's Chesapeake Bay. You're likely going to be chumming and live-lining. Bait fishing, there are a lot of other

things that people are bait fishing for, and they're not overlapped.

We felt like we really accomplished what our attempt was; which was to get on the chumming and the live-lining fleet, and make the requirement for circle hooks. If we were to try to do, and I understand the concern, we said one thing and we modified that as we promulgated regulations.

We were going to lose the entire package. It wasn't going to happen in time. We weren't going to get it in place for the time period when we needed it; and we felt that the conservation effort that we would accomplish by modifying it so that the rule would go into place by May, was the tradeoff that we felt was needed. We still feel that we were successful in that attempt.

CHAIRMAN ARMSTRONG: Adam.

MR. ADAM NOWALSKY: I think we need as a Board to think about what it was we were asking Maryland to achieve; and that was a conversationally-equivalent proposal. I understand the concern that there is a line here that says required when fishing with bait, and Maryland had to deviate slightly.

But, at some point in time we've got to step back and think about the gains of what we achieved. The mass educational outreach of discards and the harm of them, the extreme level of compliance that we were able to achieve in Maryland and fishermen, greater than 90 percent compliance with those, and despite all that at the end of the day using recreational data and analysis, which we know are fraught with all kinds of concerns.

The proposal still landed in the bounds of a 0 percent increase. I think the state should be applauded. I think it is fine to sit here and think about okay, what can we recommend to Maryland to continue to approve it? But I hope we don't lose sight of the bigger pictures with this issue, and in similar issues

the states may bring forward.

CHAIRMAN ARMSTRONG: Further discussion, actions, motions. Eric.

MR. ERIC REID: Yes, I guess everybody in Maryland should go buy lottery tickets; because they got lucky on this one. That's the way it worked out. Pat, I appreciate your comments; and I'm right with you. I appreciate Adam's comments, so he accomplished the task more or less. But the reality of it is if the numbers were different, or perhaps maybe the survey was conducted differently, we may be looking at a different set of results, in which case the conversation would be totally different.

I don't know if you improve your tackle shop sales for circle hooks, and it's more convenient for you to do more surveys with full questions, and you get more private anglers to actually fill out a survey they are required to do. Then you find out a little bit more about it. We might be having a different conversation maybe this time next year. But you got lucky that's it. It's good for the resource, but necessarily good for the long term.

CHAIRMAN ARMSTRONG: Further conversation. Mike, would it be your intent to present again next year with the 2019 data?

MR. LUISI: I don't see anything in that motion that would ask me to do that. I'm making light of it. I don't plan to. We're going to have to review this anyway; and I think that we're onboard with what we talked about for two and a half hours earlier today. I think that we're going to all find ourselves having to do something for the future; especially in the recreational fishery.

Changing our program right now would not be a good thing mid-season. It wouldn't be effective until August, probably. Our intent is to go forward, work with this Board on future

management issues that arise through this benchmark assessment and analysis.

**TECHNICAL COMMITTEE REPORT OF
CHANGES TO VIRGINIA'S STRIPED BASS
MONITORING PROGRAM**

CHAIRMAN ARMSTRONG: All right, enough. Next item is to Review Changes to Virginia's Striped Bass Monitoring Program. Nicole.

MS. LENGYEL: Today I'll be presenting a Technical Committee report on Changes to Virginia's Striped Bass Monitoring and Tagging Programs. I'll start off by giving some background information, review the rationale for the program changes, and then present what those changes were and the comments provided by the Technical Committee.

The Virginia programs began in 1992; and they have been primarily conducted on the Rappahannock River using commercial pound nets. They have been supplemented with fyke net and/or gill net samples from the James and York Rivers during certain periods; but the only long term consistent sampling is from the Rappahannock pound nets.

There were a few things that led to Virginia implementing these changes in 2018; one was that the Virginia pound net data was previously used as an abundance index in the assessment, and it was dropped from the benchmark stock assessment in 2018, due to some concerns about the survey. Recent staffing changes in Virginia, as well as funding reductions in Virginia, were the other reasons for these changes in 2018.

The changes implemented were pound net sampling was completely replaced with multi panel anchored gill net sampling. Tagging was conducted through electrofishing, and sampling and tagging in both the James and Rappahannock Rivers was done, and both programs were deemed successful in 2018, in terms of establishing protocols and the number of specimens sampled and tagged.

As Amendment 6 requires, all spawning stock survey changes to be reviewed and approved by the Technical Committee. The TC reviewed the changes via conference call on January 10. They unanimously approved all of the program changes. The TC did have a few comments on the proposed changes; specifically that reducing the soak time may reduce unnecessarily high sample sizes and gear saturation. That the program only samples the Rappahannock and James Rivers, not the York, so it is missing information on one of the spawning grounds.

This was because the FMP only specifies that the Rappahannock and James Rivers are to be sampled. The monitoring program requirements listed in the fishery management plan may not support the future data and assessment needs. The Technical Committee is recommending that the Board consider changes to the FMP to update and improve those requirements, in consultation with the Technical Committee, and I'll take any questions.

CHAIRMAN ARMSTRONG: Questions for Nicole. I have one, the last item. Will we be getting a report or a letter regarding things you would like to see updated for monitoring?

MS. LENGYEL: I think what the Technical Committee was expecting was just a charge from the Board to revisit those program requirements; and then we're hoping that once the Peer Review Report comes out, some of the elements that are needed for future assessment and future development, specifically of the two-stock model will be in that report, and we can inform the Board as to some changes for the program requirements.

