Atlantic States Marine Fisheries Commission

ISFMP Policy Board

November 5, 2015
9:15-11:15 a.m.
St. Augustine, Florida

Draft Agenda

The times listed are approximate; the order in which these items will be taken is subject to change; other items may be added as necessary.

1.	Welcome/Call to Order *(L. Daniel)*	9:15 a.m.
2.	Board Consent *(L. Daniel)* • Approval of Agenda • Approval of Proceedings from August 2015	9:15 a.m.
3.	Public Comment	9:20 a.m.
4.	Executive Committee Report (*L. Daniel*)	9:30 a.m.
5.	Habitat Committee Report (*J. Kritzer*) **Action**	9:50 a.m.
6.	Discuss Revisions to ASMFC Guidance Documents (*T. Kerns)*	10:05 a.m.
7.	Review MSTC/BERP Committee Structure (T. Kerns)	10:35 a.m.
8.	Law Enforcement Committee Report (*M. Robson*)	10:40 a.m.
9.	Progress Report on the Atlantic Sturgeon Stock Assessment (*K. Drew*)	10:50 a.m.
10.	Review Non-Compliance Findings, if Necessary	11:00 a.m.
11.	Other Business	11:05 a.m.
12.	Adjourn	11:15 a.m.

The meeting will be held at the World Golf Village Renaissance; 500 S. Legacy Trail; St. Augustine, FL; 904-940-8000

MEETING OVERVIEW

ISFMP Policy Board Meeting
Thursday, November 5, 2015
9:15-11:15 a.m.
St. Augustine, Florida

Chair: Louis Daniel (NC) Assumed Chairmanship: 10/13	Vice Chair: Doug Grout (NH)	Previous Board Meeting: August 6, 2015
Voting Members: ME, NH, MA, RI, CT, NY, NJ, PA, DE, MD, DC, PRFC, VA, NC, SC, GA, FL, NMFS, USFWS (19 votes)		

2. Board Consent

- Approval of Agenda
- Approval of Proceedings from August 6, 2015

3. Public Comment – At the beginning of the meeting public comment will be taken on items not on the agenda. Individuals that wish to speak at this time must sign-in at the beginning of the meeting. For agenda items that have already gone out for public hearing and/or have had a public comment period that has closed, the Board Chair may determine that additional public comment will not provide additional information. In this circumstance the Chair will not allow additional public comment on an issue. For agenda items that the public has not had a chance to provide input, the Board Chair may allow limited opportunity for comment. The Board Chair has the discretion to limit the number of speakers and/or the length of each comment.

4. Executive Committee Report (9:30-9:50 a.m.)

Background

- The Executive Committee will meet on November 3, 2015.

Presentations

- L. Daniel will provide an update of the committees work

Board direction for consideration at this meeting

- none

5. Habitat Committee Report (9:50-10:05 a.m.) Action

Background

- The Habitat Committee will meet on November 3, 2015.
- The Habitat Committee developed a white paper on habitat bottlenecks to focus both research and management on habitat areas likely to yield the greatest returns.

Presentations

- J. Kritzer will present an update of the committees work.
- J. Kritzer will present the Habitat Bottlenecks White Paper (**Briefing Materials**)

Board actions for consideration at this meeting

- Approve the Habitat Bottlenecks Paper.

6. Discuss Revisions to ASMFC Guidance Documents (10:05-10:35)

Background

- The Executive Committee has been updating Commission Guiding Documents (e.g. Charter, Rules and Regulations, TC Guidance Documents) to reflect the current practices of the Commission.

Presentations

- Staff will review the progress of the Executive Committee

Board guidance for consideration at this meeting

7. Review MSTC/BERP Committee Structure (10:35-10:40 a.m.)

Background

- The Biological Ecological Reference Point (BERP) Working Group started as a spin-off of the Multispecies Technical Committee (MSTC) which reported to the Policy Board. The committee is now solely working on the menhaden reference point issue. Given this change how should the BERP's products be reported to the Commissioners.

Presentations

- T. Kerns will present an overview of the current committee structure and suggested changes.

Board action for consideration at this meeting

- None

8. Law Enforcement Committee Report (10:40-10:50 a.m.)

Background

- The Law Enforcement Committee will meet on November 4, 2015
- The Policy Board tasked the LEC to provide information regarding regulations or laws that address "landing in whole condition" or related rules that allow partial or complete filleting of fish prior to landing. The LEC will review this information (**Briefing Materials)**

Presentations

- Update on LEC activities by M. Robson

Board action for consideration at this meeting

- None

9. Progress Report on the Atlantic Sturgeon Stock Assessment (10:50-11:00 a.m.)

Background

- The Benchmark stock assessment for Atlantic sturgeon is schedule to undergo peer review in 2017.

Presentations

- K. Drew will present an update on progress for the sturgeon assessments

Board actions for consideration at this meeting

- None

11. Review Non-Compliance Findings, if Necessary

12. Other Business

13. Adjourn

DRAFT PROCEEDINGS OF THE

ATLANTIC STATES MARINE FISHERIES COMMISSION

ISFMP POLICY BOARD

The Westin Alexandria Hotel
Alexandria, Virginia
August 6, 2015

These minutes are draft and subject to approval by the ISFMP Policy Board
The Board will review the minutes during its next meeting

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ATTENDANCE

Board Members

Terry Stockwell, ME, proxy for P. Keliher (AA)
Doug Grout, NH (AA)
Ritchie White, NH (GA)
Dennis Abbott, NH, proxy for Sen. Watters (LA)
Dr. David Pierce, MA (AA)
Bill Adler, MA (GA)
Robert Ballou, RI (AA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)
David Simpson, CT (AA)
Craig Miner, CT (GA)
Lance Stewart, CT (GA)
Katherine Heinlein, NY, proxy for Sen. Boyle (LA)
Jim Gilmore, NY (AA)
Emerson Hasbrouck, NY (GA)
Brandon Muffley, NJ, proxy for D. Chanda (AA)
Tom Fote, NJ (GA)
Adam Nowalsky, NJ, proxy for Rep. Andrzejczak (LA)
Loren Lustig, PA (GA)
Leroy Young, PA, proxy for J. Arway (AA)
Thomas Moore, PA, proxy for Rep. Vereb (LA)
John Clark, DE, proxy for D. Saveikis (AA)
Roy Miller, DE (GA)
Craig Pugh, DE, proxy for Rep. Carson (LA)
Lynn Gegley, MD, proxy for D. Goshorn (AA)
Bill Goldsborough, MD (GA)
David Sikorski, MD, proxy for Del. Stein (LA)
John Bull, VA, (AA)
Kathryn Davenport, VA (GA)
Louis Daniel, NC (AA)
Robert Boyles, Jr., SC (AA)
Ross Self, SC, proxy for R. Cromer (LA)
Patrick Geer, GA, proxy for Rep. Burns (LA)
Spud Woodward, AA (GA)
Jim Estes, FL, proxy for J. McCawley (AA)
Sen. Thad Altman, FL (LA)
Wilson Laney, USFWS
Kelly Denit, NMFS
Martin Gary, PRFC

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

Ex-Officio Members

Staff

Bob Beal
Toni Kerns
Pat Campfield
Mike Waine

Guests

The ISFMP Policy Board of the Atlantic States Marine Fisheries Commission convened in the Edison Ballroom of The Westin Alexandria, Alexandria, Virginia, August 6, 2015, and was called to order at 8:00 o'clock a.m. by Chairman Louis B. Daniel, III.

CALL TO ORDER

CHAIRMAN LOUIS B. DANIEL, III: Good morning. Welcome to the Policy Board.

APPROVAL OF AGENDA AND PROCEEDIGNS

CHAIRMAN LOUIS B. DANIEL, III: Everyone should have a copy of the agenda. I'm going to add one piece of other business where Kevin Chu is going to give us an update on regional planning. You should have our agenda and our proceedings from our May meeting. Are there any corrections to those minutes or any additional items that we need to consider on the agenda? Seeing none; they will be considered approved by consent.

PUBLIC COMMENT

CHAIRMAN LOUIS B. DANIEL, III: The first item on our agenda is public comment.

UPDATE FROM THE EXECUTIVE COMMITTEE MEETING

CHAIRMAN LOUIS B. DANIEL, III: Our other item is our executive committee report. The executive committee met to discuss some policy guidance issues that have been brought up by various commissioners over time. Staff put together a white paper with the Administrative Oversight Committee to address various issues from compliance findings to amendment and addendum processes and other such things.

We did not get through all of those in our meeting and so we will be working on that at the annual meeting and hopefully have a document to provide to you there that summarizes these guidance changes. That was really the main focus of the executive committee other than providing our executive director with his performance evaluation for the past year.

That was an outstanding review by consensus; and so we certainly appreciate the job that our executive director is doing and the staff that you have put together over the last year with a lot of folks leaving. You guys need to stick around a little longer than six or eight months now. We need you to be here with us for at least a couple of years.

I do want to thank you all for coming out last night to the hospitality. It was great staff come out to that. It gives a great opportunity to get to meet you and talk with you. I think it makes us a more cohesive bunch; so thank you to the staff and especially to Bob. We didn't really have a chance to talk about the annual meeting, but we will be meeting in Florida.

I didn't know if there was anything else we needed to brief the commission on in terms of the annual meeting. I don't believe there is. Are there any questions for me on the executive committee report? If not, that concludes my report; and I will turn it over to Toni to do a review of the stock rebuilding performance.

REVIEW OF STOCK REBUILDING PERFORMANCE

MS. TONI KERNS: Each year as part of the strategic plan, the commissioners have asked that staff put together a review of each of our species' performance and looking at how well that stock is doing in terms of its health as well as how well are we responding to the scientific advice in each of the species' management boards and sections. We started this in 2009 and carried it through into the 2015 Action Plan.

The objective is to validate the status and the rate of progress that we're making on each species; and if it is not acceptable, to identify corrective action for those species. What we hope to find at the end of the day here today is to get direction and feedback to species' management boards if necessary and also to have information so that staff can put together the 2016 Action Plan.

We have five categories for our species; and we finally did revise these and changed the definitions and those new definitions are now being used to put together the report from the last Policy Board meetings. Our five categories are rebuilt/sustainable, recovering/rebuilding, concerned, depleted and unknown.

For our rebuilt and sustainable and recovering and rebuilding stocks; we have a couple here. The Gulf of Maine and Georges Bank lobster, Atlantic herring, bluefish, scup, spiny dogfish were all in the rebuilt and sustainable category last year and new to this category is menhaden, black drum and I believe

Spanish mackerel. Red drum also was recovering and rebuilding last year.

I'm not going to go through any information on those species – they're doing well. The boards are responding well to their statuses – unless somebody has questions on those. For species of concern, we have Atlantic croaker, striped bass, black sea bass, coastal sharks, horseshoe crab, tautog, summer flounder and the Gulf of Maine winter flounder.

I'm going to go through some details on species that we have new scientific information or the board has taken additional action since last year. There are some species that we don't any new scientific information nor have we taken any actions; so I'm not going to go through those species unless commissioners have questions at the end on them.

First we have Atlantic croaker. Later this morning the South Atlantic Board will get the updated traffic light information, which is presented here. The traffic light is another way of looking at how well the stock is doing in between assessments. The analysis is for the 2014 fishing year, and the results showed that there is declining trends in the fishery-independent indices as well as a drop in both the commercial and recreational landings.

The harvest index was above the 30 percent threshold, which is the black line in the top graph with the red proportion of 44.5 percent for the management measures. The management measures were not tripped since both the abundance index was below the threshold at the 14.2 percent, which is the bottom graph.

In order for management measures to be triggered, both the harvest and the adult composite have to go above the threshold. Although the plan review team was concerned about the declines that we're seeing in croaker, there is going to be an assessment coming out next year and so the plan review team is going to suggest to the South Atlantic Board that they wait until they see the results of those assessments before taking action.

Next we have Atlantic striped bass. The assessment showed F in the terminal year was above the new F target and the spawning stock biomass had been declining steadily below the target since 2006. This indicates that even the stock is not overfished and overfishing is not occurring, the spawning stock biomass is approaching its overfished threshold and stock projections show the spawning stock biomass will likely fall below the threshold in the coming year because of the poor year classes from 2005 to 2010.

The 2011 year class was strong and will mature into the spawning stock in 2016 and 2017. The Striped Bass Board responded to the scientific advice and implemented new reference points as well as state-level regulations to reduce F to a level that was at or below the new F target for the 2015 fishing season. The final implementation of all the state regulations are projected to reach the 25 percent reduction in F.

For black sea bass, the unique life history characteristics, for example, that the species changes sex from female to male, contribute to uncertainty regarding the stock size and the response to exploitation. Therefore, an overfishing limit can't be specified for the fishery, which means the level of catch cannot be derived from the model results and we use a constant catch harvest strategy for this species based on information that we get from the scientific committee coming out of the Mid-Atlantic Council.

The major sources of uncertainty are that the assessment assumes a completely mixed stock; but we have tagging evidence that suggests otherwise. We have seen changes in the spatial distribution of the stock that we think may be due to warming waters; and we're seeing expansion of black sea bass into the north.

Due to the life history, strategy of the species, the assumptions of a constant F mortality in the model may not actually be adequately capturing the dynamics of natural mortality. Again, the unique life history makes the determination of appropriate reference points very difficult for this species.

We've pulled together prioritized research to reduce the scientific uncertainty; and some of these items are being worked on with the new assessment that we're doing jointly with the Mid-Atlantic Council in the upcoming years. Those are to develop reference points and assessment method to account for the unique life history of the species, to explore a spatially structured stock assessment to address the incomplete mixing of the stock and to evaluate implications of range expansion to the stock and fishery dynamics.

For coastal sharks, we looked at and worked with HMS on these species. There is a couple of changes that we have seen in some of the statuses of the stocks. The porbeagle is now overfished but overfishing is no long occurring. The smoothhound

assessment was recently released; and it found that overfishing was not occurring nor was it experiencing overfishing. The board has been working collaboratively with NOAA Fisheries in both management measures to be consistent with the measures that they're putting out as well as the Shark Conservation Act.

For summer flounder, the reported 2014 landings in the commercial fishery were approximately 8 percent over the commercial quota; and the recreational harvest in 2014 was approximately 6 percent over the recreational harvest limit. We had a recent update that came out for summer flounder in the past couple weeks.

It found that the stock was not overfished but overfishing is occurring. There has been low recruitment since 2010; and there is a retrospective pattern that is evident in the assessment. It has substantial implications on the reliability of the model projections. The projections are made assuming that the ABC will be harvested fully but not exceeded. The harvest trends that we have been experiencing have been actually exceeding some of our measures.

This indicates that the likelihood of catches exceeding the ABCs is high. In 2016 and 2017 the probability of overfishing is higher than what the Mid-Atlantic Fishery Management Council's risk policy dictates. There has been a recommendation for the upcoming fishing year of a reduction in catch from the 2015 harvest levels for this species. The Summer Flounder, Scup, Black Sea Bass Management Board will be taking on this issue next week with the Mid-Atlantic Council jointly at their meeting in New York.

For tautog, the overfished and overfishing is occurring on a coast-wide basis. We had an assessment that came up earlier this year. The assessment recommended that we look at tautog in a regional manner.

It gave two options to look at the stock on a regional basis. Those stock statuses vary depending on how you combine the two regions. The Tautog Management Board has initiated an amendment to address the results of the assessment and look at these new regional approaches and that process will be occurring through this fall.

Moving on to the depleted species; for depleted we have American eel, the Southern New England lobster stock, American shad, northern shrimp, river herring, weakfish and then the Southern New England/Mid-Atlantic winter flounder stocks. For Southern New England lobster, it was found that the resource is depleted but overfishing is not occurring.

While overfishing is not occurring, the peer review panel recommended that effort must be curtailed in order to have any possible improvements in the stock. The inshore proportion of the stock is showing a dramatic decline in the spawning stock abundance and that the offshore stock is highly dependent on the recruits that are coming from the inshore stock.

There is concern that if we don't see any increase in recruitment; that the offshore stock in Southern New England will suffer. The technical committee advises to use output controls in the past, but the board has continued to use input measures in order to manage the fishery. In the past, before we had this new assessment, the technical committee had advised 50 to 75 percent reductions in Southern New England; and the board approved 10 percent reductions.

For northern shrimp, due to failed recruitment, the stock is not expected to recover until at least 2017. We are at some of the lowest biomass levels that have come from the northern shrimp summer survey. The stock assessment that was done last year did not pass peer review, so we used a series of indices to look at the status of the stock.

Most of those indices are similar to a traffic light approach that we see with the croaker and spot approach. Most of the indices are in the red and yellow and northern shrimp. The section implemented a moratorium for the second year in 2014 and initiated an amendment to look at limited entry for the fishery in response to the poor stock status.

For species that are unknown, we have Atlantic sturgeon, Jonah crab, spot and spotted seatrout. Jonah crab is a new FMP that the full commission will be considering for approval later today. Jonah crab landings have increased almost six and a half fold since the early 2000's with over 17 million pounds of Jonah crab landed in 2014. The status of the Jonah crab resource is relatively unknown; and there is currently no data on juvenile recruitment.

