Maryland DNR

Sport Fisheries Advisory Commission

Blue Crabs Meeting

Tuesday,
May 23, 2017

Held at the
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Maryland DNR
Sport Fisheries Advisory Commission Meeting

Tuesday, May 23, 2017

SFAC Members Present:

Phil Langley, Vice Chair

Rachel Dean
Mark De Hoff
James Gracie
Valentine Lynch
Dr. Raymond Morgan, II
John Neely
Captain Edward O'Brien
Chris Pittas, proxy for Beverly Flemming
David M. Sutherland
Roger Trageser

SFAC Members Absent:

Micah Dammeyer
Beverly Fleming
James Wommack(Mack)

Maryland DNR Fisheries Service

Dave Blazer
Paul Genovese
Mike Luisi
Dr. Matthew Ogburn
John Page Williams

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I N D E X

KEYNOTE: "---" indicates inaudible in the transcript.
"*" indicates phonetic spelling in transcript.

A F T E R N O O N S E S S I O N

(4:05 p.m.)

Call to Order

by Phil Langley, Vice-Chair, SFAC

MR. LANGLEY: If I can have everybody's attention, we are going to go ahead and get this meeting started. I would like to thank everybody for coming this afternoon. I know everybody's time is valuable and I appreciate all of the time that everybody puts into this. I think Dave has a couple of comments he would like to make.

Comments

by Dave Blazer, MD DNR

MR. BLAZER: Yes, again thank you all for coming. This is one of the two meetings that we kind of injected, if you will, into our process. So this is kind of like an extra meeting from the standard quarterly things that we have been doing. The original idea of this meeting was to talk about crabs because this is when we are considering some changes to crab regulations and we will talk a little bit about some of those efforts today.

But it also seems rather timely because it is good to check back in with you after ASMFC and after Mid Atlantic Council so you will get kind of a feedback instead of having to wait three months until you hear some of that before the next meeting. So we will use this meeting to do some of

that as we go through.

I also want to thank everybody. I think those of you who were up for exploration if you will in the Sport Fish Meeting reapplied. So we got applications have been submitted. I think that closed out the other day. So hopefully we will be hearing about everybody's seat on the Sport Fish Advisory Committee, all those names are down at the appointment's office, so we will see what happens there. But again thank you all for applying. I think everybody who was up for renewal applied. So I think that was great and we appreciate everybody's willingness to continue to serve.

MR. PITTAS: I have a question. I do the proxy and I know Paul talked to you, I do the proxy for Beverly and where she has had a lot going on with her husband health wise, et cetera, our president at AMSA has written a letter and I am going to fax it to Paul. And I am going to get with Beverly afterwards and -- so we can switch it up if she is comfortable with it because of everything that is going on and I am going to take it over and she will be the proxy if she has to be. But I don't miss a meeting, so it don't matter.

It is just the point that I want to give her that opportunity if something happens and she wants it back at what period of time I can give it back to her and it is not like she feels like she is being pushed out or anything.

MR. BLAZER: Okay. Well send us that letter and

again the appointments office will be making a lot of those decisions.

MR. PITTAS: Do I -- if I fax them to Paul, he can take care of it?

MR. BLAZER: Yes.

MR. PITTAS: Thank you.

MR. LANGLEY: Was there any public comment before the meeting? Anybody?

(No Response)

MR. LANGLEY: No? All right. We will move our meeting forward. The recreational blue crab harvest. That is Dr. Matthew Ogburn.

MR. BLAZER: If I can, we asked Matt to come today and he is doing some interesting research on some of the recreational crabbing effort and he gave a talk to our Sport Fish Goal Implementation Team, I guess that was a couple of weeks ago. You know one of the issues that we always deal with is what is the impact effect and evaluation of recreational crabbing. They are a pretty hard group to get a handle on. And Matt has been doing some work here in the last couple of years.

So we wanted to invite him here and talk a little bit about what he is finding and what is going on in the recreational fisheries. So thanks for being here, Matt.

by Dr. Matthew Ogburn,

Smithsonian Environmental Research Center

DR. OGBURN: Yes, thanks. And thanks for this opportunity to share the work that we have been doing.

(Slide)

DR. OGBURN: I have a couple of co-authors who have been involved in this project. The most important one is Bobby Semmler who is listed here second. He is a master student who has been at University of Maryland and just graduated in the fall and is headed off to a PhD in England next year. But a lot of this work was part of his Master's research. And then Rob Agular* and Tuck Hines*, are my colleagues at SERC.

And I want to thank a few other groups that have been critical to making this project work. This was a mercury(sic) capture study where we tagged thousands of crabs and all of the data came from commercial and recreational fishermen who caught them and reported them back to us. I will talk more about that. But the -- this research doesn't happen if people don't participate. And so I think it has been really successful. It was funded by Maryland Sea Grant. Marjorie Reacta* and Elizabeth North were Bobby's other thesis committee members. Eric Johnson some of you may know. It is still on the CB SAC, the Chesapeake Bay Stock Assessment Committee.

He had been at SERC and was involved in kind of thinking about how to do this project. But he is now at University of North Florida. And then we had quite a few of our interns and technicians out there doing all the tagging.

(Slide)

But I want to start sort of by setting the stage of where we were when I wrote this proposal in 2013, I think. Was and what we still have is the stock assessment for blue crabs and the stock assessment model uses the assumption that the size of the recreational blue crab fishery is 8 percent the size of the commercial fishery. And that 8 percent number was based on a series of angler surveys which are listed up here that were done by telephone interview, by meeting people dockside and intercept surveys as they come back from fishing and from log book data from waterfront homeowners who fish for crabs off their docks using pots.

And in those four studies in -- over about a 10 or 11 year period using the same methods each time. And what they found was that if you look at the column all the way to the right, the recreational harvest was anywhere between 4.8 and 7 percent of the total crab harvest in Maryland. It is a little bit higher percentage of males and even higher percentage if you go to male hard crabs. So the reason I split that out will become apparent at the end.

But from this work, 8 percent was chosen as the

amount for the stock assessment model. But we had also heard from a lot of different people that the felt like the recreational harvest was much greater than 8 percent, maybe as much as 50 percent. And there was some limited data from a few places including work that was done by my lab mates before I got to SERC that showed at least in the Rogue River, Maryland that the recreational harvest was much higher than 8 percent.

But the question was, you know, has this changed as people have adjusted to the banning of recreational harvest of females? So that recreational harvest might be higher now particularly focused on males. And you know was the higher percentage of recreational harvest we were seeing in our studies in the Rogue River reflective of statewide or not? So the goal of this work was really to expand research that we have been doing with mercury capture studies, crab tagging studies. Locally and the Rogue River to statewide.

(Slide)

And in concept, that was a simple thing. The idea was that we have reported commercial harvest data. If we come up with in the middle the proportion of recreational exploitation or recreational harvest divided by the commercial harvest so what is the -- can we come up with what percentage is statewide. Then we can actually estimate the size of the recreational harvest.

So in concept, it is very simple but to capture the variation in space and time, we use the monthly commercial reported harvest and then estimated recreational harvest for each harvest reporting area. And there are 25 harvest reporting areas. And we estimate it at monthly. Now we didn't do tagging in all of those places and all the times and I will tell you more about that. But the idea is that we estimate -- come up with an estimate of recreational harvest for each month, for each harvest reporting area and then add it all back together to come up with total recreational harvest statewide.

(Slide)

So that is kind of what I have said we did. Two years of the work -- in the first year we did tagging in four different parts of the Chesapeake Bay, two on the western shore and two on the eastern shore of Maryland. And did the tagging at three different time points through the year so that we could estimate the seasonal relationship of the ratio of recreational to commercial harvest.

And then we tagged, the second we did tagging in 15 of the 25 sites because that was all the money that we had to pay tag rewards. Which I will talk about in a minute. And for the sites where we couldn't do tagging in the second year, we used nearby areas that were similar to estimate what happened in those sites.

(Slide)

So part of this was estimating exploitation rates. And I am not going to estimate -- or I am not going to talk about this too much but what we were essentially trying to do was estimate what proportion of tagged crabs were caught by recreational and commercial fisherman in each place -- in each time period. And this is sort of a simple schematic for how we did that.

The exploitation rates that you as the variable that is normally used for that, it is the number of crabs that were tagged that people caught on top with the cage divided by the reporting rate. And what the reporting rate is is an estimate of how likely people were to call in the tags if they actually caught a tagged crab. And we estimated that by releasing most of our tags with just the word "Reward" on the front but 5 percent -- 1 out of every 20 had $50 really clearly written on the front.

We have tested $100 before to see if there is a difference between $50 and $100 but there wasn't. So we admit that it is not 100 percent true probably but the assumption in the work is that all of the $50 tags are reported back to us. And then what we typically found is that anywhere between 70 and 90 percent of both recreational and commercial crabbers are calling in the tags that just say "reward" on the front.

So we adjust the number of recaptures based on what

proportion we think we are reported to as the people caught. And then we divide all of that by the number of crabs that we released. So it is basically percent that were caught of the ones that we released. Because a lot of this work focused on male crabs which molt and when they molt, they lose their tag. We had accounted for molting. We accounted for mortality assuming the same mortality rate that is used in the stock assessment model. So those are just crabs dying of natural causes like predation or disease or other things.