CHAIRMAN ARMSTRONG: Those requirements, would that have to be an amendment or an addendum, an addendum okay. We should keep that in mind as we move forward that this may be an item that

we need to include. Rob, while you've got your hand up. The Commonwealth has the resources to continue with the new monitoring?

MR. O'REILLY: Yes, and I would like to make just a couple of comments in that if you go back in time, maybe the 1940s, 1950s, the Rappahannock was sort of the area with the most abundance for striped bass. I think for that reason, when VIMS, which has been doing this work really since 1990, and I followed every year.

Eventually there were spatial problems with the tagging. There were not pound nets in the James River. The York River pound nets disappeared, probably in the early 2000s. But it was the reliance on the pound nets which was the downfall. I think what is offered now is a really good program.

It's taking advantage of different techniques, not new techniques. The electrofishing is used elsewhere, the variable mesh gill net, which Maryland has had a successful spawning stock survey for years is something to look forward to. I think that Nicole putting up the idea of 2018 dropping the pound net index; that really started in 2005.

It's been some trials and errors. I think now looking forward for the future, we can keep supporting it. We have supported it. We do support it through Wallop-Breaux Funding. That was what was indicated by Nicole with the comment about funding issues. But the way that VIMS is situated, they also have ChesMMAAP, and so there is the same investigators working on striped bass, and they have more of a compartmentalized approach, rather than having different sectors of VIMS doing different things.

I'm really, really pleased at what has happened, and I think the Board will too as we go in the future, because there have been very few occasions where either the spawning stock information was able to be used, and

the tagging information after a certain amount of years. It also suffered from spatial constraints of getting the tagging. Thank you for the time, and I think this will be good.

CHAIRMAN ARMSTRONG: Any questions for Rob or Nicole? Rob, would you like to make a motion?

MR. O'REILLY: I would. I would move that the Board consider the changes that have been made to Virginia's two monitoring programs be approved, both for the Spawning Stock Survey, and for the Tagging Program; if you want to shorten that that's okay.

CHAIRMAN ARMSTRONG: Is there a second, John Clark second, discussion. All right we'll wait until it's up on the board. I need to read it first. I haven't read one yet today. **The motion is: move to approve changes to Virginia's Striped Bass Monitoring Program, seconded by John Clark. I'm going to go out on a limb and say is this approved by consensus. Is anyone opposed? So approved.**

**OTHER BUSINESS:
UPDATE ON THE STRIPED BASS
COOPERATIVE TAGGING PROGRAM**

CHAIRMAN ARMSTRONG: Next up is Update on the Tagging Program, Toni.

MS. KERNS: We have conducted 10 out of the 13 tagging trips through the Cooperative Striped Bass Hook and Line Tagging Trips, and unfortunately this year we have not been as successful as we have been in years past. I believe we have tagged 50 fish in total. In some cases Captain Ryan is doing an excellent job, and they're finding fish. But the fish just don't seem to be biting.

There have been, I think a couple of days where when the weather shifted they weren't able to locate the fish as well. We have three more trips left; so we're hoping that we will

have some bang up days on those days, and get a bunch of fish tagged. I just wanted to thank North Carolina.

Greg Reger stepped in and did a lot of the tagging, and led the trips when the Federal Government shut down. He has been a wonderful help, since Josh Newhard hadn't been working, since he is an employee of the Fish and Wildlife Service. Thank you to North Carolina for giving us Greg.

CHAIRMAN ARMSTRONG: Bob.

EXECUTIVE DIRECTOR ROBERT E. BEAL: I've got one other introduction that I should have done at the very outset of the beginning; and I apologize for not doing that. If you notice in the Pennsylvania delegation there is a new face between Loren and Andy; and that's Tim Schaeffer.

Tim was recently appointed as the Executive Director of the Pennsylvania Fish and Boat Commission. He's technically our Administrative Commissioner, and Andy is his proxy at the Commission. But Tim came by just to observe the meeting for a couple days, and feel free to reach out and say hello to Tim in your downtime between meetings. Welcome, Tim. We're glad you're here (applause).

CHAIRMAN ARMSTRONG: Welcome, Tim. Are there any questions for Toni regarding the tagging program? Seeing none; any business before this Board? Yes, Ray.

MR. RAYMOND W. KANE: Yes it's a question to the Technical Committee, the Assessment Committee. We've seen a lot of graphs and charts, and probably I'm going to be told there is no way it can be done. But this Commission went through a painstaking a while back about a tagging program, which was implemented coastwise. Does anybody remember the numbers of fish that were poached that drove this Commission to a tagging program; you know at point of sale?

How would that reflect in these retrospective graphs that you put up, you know in layman's terms? Is there any way of looking at the number of poached fish; and where the biomass would be today if you didn't have, what were the numbers two or three million pounds of fish in that sting operation? This goes back a few years ago, but just a question.

MR. CELESTINO: I'll try. I'm not familiar with those numbers. But your point about the retrospective is a good one. The sort of classical ideas about what's driving retrospective is missing catch, change in natural mortality, or change in catchability over time. If we were missing catch, my understanding from work at the Northeast Science Center is that we would actually see the opposite retrospective pattern. We would see increases in SSB over time, and we see the opposite. It's hard to say. I don't have a great answer for you I'm sorry to say.

MR. KANE: Thank you.

ADJOURNMENT

CHAIRMAN ARMSTRONG: Other business. Seeing none; we are adjourned.

(Whereupon the meeting adjourned at 5:16 o'clock p.m. on February 6, 2019)