It has been recommended that we conduct age-at-maturity studies in order to produce an assessment for the Jonah crab species as well as to investigate the extent of the annual migration patterns of the species. The FMP does have monitoring requirements that will help us get better information for Jonah crab as

well as puts in place some size limits, permitting and trip limits for the species in order to cap harvest at its current levels.

Lastly, we have spot. Spot is also undergoing a traffic light approach. The management board had followed the recommendations for the peer review team to monitor the stock. The traffic light analysis showed a decline in harvest primarily driven by a fall in the commercial landings. The adult abundance also fell and was above the 30 percent threshold at 45.3 percent.

The management measures were not tripped since the harvest index was just below the threshold at 29.4 percent. This is similar to croaker in the sense that one of the triggers was hit but not the other; so therefore the PRT did not recommend to make changes in management. The assessment will come out at the same time as the croaker assessment so we can do a full analysis of what to do. Currently we don't have any management measures in the FMP for spot. States themselves do have management measures, but we don't have any coastwide measures, which may be something that the South Atlantic Board will think about after those assessments have been released. That is all.

CHAIRMAN DANIEL: Very good report. Loren.

MR. LOREN W. LUSTIG: Thank you very much, Mr. Chairman, and thank you for the excellent report. We are wondering about the northern shrimp. Could you put back that northern shrimp slide, please? Can you offer any explanation for that dramatic increase that occurred a couple of years ago followed by a stunning plunge? We're wondering if that is symptomatic of any condition that we should know about. Thank you.

CHAIRMAN DANIEL: I will look to Mr. Grout to provide some insight on that.

MR. DOUGLAS E. GROUT: Loren, northern shrimp are at the southern limit of their range; and it is very temperature dependent. We had a very cold winter that spawned that big spike. We've seen this in the past. When we have very cold winters, we get increases in abundance. Following that cold winter, it is believed in winters of '11 and '12, I think it was, we had some of the warmest ocean temperatures on record, which has precipitated the inability for recruitment to occur. We're hoping because we've had a couple of cold winters; that a couple of years from now we may be seeing a rebound.

DR. DAVID PIERCE: Toni, could you put the summer flounder slide back up? As you noted, the board is going to meet next week with our Mid-Atlantic counterparts and we're going to discuss what to do about summer flounder. My question is wouldn't it be appropriate to include in this particular report the way it used to be prior to about a couple of months ago in order to give commission members and others a better perspective as to what is going on? When looking at this figure, one would conclude that we did okay relative to rebuilding back in the 1990's.

We've been in neutral since 2002 and not really working very hard to get to our target; but as we all know, we have been or at least we thought we were – according to the assessment advice we have been rebuilt for many years and now we see where we are. It is a startling reversal of fortune. This is a document that has a lot of people look at it and it gives kind of a false picture of the good work that we have done to achieve our objectives to be – well, to reach our goals, our goals towards summer flounder. Do you think it would be useful to put that figure in, the previous figures showing how we done responding to biomass relative to the target?

MS. KERNS: If the Policy Board would like me to add that figure, we can. I don't know if it would cause confusion to the public to have two figures with two sets of numbers in there in the sense that for summer flounder it is one of the unique species where the reference points change as you do the updates depending on the results of the assessment.

Yes, I think it was 2011 we declared summer flounder rebuilt and it was above its SSB level at that time. I think it only was above that SSB level for one year and then we started to see the declines in SSB. I just don't know if it would be confusing to the public to have one set of reference points in one figure and then see another totally different figure now. If you don't think it is confusing, then I'm happy to include it.

DR. PIERCE: I would suggest, then, not necessarily a figure but a bit more text that would explain the reversal of fortune; because again this board, we did some great work and the industry had to go through a lot of sacrifice to get to where we thought we were; and now it has all come undone and we're looking at cuts in quota and changes in the recreational limits that are going to be met with great resistance, fierce resistance when we meet next week in New York City, which happens to be the interesting state for us to be in for this meeting because of a number of politicians who are concerned about fluke. Anyway,

additional text to explain what happened would be useful.

MR. THOMAS FOTE: Unlike Dave, the table I would like included in this document on summer flounder is the recruitment table based on where the stock was at periods of time. If you look at that table – I pointed it out to the SSC when I went down to the SSC meeting is the fact that when we were at 40 million pounds, 60 million pounds, we had great rebuilding.

When we reached the plateau, it was about 80 or 90 million pounds where recruitment seems to actually decrease with the larger the spawning stock biomass got to. We had great reproduction when we had a small spawning stock biomass. As a matter of fact, the benchmark assessment says the spawning stock biomass is not tied into recruitment and thus is not the key player there.

I think that would be important to put there. What I also would like is a table with the size of the spawning stock biomass and the quotas going back to '96 when we start implementing these plans. This fishery, when you look at what was going on in '94, '96, '98 and you look at the size of it and the quotas we are fishing at and the stock was still rebuilding very dramatically and increasing and recruitment was good, we were basing our fishing on quotas of 22 million pounds, even up to 28 million pounds.

I'm trying to think of the last time we were at a quota that was 16 million pounds; and I think that was pretty much when the stock was all the way down at the end of this curve. When we basically tell fishermen that we have rebuilt the stock, that the numbers look great – these are the highest numbers that we have recorded if you look back at the time period on the spawning stock biomass; and yet we're not rebuilding more. There are other factors involved, whether it is environmental, whether we're trying to rebuild all the stocks where it is competition of food and everything else. It's not I think in this case really based on fishing.

I can't explain 2010 and 2011 for the poor recruitment; but I can explain 2012 and'13. There was a little thing called Sandy that washed every fluke out of the bays in New York and New Jersey and probably in Delaware that had just come in starting in October to basically spend the winter over and actually grow that half inch until they're nine inches, and they all got washed out with Hurricane Sandy. That is a really natural occurrence.

I know we don't put that in tables and we never consider hurricanes in a stock assessment. We have never done that; but it is a place to start looking at it. This discussion is going to be interesting next week. I'm bringing a lot of extra Granola Bars to sit there and listen through it. It should be going on good; but I think we should put that information out there. I really would like a chart on all the quotas and where we were from '96 on because that's really when we starting the plan.

MS. LYNN FEGLEY: Mr. Chairman, it might be overcomplicated, but it strikes me that there is two ways that as stock can change its status; and one is that it changes status just in the process of a turn-of-the-crank assessment where you watch the trend of the stock. The other is when it changes stock status based on a new benchmark, as happened with menhaden and as happened with summer flounder.

I wonder if it is worth making a distinction between those two situations; and when stock status changes as a result of a new benchmark, maybe providing a couple of sentences about the things that were different in the new model. We should all be grateful that science changes and grows and evolves and we learn more and we use the new information; but it is confusing I think to the public when on one side of an assessment everything is fine and then you come out of the assessment and you've got big problems. I think maybe a little bit more explanation there could be helpful.

MS. KERNS: Just a question for you, Lynn. The purpose of this document in the past has not been a piece for the public to see all of that history but more to here is what the latest information is and here is how the management boards have been responding to that information to be able to judge whether or not boards are actually responding to scientific advice from the Policy Board's perspective and whether or not they need to have discussions with those particular species' boards about additional actions that need to be taken or less actions that need to be taken.

I guess it could go both ways. I'm happy to add that other information in here as well; but we do have that type of information that you're speaking of in our statuses of the stock, one-pagers, as well as when we do benchmark assessments we do the primers that are a couple of pages that explain all the differences and the changes in the assessments.

Just for everybody's knowledge, summer flounder actually didn't go through a benchmark; it was just an

update. Technically it is still considered rebuilt; but we moved it into a species of concern since SSB levels were declining and overfishing is now occurring; so staff moved into a species of concern even though technically it is rebuilt. It doesn't fall out of that rebuilt category unless the SSB were to fall below the threshold as well as the fishing mortality is above the threshold.

MR. JAMES J. GILMORE, JR.: Lynn and everyone, the Mid-Atlantic put out a fact sheet last evening that actually describes a little bit of this more in laymen's terms as to how the assessment was done in a little bit more detail to make it more understandable. I think that will help with that; so if you don't have a copy of it, Chris Moore had sent it out last evening, so we should probably get a copy of that for everybody. I will say I don't agree with everything in it, but at least it gives some basic information.

CHAIRMAN DANIEL: That's good to know. Bob.

MR. ROBERT BALLOU: Thank you Toni and to staff for doing this work. I think it is a really excellent job to have these snapshots available for the public in particular. On lobster, there is a little black line on the lower right; is that supposed to be there; what does that mean?

MS. KERNS: It is a three-year average; it is the total three-year average. The technical committee has cautions about using the terminal year estimate for abundance. They average the last three years and that's what that value is. If it is not labeled, I can label that.

MR. BALLOU: Thank you and I think it does need to be labeled. I think that is really my point. Then I just would also just up under assessment findings, the first bullet, depleted and overfishing not occurring, it just seems to be sort of a mixed – it is just sort of hard I think for the public to wrap their heads around those two concepts, which really don't relate very well.

I think it might be easier to speak to the depleted aspect of the stock and then note perhaps in sequence overfishing not occurring, current exploitation below threshold. It just seems it is mixing things there; depleted and overfishing not occurring. If overfishing were occurring, the two would kind of work well together perhaps. I'm just trying of a way to convey information to the public in a way they can get their heads around; and to me that mixes things up just a little bit. I just think a slightly restructuring of those bullets might be helpful. Thank you.

MS. KERNS: And the peer review did touch on this in they do believe that this overfishing that is not occurring is slightly misleading in terms of management responses because it seems to indicate that you wouldn't need to have a management response there. The reference points probably aren't really set up in a way that you're at the lowest stock level that we've ever had and so therefore your abundance indicators aren't going to be able to go up unless you curtail fishing effort. That is what they did say in their peer review report.

MR. G. RITCHIE WHITE: To that point, Bob, the technical committee and review panel believe the stock has little chance of recovering unless fishing effort is curtailed; so maybe something like that could be added to the not overfishing and then have that is out of the stock assessment report, have that in quotations or something. Clearly, we're not formally overfishing but the stock is not standing the fishing pressure we're exerting on it.

MR. FOTE: Mr. Chairman, I have two questions on lobster; and I don't know whether we should do this under other business. One is that we need to stop calling it the Southern New England stock because really it is three states in New England and five in the Mid-Atlantic. We really need to do a name change. It is just very confusing to the states when you tell your lobstermen, well, it is Southern New England and they say, "Wait a minute; we're in the Mid-Atlantic" – whether we call it the Mid-Atlantic and Southern New England Fishery or something like that. The other one was where there was talk about voting on the board. I don't know if you want to cover that now or whether you want to do that later.

CHAIRMAN DANIEL: Much later.

MR. FOTE: Okay, but I would like to put it on the agenda under other business.

CHAIRMAN DANIEL: I would like for the Lobster Board to decide what to call lobsters.

MR. FOTE: But about the voting; I would like to cover that.

CHAIRMAN DANIEL: I'm not sure what that issue is.

MR. FOTE: It was an issue where I have never seen on a board where a council actually voted on the board; and it was a call for that. I think it might have been a mistake and we need to straighten that out

because the only voting members on the board are the states. We usually let members from the council basically be officio members but not voting members on the board. There was a lot of concern over that especially on lobster.

CHAIRMAN DANIEL: What I'd like to do with that, Tom, is move that into the executive committee's guidance criteria and have that discussed so that it is consistent under guidance policies that we're going to be bringing back to the commission. Is that satisfactory, Bob?

EXECUTIVE DIRECTOR ROBERT E. BEAL: I was having a sidebar conversation, Louis.

CHAIRMAN DANIEL: It is just that Tom has raised a concern about voting on the Lobster Board; and I just said that instead of discussing that today I would like to discuss that in our group that is discussing the guidance policy processes.

EXECUTIVE DIRECTOR BEAL: We will add that to the white paper that we're working on.

MR. DAVID SIMPSON: Toni, what you're presenting today is just a summary for this meeting. It is not necessarily for broad public consumption or to send a main message out is my understanding.

I was going to say the press release on lobster, for example, that Tina sent out yesterday was very comprehensive and very detailed and provided a really good summary of the findings, where we are, the difference between the technical depleted but not overfishing with the follow-up information, but this stock is still in terrible shape and things need to be done. I think that's the message that went out to the public; and I think some of the other documents that you've mentioned and even the plan review I think spells out some of the details that may be missing in a summary slide that you put together for us today. Is that fair?

MS. KERNS: That's correct. The objective today is, is there anything that the Policy Board wants to bring back to any of the particular species' management boards; that they're not reacting in ways that the Policy Board feels they should be or is there anything in the action planning for the upcoming year that the Policy Board thinks needs to be addressed for any particular species and staff can add that as part of our planning process for the annual meeting.

CHAIRMAN DANIEL: And that's a very important point; so I don't think we necessarily need to go in and spend too much time wordsmithing or modifying. This is really for us. I think there is one issue that I'll – and just due to some scheduling difficulties that I had, I won't be able to be at the South Atlantic Board.

I know we have received some comments on spotted seatrout. Again, with some of the concerns that have been raised about being more restrictive than the feds in certain states; it may reasonable to consider removing spotted seatrout from the South Atlantic Board's purview and not have a fishery management plan for spotted seatrout. That would be one issue that I think is important at least to have that discussion at the South Atlantic Board instead of dealing with these issues that we're dealing with now. I think that kind of information is sort of the intent and purpose. Eric.

MR. ERIC REID: Mr. Chairman, when it comes to summer flounder, fluke, there was a discussion earlier about what to supply the public with as far as information because you didn't want to confuse anybody. Before the May meeting I was part of the public; and when it comes to summer flounder, I'm confused.

It is a mess; and I really think that this body would be remiss if it didn't supply every bit of information that it had so somebody can try to figure out how we went to let's have a 46 percent reduction and then somehow we do a math problem and we look at our risk factor and now we're down to a measly 29 percent. I really think that the public should have access to every bit of information to try to digest what is going to happen. That would be my recommendation to this board.

CHAIRMAN DANIEL: I think that's good advice. I think we're putting together that information; and I think it would be helpful, perhaps – and I think Dr. Pierce is the chairman of the Summer Flounder, Scup, Black Sea Bass Board – my understanding, Eric, is that these years of poor recruitment that may been environmentally induced or storm-induced resulted in this decline in spawning stock biomass that has put us into an overfishing situation that we're supposed to stop.

The question is I think, Dr. Pierce, if you could perhaps provide the Policy Board with your understanding of the options that may be considered next week by your board and the Mid-Atlantic Council. Everything I've heard is a 43 percent reduction in the quota. I'm hearing some additional things and I don't know if you have any insight into what those might be.

DR. PIERCE: Again, I could call on Mike Luisi if he is here. He is not here; okay. The Mid-Atlantic Council apparently already has had some updating as to what has happened and what might happen at the board meeting next week when we meet with our council counterparts. My understanding is – and I'm still trying to get a clear understanding.

My understanding is that the SSC of the council has offered up some advice regarding the nature of the cuts we should have and that we will be looking at; not a large cut initially but a much less cut, two or three years of cuts, I think. Toni, has perhaps more insight into this. It is not as bad as it could be but it is bad and frankly it is embarrassing for all us, I suspect, because as already indicated there will be great uncertainty and concern.

Even though there have perhaps been some environmental effects and poor recruitment or below average recruitment in the last few years, that doesn't provide an understanding of why certainly all of the data going back in time have been adjusted so that we're no longer rebuilt and going down. We've never been rebuilt.

At least an explanation I guess has already been provided as noted by the executive director of the Mid-Atlantic Council. I haven't seen that announcement yet. It is as bad as it is going to be, but it is still not good. If you could turn to Toni, Mr. Chairman, she may have some additional insight into that.

MS. KERNS: I don't have all the percentages off the top of my head, David; but I can say that originally when the assessment update came out this early summer, it indicated that we would need a 43 percent reduction. That is what originally went to the SSC. The SSC is the scientific body, for those of you that don't know, that look at the – to give recommendations to the council and commission on an ABC.

The council staff put together a memo that looked at an alternative way to get at the necessary reductions that came out of the assessment update, and that was to spread those reductions over a three-year time period. Relative to 2015, next year, the first reduction would be around 28 or 29 percent and then in the following two years there would be two more additional reductions that are also in the twenties.

I don't know the exact numbers off the top of my head; but the 20 percent is relative to the 2015 allocation. The SSC looked at that staff memo and found that it can work. To my understanding, the GARFO staff office said that falls within the purview of Magnuson and what the council can work with; and so that is the recommendation that is being put forward to council staff. I also believe that there has been a recommendation to do another assessment update for the upcoming year so we would get fresh and new information for the 2017 fishery in 2016.

CHAIRMAN DANIEL: Is that helpful and is there more information that we think we can provide to the public or to address Eric's concerns?

MS. KERNS: The meeting materials for the Mid-Atlantic Council has the SSC documents, the Monitoring Committee documents, the assessment update, staff memos. All of that information, just like we do our meeting materials, they provide the same meeting materials. Those meeting materials should have been provided to the Summer Flounder, Scup and Black Sea Bass Board for folks to review. That is available to the public for them to have as well.