And then we have an estimate which is very small of the likelihood that they might lose their tag just by running around and having the tag fall off. So we accounted for all of those things in these estimates and I just wanted you to understand sort of how we do these calculations. And I won't bore you further with the math.

(Slide)

So here are some of the results. I like talking mostly about results so that you get the best opportunity to ask questions about what we actually found. Over the two years we tagged about 9,000 crabs. 7,000 and some of those were males because recreational harvest is banned for females in Maryland. But we wanted some information on females as well. 35 percent of the crabs -- 35 percent of all of the males that we released were caught. But only 11 percent of the females released were caught.

And I will just mention briefly that we have a separate study that focuses on females that is probably about a year away from sharing the results. So we are going to add this to that and we will have a really story on females as well. But this work focused on males because it was recreational fishing.

Of the ones that were caught that we tagged, about 1,600 of those were caught by commercial fisherman and of those 75 percent were trotlines and 25 percent were pots. I wouldn't assume that that is the statewide number because most of our tagging happened in the tributaries. And the thinking behind that is that most of the crabs are molting into maturity and growing to harvestable size in the tributaries and then some of them are caught there and some of them move out. But we did do tagging in a few main bay places as well for comparison.

And then about 450 of the crabs were caught by recreational fisherman. 62 percent of those were trotlines and 18 percent were pots. 12 percent were collapsible traps and then everything else was just a couple of percent. So we have our few chicken neckers and other things going on in there too. But those were the three biggest categories.

(Slide)

These are the maps of what that sort of looks like. Luckily I just got glasses so I can actually see it from here.

But each of these maps has 15 circles with an X in the middle. They are admittedly a little bit hard to see and I apologize for that. But those are the places where we released crabs and then the map on the left shows where all the recreational recaptures happen with the dark dots.

The map on the right with the sort of grayish dots shows where all the commercial recaptures happen. And the obvious thing that you can see just by glancing at the maps is that commercial recaptures were much more likely to happen in the main stem of the Chesapeake Bay recreational harvest. Almost exclusively happened in the tributaries.

(Slide)

This is what the seasonal variation looks like and this isn't harvest, this is the ratio of recreational to commercial harvest for one of our sites as an example. I think this is the South River because you see in the middle of the summer here it is 50 percent recreational catch. It is either the Road West(sic) or the South River. I don't remember which. But the same -- we see the same general pattern statewide where in the spring and the later fall almost all of the harvest is commercial.

But in the summer with a peak in sort of August and into September. Remember September includes Labor Day. That is when there is really intensive recreational harvest. So I am sure that this is not news to anyone in this room. But

this is what the data looks like across -- this is averaged across the four sites that we did seasonal tagging.

(Slide)

And then one of the things that I won't talk about in detail beyond this one slide that our Master student, Bobby, spent most of his time working on. Is figuring out what the consequences of are tagged crabs moving from one place before they are caught. And it turns out it actually matters a fair bit how you deal with that in the analysis. So there were certain -- for each place that we released our crabs, there is sort of three different ways of looking at that data.

The one all the way on the left here(indicating) is where all of the recaptures happened for crabs released in the Magothy River. So you can see recreational and commercial within the Magothy River and then there is all these other ones spread out where crabs moved and were caught somewhere else. Most of those were caught by commercial fishermen. And the reason that is important for our calculations is that in places like this, that have pretty high recreational fishing, if we include all of those commercial recaptures once they move out of the tributary in our estimate of recreational fishing for that area, we really underestimate the recreation harvest that goes on in that tributary.

The second way in the middle of calculating that, is

just saying let's only look at the ones that are caught in the Magothy River regardless of whether we tagged them there or we tagged them somewhere else and they migrated in. And that is the -- that is pretty simple and straightforward to account for the movement. And it turns out that that is all that we need to do to estimate the statewide recreational harvest. We just need to know the ratio of recreational to commercial crabs that are caught in a place.

The third method here has arrows showing. Bigger arrows mean more crabs moved from one harvest reporting area to another one. And each of those arrows shows them going from one harvest reporting area to another. To actually calculate the exploitation rate, the fraction of crabs harvested there, we need to know how many moved out in and out from each other place.

So I won't go into that too much. That is going to be in the papers and things that come out it. It is important for calculating the actual recreational exploitation rate in each location. But you -- when you -- that movement sort of cancels itself out if you are just calculating the harvest.

(Slide)

So this is what the sort of spatial variation and recreational harvest look like in the 15 places where we released crabs. And in this the darker part of each pie chart shows recreational harvest. And the lighter gray part of it

shows commercial harvest. This is the first map that I know of that shows the distribution of recreational harvest in Maryland. So this is one of the things that we are really excited about doing and seeing.

And what it shows is not terribly surprising probably to anyone in this room either is that sort of western shore and then areas around Eastern Bay and the Miles and Wye River have much higher recreational harvest as a fraction of the total harvest in other places. And then in the main bay areas, there is essentially no recreational harvest when you compare it to the commercial harvest. So this shows the kind of variation that I was talking about where in places like the Rogue River and the Severn River and the South River, you might see 50 percent or more of the harvest as recreational. So it seems like recreational harvest might be huge but there is other places where it is low. And the trick is figuring out what the statewide average is.

(Slide)

So we took this panel on the left here which is the reported commercial harvest. And this is what comes actually straight from the commercial harvest reports to DNR. Then we multiplied it by the proportions from the previous map that I showed you. And we come up with the panel on the right which is the size of the recreational harvest by reporting area for Maryland. So this is also the first map that I know of that

shows recreational harvest across the state in Maryland. Please correct me if I am wrong on that but as far as we know these are the first time that this has really been done in this way, using this kind of data.

And what you see from this, the bubbles on each figure are scaled the same way. So you can see how the commercial harvest, I was actually surprised to find out the highest harvest at least in 2015 came from the Choptank River and not the main base station. But the Choptank River and the sort of main bay commercial reporting areas are where the highest proportion of commercial catch is coming from.

For recreational harvest, it is the tributaries. The Patuxent, some of the western shore ones. And you know, again like the Miles and Wye River, Eastern Bay area, those are the hotspots for recreational harvest.

(Slide)

And so I am going to show this again, and I am going to tell you some of the numbers because we are still finalizing this publication to submit it and I am waiting for feedback one of our co-authors but this is the estimate from the recreational creel surveys that I showed before. What we have estimated is that male hard crabs in 2015 that recreational harvest of male hard crabs was about 12 percent of the size of the commercial fishery and you see that that is pretty much inline with what is here.

For males, it is about eight and a half percent and as a fraction of the total crab fishery, it is six and a half percent. And those numbers are actually almost exactly the average of these four years that they did the recreational creel survey. So we have -- and I will say also that we are going to put those numbers out publically on an updated presentation at the June Fisheries Gold Team meeting.

But the -- we have sort of two main outcomes of this work. The first is that these prior estimates of recreational harvest are probably pretty accurately reflecting what is happening in the fishery. Recreational fishing hasn't exploded. There is -- it really hasn't that changed that much over the last 15 years it seems. It may change a little bit from year to year but on average seems to stay about the same.

But one of the changes that was made in how the stock assessment model is used following 2008 when recreational harvest was banned in Maryland, they shifted from assuming that recreational harvest was 8 percent of the total harvest to 8 percent of male harvest because females were no longer harvested by recreational fisherman. What we have seen is that actually the numbers probably haven't changed that much. And that I said it is about ten and a half percent of the male harvest.

So our major management recommendation coming from this research is that we should go back to estimating that

recreational harvest is 8 percent of the total harvest not just male harvest. And the reason for that is that since 2008, we have probably been underestimating the recreational -- the percent of males that are caught by the recreational fishery. So we would be underestimating the total harvest of males in the bay.

And there is -- and it hasn't been triggered before but there is a male management trigger in the stock assessment. And to be conservative in fisheries management, we don't want to underestimate the male harvest and put ourselves in a bad situation when we have this management trigger that is supposed to be triggered if the percent of males harvested goes over levels that haven't been observed before.

(Slide)

So I think that is the end of my presentation here. I am happy to answer whatever questions you have and go back through this. But I appreciate the opportunity again to share this work with you and hopefully we will be able to share more research in the future.

Questions and Answers

MR. O'BRIEN: Yes, I probably missed the first five minutes of what you were saying. But I was thinking about striped bass. Some people tell me that is all I ever think about. Anyway, it is probably true. Who do you do your work

for? Do you work directly for DNR?

DR. OGBURN: So we are an independent academic research organization like a university or any other fully independent academic organization. The Smithsonian is was -- it was founded on a gift to the U.S. to our Nation for the increase and diffusion of knowledge is what our mission is. So we do independent research, it is not reviewed. And this was funded by Maryland Sea Craft but they have no part in deciding the research or interpreting the results or anything.

MR. O'BRIEN: Well, I have two questions formulating in my mind. This presentation is very well done by the way. You express it very well. But it is five years old. And I just wonder Dave, how this information rhymes with what we are doing? What DNR is doing here on the bay? Are you able to use this as a supplement to what you are doing?

MR. BLAZER: Well, absolutely. And Matt probably can answer is a little bit better than I am. The data that we got from this, kind of from what I understand and Matt, correct me if I am wrong, there has been studies before. It kind of collaborates some of the study work before but it also gives us some additional pieces of information that seem realistic and pretty reliable.