We do try to put out a press release after the meeting to explain what happened and why it happened. We have in the past put together white papers with fact sheets to explain different things that are going on in the Summer Flounder, Scup, and Black Sea Bass Fishery when things have been difficult to comprehend and understand. I just tried to open up that white paper that the council put out and I can't get it open; but we'll look at that and see if there is something similar that we can put out on the website as well.

MR. GILMORE: Toni, I'm not sure if it is in the materials, but the Most Frequently Asked Questions we're getting and that most of the public doesn't understand is that the SSC sets the ABC and they're bound by Magnuson; so there are a lot of questions about, well, we're not going to like stand for this, correct? I said, No, it is based in federal law; so once they set that, the council really can't adjust that. If we could have a little bit – if they're not in there already – some description about the legal requirements under this; because nothing is going to change next week at this meeting other there is going to be a lot of unhappy people.

CHAIRMAN DANIEL: I hear that; a lot of unhappy people. Tom.

MR. FOTE: And that brings up a bigger question is that we're going to a meeting which we have really

no choice in doing anything but rubber stamping with the SSC; and that is the way it has gone on since the SSC was put in charge and basically the rules were set in talking about it. So, really, why are we having this meeting especially on summer flounder?

Maybe black sea bass and scup we can have some discussion; but if we're stuck with a quota, we're going up there just to rubber stamp whatever has been done. A couple of years ago because we got so up upset, we actually voted against the SSC; and, of course, the federal government decided that they would shut the EEZ down if we did that for commercial and recreational fishing; and we basically reversed the vote. We said that we would set a separate quota.

Now that's probably not going to happen to us again because again with the fear of shutting down the EEZ, how it affects both the commercial and the recreational fishing industry because a lot of it takes place in the EEZ, there would be a lot of concern on doing that. We're spending all this time, effort and money to go to a meeting on summer flounder, which has already been set, which the rules are already in there, and we're not going to be able to appeal any of that at this meeting.

I'm trying to figure out why we're going to this meeting. I mean if it is a conclusion that is already established, I don't feel comfortable. I mean we could basically vote no confidence of what you're doing, and that would be interesting to see what happens; but just for me to go up and rubber stamp what the SSC did, I don't feel comfortable doing that. We have been doing that for the last five or ten years.

MS. KERNS: The only thing I can provide, Tom, is that it is a jointly managed species so we do in every effort try to work collaboratively with the council through the process in working with them. That said, if the board is not in agreement, they can try to suspend the rules with the council. That takes concurrent votes from both the council and the board to suspend the rules that we work in conjunction with each other, so having like motions.

If you can suspend the rules, then the board can provide their own motions unique to the commission. That does pose issues down the line where state waters will have different quotas and measures than federal waters; and if a person has a federal permit, then they are bound by those federal water measures regardless of where they're fishing. In the past the board steered away from suspending the rules and to continue in their effort to work collaboratively with the council through the process that we're under with these jointly managed species.

MR. FOTE: Yes; but how likely is the Mid-Atlantic Council going to basically vote to suspend the rules because all they have to do is vote no and we're stuck again. I mean you're talking about a true Catch-22 and this is ridiculous. I've been complaining about this for a long time. Winter flounder, we go our separate ways.

They did just the opposite on winter flounder when they opened up the EEZ for 5,000 pound trip limits; and now with summer flounder, we're going the opposite direction than I think a lot of us sitting around this table feel like that we should be doing, and we have no control over it. I'm not happy with the way the plans are jointly managed. I've asked to put that under discussion. You're going to probably tell me we need to push that up to the executive committee, but we really need to do something about this because it is not working.

Again, I don't know if we have to put this in the document; but I really want to see a list of the quotas that we started with from '96 on; because to tell me that this stock is that big and we're going to a 16 – because that is what the new proposal is under the 29 percent reduction. I think it was at the SSC meeting; it is going to be about 17 million pounds.

That is unacceptable with this size of stock. The strain we're going to put on both commercial and recreational sectors – I mean, probably if they had said 43 percent, they would probably have said shut the EEZ down because we'll fish in state waters and catch whatever quota we have because we're doing this and we're upset on it.

Now they gave us a little taste at 29 percent, so, oh, we're only going to reduce you by 29 percent; and the frustration at 29 percent is huge. Also, some of this is MRIP data that we look at and problems. I can just look at the number of trips in the Mid-Atlantic Region, if you can trust MRIP, that we're down a total of 8 million trips just from 2007. In 2013 we had 900,000 less summer flounder trips and we caught more fish than the year before. It just doesn't make any sense.

DR. PIERCE: Tom is giving us a preview of what he is going to say next week and others will repeat what he just said. He makes many good points; they're very valid points. As board chair I'm going to be asking the states in particular at the meeting to offer up some opinions regarding the extent to which we as

contributing states, the degree to which we can reduce management uncertainty; because if we can come up some compelling arguments that there are some things the states can do to reduce management uncertainty, then that will put the National Marine Fisheries Service, I suspect, and the council in a far better position to justify cuts that are not as severe.

Obviously if we reduce the quotas to account for management uncertainty, this has always been an issue and now I think it has become an even more important issue; so it will be up to us as states to try to make some convincing arguments; and if we can't, then I suspect we will be going down to do the will of the council. Of course, many state members here are members of the council. We have dual hats.

CHAIRMAN DANIEL: It is a tough gig. It is going to be particularly difficult for – you know, in North Carolina we're dealing with a southern flounder/summer flounder issue, too, and we're looking at the potential of even further lowering our size limit on southern flounder to try to harvest more male fish.

We're not harvesting any male southern flounder and so it is going to put our state in a very difficult position if they come back with increasing size limits or however we end up with disparate management actions in inside waters versus ocean waters. It is just a taste of our discussion for next week, I guess. Last word on this issue, Tom.

MR. FOTE: Yes; I mean if you look at what we're doing on summer flounder is that we're harvesting all the females. We're not harvesting males either because we raised the size limit; and that has been a lot of consternation by the community that says by raising the size limits; because the only thing we're going to be doing at a 29 percent reduction is we're going to have raise limits and cut seasons; and so we're going to fish on more females and less males. We're doing the same thing on summer flounder as you're doing with southern flounder.

CHAIRMAN DANIEL: It is going to be a mess. All right, any other burning words on something other than summer flounder for this report? Bill.

MR. WILLIAM J. GOLDSBOROUGH: Mr. Chairman, just an observation and maybe a note to file away for maybe next time we evaluate these criteria; and that is they struck me as being pretty much single-species oriented; what is the status of sustainability trends for that one population. Maybe that doesn't capture the complete picture for certain species for which we have identified broader ecological roles.

As we come to grips with those roles – and I know that is a challenging thing we've spent a lot of time on and hopefully we'll make progress on in the future – perhaps those components can be incorporated into our stock evaluations as well.

CHAIRMAN DANIEL: With that, Toni has indicated that it is her opinion that the discussion that we had related to summer flounder handles Agenda Item 8 unless there is other discussion; so think about that before we get to that item. If you feel we've had a good discussion that issue and if not, we will take it up. With that, I'm going to move to Mark Robson to review and consider the Law Enforcement Committee Enforceability Guidelines.

CONSIDER LEC ENFORCEABILITY GUIDELINES

MR. MARK ROBSON: I've been asked to present you with a revised enforceability guidelines document that the Law Enforcement Committee has prepared for your consideration. To give you a little bit of background, the charge to the Law Enforcement Committee in this regard – I wasn't here in 2009, but the original guidelines, which are called "Guidelines for Resource Managers on the Enforceability of Fishery Management Measures"; that document was prepared in 2009 with the help of you, the members of the commission and the staff and also the Law Enforcement Committee.

They were designed to provide you with enforcement advice and some guidance information in designing and crafting various management plans and management options for fisheries. They included some pretty general enforcement precepts; and also through a ranking or rating survey that was done at the time of the Law Enforcement Committee provided some ratings for various management strategies that you might employ, things like bag limits or closed areas.

We were asked in 2015, through the direction of the commission's action plan for that year, to take a look at that document and provide any updates or revisions as needed. We were able to do that and that new revision has been provided to you today. I believe it is in the briefing documents. We here today to kind of review that with you in general and also to seek your direction or any approval you have of that revised document.

To give you just a real brief background, the Law Enforcement Committee reviewed the original document. We went through it and made some edits, updates and changes at one of our meetings. After that, we had a re-survey or reranking process that we went through online with LEC members where we re reranked the management strategies and then revised and changed the presentation of that as sort of a matrix table of the ranking of those various management options.
I'll show that to you later. After that survey was done, we incorporated that new matrix table into the revision. We also took a look at a very similar document that had been prepared after our 2009 enforceability guidelines that was prepared by the U.S. Coast Guard and some of the other federal partners. They had some additional material that we incorporated into our revision.

Very quickly, the guidelines' format that we employed now in this revision, if you'll look at the document you'll find three basic sections. The first one is sort of a general outline of the enforcement precepts that we often bring to you or talk about when we're discussing management strategies and their enforceability.

Those general precepts lay out in terms of what we consider the need for simplicity, consistency, stability, effectiveness and safety of management regulations or management options that are employed. You can walk through that and see some general ideas about how those things can apply to your thinking when you're developing management options as regards their enforceability.

The second section is a simple presentation of that matrix table, which again I'll get to here in a second – you can just take a look at it, but it is in the document – which lays out from that survey result the overall enforceability ratings that we give to the various management strategies that were looked at.

We also break down those strategies in terms of their ratings by an overall numerical score and then more or less a qualitative score of yes, no, neutral on a particular management option for dockside enforcement, at-sea enforcement and also for airborne enforcement considerations. Then the third section is a more detailed sort of run-through or listing of various management options that we looked at in the document and provides that overall rating for each of those strategies with some additional more specific recommendations that could enhance enforceability of a particular management strategy.

I wasn't able to blow the size of this very well, but it is in the document. On the left you can see this is the revised ranking matrix that we came up with in our survey. On the left is a list of the management strategies or options that we took a look at. There is an average numerical score. Then you can see kind of a red, green, yellow approach to evaluating the enforceability of those various management options. Again, this is in your document. With that, that concludes my general overview of this report. Toni, we certainly would welcome any comments or suggestions for changes or any concerns that you might have about this revision. We seek your guidance and direction. Thank you.

CHAIRMAN DANIEL: Thank you, Mark. It would probably be good to have that table back up on the screen, if we can get it up there. Tom

MR. FOTE: As most of you here remember Rob Winkle that was Chief of Law Enforcement of the New Jersey, Rob's big concern was always – I'm looking at Page 9, right at the top; but it talks about how fish should remain intact and basically states how fish, if you fillet them at sea, that you need skins and things like that.

Rob's concern was that a lot of states had not done that. Without doing that enforcement, once you fillet a fish and you don't keep the skin and the rack and bring it in, how do basically make sure that it has basically been done. Rob asked me the same question every time I see him until this day when are we going to straighten this out. I wonder if we have surveyed all the states and looked at their filleting regulations, whether it is striped bass or summer flounder, to make sure that the fillet size are what should be done on summer flounder.

I know in New Jersey if you're allowed to have filleting at sea, you have to bring in the racks. That's only really on partyboats; it might be on charterboats now, I don't remember. You basically still need the racks to bring it in; and you've got to dump those racks before you make the next trip so you have the racks, and it has got to correspond to the number of fillets.

I would like to know how many states do that because that's the only way you can reinforce what is going on with the size limits. If you don't have that, then according to him, who was chief of law enforcement, you really don't have an actual enforceable law. I have never seen a survey done of all the states to actually where they're filleting laws at sea are on the recreational sector. I would like to

see that report when we get a chance; so I can have Rob stop yelling at me every time he sees me.

CHAIRMAN DANIEL: Well, I'm not so worried about Rob yelling at you; but it is an interesting – and this just shows my ignorance; I didn't know that we allowed that anywhere. I mean, in North Carolina that's considered a mutilated finfish if you don't bring it in intact. Anything with a size limit has to be landed whole. That's a surprise to me.

MR. FOTE: Some states don't do that.

CHAIRMAN DANIEL: That's interesting is the best way I can put that. I would imagine that would be very difficult. Are we wanting to look at all commission species; is this something that the Policy Board wants to look at? This kind of hits me by surprise.

MR. FOTE: My suggestion is to turn it back to the Law Enforcement Committee and ask them to survey each state where they are about their filleting laws at sea; and then we can look at this and see if it is a problem.

CHAIRMAN DANIEL: I think that is a good suggestion to the Law Enforcement Committee if there is no objection from the board. So ordered; good point. Any further direction or comments to the Law Enforcement Committee and specifically Mark Robson? This is an action item so we will need to approve this guidelines' document. Mr. Clark.

MR. JOHN CLARK: Mark, thank you for the report. I was just curious; I didn't see under here whether the Law Enforcement Committee had taken any opinion as to when would be the best time to tag a fish in those fisheries that require the fish to be tagged that are landed such as striped bass. I mean while they're at sea, while they're landed, at a dealer; was there any opinion offered on that?

MR. ROBSON: I will have to review the document to see if that's addressed. I know in the past, particularly when we were discussing the Striped Bass Tagging Program the recommendation was that the fish should be tagged as soon after harvest as possible; and so I think that would probably be the recommendation in such a guideline as this.

CHAIRMAN DANIEL: Yes, before landing or you could run into some problems, I would think.

MR. WHITE: Excellent report. I'd just like to suggest – I'm sure staff is going to take law enforcement's comments about conservation equivalency in their preparation of the white paper they're working on, so I just would make sure that happens. Thank you.

CHAIRMAN DANIEL: Are there any specific changes or modifications to this document? If not, I would accept a motion to approve the enforceability guidelines. Tom.

MR. FOTE: So moved.

CHAIRMAN DANIEL: Motion by Mr. Fote; second by Loren Lustig. Is there any further discussion on the guidelines? Mr. Abbott.

MR. DENNIS ABBOTT: It is a very good document and I appreciate the efforts. There is truly a lot of information in there; but following our acceptance of it, what are we going to do with it? Are we going to incorporate this in some way into our fisheries' management plans; that as we prepare them that we would not forward – we do forward the plan to law enforcement, but have them review it against the matrix and give us an indication or an overall indication of the enforceability of the management plan?

CHAIRMAN DANIEL: I think it is what it is. It is a guidance document that folks could use to say you don't feel that this is an enforceable action or it is not as enforceable as another option and it would be used in your argument for a certain management measure over another, I would think.

MR. ABBOTT: It would be helpful if we had a definite position from the Law Enforcement Committee on every issue that we're dealing with.

MS. KERNS: Dennis, I don't think this precludes getting law enforcement recommendations at board meetings. I think there is two ways that this document gets used. One, as Louis just said, as you're building your arguments, if you don't have a law enforcement recommendation yet or the committee wasn't tasked to look at something, you can go and look to see, oh, well, this seems to be in general more enforceable because of what it says in the guidelines.

Secondly, sometimes technical committees will discuss certain things and enforceability can come up. If the committee hasn't talked about something, the staff could say, well, this is their general guideline on this type of issue and they can use the guidelines that way.

MR. ROBSON: I think what we can do as the Law Enforcement Committee; we try to make sure we work with staff to coordinate any comments on any particular commission action that is coming up. One of the benefits of this document is to hopefully use it in earlier stages of a plan or amendment development or addenda development so that you can kind of get an advanced idea of what might work and what might not work really well as far as enforceability.

I think what we can do now with this revised document is make sure that when we look at various issues for the commission; that we ourselves, as a committee, go back and look at the guidelines' document; and when we do come back to you with recommendations, we very clearly point out where in this document or where in these enforceability ratings a particular management option stands and how strongly we might feel about the enforceability based on that document. There are always, as you deal with in your own deliberations, even in enforcement sometimes there is not a real black and white answer for what is enforceable and what is not.

It may depend a little bit on the condition of the fishery or the species or the location. We might say something is particularly unenforceable in the document or not as enforceable as some other option; but that may be mitigated somewhat by the fishery or the circumstance. I think what we need to do as a committee is also use this document and when we come back we point out specifically in the ratings or the rankings where a particular management stands.

MR. ABBOTT: Thank you; that is what I was wanting to hear.

MR. WHITE: To follow up on that, I think a board, when we're creating a PID, I think a board could look at adding that to options in the PID; so we get one fish 28 inches; is that red, green or yellow law enforcement if a board chose. That's something clearly I think we can think about going forward.

CHAIRMAN DANIEL: All good comments. I had one issue with the document; and I may be the only one looking at it this way; so if I am, just tell me. I would hate for somebody to look at this table and conclude that airborne is not important, because it is critically important. That would be my only concern. I think if maybe there could be some statement in there that indicates the critical nature of enforcing shellfish closures, EPA requires certain things, to make sure it is very clear in the document how important air support is.

MR. ROBSON: That is a very good point, Mr. Chairman, and it was pretty surprising to see how that stood out in the matrix. You're absolutely right; it doesn't imply that airborne enforcement is not effective or valuable because a couple of members pointed out there are certain kinds of management activities it is essential to have airborne coverage particularly with closed areas and things like that. I think what we need to do is make that point, and we'll make sure we add that to the document.

MR. ROY MILLER: Mr. Chairman, I would just add to the comments already made that this is potentially a very useful document. As we consider future deliberations, if Mark would bring it with him or remind us of its content and we could refer to it regularly, it would be helpful rather than a one-time exposure and trying to remember what it said. I would like to see this used regularly for our purposes in deciding on management measures. Thank you.

CHAIRMAN DANIEL: I think there are ways that we can do that so we have an LEC rating under each management option that is consistent with the table might be helpful.

MR. ROBSON: One point along those lines – it mentions it in the document, too, but this we consider somewhat of a living document; so at any point we can do a reranking or resurvey to include the latest thinking about how these different management options work out. I think we constantly want to be looking at those enforceability issues as things change like technology and so forth.

MR. GROUT: I assume if we approve this that this will go up on the website under our guidance documents and maybe we could include it with each meeting. In the meeting announcement we always put a series of guidance documents with links to them. We can include this so that we can all have access to it throughout the meeting.

MS. KERNS: We will get Tina to add that, too.

CHAIRMAN DANIEL: It will be done if it is approved. Any other comments on the motion on the floor, and I will read that: move to approve the LEC Enforceability Guidelines. Motion by Mr. Fote; second by Mr. Lustig. Further discussion? Any objection? Seeing none; the motion carries unanimously. Thank you, Mark; good piece of work. Next Katie is going to go over stock assessment updates on weakfish and sturgeon.

STOCK ASSESSMENT UPDATES FOR WEAKFISH AND ATLANTIC STURGEON

DR. KATIE DREW: I know you're all excited to hear this. Weakfish had its assessment meeting last week, and we were scheduled for a November peer review through ASMFC's external process. At the assessment meeting we decided that the data gathering and finalization was not as far along as we would have liked although we're satisfied with where the models are in terms of model development and choice.

We are going to recommend that it actually be peer reviewed in January, which would give us additional time to complete the model runs and to finish writing the document. That will put us a few months back of where we were originally scheduled, but not a huge delay.

CHAIRMAN DANIEL: I was actually very excited to hear your report on the weakfish stock assessment because I'm anxious to see what happens with that thing. Any comments or questions about the schedule for weakfish? It sounds like we will have a January peer review; so we will have it in our winter – no?

MS. KERNS: Depending on the timing of the peer review, the peer reviews have – I believe we give them three weeks to get the report back to us. It is highly likely that we would have it at the February meeting; definitely at the May meeting. We can do our best to see if we could do February, but –

CHAIRMAN DANIEL: Yes; maybe if we could have February, that would be great, but understand some of that is beyond our control. Robert.

MR. ROBERT H. BOYLES, JR.: Mr. Chairman, I just wanted to echo your enthusiasm to see the results of the stock assessment. Those of us in the southern range are waiting with baited hooks.

CHAIRMAN DANIEL: Because they're everywhere, man, we can't get away from them. All right, sturgeon, is that good news, too?

DR. DREW: Sturgeon continues apace. We've worked with NOAA and they've agreed to dedicate some of their Northeast Fisheries Science Center scientists' time to working with the technical committee to develop bycatch estimates up through the most years of data from their data source.

In addition, we have also started reaching out to the owners of acoustic tags up and down the Atlantic coast in order to get their data, which we think is going to be a great source of information for the stock assessment. Obviously it is a huge network spread out through a lot of different people and it is a ton of data to actually work with; so hopefully we can get that started and get hold of that of information for the assessment.

CHAIRMAN DANIEL: I'm just sorry John Bullard is not here for this discussion. How are they using – if they are using it; how are they using our observer coverage information? We've got a very detailed time series or developing a time series of good observer coverage information for sturgeon in North Carolina.

DR. DREW: Absolutely; and North Carolina's data is definitely also being analyzed. We actually have Laura Lee from North Carolina who is doing a lot of the analysis on that; so she is leading the development of our own methods to analyze the bycatch data. Obviously North Carolina's data is very detailed, but it is a more limited spatial scale.

I think we're trying to figure out how to incorporate that more detailed information with a limited spatial scale into the larger, more broad coverage of the Northeast Fisheries Science Center observer data, which has a lower sample size and is less detailed than the North Carolina data; but they're both definitely used to complement each other in these analyses.

CHAIRMAN DANIEL: Good. Anything else on sturgeon? Thank you very much. Is there interest in continuing to discuss implications of jointly – David.

DISCUSSION OF IMPLICATIONS OF JOINTLY MANAGED ASMFC SPECIES

MR. SIMPSON: Absolutely. Tom pretty well summarized the frustration that you feel as a commission member going to a joint meeting with the Mid-Atlantic Council when they hold all the cards. We're required to do what the SSC says and so forth. It is not at all that I don't appreciate and value the strength of Magnuson behind our plans.

I know I looked at the stock assessment summary as we were talking for summer flounder; and I don't think as the commission we would be in panic mode, in severe reaction mode, I will say. The F estimate is within the tolerance range. The biomass has declined a little bit, but still in the happy face zone. We would

probably make a little adjustment, corrective action, but not cause widespread panic.

I think what we've learned over the last few years in this partnership is that – and I've said it a number of times – the commission is a whole lot more nimble in implementing change; and the Mid-Atlantic Council has come to rely on the commission to actually handle the recreational fishery.

You guys do it, you know; we can't wait until May of the fishing year to know what we're doing. I'm hoping that in time we can move to something that is more like complementary management. I understand under Magnuson that they're set the bottom line for the quota and things like that; but how do we deal with it? I think the commission – if the relationship were different, complementary rather than joint, I think we could be more effective in addressing some of these issues and not frankly wasting time at an August and a December meeting when the information isn't available or we have no choice.

We'll go down in August and we'll hear what the quota is, you're right, and we'll go home. That's what we'll do; and in December – I've called them the crop reports from Toni for a number of years now where we're waiting for Wave 4 to come in. So you prepare for two weeks for a meeting, this is my strategy going in, this is what I think the problem is, and then you arrive and you meet Toni in the lobby and she tells you the numbers have changed completely and here is the new picture and here is what the Mid-Atlantic Council going to do.

It is a very frustrating process for everyone. The commission actually handles the recreational fishery. We stand around all day long and we talk about, okay, we'll do conservation equivalency, the states will go deal with it, and the commission takes care of it very effectively in February. It is not only a waste of time; but that complementary relationship, if we could move to that, would be I think a great time-saver and much more effective in the end.

Then finally is the big one, the allocation question. How on earth can we ever expect to get a real discussion of allocation going if half the affected parties don't have a voice? Louis is a charitable guy, but I don't think he would have his job very long if on his own he met other states' needs under the current structure.

Unless the National Marine Fisheries Service comes in – as I said to Kelly, unless mom and dad come in and tell the kids to get along better and share their toys better, it is not going to happen. The summer flounder assessment I think is a good example. I think there were real things going on in that fishery that are causing the problem we have.

Here is another thing; Jim is on the Mid-Atlantic Council so he gets a letter. I'm still in the dark except that he shared it, right. Everyone north of New York is in the dark as far as what is going to happen next week. He is apparently attributing some of the problem, the retrospective pattern to illegal harvest, which I have no doubt is occurring.

I think we helped to partially correct that by getting rid of RSA. I think it is widely perceived, for good reason, that 3 percent RSA got caught several times during its tenure. That was just a license to cheat; and with that gone away at least for now, I think that helps. The other thing is dead discards; how can we address that in our current structure?

I think the commission could – and in this respect we need to work with the Mid; but with current trip limits – I mentioned during the executive committee on black sea bass, our commercial trip limit for black sea bass this summer was ten fish. That's our commercial limit. We're out of fish; we had to close on July 30th. That's an allocation issue. We're overrun by black sea bass, which is great but frustrating at the same time.

More importantly, almost, on summer flounder is dead discards. We have a fleet of boats that have access to very large landing limits that travel two or three hundred miles up the coast to fish and take several thousand pound limits and go back home. Our boats go out for their hundred pounds and in two hours have caught five hundred to a thousand pounds; so four hundred to nine hundred pounds go over dead; and they land their hundred pounds because they're picking up some other things.

Now, very, very small boats will quit at a hundred pounds and go home; a 25-foot boat will; but a 50-foot boat is not or an 80-foot boat is not. These are fundamental problems that aren't getting addressed because of our joint management structure and not fully coming to terms with the issues that we could be dealing with. I've said any number of times I think is the best venue we have.

The Grand Experiment I think, as Robert referred to the commission – Grand Experiment in Federalism – you always say things better than I do; but I thought he is exactly right. This is the one place you can come state to state and talk about how do we solve

common problems. Through the council process it is much more political; it is much more – it is just a much more difficult arena to get a desirable outcome.

I've said to people I don't think there is a better example than red snapper in the Gulf of Mexico where the Gulf Council made up of the five states that share the Gulf resource could all say this is a lousy plan, we reject it, we want authority. That's the difference between a council process and the commission process.

We're not going to solve it today, I know, but I do think we need to revisit this relationship with the Mid-Atlantic Council. I think we're trying to find our way with New England where we overlap. There are frustrations there, too, but at the end of the day the federal system holds all the cards in terms of quotas; and we're not taking enough advantage of what this body can do in terms or fairness and equity, in terms of flexibility to move more quickly and more effectively in management.

I hope we don't lose this idea of refining how we do things, refining the relationship and, yes, as a state that is not the Mid-Atlantic Council hoping that there will be a day when we have more opportunity to speak at an equal level, with equal ability to influence outcomes. Again, in the council process, I don't know if Dewey is still a member of the council from North Carolina, but I just take him as an individual that seems like a great guy, knowledgeable, but he is a commercial fisherman for North Carolina.

How could he ever vote for something that – even in his heart he knew was right, how could he vote for something that would take away from his state? He wouldn't be able to go back home again. That's the difference with the commission process versus the council. I do think we need to make some movement.

It may be this experience on summer flounder that helps that; because I think a great example is summer flounder. We're losing these fish, these missing fish that is causing a retrospective pattern. It is dead discards and sea sampling; it is probably some cheating; it is things that we can deal with better as a commission.

MR. FOTE: I think part of the problem is when we look at the federal-managed species on the east coast, one of the most information fisheries that we have is summer flounder. NMFS started that to me going back to Bill Hogarth when we put all these studies together back in nineties. We have more information on summer flounder than we have on any other species; and yet when it comes to risk assessment, which the council puts in their management plan and then the SSC compounds that, we're putting it on a Tier 3, which means we get very precautionary along every move of the way and which we start reducing the quota.

That is not something that we discuss with the Mid-Atlantic Council when it comes towards a risk assessment move. That is basically what is happening with black sea bass, summer flounder and scup when it comes to the quotas because it is all three. The other problem with black sea bass is we are really still using the same biological information that we had in '94 with a few tweaks. What we really have done is now they're looking at a new model, which I applaud, to handle the bad information. That's all we've done for the last ten years is look at models that we handled bad information and try to get better models to do that instead of getting better information.

I think my other concern here is we have gone to a point – you know, when striped bass really worked in the nineties in the recreational sector is because they had trust in the system and rebuilding the stocks. That still goes on. There might have been discussion whether we vote one fish, two fish, whether we need a reduction or not; but the recreational anglers trusted the system.

That's how you get law enforcement. When the recreational anglers no longer basically trust the system, figures that are just going to get screwed – let's put it simpler – nobody what they do and nobody cares, then they're going to start breaking the law. I used to be invited on a lot of boats to go fishing; and these guys don't invite me anymore because they want me to be on the boat when they basically do things that are not on the up and up.

That's a shame because these people were conservation minded. They respect me enough to say, "Tom, you can't go on my trips anymore," and that's a shame. I'm sitting there, well, we've got to follow the rules, but you know what is going to happen. We're forcing people to basically feel like they have to poach when they go through 30 summer flounder to try to get a keeper.

That's my real concern; when we lose that; because then we're going to have all this mortality in there because once that breaks down in the recreational sector – unlike the commercial where you could basically do dockside landings, you're going to

enforce it there, a lot of what happens – we've got, what, eleven marine officers in New Jersey to basically enforce the laws in the whole state. You can't basically supervise 1.3 million anglers with eight law enforcement.

It is mainly trusting the system, believe in what you're doing, and it is peer pressure. I mean, a person walked off the jetty in Island Beach State Park with 23 tautog; and there was calls made immediately to law enforcement so when they got off the jetty and they started walking out of the beach, they got nailed immediately. If that was summer flounder, there wouldn't have been that call and that is my concern when we really look at this. Then the law has become a joke.

CHAIRMAN DANIEL: Well, I had hoped that we wouldn't get into this conversation because it makes my blood pressure go up. There is a different perspective here, Dave, and you gave a very good call for the issues that you have in the Mid-Atlantic with summer flounder. I don't disagree with you; and it is so frustrating.

Where it is equally frustrating is where we don't have any joint plans and have absolutely no say in the South Atlantic. I made an effort years ago to try to get something done with snapper grouper; and the council folks freaked out about that possibility. There is a lot of snapper grouper complex species that should be managed with a joint plan with the commission, in my opinion, but we can't get it.

Then we get a decision that smooth dogfish are a highly migratory species from NMFS. The whole process is so inconsistent between how the Mid-Atlantic works, how the South Atlantic works, how HMS works, how they treat us, how they consider our comments, all these things. Thinking about it, that is really what we should have been talking to John Bullard about on Monday morning as raising these concerns maybe instead of talking some of the periphery stuff we talked about.

It is not that it was very valid, but these problems – you know, we had Roy on the phone; we had John on the phone. You couldn't have two more different management strategies and styles that create all these concerns and problems, especially for states with overlapping jurisdictions. There are a few of us.

We sit on the Mid and the South Atlantic; totally different animals; but they're the same agency. What is going to happen with sharks? We talked about that some at the state directors' meetings, too. You saw the table up here that had all these charts that hadn't been assessed for some ten years and still listed as unknown; and we're overrun with them.

We've got charterboats coming back with 40, 50 yellowfin tuna heads; can't get a live fish to the boat for the dusky sharks that are supposedly not going to be rebuilt until 2700 or something, you know. We can't seem to get that level of connection with our federal partners on this; and it is a major, major issue.

I really hope that this summer flounder issue will result in some positive change in all this; but I don't have a whole lot of positive – I don't have a good feeling about it not as long as the federal side is calling all the shots. Yes, Emerson.

MR. EMERSON C. HASBROUCK, JR.: Mr. Chairman, relative to the discussion of summer flounder and interaction with the councils, I would just like the Summer Flounder Board to realize there is going to be an impact from the New England Council and maybe some of the people around this table who also sit on the New England Council can provide more information.

The summer flounder fishery is likely to be severely impacted and in fact shut down by the sub-ACLs and the associated accountability measures that are set up for windowpane flounder. If the windowpane flounder meets its – and I'm not sure if it is the overall ACL or the sub-ACLs – the summer flounder fishery off New Jersey, New York and Rhode Island is going to be closed. We have no interaction on that issue at all.

CHAIRMAN DANIEL: Maybe this is a good topic for our next state directors' meetings with our regional directors. I don't know if John is planning to come to Ft. Lauderdale. We've already talked about getting together with Roy and Bonnie at the South Atlantic Board at the annual meeting. Perhaps we could expand that. I think it is a very important topic and clearly some folks are very passionate about it. Anything else on joint management? All right, the Atlantic Coastal Fish Habitat Partnership Report from Ms. Havel.

ATLANTIC COASTAL FISH HABITAT PARTNERSHIP REPORT

DR. LISA HAVEL: Just a brief update since the spring meeting. We received feedback from the U.S. Fish and Wildlife on our 2015 accomplishment report; and we reached a Tier 2 out of three. This is based on the number of the U.S. Fish and Wildlife

goals that we accomplished. This is the highest level that was achieved by any of the partnerships; nine of nineteen partnerships in Tier 2.
This is the first year that we have reached a Tier 2. Prior to 2015 we were always in a Tier 1.

Based on these accomplishments, we were able to fund an extra project. The projects that we did fund for 2015 consisted of our ACFHP operation; a fish passage project in Patten Stream Maine; a dam-removal project in East Bridgewater, Massachusetts; a river enhancement project in Cape Fear Rive in North Carolina; and in total over $160,000 went directly to on-the-ground restoration; and this is almost $100,000 more than in 2014. This is because we reached that Tier 2 position.
We also put out a request for proposals for the 2016 fiscal year back on July 22nd. This announcement was shared via our Facebook Page, mailing list. It was e-mailed out to the partners, it was put up on our website. We shared it with the U.S. Fish and Wildlife Coastal Program; and then ASMFC also put it on their Twitter, Facebook and sent out a press release.

The deadline for proposals is on September 21, 2015; and we will be sharing with you during the annual meeting which proposals we will be recommending to the U.S. Fish and Wildlife Service for funding. That is it and I will take any questions.

CHAIRMAN DANIEL: Questions on our update? Seeing none; very good; thank you very much. Next, Max, if you will give us a review of the Horse Creek Aquafarms Sturgeon Transfer. I think this is just an informational item, too, but one we need to know about.