So it is a good source of information to help CBSAC, the Stock Assessment Committee go through some of their work. So I think that is -- Matt if you want?

DR. OGBURN: Yes, and so I said these were figures from previous research. Ours was conducted in 2014 and 2015. So it is only two years old now. And you know I guess the other thing that I would mention that I should of mentioned in this presentation is that you know, these -- or at least highlighted is that the figures that I am showing on this slide are from telephone interviews with recreational fisherman. We -- one of the reasons we were really excited to get our project funded is because it used a completely different method with tagging crabs and having people call them back in.

And I was actually pretty stunned when I saw the numbers. We have been talking about for three years about what we might find and if you had told me that it was almost exactly the average of these numbers, I would have been stunned. I was guessing double these numbers. Based on what we see locally. So, I think the -- it is important to note that these are recent and we now have two complimentary types of studies that are giving us pretty much the same answer on which to give us more faith in the results.

MR. BLAZER: And just to give a little bit of a history lesson when the Bi-State Blue Crab Advisory Committee started to meet back in the mid 90s, you know this was one of the big issues that they had no clue what -- how big is the recreational crab fishery in the bay. And some of the

estimates back then -- and they were purely estimates, they weren't as well researched as any of these, we were using 35, 32 percent of the overall harvest which was recreational crabbing which overshot everything.

And so that is why a lot of these studies were asked for by that Bi-State Blue Crab Advisory Committee so that we could get better, more confident numbers and much more on it than --

MR. LANGLEY: I have a couple of quick questions. The first one is kind of easy. I was just curious that of the female crabs that you tag, did you get any reports from out of state?

DR. OGBURN: Yes.

MR. LANGLEY: And the migration south? So some of it did make it to Virginia waters?

DR. OGBURN: Yes. So that is the next presentation that I would love to give you guys. But that work is not done. But we do -- so I actually haven't looked at it too closely for these particular females. But we have another study that targeted the female spawning migration and we did that tagging in the fall and then some again in the spring. And we continue tagging females for this study in the summer to sort of get the whole year picture of what females are doing.

But yes, most of the -- the females they are either

from Maryland some proportion of them are caught in Maryland but then -- and we do get captures from Virginia, occasionally from North Carolina. So a few of them are caught in North Carolina. Down in ---.

MR. LANGLEY: I guess the follow up to not to that but another question I had, is in the studies and my memory is not that good. But have there been gear restrictions in the recreational fishery since 2001, that were running showing consistently maybe 8 percent but for management measures, has that kind of kept that in check with length of trotlines, crab pots at piers or whatever --- recreational fishery?

DR. OGBURN: That is a good question and I try and stay up to date on the regulations but I couldn't tell you going back that far what all the recreational regulations are. I dart over to these guys. But --

MR. BLAZER: I don't think there has been some significant changes during this time period.

DR. OGBURN: I think the big change that happened over this time period was banning recreational female harvest. And the assumption was that that might reduce the overall recreational harvest where as what we are seeing in this is that it seems like you know, people may -- aren't keeping females now but they may catch a few more males and so in total, it is the same proportion.

MR. LANGLEY: Thank you.

MS. DEAN: I wanted to follow up real quick, Phil, to what you said. I think in recent memory we went to two pots per pier. I could be wrong but I think that that is in my memory as something that we did, we restricted the number of pots. So -- but maybe -- check that.

MR. BLAZER: I think that there is some counties that used to be able to allow four pots. Some had two. So I know that there were some trying to make it a statewide two. And I don't remember when that went into effect but --

MS. DEAN: And call me crazy but those turtle excluders make a difference in catch too. But anyway, thank you Matt for your presentation. I just wanted to ask because I see how you came up with the recreational creel surveys. I understand that. And what you base that on. But will you go back to your recapture for your study and numbers that you had there for your total recaptures?

DR. OGBURN: These?

(Slide)

MS. DEAN: Yes, when I start to look at those numbers I don't -- I am not great at math but it doesn't look like 8 percent went to recreational. That is more. I mean because we can't control the total population, we really -- that is our best estimate but we do know what you put in the water and we do know what you got back and that is pretty reliable to me.

DR. OGBURN: Right, so no it is a keen observation and so it is -- what 20ish percent of all of the ones that we -- all the tagged crabs that we released were caught and they were caught and reported back to us were recreational. But we conducted most of the tagging in the tributaries where because we wanted to see how all those tributaries varied around the bay.

MS. DEAN: No crab pots.

DR. OGBURN: And so by tagging in tributaries, we were focusing more of the tagging in areas that have -- tend to have higher recreational harvest. So that is kind of why the numbers look higher. If you look at this figure -- if you added all of these up and you would see that 20 percent of the tagged crabs are recreational. The difference comes in to places in the middle of the bay there where there is no recreational harvest, that is where the majority of the crab harvest comes from. There and in the Choptank River where the recreational harvest is between zero and two or three percent.

And so when you scale -- because so much of the actual -- the total crab harvest comes from those places that don't really have much recreational harvest, when you scale it to the total statewide harvest, rather than the proportion of crabs that we tagged, the number comes down from 20 percent to 8 percent.

MS. DEAN: And just to follow up, that is assuming

that the crab population is evenly distributed throughout the bay at all times?

DR. OGBURN: No, no it is just -- the only thing we had to assume in this really is that -- is that the proportions of crabs caught in each area between recreational and commercial harvesters stays the same from year to year. Because we just have this data for one year. This -- we sort of took this approach breaking it down by harvest area and by month which the commercial reporting allowed us to do so that we -- we wouldn't have to worry so much about did we tag the same number of crabs in every place and did we distribute them really evenly or all of those kinds of things.

So I think you know, we did the best we could to do something that was pretty independent of big assumptions like that. And you know, it is relying on the quality of the commercial harvest reporting data. That is what I would say is one of the biggest caveats is that it is based on that. For better for worse but that is the best data that is available to us by month in all of these different places on what the harvest is.

MR. LANGLEY: I got Mark and then John.

MR. DeHOFF: If you could back to that last slide there that you had that showed the total catches there. For the releases. One more --

(Slide)

MR. DeHOFF: That 450 crabs if I am getting my math right, that is 5 percent, right? That is not 20 percent.

DR. OGBURN: About 2,000 crabs that were caught so yeah it is --

MR. DeHOFF: So that is total crabs --

(Whereupon, parties are speaking simultaneously)

DR. OGBURN: So 5 percent of the ones that we released but 20 percent of the ones that people caught.

MR. LANGLEY: John?

MR. NEELY: Are there any tributaries where the amount of recreational crabbing would from a management standpoint is causing concern?

DR. OGBURN: I mean, you know I think -- that is an interesting question. You know I think the population is -- of blue crabs is sort of a bay wide population and that is why we manage cooperatively. And so you know I think on a bay wide sense, probably not. What one of the concerns that are lab and other groups and research groups have been looking at is the possibility that if male harvest is really intense in one place, then those males might mate too frequently and contribute less sperm to the females who then have lower reproductive output. So you might have heard people talk about sperm limitation.

And you know, there may be some places and it is where there is really intensive fishing that that might

happen. We have more research coming out soon on that as well. But I think in a -- that is -- that is the result of a combination of both recreational and commercial fishing in a particular place. So you know I think sort of your broader question if there is a space where -- a place where there is too much recreational fishing it is more of sort of a management question rather than a crab population question. And I won't answer -- I won't venture to guess further. I will stick to my data and pass that one over to Dave.

But I will just -- let me -- since I mention this sperm limitation, I will add that you know we -- at least right now, we don't see a major impact on the population and that is the preview that I will give you to research that is coming soon.

MR. BLAZER: And I will just add from the management perspective, we don't have too much concern but where I would agree with Matt, that is the first time that I have seen kind of a broken down of recreational ratio harvest you know throughout Maryland by tributary and so forth. The one interesting thing is as I look at that, I would in my mind, what I am thinking about is access you know what activity is taking place. You know, obviously Annapolis and the Severn River was a pretty good deal.

Most of the crabs that were recaptured there were they in the waterfront crab pot lines. Severn South, Rogue

River, you know, that area. Versus Nanticoke, you got less population down there and there is not as much access for people to get to the waterfront. So that is kind of Patuxent, I think there is some access down in that area as well. Just might be an interesting way to look at you know, how are people getting to the water to go crabbing or shore front fishing.

You know to me that would be kind of a secondary thing to look at here. Are we providing those opportunities at some of those locations.

MR. PITTAS: When will the more data for the paperwork be out again?

DR. OGBURN: On this study or the other -- so for this one, we are going to make the results more publically available at the June Fisheries Gold Team meeting and the other studies that I sort of briefly mentioned, we are hoping within the next year those will be done. So we will provide a version of this presentation that is made publically available on the Chesapeake Bay office website.

MR. PITTAS: When is that meeting?

DR. OGBURN: It is June --

MR. BLAZER: June 19 and 20.

DR. OGBURN: I will be presenting this there as well.

MR. PITTAS: Is that a public thing that we -- that

they can go to?

MR. BLAZER: Yes. Public. In fact, we will -- do we send the GIT meetings to this group?

MR. : Not always.

MR. BLAZER: We will this one. We will make sure that you guys get this. Just sorry I used acronyms. GIT, it is the Sport Fish Goal Implementation Team. Part of the Chesapeake Bay Program that works with Maryland, Virginia, the District and all of the Chesapeake Bay states. We have a goal implementation team that focuses on fish. They also have a Habitat Goal Implementation Team and a Water Quality Goal Implementation Team. So it is part of the bay program structure. And we meet. We have conference calls every month and like twice a year we have -- get together and one on June 19th and 20th is down at the Chincoteague Field Station.

MR. PITTAS: So it would be in Chincoteague?

MR. BLAZER: Yes. We rotate around. We were in Fredericksburg, Virginia. We were in -- I forget when the last one was.

MR. PITTAS: Kind of curious to know when it comes out because I will --

MR. BLAZER: Okay we will forward the information to you all.

DR. OGBURN: We are going to try and get a -- see if we can get a couple of local papers and regional papers

interested as well and maybe the Bay Journal in putting out the articles on this work too.

MR. LANGLEY: All right, any other questions for Matt?

(No Response)

MR. LANGLEY: Thank you Matt. Great presentation.

DR. OGBURN: Well, thanks I really appreciate the opportunity.

Blue Crab Winter Dredge Survey Results

by Mike Luisi

MD DNR

(Slide)

MR. LUISI: Okay, good afternoon everyone. My name is Mike Luisi and I am with the monitoring and assessment division, fishing and boating services and the rest of the agenda here today is presented here. Dave and I are going to jump back and forth a little bit on reporting out to you what we assume you have probably seen which are the results of the winter dredge survey. We are going to talk to you -- we are going to briefly go over the results of the survey and then Dave is going to talk about our recent committee meeting that we had with our commercial blue crab industry advisory group.

We have discussed with them management alternatives of where we might be in looking ahead to this year. Crab management by both Maryland and Virginia is not on a calendar

year. It starts on July 1 and we manage that fishery through June of the following year. And that is just based on the life history and the biology and when the results of the survey are available. So we are not going to get into the details, the specifics, down in the weeds about bushel limits and things like that. But Dave is going to talk to you about what we did speak to the committee about and where we ended up at the end of that meeting in forecasting another meeting that we planned for about a month from now to talk about updates after we learned what Virginia and Potomac River possible actions are.

And then lastly I will spend some time with you as a follow up to the recent Mid Atlantic Council -- well there is an upcoming Mid Atlantic Council meeting and an ASMFC meeting that happened just two weeks go. I thought I would give you an update and we will close out the meeting is what I know is of a high importance to many of you which is the results of th ASMFC striped bass meeting. Which you probably have seen but we will have an opportunity to talk about next steps moving forward.

(Slide)

So with that, we are going to start with the results of the winter dredge survey. And this is the same information that we presented to the commercial fisherman on the Advisory Committee. We wanted to kind of give them the full picture of

what the survey results were and then talk about how we are going to manage based on these results. And so again, here we go -- we have total abundance. This is all crabs. We had a drop in total abundance by about 18 percent for both male and female crabs as it compared -- as this year's results compared with last year's results.

Age 1 females in the survey, these are any females that are caught in the survey that are greater than two and a half inches. We will just use that for -- it is 2.4, but two and a half inches approximately is what we estimate the age 1 female population to be. And this was what you read about in the press releases and articles that were written. You know this was -- we were very happy with the results of the age 1 plus females.

Results were the highest in the time series. Going back to 1990. And so we saw a 31 percent increase in the age 1 plus females in this year's survey which is above the target level -- this green line is what we would like -- we would like the results to be fluctuating around this green line. That is an ideal condition for the age 1 plus females. You have seen in recent -- in past years we have had some pretty low populations. But -- over the last three years, we have had a steady increase and we were happy with the results of this component of the survey.

(Slide)

For males, we don't see the spikes, the peaks and valleys that we have with females. We will talk a little bit about that in a minute as it relates to management action and focus that the department took many -- a number of years ago now. But for age 1 plus males, again these are males in the survey that were over two and a half inches, we saw a drop of about 16 percent from last year but no where near the bottom out levels that we saw back in 2014.

You know, looking at this, what we see here is just kind of a steady, yet low abundance of males when compared to the results of the survey back in the early 90s. Ideally I think we would like to find ourselves at a higher level of abundance but it seems to just be steady and catch -- you know we don't manage the male fishery other than the change over from the 5 inch to the five and a quarter inch crab in July.

That is the only conservation mechanism that we have in place. We don't have bushel limits. We do have time limitations and pot limitations and all of that but this fishery seems to just be bouncing along in a steady state and there is enough male crabs here from what we see to be able to allow for the production of high levels of juvenile crabs which I guess is not the best way to say this is what happened this year for the juvenile crabs -- it wasn't a great lead in to that.

(Slide)

So for juvenile abundance, this was kind of the low point in the report. We saw a very sharp decline of a 54 percent from last year's juvenile -- the juveniles from last year's survey. And again so juveniles when can -- so two and a half inches and greater in the survey are the age 1 plus. The juveniles are everything less than two and a half inches that are found in this survey. And I highlighted 2013 because that is the most recent year for which we had an abundance of juveniles that are close to what we had in 2013 and that year 2013 we discussed internally as kind of where we started to formulate our approach for management because back in 2013, we established limitations and conservation measures that we rebounded from.

We were able to implement actions that allowed us to you know see increases in both juveniles, both in males and female populations in more recent years. So we started, we kind of based our understanding of where we currently stand looking at that 2013 level for juveniles. And certainly this, the significance of this -- the significance of having a poor year close let's say is that the crabs that are less than two and a half inches in the winter, will be this late summer and fall crabs that are harvestable.

They will reach harvestable size by August, September, October and November and they will be what are harvested by the recreational commercial fisherman throughout

the rest of this year which is why we like to get the bushel limits in place in July. So that we can manage -- we can manage the upcoming year class and the exploitation of that year class just because it happens very quickly. They are not living for three or four years and then becoming harvestable. They are harvestable within that first year.

(Slide)

Some good news. We continue to -- so this is what this graph represents is the exploitation of female crabs from the population. Literally a division of population size and what was taken from the bay as a fraction. And so the fraction -- the exploitation fraction we have target levels and we have threshold levels. We have been below the target level for many years now. Going back -- we haven't exceeded the target since maybe 2008.

So we are pleased to see that we are taking a sustainable level of crabs out of the bay and we are managing below the target. It is okay if we were to achieve the target but going over the threshold which you could see if you go back prior to 2008, we did many times. Year after year after year. We were taking just more crabs than what the population could withstand. So this is all good. This means you know, we are managing according to the sustainable -- to providing for a sustainable population year after year.

(Slide)

Now Matt discussed in his presentation the exploitation on male crabs. The male -- he discussed -- he talked about a conservation trigger. And so this red line here (indicating) compared with the female, the female reference points these are more science driver. The female reference points kind of come out of the assessment work to say that this is what you need to leave in the bay and you don't want to exceed catch over this.

We didn't have the same type of reference points for males. And so what the scientists and managers did was they looked back over the time series and determined a level of exploitation for males that they said this is a point for which you need to start to become a little more concerned. We don't want to over -- we don't want to exceed this point. We exceeded that point back in early 2000s -- but we don't -- but we have been able to manage sustainable since then. So that is kind of our baseline for which we don't want to exceed.

And so you can see over the past recent years, we have been well below the conservation trigger. If we were to find ourselves above that conservation trigger in a given year, it would start the conversation about whether or not we need to implement further restrictions on days and the times when crabbers can crab or bushel limits for the male population. We just aren't there yet and we hope not to be there any time soon.

(Slide)

This is something that we update each year and it kind of just gives you a frame of reference for both the male and female population as to where they stand based on the average over the time series of the survey. And so what we saw back from the mid 90s and through the mid 2000s, we just had low abundance of both female and male crabs. And the implementation here what this date represents is when we put forth female bushel limits, we eliminated the female harvest and the recreational fishery and we took you know, pretty significant action, focused on female -- focused on the female portion of the population.

We saw immediate reaction to that by the population as far as increase abundance and it has bounced around since then which is to be expected on a short lived animal like crabs that are highly dependent upon environmental conditions, each year classes just really dependent on what happens as far as tides and winds and environmental conditions and the ocean and incoming tides and survivability due to winter conditions. There is just a lot to it.

So we expect this to happen and we believe that these actions that we took back in 2008 are the reasons why we have seen these really high spikes in certain years. The protection of the female portion of the population, the fact that we are fishing below the exploitation threshold and

target, all signs indicate that this is the reaction to that.

We haven't been seeing the same thing with males. Again, we are not managing male with the same amount of focus that we are managing the female portion of the population but you know, the population right now, the abundance is hovering right about -- right around average. We are not concerned about it, we just -- this is just what it is. And we expect without any change in the future, we would just expect this to bounce along probably right around the average for -- unless we put a focused effort into managing the male population to account for less harvest and you know to see abundance of increase.

But we don't have any concern given that this is just bouncing along and it seems we are still able to produce strong year classes and have a very sustainable fishery. Now, I did mention this, we don't need to get into the details, I think I am already over my time here for what we needed to discuss. But the expectations. What we talked with the commercial industry about was what to expect for this upcoming year. And I -- so what we saw if you think back to this is the juvenile, this is the same graph that you looked at already with the juvenile abundance and this is female, age 1 plus.