REVIEW HORSE CREEK AQUAFARMS STURGEON TRANSFER

MR. MAX APPELMAN: I'll be just reviewing a memo that went out in the meeting materials. Essentially the memo informed the board that in February of this year 6,837 pounds of Atlantic sturgeon was sold from La Paz – live Atlantic sturgeon was sold from La Paz Aquaculture Facilities in North Carolina to Horse Creek Aquafarms in Florida.

Originally these fish were from Canadian sources and were exported to La Paz in 2005 and 2006 in accordance with Addendums 2 and 3 of Amendment 1 to the Atlantic Sturgeon Fishery Management Plan. Also, to fulfill the requirements of Addendum I, Horse Creek Aquafarms received approval from the Florida Department of Agriculture and Consumer Services, essentially certifying that they meet the best management practices and state aquaculture regulations to culture Atlantic sturgeon for the production of sale of meat and caviar.

That letter of approval is enclosed in the memo. Also a bill of sale from La Paz to Horse Creek is included in the original certificate of non-indigenous origin that accompanied the sale. Also with that completed sale, La Paz no longer possesses Atlantic sturgeon and has no plans to do so in the foreseeable future; and, lastly, that Horse Creek is currently developing a methodology to easily distinguish their caviar from wild-caught sources and will require board approval at that time. Thank you, Mr. Chair.

CHAIRMAN DANIEL: Questions.

REVIEW NON-COMPLIANCE FINDINGS

MS. KERNS: Mike, can you please put the eel motion up on the board?

CHAIRMAN DANIEL: Marty, are you going to make this as the vice-chair of the Eel Board?

MR. MARTIN GARY: I'll read the following non-compliance findings into the record for the American Eel Board: On behalf of the American Eel Management Board move that the ISFMP Policy Board recommend to the commission that the State of Delaware be found out of compliance for not fully and effectively implementing and enforcing Addendum III to the Fishery Management Plan for American Eel.

Delaware has not implemented the following regulations required by Addendum III: the nine-inch minimum size for yellow eel recreational and commercial fisheries; one-half by one-half inch minimum mesh size for yellow eel pots; allowance of four inch by four inch escape panel in pots of one inch by one inch mesh for 3 years (beginning on January 1, 2014); recreational 25 fish bag limit per day per angler; crew and captain involved in for-hire are exempt and allowed 50 fish bag limit per day.

The implementation of these regulations is necessary to achieve the conservation goals and objectives of the FMP to rebuild the depleted American eel stock. In order to come back into compliance the State of Delaware must implement all measures listed above as contained in Addendum III to the Fishery Management Plan for American Eel.

CHAIRMAN DANIEL: Thank you; and that motion does not need a second. Kelly.

MS. KELLY DENIT: Just a reminder to the board that there are a couple of components – and I appreciate the motion on the board that references the nexus with the conservation goals of the commission and would certainly appreciate hearing additional comments, it there are any, from the members of the board just to further inform the process as that is one of the two criteria that we have to hit as part of the non-compliance requirements. I appreciate hearing any further thoughts that the board had to offer on that conservation nexus.

MR. GROUT: Kelly, the goal of Addendum III is to reduce mortality across all life stages; and both in Addendum III and Addendum IV we addressed all life stages with management measures to try and address that goal. The specific measure to increase the minimum size to nine inches was intended to delay mortality and to increase escapement of yellow eels.

The change in the mesh size was necessary to ensure escapement of undersized eels to match this new nine-inch minimum size requirement. Clearly, the reduction in bag limit was intended to reduce mortality on the recreational fishery. I think all of these things were that all of these measures up here were intended to achieve our goal here and not having them implemented makes it so that our achievement of this goal is in jeopardy.

MR. LUSGIG: In regards to the motion just addressed by Marty, I did not hear a time frame for expectation of compliance. Perhaps I missed it, but is there a time frame? Thank you.

MR. GROUT: Well, clearly, I think we've been made aware that if we decide to forward this non-compliance finding to the secretary, our executive director has ten working days to submit the letter. The Secretary of Commerce has 30 days to make a decision on it; and then he has up to six months to implement the moratorium if the state of Delaware does not come into compliance.

My thought is that I think this should put in as soon as practicable. Clearly, if by some time – the beginning of the fishery in 2016 they have not accomplished this, I would hope that the Secretary of Commerce would take action.

MR. CLARK: Delaware has acknowledged that we're out of compliance on this. If in my description of how we got there has sounded like I was assessing blame for why that happened; that was not my intent at all. I just would like some clarification.

There are two paths our legislature could take to address this; either address it prescriptively in the legislation, which could happen in January, or they could give us the regulatory authority. If that happened it would delay actually coming into compliance because then we would have to promulgate the regulations and go through that process. I would just like to know if we would be considered back into compliance whether the law was changed either way.

Like even though the regulatory process would still take several more months to bring us into full compliance with the plan, the fact that the law is changed and the department would immediately start the process to bring us into compliance, if that would be a finding of Delaware being back into compliance; or whether we really do need to have everything in place to be considered in compliance.

CHAIRMAN DANIEL: I believe you would need to have everything in place to come into compliance. I think January is your best bet, because there will be concerns if a fishery opens in Delaware in 2016 and you're not in compliance. If there is another opinion about that; but that would be my recommendation. Bob Ballou.

MR. BALLOU: Mr. Chairman, I'm just curious about the step that we're at right now. As I remember from our meeting on Tuesday morning when we were discussing this process; there are three levels of review. This is the second, as I understand it. The third would be the full commission. Would that happen at –

CHAIRMAN DANIEL: It is going to happen here in just a minute.

MR. BALLOU: And then related thereto is the opportunity for the state, in this case Delaware – and, John, I realize you're in an awkward position because this is more of a legislative issue than anything else to be able to respond, is it your sense that the powers that be, in this case the Delaware Legislature, is aware of what is happening here today? Again, that is the whole point here is to make sure that the folks who hold the reins – in this case I think it is your legislature – are aware of the implications of what is happening today. Thank you.

MR. CLARK: I believe they are. Craig, would you like to add anything to that?

MR. CRAIG D. PUGH: Yes, I can elaborate on that. I guess part of that would be to explain how we got to this position. Most of that came through the hearing processes at the beginning of this. I think it was 2013, at the first hearing the public was told that we were data poor on this issue 15 times. The socioeconomic data was asked for at the time, which is a charter requirement under the Interstate Fisheries Management Program Charter. They failed to bring that to bear.

The following year the same hearing was in process again with a different presenter. That presenter offered that we were data poor on this issue twice. The socioeconomic data was also asked for at that time. Some was actually presented from our Delaware State Housing Authority to help this along, to show that we can provide this type of information quickly and easily.

It was ignored. The response again was no response. It is not hard to show our legislators. If we're not going to follow the charter, there are some issues here and credibility becomes an issue with this body. Along the same lines, it would take probably less than a day to convince any legislator.

As it was brought to bear at the legislative level with Director Beal's letter saying that the U.S. Fish and Wildlife Service was willing to put these eels on the endangered species list, it would take less than a day to show any legislator in our state that was an inaccurate statement. With that, we lose more credibility; and that is the direction that we're heading here. It is serious. It is not just for this plan. It is with many other plans that are trying to be implemented.

When you bring part of the science and not all of the science to the public, it is kind of like you bring your lunch but you forgot your thermos. You eat your sandwich but you're left with a bad taste in your mouth. If these scientific requirements of socioeconomic data are required, we expect to see that especially in the future.

I know there has been some talk of that here lately. We appreciate that but in the past there has been none. These people that are represented by these legislators are quite impoverished. They've worked all their lives or recreated in the same areas all their lives in these places; and they expect some sort of real representation and the legislators are willing to do that for these people.

As I said, we take this as a very serious matter in the state of Delaware today. The process as described yesterday was inaccurate and not correct as the legislature had two years to look at this. That is not necessarily true. The legislature had one day to look at it two years ago. It was brought to bear on the last evening of the session and it failed.

This year it was brought during the last week. It was brought not as what you see on the screen, in those terms. It was brought as a full regulatory process, which our people in our state are happy with the state process that we have now. In saying all this, understand what your requirements are stating on the screen can be met very early next year.

We're in agreement with that and that is not an issue. It will not be an issue and I'll make sure it is not an issue. With that, I'm a simple man with a simple plan; but if you have certain charter requirements that this board is supposed to present, then our people are going to require that. It is as simple as that. If it doesn't, then we're going to go through this again. Any questions?

We'll fix the problem and it will be – what you see up there will be a law in the state of Delaware. How you follow through; that's up to you. If you want to follow through further, I welcome the conversation with the Secretary of Commerce. I expect them and I said that to these people at the meeting at the Legislative Hall at the day they presented their bill. I welcome that. Thank you.

CHAIRMAN DANIEL: I've got Dave Simpson next.

MR. SIMPSON: I just wanted to make sure when I heard it read – and I'm looking at it here – I just wanted to make sure it was clear for Delaware and everyone that there is a three-year time period to implement the escape panel so they would have until 2017 on that element; is that right?

MS. KERNS: It would have to be in place for January 1, 2017.

MR. PUGH: I'm sorry, for us the legislative session will not begin until January. I don't know if we can get an allowance when they start early or not. I have to work through that. I could get back with you on that; but somewhere in January should be a possibility; January 1st, probably not.

MS. KERNS: And that is just a mesh requirement, Dave.

MR. SIMPSON: Yes; and to be clear it is January of 2017; so that one piece, there is actually – they're not technically out of compliance on that yet was my point.

MS. KERNS: They don't have an escape panel at all. There is an allowance for the four by four and then it needs to move to the new panel; but they don't have anything right now.

EXECUTIVE DIRECTOR BEAL: David, the three-year allowance that is mentioned here in the motion and in Addendum III allows all the states to use – instead of modifying the entire trap to be one-half inch by one-half inch, they can use a four inch by four inch panel of that larger mesh. That allowance to use that four inch by four inch panel is in effect now through January 1, 2017; and after January 1, 2017, the entire pot has to be modified and made out of that half inch by half inch mesh. Delaware has not implemented a provision to implement the four by four escape panel or a modification to the entire trap.

MR. BRANDON MUFFLEY: Mr. Chairman, I guess my question is not specific to Addendum III but Doug had brought it up and mentioned Addendum IV where there are additional measures that I think already needed to be place. I was just wondering if we're going to go down this same road with Addendum IV.

Those needed to be in place I think January 1, 2015, Addendum IV which addressed the silver eel fishery. Addendum III was primarily the yellow eel fishery. Are those in place in Delaware, the Addendum IV measures for the silver eels in place where you had to close essentially your silver eel fisheries?

MR. CLARK: Brandon, we don't have any silver eel fishery. I mean in the terms of having weirs or anything like that, there is nothing like that in Delaware. The escape panel is kind of a moot point. Even though we don't have a mesh requirement currently in our law, nobody is using anything other than half by half in their trap; so I don't see that as a problem. In terms of silver eel, are you talking about actually putting into the law that we do not allow the harvest of silver eel? We have not done that, no. We could do that, though, to add it to the suite of changes to our law.

CHAIRMAN DANIEL: Did you have something else, John; I have you next.

MR. CLARK: I was just going to mention about the mesh; that it is not really an issue.

MR. WHITE: Mr. Chair, just to follow up what Bob was saying, so as of January 1 Delaware will not have the ability to have the escape panel. Their fishermen will have to go to the one-half inch mesh on the whole pot – January 1, 2017, excuse me.

MR. PUGH: Our fishermen are already at that point. It doesn't say it in the law, but the common practice on the commercial side is half by half and it has been for a number of years. That part is simple; it is easy. It is actually already done; it just doesn't say it in the law; but we can make that happen.

CHAIRMAN DANIEL: Any further discussion on the motion from the Eel Board? Do we need to caucus? If not, we will do a roll call vote.

MS. KERNS: Maine.

MAINE: Yes.

MS. KERNS: New Hampshire.

NEW HAMPSHIRE: Yes.

MS. KERNS: Massachusetts.

MASSACHUSETTS: Yes.

MS. KERNS: Rhode Island.

RHODE ISLAND: Yes.

MS. KERNS: Connecticut.

CONNECTICUT: Yes.

MS. KERNS: New York.

NEW YORK: Yes.

MS. KERNS: New Jersey.

NEW JERSEY: Yes.

MS. KERNS: Pennsylvania.

PENNSYLVANIA: Yes.

MS. KERNS: Delaware.

DELAWARE: Yes.

MS. KERNS: Maryland.

MARYLAND: Yes.

MS. KERNS: District of Columbia. (No response) PRFC.

POTOMAC RIVER FISHERIES COMMISSION: Yes.

MS. KERNS: Virginia.

VIRGINIA: Yes.

MS. KERNS: North Carolina.

NORTH CAROLINA: Yes.

MS. KERNS: South Carolina.

SOUTH CAROLINA: Yes.

MS. KERNS: Georgia.

GEORGIA: Yes.

MS. KERNS: Florida.

FLORIDA: Yes.

MS. KERNS: U.S. Fish and Wildlife Service.

U.S. FISH AND WILDLIFE SERVICE: Abstain.

MS. KERNS: National Marine Fisheries Service.

NATIONAL MARINE FISHERIES SERVICE: Abstain.

CHAIRMAN DANIEL: The motion carries unanimously with two abstentions. Thank you very much. Dave.

MR. SIMPSON: I will have to confess then that I have misunderstood this requirement of the plan and Connecticut has not been in compliance with the escape panel or escape mesh. I don't know what current practice is; but at the time we did not have declaration authority to change mesh. I have a regulation package that contains this provision, and we will be moving to implement that as quickly as possible. I wanted the board to know that is one element that we're not in compliance with.

CHAIRMAN DANIEL: All right, seeing no motions to find Connecticut out of compliance, we will move on to Mr. Chu.

OTHER BUSINESS

MR. KEVIN CHU: I'm Kevin Chu from NOAA Fisheries in GARFO. I asked for a little bit of time to make sure that the commission was aware of the development in the Mid-Atlantic Regional Planning Body. The Mid-Atlantic RPB is considering taking up fishing as one of its topics to discuss ways to improve interjurisdictional collaboration.

For those of you who are not familiar with the Mid-Atlantic Regional Planning Body, it is one of I think nine different regions of the ocean where by executive statute or executive order the regions have been brought together with states and federal agencies and interested tribes to try to improve interjurisdictional collaboration to look for ways in which the states and the federal government can work more closely together. The goal is to streamline processes; the goal is to make the decision-making process more effective, more efficient.
The Mid-Atlantic Regional Planning Body in particular includes all the coastal states from New York down to Virginia. North Carolina was spared being part of the Mid-Atlantic Regional Planning Body. It contains all of the federal agencies like NOAA, of course, and the Bureau of Ocean Energy Management, the Department of Defense, Coast Guard, EPA, et cetera, and one recognized tribe at the moment. There is another one that was just recognized and not yet a member.

It is charged with developing a plan by the end of 2016 for improving collaboration across state and federal boundaries. It is in the process right now of developing topics that it will look into. These topics include relatively broad issues like national security, sand and gravel management, wind energy development, marine transportation and it also includes fisheries' management.

The RPB has identified four areas of fishing management that they think are important for their further discussion. They include coordination of management of fisheries, data collection, research on fisheries and several specific issue areas. I would like to read those issue areas to give you a flavor of the kinds of things that they are thinking that the RPB might want to get involved in. There are only three of them.

One is federal agencies to provide states with better integration and analysis of fishing effort and stock data to help states identify and articulate state interests in federally managed stocks. Second is to consider changes in the collection and analysis of fisheries' data in response to accelerated changes in climate, habitat and population dynamics. Third is to consider ways to improve understanding of recreational fishing industry.

Next week at the Mid-Atlantic Fishery Management Council – Mike Luisi is the representative for the Mid-Atlantic Council on the Mid-Atlantic Regional Planning Body. He is going to make a presentation there that may in fact be a better forum for states and federal agencies to discuss the ways to collaborate better on fisheries' management.

The purview of the Regional Planning Body goes from the coastline through state waters and federal waters; so it seemed appropriate to call the attention of this body to make sure that they are aware that there is sort of a higher-level group that is beginning to think about ways to improve fisheries' management. I will stop there if there are any questions.

MR. FOTE: I've been part of this process when Paul Sandifer was basically talking about it; me and Bruce Freeman and a number of others. One of the things we basically always said clearly is we didn't want this body to get involved in fisheries' management. We said we have councils, we have NOAA, we had everything else involved and we didn't need another body to do this.

At the time it was strongly by both the commercial and the recreational sector. In many areas there was a lot of concern that they would because of their concerns with basically looking at sometimes not in the best interest of fishermen. Sand mining right now; we're basically sand mining lumps off New Jersey basically used for beach replenishment; and we have been turned down. The fisheries' implications have not been put forward on this.