So we had this high year in 2017 but we wanted to look at a comparison between what we saw in 2013. So in 2013,

we had a female age 1 plus abundance that was halfway between the target and the threshold. We also had a juvenile abundance that was very similar to what we have now. And therefore when we start harvesting the year class, when we start harvesting this 2017 year class, this late summer into the fall, we are going to be taking crabs from a low -- from a low starting point. So our expectation is that the abundance of those crabs in next year's survey which those crabs as they grow -- if they survive will be the age 1 plus females for next year -- in next year's survey.

We expect that this value will -- that the value compared to the 2017 abundance estimate will drop. Because we are harvesting on a -- we already have a low abundance of the juveniles and we are taking from them. So there is no expectation that this is going to rise. And what we saw if we look back in time is that from 2013 to 2014, even though we had management measures in place, we saw a drop in the female age 1 plus female population.

So we are expecting a drop. And our job now is to work with the industry, work with the managers and the scientists to determine -- to manage that drop. To figure out what we can put in place as far as restrictions that will allow for a sustainable fishery to continue but managing that reduced abundance for next year. And that is kind of where we left it off with the committee. We talked about all of this

and Dave is going to go into the -- some more details about some of the things that we discussed with them but we are using 2013 to kind of establish a baseline for where we start in that discussion about managing the female -- the female population and managing bushel limits.

And so we ended the presentation on the science there and maybe before we get into Dave's discussion of committee -- may I will take any questions anyone has just regarding the survey itself.

Questions and Answers

MR. LANGLEY: Mike and it does -- maybe you can't answer it and maybe it kind of does and doesn't involve the survey. But as far as do we know what the best reproduction month is or months are? I know it is the fall. Normally the females migrate to high swimming(sic) conditions between Cape Henry and Cape Charles, Virginia but is there a month that is the predominant best month? Whether it is November? October? You know, where the highest percentage of females?

MR. LUISI: I don't know that information. I am not sure -- I have never heard any type of report or any type of science that is determined that, that I am aware of. I don't know. Dave?

MR. BLAZER: I don't know anything directly related to that question. But what I can say, Phil is that what we do know is that when those eggs are hatched and they are zoea and

megalop and you know they are floating around down there at the mouth of the bay. You know, what we find happens is if the current or the winds or if there is a storm pushes a lot of those platonic stages of the planktonic stages of the blue crab after the eggs hatch, that goes out in the ocean. Got to have something to blow them back in. Because you know, and sometimes that just doesn't happen. And that is what we kind of think with these low juvenile numbers is just the environmental conditions. The tides, the current, the temperatures and the way the water flow is around the mouth of the bay. That plankton is not bringing them back in.

So I know there has been a lot of research on that and they have kind of talked about that. So part of the idea and you know I have to kind of quote Mike. One of the things that he says all the time that I try to pick up and I butcher it every time is, you know, we are trying to minimize the risk of that happening. So the more eggs we can produce, the more mature females that are down in that area. These environmental conditions are going to happen.

So if we can help keep some of those eggs there but also know that -- pray that we don't get two or three environmental years in a row, we are willing to live with those spikes. You know but as long as they get back up to some high level that is what kind of worries us a little bit about the males is they are staying relatively low, we are not

seeing any spikes coming back up.

MR. LANGLEY: The juvenile -- and that is the low age 1, is that based on percentage that was all female? Juvenile female crabs?

MR. LUISI: Juveniles are both male and female.

MR. LANGLEY: Is there a percentage that they saw? So both were down? One not more than the other as far as percentages? They seem to be pretty equal?

MR. LUISI: I don't know -- I don't know the answer to that. When you are looking at a crab that is this big (indicating) it can be awfully hard to determine what the -- a lot of times they are not sexed just because they are very difficult to tell the shape -- the shape that everyone knows from under the abdomen is almost the same. I have seen enough of them. It is very difficult.

And I have been out in the surveys and I told people that I am not even making the call. I am not messing up the data because I can't tell one from the other. And to people who are on the survey, they see enough of them that they get comfortable with it over time. But I do not have the breakdown between what they saw and --

MR. LANGLEY: I was just curious if there was a percentage there. Any other questions?

(No Response)

MR. LANGLEY: All right.

MR. LUISI: Okay, so Dave is going to go through the next portion of the presentation.

Blue Crab Industry Advisory Committee

by Dave Blazer

MD DNR

MR. BLAZER: Real quick before I get to the slides. I just -- the Blue Crab Industry work group -- advisory group met on May 11. And we presented the winter dredge survey results to them. Again, as Mike described, to get some feedback on how we want to proceed with managing fishery. We as Mike described a little bit, we look at the July 1 date so that we can make -- be flexible and make adjustments as we go through. We have that and have the confidence in the winter dredge survey data that we have been doing pretty well and it is a pretty good predicator of being able to help us to guide through that.

(Slide)

So we met with them and presented the winter dredge survey. Talked about a lot of different options. One of the things that we talked about and actually Mike if you can go back to the -- sorry to the female abundance. If you look at last year, we expanded the fishery. We added 20 days and we upped the bushel limits. Because the number was right there below one of the target lines and then even this year, it continued to grow.

So last fall we expanded but also some of those limits still carry over to this spring. So the early April, May, June time frame they are still being able to fish off of that good abundance that we had there. So now we come back and if you can go to the juvenile numbers, you know the juvenile numbers aren't going to be there to replace the population that we have now.

So you know that is obviously of concern to a lot of the commercial watermen. They are going to see kind of a decrease. So part of the discussion that we had was how do we want to decrease? How do we want to protect this juvenile? We have options. We can decrease bushel limits. Since we expanded last year, can we go back to where we were at a similar time frame in 2013 go back to those bushel limits and season length?

So we had a discussion with the commercial folks. Obviously they are not crazy about going back on some of these regulations. But we presented the data. They are going back and talking to their constituents -- other commercial folks in their communities. And we will meet again on June 21 to come up with some formulation of a plan to move forward. And I think there is a lot of discussion going on right now about modifying bushel limits, modifying seasons and kind of how they want to progress going forward.

(Slide)

Two things that they -- well one thing kind of combined. They wanted to find out -- they wanted to make sure Virginia and PRFC are following the same tack. This is a bay wide survey, the winter dredge survey and they look at what 1,500 sites throughout the bay and Maryland Potomac and Virginia. So the data is consistent. We all looked at that. PRFC and Virginia have met with their industry work groups. They are going through the process much like we are. They are looking at similar types of actions that we are.

They won't make those determinations until late June but I know Virginia has had discussions about going back -- taking some of the days back on the season length. Again they expanded as well as last year but they are going to go back to where they were two years ago and I think that takes 15 or 20 days off of their season. So that is again an option and I think our folks, our industry work group wanted to see you know, well what is Virginia going to do and what is PRFC going to do, and you know, maybe we can all stay consistent.

I do have to tell you that Maryland, Virginia and PRFC have been cooperating very, very well. And you know, we have concerns here -- Virginia has their pressures and concerns as well. So we are all trying to stay in lock step with one another when it comes -- and when we see the low juvenile, we want to be cautious and make sure that we protect that so that we minimize that risk so that we can hopefully

get a spike back up and retain that population.

So that is kind of the immediate issue that the industry work group talked about. There is a couple of other things -- long term regulatory and legislative proposals. So if -- I would just pause here if anybody has any questions -- the things that I described that we hope to come up with some formulation June 21 that will go in place by July 1 so again that flexibility so that we can address this coming fall's fishery and next spring's and you know we have been doing this for the last 8 years in this May/June time frame being able to have that flexibility for the season. So I will pause there and are there any questions about that? On those couple of items?

MR. BLAZER: Jim?

MR. GRACIE: Do you expect the committee to come back with a consensus on the approach?

MR. BLAZER: I am not -- I am not sure consensus is the right term. I think the way -- and again they are an advisory committee to the Department. And the way their bylaws are set up for the industry work group is in order for them to I guess have a committee recommendation, they have to have two thirds.

MR. GRACIE: Oh so two thirds vote.

MR. BLAZER: Two thirds vote. Then it would become a formal recommendation to the Department.

MS. DEAN: I just -- will you go back to the target. I just -- I want to -- I kind of want to voice this because I think it really speaks to Jim's question of you know will we come up with a consensus. If you see where we are for 2017, we are telling these guys based on our best available science that when they look in their cull box and they are seeing a cull box full of females right now, we can't even get through our whole rigs before we have to call it quits because we have met our female bushel and we don't to be throwing the females back to get to our males, we are telling them that in the same year we need to take cuts because we something coming.

So just -- I know that it is contentious and I know that you know, when we say the commercial guys don't want to take a cut, understand please, for what it is worth, that it is difficult again to look in that cull box and say oh my gosh and know those females are going to be here all year. But also have the wherewithal to say okay we also know the future. So it is kind of just -- it is a perspective thing and I just kind of wanted to share that with this group.

MR. BLAZER: And that is a good point, Rachel. And I -- forgive me if I made it sound like that industry work group meeting was contentious or you know, it was not. It was a very respectful meeting. It went very smoothly. People were articulate. People brought up a lot of issues. There

was a lot of discussion and I think there was a lot of information exchanged and good dialogue.