There is a lot of concern what I have and the people that have expressed to me over this, and not just from New Jersey – it was up and down the coast. The same thing with a lot of the environmental groups because they figured because they're widespread what they're doing. Again, we have lost out when we get to the table sitting with the ports. The Port of New York basically superseding the governors when it comes to what they need to be done. There was a lot of concern. There is still that same concern. I haven't heard – I attended a workshop and presentation and basically did my thing about what is going on in Rhode Island, about the cooperative between the wind farming and everything.

It was very interesting and a very interesting film. I saw the second film which they put out, which was also very interesting. The public doesn't need another group that it has to go sit through to make sure they're not getting the short end of the stick. We have now the council, we have HMS and we have to go directly to NMFS; and then we have the Atlantic States Marine Fisheries Commission.

That was the concern of the commercial and the recreational sector that I had and heard when I attended those meetings. I will be looking at this very, very concerned, I would say. I'm just not sure that is the proper body or where the money is coming. If they had a pot of gold which they could basically spend on all this research, then I would probably welcome them in, but they don't have the money to do any of what they're going to suggest and we don't have the money. I'm not holding out a lot of hope.

MR. CLARK: Just to follow up on what Tom said there; I'm appointed to the RPB from Delaware. Because of kind of the ambiguity of the charge there, it does not have regulatory authority. It does not have any funds to spend; and yet it is all these different bureaucracies that have an interest in ocean efforts.

There is a lot of concern because we had the same thing happen in the Delaware hearings where many of our fishermen were there thinking that this was an effort to get marine protected areas out there. I think the overall push for all the bureaucracies to coordinate better on ocean policy is a good one; but it still has been generating a lot of concern among the public.

CHAIRMAN DANIEL: We will stay tuned; and thank you for the update, Kevin. Bob.

EXECUTIVE DIRECTOR BEAL: A couple of commissioners have come up and asked me about the eel compliance review and the timing of the next full compliance review. The state compliance reports are due September 1st; so in a couple weeks we'll get a full suite of those. The plan review team will look over all the states' measures and have a full report at the annual meeting. All the states will get a memo from Mike in the next couple days detailing exactly what the states need to implement under Addenda III

and IV. That will be timing of the full review for all the other states.

CHAIRMAN DANIEL: So we will have that at the annual meeting?

EXECUTIVE DIRECTOR BEAL: Yes.

ADJOURNMENT

CHAIRMAN DANIEL: Okay, with that, I will adjourn the ISFMP Policy Board.

(Whereupon, the meeting was adjourned at 10:15 o'clock a.m., August 6, 2015.)

Atlantic States Marine Fisheries Commission
Habitat Committee

Whitepaper on Habitat Bottlenecks and Fisheries Management

October 2015

Introduction

There is little dispute among fishermen, scientists and fishery managers that the amount, quality, and availability of habitats utilized by diadromous, estuarine, and marine species is a critical determinant of a fish stock's productivity and resilience. However, despite the widespread recognition, conservation of fish habitat remains one of the biggest challenges in fisheries management. There are at least three important reasons for this.

First, patterns (seasonal and temporal) of habitat use by a given species typically vary considerably both within and among life stages. Many species exhibit strong dependence on one or a small number of habitats, but many also show an ability to utilize different habitats at a given life stage in response to prey availability, density, or other factors. Habitat sections of most FMPs illustrate the diversity and complexity of habitat use.

Second, quantifying the relationship between habitat metrics (i.e., % cover, patchiness, density of structural features, etc.) and stock productivity is difficult for most species[1]. This means that decision-making often cannot be informed by estimates of an *X*% reduction in potential yield of a given species if *Y* acres of habitat are lost or degraded due to a proposed action (e.g., marina development, offshore energy facility, dredging, destructive fishing practice, etc.), or, conversely, that yield will increase due to habitat recovery through protection or restoration. The synergy of multiple impacts which degrade or improve habitat quality very often result in nonlinear or indirect responses in species' productivity.

Third, the range of impacts that affect habitat is broad, and fall under the purview of multiple agencies, not solely those responsible for harvest management. This creates a complex, and generally disconnected, governance structure that would likely have limited effectiveness even with a stronger and clearer scientific foundation.

In response to these challenges, the Atlantic States Marine Fisheries Commission (ASMFC) Habitat Committee has been working with the concept of *habitat bottlenecks* as a means of focusing both research and management on those areas likely to yield the greatest returns.

[1] An important exception is the generally strong relationship between abundance of anadromous species and accessible river miles.

Definition

A Habitat Committee work group developed a proposed definition, which was modified slightly by the full Committee at its April 2013 meeting. The current working definition is as follows:

> *A habitat bottleneck is defined as a constraint on a species' ability to survive, reproduce, or recruit to the next life stage that results from reductions in available habitat extent and/or capacity and reduces the effectiveness of traditional fisheries management options to control mortality and spawning stock biomass.*

In other words, the concept of a habitat bottleneck is not meant to capture situations wherein the stock's response to changes in habitat conditions is gradual, incremental, or linear. Rather, a habitat bottleneck is a situation in which the response is sharp and pronounced, to a degree that it overwhelms the effectiveness of harvest control measures and creates excessive deviation from the constant or bounded conditions assumed by stock assessment models. Figure 1 illustrates potential relationships between habitat metrics and ecological responses in which a threshold exists at which the response is sharper and more sudden. Such thresholds are points at which habitat bottlenecks are likely to be created.

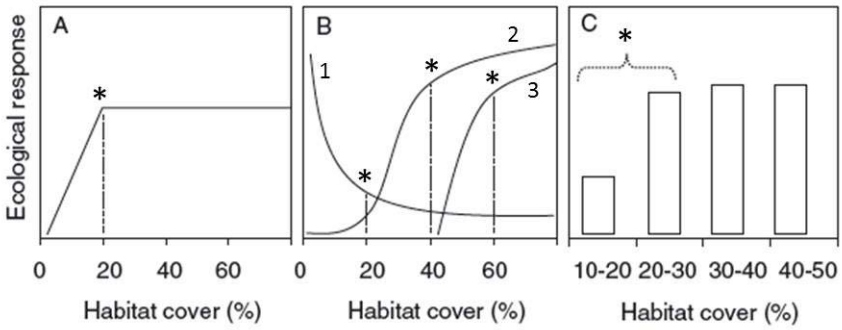

Fig 1. Possible functional relationships between habitat metrics and ecological response variables, such as key demographic rates (growth, mortality, recruitment). Asterisks mark thresholds at which a habitat bottleneck might be created. A and C represent situations in which the response variable is constant, or at least variable within bounds, over a wide range of habitat conditions, but then changes markedly past the threshold. B represents situations where there is an ecological response to habitat across all values, but the rate of change increases or decreases markedly at the threshold. Curve 1 in B represents a response variable that is inversely related to habitat, such as mortality rate. Curve 3 represents a response variable that is strongly tied to habitat, and for which the bottleneck is created when the habitat metric is still seemingly high. An example might be demographic rates during the juvenile stage when individuals are strongly dependent upon nursery habitat for shelter and feeding. (modified from Swift and Hannon 2010).

This is not to say that more gradual or linear changes are not important. If, for example, a 5% reduction in some key habitat metric causes a 5% reduction in growth rate[2] for a given species, but

[2] Although the definition proposed by the Habitat Committee does not explicitly include growth, among other important attributes (e.g., condition, behavior, etc.), those attributes affect survival, reproduction and recruitment, and therefore are implicit within the definition.

the stock assessment model does not account for that change, then the actual dynamics will deviate from those predicted by the model and management will seem to underperform. However, such a deviation is modest and within the range of expected error and uncertainty, and a response to harvest controls would still likely be observed (assuming other errors and uncertainties are not excessive). A habitat bottleneck is the point at which the deviations from model assumptions are no longer minor, and prevent expected responses to management.

It is important to note that incremental or linear responses to changes in habitat metrics can lead to a habitat bottleneck if the changes are continuous, directional, and not detected scientifically or incorporated into management. For example, a 5% reduction in growth rate due a modest change in habitat might have tolerable effects, but if the reduction grew to 30% through sustained declines in habitat, then the deviation would be excessive even if the change did not look like crossing a threshold (per Figure 1). At that stage, it would also represent a habitat bottleneck. One response might be to take no action on the habitat conditions in the water, and instead adjust the assessment model to better account for the new reality (i.e., lower productivity and recoverability regime). Or, action could be taken to remove the bottleneck and restore the previous productivity regime.

Importantly, habitat bottlenecks can come and go for a given stock in response to changes in habitat condition as well as stock size. Habitat is a key determinant of carrying capacity, and adverse impacts on habitat can lower carrying capacity. However, if the stock size is below even the reduced carrying capacity, then a bottleneck will not be evident and the stock should respond to harvest controls. Once the stock approaches the new lower carrying capacity created by changes in habitat conditions, then the bottleneck will become evident as the stock no longer responds as expected under the (incorrectly) assumed conditions.

Categories of Habitat Bottlenecks

Habitat bottlenecks can be categorized as environmental and physical. The distinction differentiates bottlenecks that can be addressed by habitat management measures, such as barriers and direct human activities (physical), from those that cannot be as easily controlled, such as temperature changes (environmental).

Environmental Habitat Bottlenecks

Some species may require specific ranges of environmental conditions such as temperature, pH, salinity, and dissolved oxygen during crucial life stages. Accelerated shifts in these environmental conditions may create habitat bottlenecks that are more challenging, if not impossible, to address with management measures. However, these environmental habitat bottlenecks should be factored into management measures as risks that may compromise a species' ability to rebuild or recruit to the population.

Examples of environmental habitat bottlenecks are temperature shifts for American lobster, oxygen levels for summer and winter flounders, spawning beach availability for horseshoe crab, and access to spawning areas for Atlantic sturgeon (see case studies below). Management measures which accommodate these risks include fishery closures during high temperature months, restrictive size limits to preserve genetically adapting survivors, harvest and quota transfers among jurisdictions, and precautionary trip/bag limits which account for higher mortality rates for vulnerable size classes.

Physical Habitat Bottlenecks

Habitat bottlenecks related to substrate, depth, turbidity, light penetration, water flow, and other physical conditions can be more feasible to address with habitat management measures and activities than the environmental bottlenecks. For example, the New England Fishery Management Council (NEFMC) is proposing to update the winter flounder EFH to better protect spawning grounds from dredging activities in its Draft Omnibus Habitat Amendment 2.

Case studies

As the Habitat Committee continues to refine the habitat bottleneck concept, we are exploring the utility of new data presented in updates to the Habitat Sections of different FMPs. The following examples illustrate how the concept is being considered and applied in the management of different stocks.

American Lobster

The updated Habitat Section draft of the American lobster FMP identifies two observed potential habitat bottlenecks for the species. Neither relate to structural habitat attributes (i.e., benthic features such as vegetation, sessile fauna or sediment type). Instead, both relate to water quality attributes and the physiological and behavioral responses by individuals within the stock.

Habitat Bottlenecks

The first bottleneck is a temperature threshold effect that was most evident in Long Island Sound at the time of the massive 1999 lobster die-off. Fall water temperatures increased rapidly that year causing thermal stress and mortality, and also caused lobster to aggregate in deeper thermal refuges. These stressed animals were less resistant to several chronic diseases. The result was mortality on the order of 90% or more that year. In subsequent years, continued high temperatures during the fall season caused further physiological stress, overwhelming any expected benefits of fisheries management. Research has demonstrated that lobsters show a distinct and abrupt response to water temperatures above 20°C (Crossin et al. 1998) which field studies have shown can double observed mortality rates (Figure 2), making elevated temperature a true bottleneck for this species.

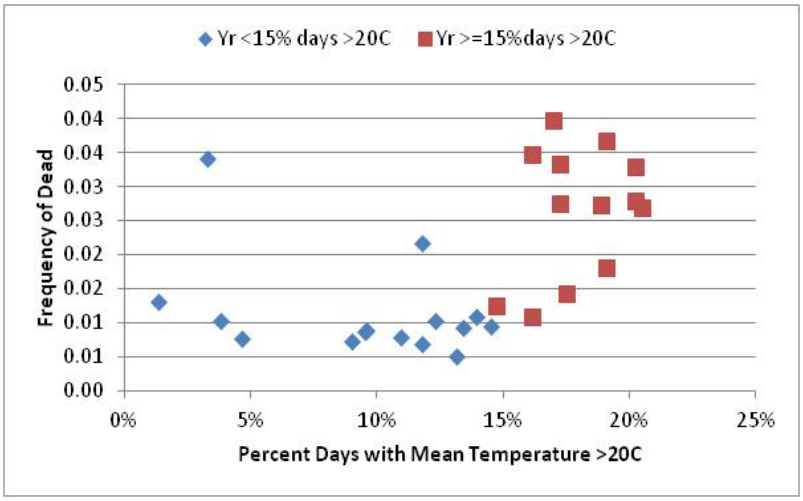

Fig 2. Relationship between the observed annual frequency of dead lobsters in research traps versus the percent of days that year with a mean bottom water temperature above 20ºC. (Data provided by Millstone Environmental Laboratory, Dominion Nuclear Resources)

The second bottleneck is also linked to temperature, and involved the reduction and contraction of suitable thermal habitats in several locations off southern New England (Figure 3). This has caused lobster to be absent from traditional nearshore fishing grounds, reducing availability to the fleet and subsequent yield. There is some evidence that displacement of egg-bearing females into deeper water has resulted in newly hatched planktonic larvae being carried on currents out to open ocean waters where their survival rate is diminished. It is not clear whether and to what extent the stock has experienced a decrease in productivity as a result of these increases in temperature, or whether the change has primarily been one of distribution. Regardless, the effect is similar in that the fishery does not perform as expected.

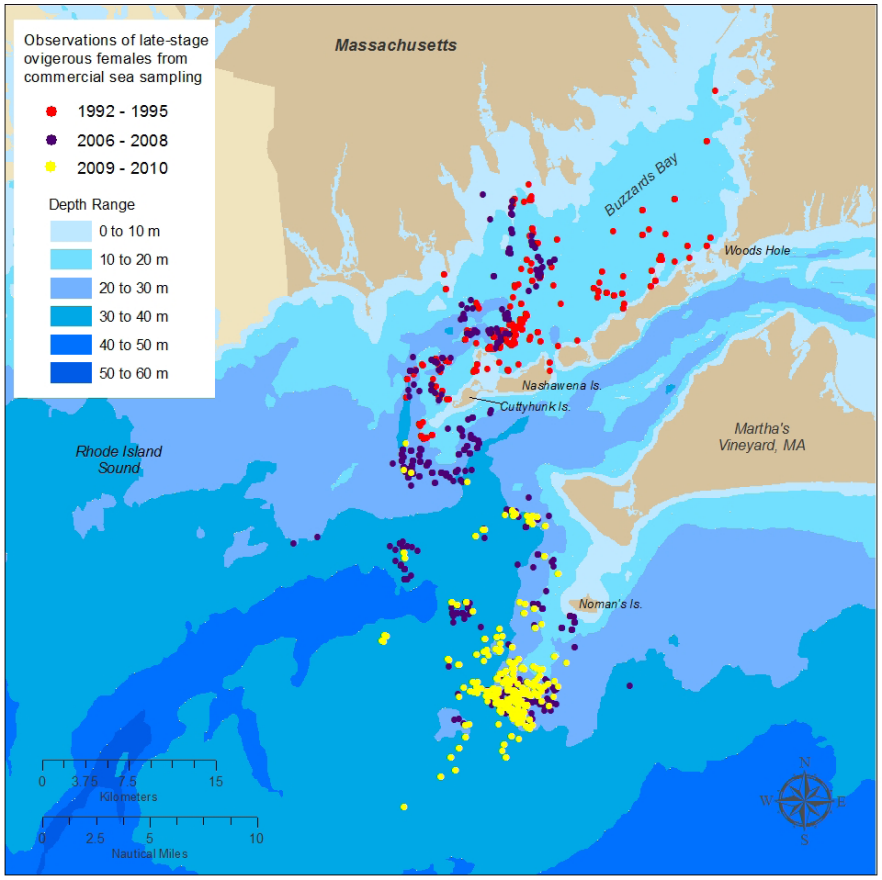

Fig 3. Map of distribution shift in late-stage egg bearing female lobsters in southern New England that has been related to changes in temperature. From: MA DMF 2011

Summer and Winter Flounder

Habitat Requirements

These two specialized flatfish rely on shallow estuaries for their nursery grounds, which contribute substantially to successful recruitment of juveniles to the adult population (Beck et al. 2001). A bottleneck, as defined above, can often develop when these nursery areas experience chronic

seasonal hypoxia due to excessive nutrient loading and eutrophication. Laboratory studies of juveniles of these two species (Stierhoff et al. 2006) show that growth of winter flounder at 20°C was reduced by ~50% at both 3.5 and 5.0 mg O_2 l^{-1} (compared to growth at normoxia [7.0 mg O_2 l^{-1}]), and growth was completely halted at 2.0 mg O_2 l^{-1}. Similarly, summer flounder growth was reduced by ~25% at 3.5 mg O_2 l^{-1} and by 50 to 60% at 2.0 mg O_2 l^{-1}. Importantly, there was no evidence of growth acclimation for either species after 7—14 d exposure to hypoxia, and these levels of hypoxia commonly persist in many coastal estuaries. The distinct drop in growth at DO levels below 3.5 mg O_2 l^{-1} was attributed to reduced feeding rates under hypoxic conditions. These significant reductions in juvenile growth rates, at sizes and ages below those usually modeled for fishery management, can translate into significant reductions in the ultimate production of the entire population (Eby et al. 2005), resulting in overly optimistic model predictions under reduced fishing mortality on the adult stock.

Horseshoe Crab

Habitat Requirements

Horseshoe crabs are evolutionary survivors that have remained relatively unchanged physically for over 350 million years (Figure 4). Of four species worldwide, the one species (*Limulus polyphemus*) in North American waters is the most abundant and ranges on the Atlantic coast from Maine to the Yucatan Peninsula. Adults remain in larger estuaries or migrate to the continental shelf during the winter months, returning inshore in spring to beach areas to spawn. Spawning usually coincides with a high tide during full and new moon phases. Eggs are laid in clusters of a few thousand in buried nest sites along the beach, totaling as many as 90,000 eggs per female per year spread over several spawning events. Such a large number of eggs play an important ecological role in the food web for multiple species of migrating shorebirds specialized in digging them out of the sand. Juvenile crabs hatch from the beach environment and spend their first two years in near shore nursery grounds. Horseshoe crabs molt at least six times in their first year of life and about 17 times until they become sexually mature at ages 9—12 years. The average life span of adults reaching maturity has been estimated at 20 years.

Fig 4. Horseshoe crabs on a beach in Fairfield, Connecticut. Photo credit: Penny Howell, CT Department of Energy and Environmental Protection.

Habitat Bottlenecks

The most important structural habitat attribute dictating stock status, spawning success, and recruitment is the ready availability of high quality spawning beaches. Despite their primitive physiology, these animals have developed sensory organs that allow them to perceive and chose spawning beaches that promote successful egg development and juvenile survival. These beaches are sloped such that the tidal prism creates an intertidal band with variable inundation and they are thereby protected from strong winds and surf which disrupts the mating process. High quality beaches are composed of a sand/pebble mixture optimal for incubating horseshoe crab eggs in terms of aeration and moisture. From Massachusetts to Delaware, productive spawning beaches are typically coarse-grained and well-drained to maintain adequate oxygen levels; productive southern spawning beaches are typically fine-grained and poorly drained where desiccation is a larger mortality factor (Brockmann 2003).

Schaller et al. (2010) concluded that most horseshoe crabs in the Great Bay Estuary in New Hampshire tended to spawn on beaches nearer to where they overwintered. Landi et al. (2014) also found that the probability of a beach segment in Connecticut falling into a higher use category increased with increasing slope, decreasing wave exposure, and decreasing distance from offshore congregations of overwintering adults. Therefore the distribution of high quality spawning beaches, which are exposed to only minimal human disturbance, also presents a bottleneck to reproductive success for this species. Disruption to beaches during the spawning season should be minimized by both reducing direct (e.g. harassment of horseshoe crabs, eggs, or predatory birds, Figure 5) and indirect (e.g. bulkheads and riprap) human impacts. In addition to tightly managing horseshoe crab removals, an effective management strategy should recognize and accommodate linkages among offshore overwintering grounds, high quality spawning beaches, and juvenile

nursery areas, maintaining priority beach habitat long term. Seasonal area closures designed with these linkages in mind would optimize horseshoe crab reproduction and recruitment, while also promoting their contribution to the regional food web. Restrictions on development and regulations on shoreline hardening, as well as enforcement of existing and future regulations are recommended. This includes the appropriate use of living shoreline designs to maintain beach slope and energy characteristics in the face of sea level rise.

Fig 5. Predation on horseshoe crabs by predatory birds is common on beaches. Photo credit: Penny Howell, CT Department of Energy and Environmental Protection.

Atlantic Sturgeon

The Atlantic Sturgeon is a highly migratory anadromous fish, and each estuary analyzed hosts one or more genetically distinct populations (Grunwald et al., 2007; Balazik and Musick 2015). Historically, Atlantic Sturgeon were documented in 38 rivers ranging from Labrador to the St. Johns River in Florida. Thirty-five of these historical rivers currently have Atlantic Surgeon present, but only 21 (possibly only as few as 19) have one or more extant breeding populations (ASSRT, 2007, Table 1, p. 140; Hager et al. 2014; Balazik and Musick 2015).

Physical Bottlenecks

Dams – Spawning and recruitment appears to be most successful in rivers without dams blocking access to historical spawning habitat (hard surfaces such as cobble). These include the Hudson (NY), James (VA), and Altamaha (GA) rivers. The Cape Fear (NC), Santee-Cooper (SC), and St. Johns (FL) river systems have lost greater than 62% of the habitat historically used for spawning and development; only 42% of the historical habitat is available in the Merrimack River (MA, ASSRT, 2007). Barriers to spawning areas can cause females to resorb eggs and not spawn. Fish passage measures beneficial (i.e. safe, timely, and effective) to Atlantic Sturgeon have had limited success but alternate designs are being developed (Schilt 2007; Kynard et al. 2008; Katopodis and Williams 2012). In addition to being a physical barrier, dams can alter or degrade sturgeon habitat downstream by reducing water quality and availability of spawning habitat through temperature, flow, or oxygen content changes. Water flows (both seasonal flow timing and natural rate of flow delivery affect habitat suitability), water temperatures, and concentrations of dissolved oxygen (DO) are all affected by peaking operations from hydroelectric facilities.

Dredging – Removal and displacement of sediment modifies the quality and availability of Atlantic Sturgeon habitat, mainly through sedimentation. It can alter overall water quality (salinity and dissolved oxygen) greatly reducing the value of foraging and nursery habitat. Dredging operations have also been documented capturing 14 Atlantic Sturgeon from 1990—2005 (ASSRT, 2007).

Environmental Bottlenecks

Secor and Gunderson (1998) noted a correlation between low abundance of Atlantic Sturgeon and decreasing water quality caused by increased nutrient loading and increased spatial and temporal frequency of hypoxic conditions. Frequent occurrences of low DO concentrations in combination with high summer water temperatures are a particular concern. A bioenergetics and survival model for Chesapeake Bay demonstrated that a combination of low DO concentration, water temperature, and salinity restricts available Atlantic Sturgeon habitat to 0—32.5% of the Bay's modeled surface area during the summer (Niklitschek and Secor, 2005). Sturgeon are more sensitive to low DO concentrations (<5 mg l^{-1}) than other fish species (Niklitschek and Secor, 2009a, 2009b) and experience sublethal to lethal effects as DO concentration drops and temperatures rise. Summer mortality has been observed at <3.3 mg l^{-1} and at 26°C.

Final Thoughts

Over the course of writing this paper, the Habitat Committee discussed the role that humans play in the marine environment, both indirectly and directly. Arguably, humans have had some influence, either directly (e.g. shoreline hardening) or indirectly (e.g. through CO_2 emissions, thus increasing water temperature), on each habitat bottleneck addressed above. Because of the complex interactions among humans, habitat, and other environmental factors (both biotic and abiotic), it was at times difficult to focus on the effects of habitat bottlenecks without acknowledging other potential influences on spawning stock biomass. We ask that the reader please keep the intended scope of this paper in mind, as it is not a comprehensive examination of all of the variables that can impact fisheries, whether natural or anthropogenic.

References Cited

ASSRT (Atlantic Sturgeon Status Review Team). 2007. Status review of Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*). Report to National Marine Fisheries Service, Northeast Regional Office, Gloucester MA. 187 pp. on February 23, 2007.

Balazik, M. T. and J. A. Musick. 2015. Dual annual spawning races in Atlantic Sturgeon. PLoS ONE 10(5): e0128234. doi:10.1371/journal.pone.0128234.

Beck, M., K. Heck, K. Able, D. Childers, et al. 2001. The identification, conservation, and management of estuarine and marine nurseries for fish and invertebrates. Bioscience 51:633–641.

Brockmann, H. J. 2003. Nesting behavior: A shoreline phenomenon. Chapter 2 IN: The American Horseshoe Crab, C. N. Shuster, R.B. Barlow, and H. J. Brockmann, eds. Harvard University Press, Cambridge, MA.

Crossin, G., S. Jury, and W. Watson, III. 1998. Behavioral thermoregulation in the American lobster *Homarus americanus*. Journal of Experimental Biology 201:365-374.

Eby, L., L. Crowder, C. McClellan, C. Peterson, and M. Powers. 2005. Habitat degradation from intermittent hypoxia: impacts on demersal fishes. Marine Ecology Progress Series 291:249-261.

Grunwald, C., L. Maceda, J. Waldman, J. Stabile, and I. Wirgin. 2007. Conservation of Atlantic sturgeon *Acipenser oxyrinchus oxyrinchus*: Delineation of stock structure and distinct population segments. Conservation Genetics 9:111-1124.

Hager, C., J. Kahn, C. Watterson, J. Russo and K. Hartman. 2014. Evidence of Atlantic Sturgeon spawning in the York River system. Transactions of the American Fisheries Society, 143:5, 1217-1219.

Katapodis, C. and J. G. Williams. 2012. The development of fish passage research in a historical context. Ecological Engineering 48:8-18.

Kynard, B., M. Horgan, D. Pugh, E. Henyey and T. Parker. 2008. Using juvenile sturgeons as a substitute for adults: a new way to develop fish passage for large fish. American Fisheries Society Symposium 61:1-21.

Landi, A. A. J. C. Vakoun, P. Howell, and P. Auster. 2014. Predicting use of habitat patches by spawning horseshoe crabs (Limulus polyphemus) along a complex coastline with field surveys and geospatial analyses. Aquatic Conservation: Marine and Freshwater Ecosystems, wileyonlinelibrary.com, DOI: 10.1002/aqc.2440.

Niklitschek, E. J., and D. H. Secor. 2005. Modeling spatial and temporal variation of suitable nursery habitats for Atlantic sturgeon in the Chesapeake Bay. Estuarine, Coastal and Shelf Science 64:135-148.

Niklitschek, E. J., and D. H. Secor. 2009a. Dissolved oxygen, temperature and salinity effects on the ecophysiology and survival of juvenile Atlantic sturgeon in estuarine waters: I. Laboratory results. Journal of Experimental Marine Biology and Ecology 381:150-160.

Niklitschek, E. J., and D. H. Secor. 2009b. Dissolved oxygen, temperature and salinity effects on the ecophysiology and survival of juvenile Atlantic sturgeon in estuarine waters: II. Model development and testing. Journal of Experimental Marine Biology and Ecology 381:161-172.

Schaller, S.Y., C.C. Chabot, and W.H. Watson III. 2010. Seasonal movements of American horseshoe crabs *Limulus polyphemus* in the Great Bay Estuary, New Hampshire (USA). Current Zoology, 56(7):587-598.

Schilt, C. 2007. Developing fish passage and protection at hydropower dams. Applied Animal Behaviour Science 104:295-325.

Secor, D. H., and T. E. Gunderson. 1998. Effects of hypoxia and temperature on survival, growth, and respiration of juvenile Atlantic sturgeon, *Acipenser oxyrinchus*. Fishery Bulletin 96:603-613.

Stierhoff, K., T. Targett, K. Miller. 2006. Ecophysiological resposes of juvenile summer and winter flounder to hypoxia: Experimental and modeling analyses of effects on estuary nursery quality. Marine Ecology Progress Series 325:255-266.

Swift, T. L., and S. J. Hannon. 2010. Critical thresholds associated with habitat loss: a review of the concepts, evidence, and applications. Biological Reviews of the Cambridge Philosophical Society 85(1): 35-53.

Atlantic States Marine Fisheries Commission

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MEMORANDUM

October 18, 2015

To: **ISFMP Policy Board**

From: **Law Enforcement Committee**

RE: **Summary of Regulations for *Landing in Whole Condition***

At the August, 2015 meeting of the Interstate Fishery Management Program Policy Board (ISFMP), the Law Enforcement Committee (LEC) was asked to provide information regarding regulations or laws that address "landing in whole condition" or related rules that allow partial or complete filleting of fish prior to landing. Following are the pertinent sections of state regulations addressing these provisions. Some re-formatting of the source text from the various state regulations was done to provide consistent readability. The LEC is available at any time to address specifics of these regulations.

MAINE

These are Maine's groundfish regulations. Striped bass must be whole with head on.
(b) The minimum fish size applies to the whole fish or any part of a fish while possessed on board a vessel, except as provided in paragraph (c) of this section, and to whole fish only, after landing. Fish or parts of fish must have skin on while possessed on board a vessel and at the time of landing in order to meet minimum size requirements. "Skin on" means the entire portion of the skin normally attached to the portion of the fish or fish parts possessed.
(c) Exceptions:
(i) Each person aboard a vessel may possess up to 25 lb. of fillets that measure less than the minimum size, if such fillets are from legal-sized fish and are not offered or intended for sale, trade, or barter. The exception, Chapter 34.10(1)(B)(1)(c)(i), shall not include Atlantic halibut.
(ii) Vessels fishing exclusively with pot gear may possess multispecies racks used, or to be used, as bait that measure less than the minimum fish size, if there is a receipt for the purchase of those racks on board the vessel.

NEW HAMPSHIRE

Fis 603.08 Striped Bass.
(a) No person shall take, possess, or transport striped bass less than 28 inches in total length. Striped bass shall have head and tail intact while on or leaving the waters or shores of the state.
Fis 603.09 Groundfish Restrictions.
(f) Fillets of all groundfish species that are skinned shall retain at least 2 square inches of contiguous skin intact that enable the identification of fish species.
(g) Cod shall have head and tail intact or as fillets no less than 13 inches in length while on or leaving the waters of the state.
(h) Haddock shall have head and tail intact or as fillets no less than 13 inches in length while on or leaving the waters of the state.

MASSACHUSETTS

Striped Bass:

f) Exceptions for For-Hire Vessels.

1. At-Sea Filleting. Operators and crew onboard for-hire vessels permitted under the authority of 322 CMR 7.10(5) may fillet or process legal sized striped bass for their recreational customers at sea provided that:

a. The skin is left on the fillet; and

b. Not more than two fillets taken from legal striped bass are in the possession of each customer of that trip, representing the equivalent of one fish per angler.

However, it is unlawful for:

(e) a recreational fisherman to mutilate any striped bass in a manner that prevents the accurate measurement of the fish**;** such mutilation shall be prima facie evidence of a violation of this section;

(t) a commercial fisherman to fillet or process any striped bass other than by evisceration;

(u) a commercial fisherman to mutilate any striped bass in such a way as to interfere with or affect a proper or adequate measurement of the fish;

(2) Commercial Fishing

a. Possession of Fish Parts by Commercial Fishermen. When commercial fishermen, permitted pursuant to 322 CMR 7.01(2), are authorized at 322 CMR to fillet or mutilate fish at sea, those fillets and parts of fish will be multiplied by three to determine compliance with species specific commercial possession limits at 322 CMR. This regulation shall not apply to whole-gutted or gilled fish, cod parts regulated at 322 CMR 6.03(3)(b) and 322 CMR 6.03(6) and monkfish parts regulated at 322 CMR 6.03(10).

And finally:

(3) Recreational Fishing

a. Filleting Catch.

i. Black Sea Bass and Scup. Recreational fishermen may fillet black sea bass and scup, provided the recreational fisherman complies with the following conditions to determine compliance with the daily recreational bag limits:

1. it shall be unlawful to possess a fillet that does not have all the skin affixed until the recreational fisherman reaches their domicile or temporary residence; and

2. it shall be unlawful to possess more than two times the number of fillets than the recreational bag limits for black sea bass and scup specified at 322 CMR 6.28.

ii. Groundfish Species. Recreational fishermen may fillet any groundfish species, managed under the authority of 322 CMR 6.03, provided the recreational fisherman complies with the following conditions to determine compliance with the daily recreational bag limits:

1. it shall be unlawful to possess a fillet that does not have at least two inches of skin affixed to the fillet until the recreational fisherman reaches their domicile or temporary residence; and

2. it shall be unlawful for any person or vessel to possess more than two times the number of fillets than the species specific possession limits at 322 CMR 6.03.

b. Comingling of Recreational Catch. In instances where recreational fishermen have comingled their catch, the comingled catch will be divided by the number of anglers on board the vessel to determine compliance with per angler or per vessel bag limits and fillet limits.

RHODE ISLAND

Rhode Island does not have a requirement that a fish must be landed whole. There are minimum length requirements for many species but no requirement that the fish be landed whole.

CONNECTICUT

Sec. 26-142a-8a. Species restrictions

(b) **Minimum Legal Length.** No person shall possess any fish taken by any commercial fishing gear or for commercial purposes less than the lengths specified below measured from the tip of the snout to the end of the tail and, notwithstanding section 26-159a-4 of the Regulations of Connecticut State Agencies, no person shall buy, sell, offer for sale or possess in a place where fish are offered for sale, any of said species less than the minimum legal length stated herein.