And I can continue to say that because my phone hasn't been ringing off the hook about people complaining. Everybody kind of knows the score, knows what is going on and we will wait and see what Virginia and PRFC are doing. We will get back together June 21. You know, and I think people understand. And you are right, that is a perspective that we have heard a lot of.

MS. DEAN: And I didn't say that because of your wrap up of the blue crab, I was just saying that when I look at this chart, I know what that means and I have seen it on the boat this year.

MR. BLAZER: Understood.

MR. LUISI: And to add to that -- so when you look at this, these -- this is the juvenile, this is last year's juvenile survey result. Those juveniles became these age 1 plus. They were enough of them that when they were harvested, there was enough to increase that abundance. I am a really visual person. And I have to -- if I see -- we have to do and I have been thinking about a way of trying to do a better job of explaining to the public and to the fishermen when they are fishing in a given point in time, what their -- what are they pulling -- what part of these sections of the population are they selecting from?

Because it is not -- the fisherman -- some of the guys came in -- a lot of the news reports said oh, you have an amazing abundance of female -- mature female crabs. They are coming in thinking well we are going to get higher bushel limits. We have a lot of female -- but they are not -- first of all these crabs up here they are not even in Maryland anymore, they are down in Virginia. And those fisherman are catching them now, they are getting that benefit of a spring fishery. They will likely not be around in the fall because many of them will be harvested in the spring.

And so there is this cyclical pattern and there is also understanding of the different components of the fishery throughout the year as they are being taken. It is something that I have been thinking about how to put it into a graph or put it into some kind of picture so that everyone can understand a little bit more clearly. But again we will work on that maybe by next year, we will have a little way of explaining it.

(Slide)

MR. BLAZER: The other thing that I wanted to mention was that the Industry work group -- Mike did a great job describing kind of the threshold and targets for the female fishery and that we have this conservation trigger for the male fishery. We have asked CBSAC, the Chesapeake Bay Stock Assessment Committee who analyzes of this data to go

back and look and see if we can get scientifically based thresholds and targets for the male population or at least some biological reference point to where we can be able to make adjustments in the male fishery at some point.

So we have asked our scientists to kind of look at that a little bit and see if they can come back to us with some recommendations on being able to do that. So.

MR. SUTHERLAND: Can you describe the female market? The market for female crabs?

MR. LUISI: The market is mostly to picking houses. The female crab is what is getting picked. They will sold in some of the -- some of their trade is a bushel trade. When there is really high volume being harvested in the fall, some of those crabs will be sold in the bushel market. But for the most part, they are getting picked and they are getting made into crab cakes. That is really what the female market is.

MR. SUTHERLAND: Thank you.

MR. LUISI: And depending on that price point, fluctuation between the price point, they will either be sold in the bushel market or they will be sold to picking houses. And a lot of it, it hinges around a few dollars per bushel in some cases and there is an importation we are going to get to some of that with the sponge crab but yes, Dave is going to step through with some of our more longer term discussions that we are having.

MR. BLAZER: And I will go through these pretty quickly. These are some other longer term regulatory legislative ideas to help the crab fishery, you know, either be more efficient, be more economical or you know just better ways of doing business as we have gone through. So the first one actually is a bill that past this legislative session. We are actually going to send you an e-mail kind of scoping this, but the general assembly passed bills that allow for holiday crab harvest times to be modified.

We are looking to adopt regulations so that on holiday weekends, Fourth of July, Memorial Day, Labor Day and the day before those holidays, the commercial guys can get out an hour earlier on those days to be able to meet the demands of the market on those special weekends. They passed a legislature, we are trying to get those in effect as quick as possible. But the bill doesn't really go into effect until July 1. We are trying to work it so that AELR could get them passed before July 4.

But don't hold your breath. Okay and don't announce that to the public yet. But the second one is we are hoping to get it by Labor Day, we should be able to be able to accommodate that. But we are jumping through hoops to try to it done by July 4. But we will see. We will let you know. So you will be getting an e-mail, a scoping e-mail with a paragraph on it basically saying this, this is part of our

scoping, are you guys okay with us scoping it? We want to kind of get this moving pretty quickly. So we will give you like 24 hours to back to us. For us to meet our time line, things are going to go fast.

(Slide)

The other proposal may have to be done in legislature as well. We have crew limits, we have crew authorizations for commercial guys in the CB6 and CB9 authorizations. Having that CB6 or CB9 with a crew limit, you are allowed 600 or 900 pots. Part of the thinking here is well, you know why do you need two crew members if part of your business, you don't have to pay another crew member, is there a way to kind of scale that back.

So we are looking at and having the discussion with the commercial folks to maybe do away with those crew limits. Or give them the option of having those crew limits, but we are also looking at you know, they can look at it from their business perspective, being more efficient, cost saving measures, less employees. Or you know, is there a conservation concern of how you balance all of those out?

So this is just starting off at this point, we are having some discussions. But there may be a bill in the next legislative session to address this.

MS. DEAN: Can I stop you real quick? That one, I think it would be better if we called it crew requirements

instead of limits. Limits is confusing some people I think. Does that make sense? You are required to have that crew. It is not that you are limited to three. So.

MR. BLAZER: Right. Mike is going to change it now.

MS. DEAN: Just a thought.

MR. BLAZER: Just so you know, before the meeting, I applauded Mike and gave him a great job Mike, you do these power points are fantastic.

MR. LUISI: This is the worst slide that I have ever made by the way.

MS. DEAN: Well, you keep asking me --

MR. LUISI: The -- with all of the words, but this is part of our discussion with the commission or the committee. We wanted to have it all somewhere where they could read it when they took it home.

MS. DEAN: In the first bullet too.

MR. LUISI: Okay. I will do it another time.

MS. DEAN: Sorry.

(Slide)

MR. BLAZER: So one of the other concepts that is being talked about is work day hours. Some folks in the commercial industry have asked us about some flexibility so we started discussions with folks in the industry. And this is something that we can probably do by regulation but again we need to discuss it. So the concept is, creating -- this is

just an example like a 12 hour window where commercial folks can crab.

But they still would be limited to their 8 or 10 hour time limit. But let's say if they had boat problems in the morning and got a -- like a two hour delay, they would still get their ten hours in. Or you know, likewise. But creating some flexibility that they could make. They would have 12 hours in which they could go but they would only have 8-10 hour defending on their gear type.

So this is something that we are talking about and looking at. Enforcement was an issue that the industry work group talked about. How do you regulate that? How do you control that? But again looking at the efficiency, if people had that flexibility it would benefit their business. So this is something that we are talking about as we go through.

(Slide)

One other item was sponge crab importation. You know the current regulations only allow importing sponge crabs from Virginia and North Carolina during a certain time of the year. And again this goes back to the crab cake market if you will. These get picked for crab meat. At least make -- so there has been a request and some discussion about modifying that. Either being able to adjust that two weeks forward or back. Also can we get public notice to make that change? As you all know, it takes us 90 to 120 days to enact a

regulation.

We have public notice authority and on some fisheries at some times, but if we you know are talking to the industry work group and you know, there is not an abundance of crabs in early April but we could import sponge crabs that would help that crab picking market. We could issue a public notice in 48 hours. We could move that up a week or two weeks, you know to April 20 through June 1 or something or 30th. So we would have some flexibility to be able to modify those dates. Rachel?

MS. DEAN: I just want to ask a question. When we enter into these discussions, will Virginia be in the discussions? Because I would image that they would want to weight in on how this might change effort in their state?

MR. BLAZER: We have talked a little bit to Virginia about this and again, you know that is part of trying to understand the entire market for the Maryland, Virginia, North Carolina because that is kind of where the sponge crab center is, if you will.

MR. LANGLEY: Are the picking houses the ones that are pushing this change?

MR. BLAZER: Pretty much. And some of the folks down in the lower Tangier Sound area.

MR. DeHOFF: So basically this is a flexibility to allow them to get product for their business during times when

the local grabs are slow?

MR. BLAZER: Right. Right. To be able to make some adjustments as we go through. One other one that I wanted to bring up, that I found some information about today and yesterday. One of the other issues that they talked about at the industry work group was out of state commercial crabbers. Apparently over in Talbot County and some of those areas on the Eastern Shore, there is folks in Delaware that have a Maryland commercial crabbing license and come over and kind of compete and then go back to Delaware with their harvest.

And some of our local guys are concerned about that. So we got a little bit of information. We actually only have about 83 non-resident commercial crabbers. So there is 83 licenses out there of these folks. And we looked at what they pay. We charge a non-resident surcharge to all of the states around if you will, so for example, like a Delaware resident who would hold an LCC, they would have to have a harvester registration, marketing surcharge and then a non-resident surcharge.

Their total license fee would be about $880. Their non-resident surcharge is about $547. So that is what a Delaware resident would pay. A Florida resident would pay $450 in a surcharge. So just -- that is one of the things that we will probably talk about with the industry work group as well. And again we are getting more information about

that.

MR. : So that is about 45 grand a year, then? A surcharge, to DNR?

MR. BLAZER: Yes.

MS. DEAN: Are we -- is that reciprocal? Do all of these other states allow -- like can our crabbers get an out of state Delaware license?

MR. BLAZER: Our folks would have to pay their surcharges.

MS. DEAN: Okay but it is not shut down -- there is that option in all of the different jurisdictions?

MR. BLAZER: No --

MS. DEAN: Here, --- FC, Virginia?

MR. BLAZER: I don't know if they have limited entry in what they -- in what all of their regulations are.

MS. DEAN: Yes, it could be limited entry but it doesn't prohibit?

MR. BLAZER: Right. Right. So again we are still getting information but that was one of the other issues that again is kind of a long term regulatory thing that or legislative thing that they want to look at.

MR. DeHOFF: What does that number turn out to be as a percentage of total licensees?

MR. BLAZER: 87 out of 5,000 --

MR. DeHOFF: Okay.

MR. BLAZER: -- commercial licenses that we sell. I don't know if that is 5,000 individuals but it is pretty close to that.

MR. LUISI: And it gets pretty complicated when we do the reciprocal agreement. For instance, in New Jersey, they have a different license structure than we do. We have a TFL or a fin fish license that allows you to harvest all different sorts of fin fish. So let's say if fin fish and a crab license combined is everything in the state other than oysters. And so if you go to New Jersey, their license structure is set up where each individual species is licensed.

So in order for them to be reciprocal with us, they have to pay like $3,500 just to get the access to the same things that our fishermen can have access to in their state. So it gets complicated because of all of the different states and the way their structures are set up. There are complaints each -- every year from New Jersey about why they have to spend so much. But it would cost our fishermen that much to get the same access in New Jersey, that is why it is the way it is.

MR. BLAZER: So those are all the issues for the industry work group that will be coming up.

MR. LUISI: Okay.

MR. BLAZER: Sorry I took so long.

MR. LUISI: No, no. So the last section on our

agenda here tonight, I am going to give you guys an update on the Mid Atlantic Council ASMC Actions.

Monitoring and Assessment

by Mike Luisi

MD DNR

MR. LUISI: The only thing that I have for you here is -- so the Mid Atlantic Council is going to meet in a couple of weeks. There is -- one of the things that the council has been discussing at the Federal and both at the State and Federal level but there is a high interest that Federal level. Has to do with warming oceans and climate change, climate velocity. There is a conversation if you are interested. It is going to be on Tuesday, June 6 from 2:30 to 3:30, James Morley from Ruckers University is going to present work on something we refer to as climate velocity. And that is the change and the speed for which the change is happening.

And there is predictions starting you know, these kind of looking out over the next 80 years. What we are going to see was distribution shifts and species that we are managing. This is one that is already been -- a lot of work has been done on summer flounder. So without getting into the details of what this graph represents, the blue in the graph indicates the historical level or the historical abundance of summer flounder back in the 70s lets say. 70s or 80s. And so you will see a very strong influence of abundance in the Mid

Atlantic, lower Mid Atlantic portion of the region.

And the overlap or the recent -- the more recent is in the pink color. So you will see that over the last 30 or 40 years, we have seen based on warming oceans, a strong shift in summer flounder abundance from the areas off of North Carolina, mouth of the Chesapeake Bay and Virginia to a point now where a large portion of the abundance of that stock is located off of New Jersey and Long Island.

And what that is causing between the states are issues of allocation, management of how we are going to manage for the future with species being present in places where they were -- when allocations were derived. We derived the summer flounder commercial allocation from information back in 1980. Between 80 and 89 and things are different now than they were.

We also see shifts in species where they are centering off of New England. And the New England Management Council and the Mid Atlantic Management Council have management plans now for some species like black sea bass, there is more black sea bass now off of New England but they don't manage black sea bass. The Mid Atlantic Council does. And so we are having governance issues between the bodies of who is managing what.

And so are those -- I thought maybe this would be of interest to you guys as something that you could call in to get on the webinar and listen to the discussion. It is going

to be a major topic in the future of how we adjust to all of this --

MR. : How do we find it?

MR. BLAZER: We will make a copy and we will send that out to you.

MR. LUISI: We can send you the link to the website. But if you just go to MAMFC.org and get --

MR. TRAGESER: Do you know if that will be archived in case we are not there to --

MR. LUISI: Yes, you can listen to it after. Okay, so that is all I had for the Mid Atlantic. Most of the Mid Atlantic Council meeting this June was commercially -- focused on commercial issues. But we do -- we did have an Atlantic states commission meeting just a few weeks ago. May 8 through May 10 in Alexandria. I have some brief points to talk about just on the number of different species that we discussed and then we will talk about striped bass but I can spend a minute here just giving you an update on where we are with some of these other recreationally important species.

(Slide)

For summer flounder, there has been a lot of drama over the last few months about what actions were going to be taken by the board and more specifically what was New Jersey planning to do regarding implementing regulations for their summer flounder fishery recreationally? And we just had a

board webinar yesterday. And the species board did not approve New Jersey's conservationally equivalent proposal because it didn't meet the standard level for which they needed to put a proposal together to change their recreational measures from what the board instructed them to do back in February.

We also are recommending to the policy board a finding of non-compliance for New Jersey. Which is a big deal. And so when the policy board makes that final decision probably within a week, it is likely that a letter will be sent from the commission to New Jersey and to the Secretary of Commerce to determine them out of compliance. And out of compliance results in a complete moratorium in the state if the Secretary of Commerce deems that to be what he or she would like to do in this case.

Now there are a lot of things that -- there is a lot of stuff hinging on that decision. There are some rumors that that decision will be delayed or won't be made for quite a while and New Jersey might be able to get away with not doing what the commission instructed them to do. All of that has consequences that are not good for the relationship between NOAA and the commission.

And the non-compliance finding has always been the hammer to keep the commissioned states tight and doing what they are instructed to do. If a finding of non-compliance is

made and NOAA does nothing, it will begin to degrade the integrity of that process. And so you know, just stay tuned for how that works at this point. The commission has almost done all that it can do and it will be up to NOAA to make a determination on that this summer.

Black sea bass I have mentioned to you a number of times over the past few months and meetings. That there was some questions as to what the recreational certainty would be for black sea bass regulations this year. It looks as if Federal waters will be maintained -- will be status quo in 2017, so there will be no change -- there will be no reduction or anything that the Marylanders will have to deal with in Federal waters.

Cobia has been a topic of interest and the recent meeting, there was a discussion and a motion made in the past that Cobia currently is managed by the South Atlantic Council which is the counter part of the Mid Atlantic Council. It is a Federal Advisory body to NOAA. ASMFC made the request that they take sole property over management of cobia for the future. Rather than complimenting the Federal measures, ASMFC is saying we want the whole thing because most of the fish are caught in State waters and that gives them a greater flexible management options in having to -- not having to deal with the Magnuson Act with the South Atlantic Council.

So stay tuned for that on how that goes. Tautog we

are working on regional management options for 2018 with Delaware and Virginia to get all of our regulations on the coast in line with one another. We may not necessarily achieve the ultimate goal which I think is to all have the same rules because we have very different rules right now. There are hearings scheduled down in Ocean City in the coming weeks for public input into that process.

But I have been working closely with my counter part in Delaware and Virginia to try to find a place where we could all be happy in moving forward. We are in a good spot with tautog in the coming years. We should be doing just fine. And then lastly, I know there has been an interest in the spot and croacker assessments that we have brought up and discussed with you a number of times over the last year.

The assessments we were hoping were going to be strong enough in order to -- so that they could be used for management action but the peer review determined that they had enough uncertainty in those assessments that they were not being recommended for management use. So while we were hoping that that assessment was going to be something that we could base discussions on here regarding spot and croaker, we are now back to where we were a year ago.

Where we don't have the science driving -- we don't have reference points -- we don't have the science to help us determine what actions might be necessary for spot and

croaker. So we are going to have to -- if we want to have that conversation about the summer time gill netting and the stock and how it appears in the bay right now based on what you are seeing, we are going to have to do it in the absence of an assessment.

And that is okay but we needed to wait this out to see if this was going to be enough information for us to work for, forward. So again, another thing to kind of stay tuned for. As far as us planning our conversation about spot and croaker management in the bay and as it relates to commercial netting, localized depletion, recreational interests. We know that there is a work group that we have convened before and we may be looking to reconvene that group at some point soon. So those are kind of the highlights of the things that are the low lights so probably on your radar.

(Slide)

I know that the big issue that we have been working on for a year and a half now had to do with striped bass and so I know we are to -- just step you back very quickly through time. In October 2015, we were able to convince the board to do an assessment update. Because if you remember in 2015, we had to take a 20 and a half percent reduction in the Chesapeake Bay. We had to increase our size limits to 20 inches from 18 inches. And the impact of that was felt. It was absolutely felt. It was a tremendous blow to the

recreational commercial and charter industry.

So therefore based on that, we asked for an assessment update to try to understand what the 2015 fishing mortality rate was. The objective of the addendum that made us do that was to reduce fishing mortality to a point where it was below the target level. It had been high and we had been overfishing for a number of years and we had to drop that down.

So we got the results of the assessment update in October of -- took a year for that update to be run and to be reported out and what it showed was that fishing mortality was below the target. We were at a point where we felt we achieved the objective of the addendum -- the previous addendum that required us to increase our size limit to 20 inches. So after the October meeting, we reconvened with the board in February of 2017 and were successful in initiating an addendum, another management change that would have allowed for all the states both commercial and recreationally to increase harvest by 10 percent.