(1) Atlantic tomcod (frostfish) (Microgadus tomcod) - 7 inches

(2) Tautog (blackfish) (Tautoga onitis) - 14 inches

(3) Scup (porgy) (Stenotomus chrysops) - 9 inches

(4) Black sea bass (Centropristis striata) - 11 inches

(5) Winter flounder (Pseudopleuronectes americanus) - 12 inches

(6) Bluefish (Pomatomus saltatrix) - 9 inches

(7) Summer flounder (fluke) (Paralichthys dentatus) - 14 inches

(8) Atlantic cod (Gadus morhua) - 22 inches

(9) Weakfish (Cynoscion regalis) - 16 inches

(10) Yellowtail flounder (Pleuronectes ferrugineus) - 13 inches

(11) Haddock (Melanogrammus aeglefinus) - 22 inches

(12) Pollock (Pollachius virens) - 19 inches

(13) Witch flounder (Glyptocephalus cynoglossus) - 14 inches

(14) American plaice (Hippoglossoides platessoides) - 14 inches

(15) Redfish (Sebastes marinus) - 9 inches

Any of said species less than the minimum legal length taken by any commercial fishing gear shall, without avoidable injury, be returned immediately to the water from which taken. No person on board any vessel engaged in commercial fishing or landing species taken by commercial fishing gear shall possess any summer flounder fillet less than the minimum total length for the species unless the carcass of the fish from which the fillet was removed has been retained and meets the minimum length. This subsection shall not be construed to prevent filleting of fish on shore or at the dockside.

NEW YORK

NY regulates filleting of three species; striped bass, fluke (summer flounder), and weakfish. See excerpts from our regulations below:

(h) Summer flounder and Scup recreational fishing - special regulations.

(1) Except as provided in this paragraph or paragraph (2) of this subdivision, no person shall possess summer flounder from which the head or tail has been removed or that has been otherwise cleaned, cut, filleted or skinned, so that the total length or identity cannot be determined. This prohibition shall not apply to fish being prepared for immediate consumption or storage at a domicile or place of residence. White side fillets and skin may be removed for use as bait provided the carcass of the summer flounder with dark side completely intact is retained and available for inspection to determine compliance with the size limit. Any such carcasses count against the possession limit. It is unlawful to discard overboard the carcass of any summer flounder from which a fillet or skin has been removed as bait once fishing has begun.

(2) Holders of a valid New York State Marine and Coastal District Party and Charter Boat License, issued pursuant to ECL Section 13-0336, may fillet summer flounder on board the vessel covered by the license subject to the following conditions:

(i) For each fishing trip taken by a vessel, summer flounder parts or racks (remains of fish after fillets have been removed) must not be discarded overboard once any person on board the vessel begins to fish and until the vessel returns to its dock.

(ii) Summer flounder racks must not be mutilated to the extent that the length or species of fish cannot be determined.

(iii) All summer flounder racks must be retained (unmixed with any other material) in a separate container readily available for inspection until such time as the vessel has docked and all passengers from that trip have disembarked.

(iv) All summer flounder racks from the previous trip must be disposed of prior to any person beginning to fish on a subsequent trip.

(v) Violators of any of the provisions of this subdivision are subject to the penalties established pursuant to the provisions of Article 71 of the Environmental Conservation Law and may be subject to license revocation pursuant to Part 175 of this Chapter.

Striped Bass:

(iii) The striped bass party/charter boat permit will be issued to an eligible individual owner or operator and will be endorsed for use on a specific vessel, on which it will cover any operator of that vessel. The individual to whom the permit is issued is responsible for all activities aboard the permitted vessel.

(iv) Only the captain or crew of a vessel holding a striped bass Party/Charter boat permit may fillet striped bass subject to the following conditions:

(a) fish may be filleted for customers only;

(b) only fish which are legally possessed may be filleted;

(c) striped bass may only be filleted prior to customers leaving the vessel or the dock area prior to customers departing the areas;

(d) it is unlawful to mutilate any striped bass carcass to the extent that the total length or species of fish cannot be determined;

(e) all striped bass carcasses must be retained (unmixed with any other material) in a separate container readily available for inspection until such time as the vessel has docked and all passengers from that trip have left the vessel and the dock area. Any such carcasses are included in the possession limit; and

(f) all striped bass carcasses from any previous trip must be disposed of prior to any person beginning to fish on a subsequent trip.

Commercial fishing:

(j) Striped bass commercial fishing - special regulations.

(1) General Provisions. The total season harvest may not exceed the amount approved for New York by the Atlantic States Marine Fisheries Commission pursuant to the Interstate Fishery Management Plan for Striped Bass. The annual quota shall be adopted by directive issued by the Chief, Bureau of Marine Resources, consistent with the provisions of subdivision (u) of this section.

(2) Striped bass legally harvested from other states may be sold or offered for sale during New York's closed commercial season provided they meet the provisions of paragraph (23) of this section.

(3) Except as provided in paragraph (g)(4) of this section, it is unlawful to possess striped bass from which the head or tail have been removed or that have been otherwise cleaned, cut, filleted, or skinned so that the total length or identity cannot be determined unless such fish is being prepared for immediate consumption.

Weakfish

Total length 16 inches
Fillet length is 10 inches
Dress length is 12 inches
Trip limit; 100lbs
Recreational lengths are the same. One fish creel limit
Below is description of what the measurements mean:

{1} Total length is the longest straight line measurement from the tip of the snout, with the mouth closed, to the longest lobe of the caudal fin (tail), with the lobes squeezed together, laid flat on the measuring device, except that black sea bass are measured from the tip of the snout or jaw (mouth closed) to the farthest extremity of the tail, not including the tail filament.

#The tail length is the longest straight line measurement from the tip of the caudal fin (tail) to the fourth cephalic dorsal spine (all dorsal spines must be intact), laid flat on the measuring device.

The fillet length is the longest straight line measurement from end to end of any fleshy side portion of the fish cut lengthwise away from the backbone, which must have the skin intact, laid flat on the measuring device.

**Dressed length is the longest straight line measurement from the most anterior portion of the fish, with the head removed, to the longest lobe of the caudal fin (tail), with the caudal fin intact and with the lobes squeezed together, laid flat on the measuring device.

NEW JERSEY

Recreational: The filleting at sea of all fish with a size limit, or any species of flatfish, is prohibited except for summer flounder; see Summer Flounder, see below. No parts of any fish caught on a previous fishing trip shall be in possession. Party boats may fillet fish at sea if they obtain a Special Fillet Permit. Applications may be obtained from Fish and Wildlife's Bureau of Marine Fisheries.

Summer flounder: Anglers may fillet one legal-sized summer flounder from their daily possession limit catch for use as bait. This carcass, commonly known as the rack, shall be kept intact so it can be measured for compliance with the minimum size limit. No parts of any summer flounder caught on a previous fishing trip shall be in possession; only fish just caught on this outing.

Commercial: Fish are to be landed intact for proper measuring i.e tip of snout to end of tail.

DELAWARE

3511 Summer Flounder Size Limits; Possession Limits; Season

(Penalty Section 7 Del.C. §936(b)(2))

1.0 It shall be unlawful for any recreational fisherman to have in possession more than four (4) summer flounder at or between the place where said summer flounder were caught and said recreational fisherman's personal abode or temporary or transient place of lodging.

2.0 It shall be unlawful for any person, other than qualified persons as set forth in section 4.0 of this regulation, to possess any summer flounder that measure less than sixteen (16) inches between the tip of the snout and the furthest tip of the tail.

3.0 It shall be unlawful for any person, to have in possession any part of a summer flounder that measures less than sixteen (16) inches between said part's two most distant points unless said person also has in possession the head, backbone and tail intact from which said part was removed.

3541 Atlantic Sharks

(Penalty Section 7 Del.C. §936(b)(2))

3.0 Finning

3.1 Except as provided in 3.2, it is unlawful for any person to possess the fins from any shark in the management unit prior to landing said shark unless said fins are naturally attached to the body of said shark.

3.2 A person issued a valid commercial food fish license may completely remove the fins from any smoothhound, provided the total weight of the fins does not exceed twelve (12) percent of the total dressed weight of smoothhound complex carcasses on board a vessel.

4.0 Fishing Methods

It is unlawful for any person to fish for any shark while in state waters with any fishing equipment or by any method, except: (1) Hook and Line; (2) Gill Net.

5.0 Filleting Prior to Landing

It is unlawful for any person to fillet a shark in the management unit prior to landing said shark. A shark may be eviscerated prior to landing said shark, but the head, tail, and fins must remain naturally attached to the carcass, except as provided in 3.2 and commercial fishermen may eviscerate and remove the head of any shark reduced to possession, but the tail and fins must remain attached to the carcass.

PENNSYLVANIA

Regulation 63.15 - Field dressing and disposal of fish.

(a) Except as otherwise provided in this section, it is unlawful to possess a fish in any form or condition other than in the whole or having the entrails removed while on shore, along the waters of this Commonwealth, onboard a boat or on a dock, pier, launch area or a parking lot adjacent thereto.

(b) Fish may be processed fully if they are being prepared for immediate consumption.

(c) This section does not apply to fish processed at a fish cleaning station officially recognized under §63.15a (relating to officially-recognized fish cleaning stations).

(d) Provided that the requirements of this subsection are met, this section does not apply to fish processed by a permitted charter boat/fishing guide operation. The charter boat operator or fishing guide may fully process the fish at any time provided

the charter boat operator or fishing guide retains the carcass until possession of the fish is transferred to the customer on shore. The charter boat operator or fishing guide shall give the customer who receives the processed fish a signed, dated receipt on the form prescribed by the Commission.
(e) This section does not apply to fish caught or sold in compliance with Chapter 31 of the code (relating to regulated fishing lakes).
(f) This section does not apply to fish caught under a Lake Erie commercial license issued consistent with Chapter 29 of the code (relating to special licenses and permits) after the fish reach established retail or wholesale markets.
(f) It is unlawful to discard any fish carcass or parts thereof into the waters of this Commonwealth within 100 feet of shore, a dock or launch ramp or upon any public or private lands contiguous to and within 100 feet of such water except:
(1) On lands with the permission of the landowner; or
(2) Where fish are properly disposed into suitable garbage or refuse collection systems or at officially recognized fish cleaning stations.

MARYLAND
§ 4-733. Possession of fish whose size or weight cannot be determined
A person may not possess aboard any boat on the tidal waters of the State more than 15 pounds of any fish for which a size or weight limit is prescribed by law, or rule or regulation in a condition that the size or weight of the fish cannot be determined.
8.02.15.12
General Restrictions
A. A person may not use a gaff or similar device to remove striped bass from the water. A person who catches striped bass shall remove it from the water only by hand or dip net.
B. Possession of Striped Bass.
(1) For purposes of this section, "cull" means that after a person has a striped bass in possession, the person discards or exchanges that striped bass to possess another striped bass.
(2) During a recreational striped bass season:
(a) Between 12 a.m. midnight and 5 a.m., a person may not possess striped bass while fishing on the tidal waters of the Chesapeake Bay and its tributaries; and
(b) An individual may not cull striped bass.
C. Filleting Striped Bass.
(1) Except as provided in §C(2) of this regulation, a person may only land striped bass dockside as a whole fish.
(2) A licensed charter boat captain or mate may fillet striped bass taken on a vessel displaying a current commercial charter boat decal under the following conditions:
(a) A striped bass carcass may not be mutilated to the extent that the total length or species of fish cannot be determined;
(b) All striped bass carcasses:
(i) Shall be retained, unmixed with any other material, in a separate container readily available for inspection until the vessel has docked and all passengers from that trip have left the vessel and the dock area; and
(ii) Are included in the possession limit; and

(c) All striped bass carcasses from any previous trip shall be disposed of before any person begins to fish on a subsequent trip.

VIRGINIA

REGULATION 4 VAC 20-580-10 ET SEQ.

PREAMBLE

This regulation establishes controls on the handling of finfish when fishing from a vessel or pier. This regulation is promulgated pursuant to authority contained in §28.2-201 of the Code of Virginia. This regulation amends and re-adopts prior Regulation 450-01-0075 which was adopted by the Marine Resources Commission on September 24, 1991 and was effective October 1, 1991. The effective date of the regulation is July 1, 1995.

4 VAC 20-580-10. Purpose.

The purpose of this chapter is to enhance compliance with minimum size limits, catch limits, and quotas.

4 VAC 20-580-20. Alteration of finfish to obscure species identification or size prohibited.

A. It shall be unlawful for any person to alter any finfish, or to possess altered finfish, aboard any boat or vessel, or on a public fishing pier (except at the fish cleaning station of the pier), such that the species of the fish cannot be determined.

B. It shall be unlawful for any person to alter any finfish regulated by a minimum or maximum size limit, or to possess such altered finfish, aboard any boat or vessel, or on a public fishing pier (except at the fish cleaning station of the pier), such that its total length cannot be measured.

4 VAC 20-580-30. Allowances for filleting or cleaning.

A. For finfish regulated by a minimum or maximum size limit, filleting at sea will be allowed if the carcass is retained to ensure proper species identification and compliance with size limitations.

B. For finfish regulated by a minimum size, cleaning and/or filleting at sea will be allowed if the fillet or cleaned fish exceeds the minimum length for the species and at least one square inch of skin is left intact to assist in identification of the species.

C. For finfish not regulated by a size limit, filleting at sea will be allowed if a minimum of one square inch of skin is left on the fillet to assist in identification of the species.

4 VAC 20-580-40. Penalty.

As set forth in § 28.2-903 of the Code of Virginia, any person violating any provision of this chapter shall be guilty of a Class 3 misdemeanor, and a second or subsequent violation of any provision of this chapter committed by the same person within 12 months of a prior violation is a Class 1 misdemeanor.

NORTH CAROLINA

15A NCAC 03M .0101 MUTILATED FINFISH

It is unlawful to possess aboard a vessel or while engaged in fishing any species of finfish that is subject to a size or harvest restriction without having head and tail attached, except:

(1) mullet when used for bait;

(2) hickory shad when used for bait provided that not more than two hickory shad per vessel or fishing operation may be cut for bait at any one time; and

(3) tuna possessed in a commercial fishing operation as provided in 15A NCAC 03M .0520.

Snapper – Grouper:

It is unlawful to possess any species of the snapper grouper complex without heads and fins intact as specified in 50 CFR Part §622.186.

Sharks:

Commercial - It is unlawful to possess any shark [with the exception of smooth dogfish (smoothhound shark)] without tail and fins naturally attached to the carcass through the point of landing. Commercial fishermen may completely remove the fins of smooth dogfish (smoothhound shark). If fins are removed, the total wet weight of the shark fins may not exceed twelve (12) percent of the total dressed weight of smooth dogfish (smoothhound shark) carcasses landed or found onboard a vessel.

Recreational - It is unlawful for recreational fishermen to possess any shark without head, tail, and fins intact with the carcass through the point of landing. Anglers may still gut and bleed the carcass as long as the tail is not removed. **Filleting sharks at sea is prohibited.**

SOUTH CAROLINA

Saltwater Fish (Includes Atlantic tunas, billfish, inshore fish, offshore fish, sharks, and snapper grouper complex)

All species in this section must be landed with head and tail intact.

GEORGIA

Georgia Saltwater Fishing Regulation 391-2-4-.04

(5) Possession and Landing Specifications.

(a) All fish subject to restrictions specified in this Rule may be possessed in state waters or landed only with head and fins intact, except that when landed for commercial purposes, all sharks, small shark composite species, and hammerhead sharks may have the heads removed but fins and tail must remain naturally attached.

FLORIDA

Florida regulates the requirement for fish to be landed in whole condition by species. Florida does allow preparation for immediate consumption of some species, such as redfish, but not all. Below are two examples of language requiring a species be landed in whole condition. The first is from the redfish chapter (68B-22, FAC), and allows for immediate consumption of the fish. The second example is from the cobia chapter (68B-19, FAC), and does not allow for immediate consumption. (These examples do not represent all of the possible language that require fish to be landed in whole condition found in FWC's marine fisheries rules.)

68B-22.006 Other Prohibitions; Applicability.

(4) All redfish harvested from Florida waters shall be landed in a whole condition. The possession, while in or on state waters, on any public or private fishing pier, or on a bridge or catwalk attached to a bridge from which fishing is allowed, or on any jetty, of any redfish that has been deheaded, sliced, divided, filleted, ground, skinned, scaled or deboned is prohibited. Mere evisceration or "gutting" of redfish, or mere removal of gills from redfish, before landing is not prohibited. Preparation of redfish for immediate consumption on board the vessel from which the fish were caught is not prohibited.

Specific Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 2-12-87, Amended 6-3-91, 1-1-96, 1-1-98, Formerly 46-22.006.

68B-19.003 Size Limit; Landed in Whole Condition Requirement.

(2) Landed in Whole Condition Requirement - A person harvesting cobia shall land each cobia in whole condition. A person may not possess in or on Florida Waters a cobia that has been beheaded, sliced, divided, filleted, ground, skinned, scaled, or deboned. This provision will not be construed to prohibit the evisceration (gutting) of a cobia or removal of gills from a cobia.

Rulemaking Authority Art. IV, Sec. 9, Fla. Const. Law Implemented Art. IV, Sec. 9, Fla. Const. History–New 9-1-13.