We had the board's approval of moving forward and developing that addendum. As it was developing over the past few months, we -- it was a pretty simple addendum. It wasn't very complicated. Either you can do it or you can't. And so it was all based on where this fishing mortality was as it related to 2015. And we were confident that we weren't --

there was no risk to the stock increasing the harvest by 10 percent.

So the PDT, which is the Planned Development Team for the commission, developed this addendum and we had a staff person here from Maryland DNR who was on that Planned Development Team so that we could keep our finger to the pulse to make sure that things didn't go haywire on us. We had somebody working on that team to develop the addendum. The addendum was presented to the board and it was the board's choice at this meeting back in May -- two weeks ago to decide whether or not to send this addendum to the public.

That would have allowed for public comment over the summer by all the states, recreational and commercial fishermen who would have attended hearings all summer long. And it would have a report back to the board to make a final determination in August. We have gone through all that time line with you guys a lot. We were very disappointed in that at the May meeting when this issue came up, a motion was made to approve the addendum for the public and it was ultimately -- the motion failed.

So the addendum which would allow for this increase and which would allow for us to implement some flexibility, in the catch and by one of the considerations as to reduce the minimum size to 19 inches from 20 inches for portion of the recreational season, that motion failed by a 5 to 10 vote.

So 5 in support and 10 in opposition. And therefore because of that -- that addendum -- it died. It is no longer something that we can use to alter our approach in Maryland.

(Slide)

So that takes us to my last slide which is kind of looking ahead from here. I presented this to you before which we had three options in front of us a year ago. Or less than a year go -- well a year ago. We had a new addendum that we could implement. We had conservation equivalency that we could work on or we could wait for a new bench mark assessment.

They all had different time lines to them. If the addendum had passed, and had gotten to the public and gotten to the board in August and had been approved in August, we were looking at making being -- possibly making changes late 2017 or for 2018. Well that is now off the market. That is off the table and it is not something that we are able to work with anymore. So we are left with two options now.

One of them is to prepare a conservation equivalency proposal. Which is something that we can do anytime throughout the year or at the beginning of the new season. But that conservation equivalency proposal has to -- there have to be trade offs. If we are going to reduce the minimum size, we have to do something to account for the exact harvest that happens as a result of that.

And those trade offs in previous discussions of conservation equivalency have been more than what the recreational community was willing to give up. We have looked at this a number of different ways and the trade offs -- the preliminary analysis on the trade offs was like a 60 or 70 day reduction of the season in order to get a 19 inch fish for the whole year. So that was something that was not palatable at the time we were working on the addendum.

We need -- this is another option that we need to have a discussion about as to whether or not we would prepare the conservation equivalency proposal. The last thing that we can wait for which puts us out on implementation and maybe 2019 but probably more likely 2012 would be using the results of a bench mark assessment to alter management.

And the bench mark assessment is where we could work to alter the biological reference points to a point -- we believe the biological reference points with striped bass are the ultimate -- they are too conservative. They are much more conservative than what most of the managers around the table believe we need to be where we need to be targeting our population size.

So the benchmark assessment gives us an opportunity to maximize yield to allow for the continued sustainability of the population. But all of that has to come as a result of this benchmark assessment. We can't do that without a new

model being run to determine what those bench -- what the new reference points would be. One of the things that we hope to be factor into the new reference points is the sex ratio in the bay.

We have talked about it before. Most of the fish that are harvested in the summer and in the fall before we see glimpses of that spawning stock when they come into the bay are male fish. It can be as high as 80 percent in some years as to what is available to harvest. And because the male fish don't contribute to the female spawning stock bio mass which is the biological reference point, we have made the argument that we should have less restrictions because we are harvesting males rather than the females.

So that is one of the things that will be incorporated into -- hopefully into this benchmark assessment. But if we wait for that, the commercial fishermen, the recreational fishermen in Maryland and along the coast won't be looking at any management changes for another three years probably. And so that is where we are. That is the point in that is where we are today.

And it was disappointing that we weren't able to get the addendum to the point where the public could weigh in, it was very disappointing but I thought I would offer you this look ahead and then open it up for whatever questions or comments that you may have.

MR. O'BRIEN: Well Mike, the fact is you had the votes 48 hours before they voted. And all of a sudden, they come in with the 2016 data. Which certainly worked to our disadvantage. And the suddenness with which they came out with that was remarkable the way that it affected that vote. You had the votes. You had D.C. there, all you needed was 2 or 3 more votes.

So when they came in with that 16 data, that destroyed all the good work that Maryland had done. I wonder how much that data has been vetted? And again Emerick, Emerick, Emerick. And of course, that terminology relative to the best science that we have. Which is arithmetic personified. We had a situation where when we got the vote for us to proceed to public comment, the staff of ASMFC was very affected negatively. They didn't want to do it. It made more work for them. And they demonstrated that to us in conversation in a lot of ways. You were there and they took it away from us.

MR. LUISI: Well, why don't I say, so first of all we had been working with our other states to determine where they stood on this addendum. We never did have a majority that we had on paper. That had -- that committed to supporting us, moving forward. The 2016 -- the release of the 2016 data did put a damper on the interest of moving forward

but that 2016 data would have been available by August.

It was not a conspiracy that it was released two days before because it wasn't just released for striped bass. The entire Emerick Program released its final estimates on harvest. And so what the 2016 data showed was that fishing mortality in the next year -- so I told you that in 15, we were below the target, they estimated the 16 fishing mortality and it had risen above the target. So what the people around the table were saying was we already know that in 16, fishing mortality already went up. So why would we consider going up even more?

And so that kind of -- that kind of killed the drive that we had. But it would have been nice to go to the public, it would have been great to be able to give stakeholders who have been waiting an opportunity to present their case. But that information would have been made available by August. Even if it hadn't been available at that meeting and we would have probably found ourselves in a very similar situation just months from now rather than two weeks ago. Rachel?

MS. DEAN: I was just -- I think that we had some social issues that were kind of working against us too. One of the things that happened when we got our first like I guess like you could say tick on our to do list in February, it was in the 12th hour. We had some states that were missing and there were a lot of states around the table that said sure

let's move forward with this and let's decide in the spring meeting if we want to push it out even further.

It helped at that point in time that we had about 40 charter boat captains in the room that were there to make their case. The timing of the spring meeting was not ideal for those guys that were trying to make a living charter fishing. And we did have some people in public comment that spoke for us, Phil did a great job and Robert T. did a great job. But we also had some people that are very technologically savvy and they are watching social media sites and one way to advertise your business is to only put out the great days.

So the pictures are coming across the internet of the fish piled up and the fish in the cooler and spawning striped bass with the Northern State Sea in those coolers and it is not perceived very well by them. So we had not only the science that wasn't really on our side and it really left us kind of speechless and unable to argue back. But we also had some social factors that were playing in there that really did not help us.

MR. LANGLEY: Yes, I am going to follow up, Rachel, and Mike I would like to thank you and your department for all of your work today that you have put into this. We have been working on this for a couple of years because the -- I know the charter industry has felt this first hand since the first

year and we felt that we were kind of actually blind sided a little bit going in to this. We thought it was going to be a one or two year thing and we could possibly live with it. Now we are possibly looking at six years.

And don't ever let it be said that there is not politics in the fishery business. Because there is a lot of politics at the ASMFC level. As far as social media, I understand. But it is not supposed to be about social media, it is supposed to be about science. If you can cherry-pick or if you want to market and advertise and I can do to New England sites or whatever, and showboat loads of fish being caught and the same argument. It should not be about social media. It should be about the numbers in the fishery.

I am curious 2017 the season we just came through for our spring trophy season. I felt like I had to to pull my shirt over my mouth and stick my finger out for my customers to pay me. It was the worst spring season I have had in 20 years. And I don't think it was because a lack of spawning fish. I think mother nature kind of won this year and I think a lot of these fish had spawned early and there are traditional rivers that are caught -- the Potomac, Nanticoke, the upper bay, all of these fish had left really early this year.

And what disappoints me is the fact that we looked at 2015 numbers, okay and we were fishing below the target

which kicked this addendum okay. Now, 2016 looked like we may be fishing a little over the target perhaps but I am curious to see what the 2017 looks like because I know in that spring season, I can guarantee you that I got skunked more this spring and I have been doing this a long time then I have in 20 years for --- where I came in with no fish or one fish or two fish. And it was the settlements were up and down the bay. There was one little nucleus area in the Chesapeake Bay that it seemed to be a few late spawners coming out in the middle bay area where some of the boats -- not consistently but they had a couple of good days there throughout the season.

But overall I think -- I don't know what Emerick numbers will show but I think it is going to show that our harvest at least through -- what the spring season be, wait through wave 3? Should show if they are accurate that we were way, way down in harvest this year. So you know it looks like a target is something that you shoot for, sometimes you are high and sometimes you are low but it seems like you know 2 or 3 years I think it is going to show that we are fishing below the target unless something miraculous happens the rest of the year, the numbers are extremely high.

But which is a good thing. There was a lot of fish that swam conservatively made it in this spring season that are actually being caught on the coast now and I just feel

that there was -- there was a lot of politics involved that killed this addendum.

MR. LUISI: And the point you made about a target is some -- that was the point made by a lot of the board members. Target is very difficult -- we don't want to get into a situation where we are having a knee jerk reaction each and every time we get an apgrade(sic) reported to us. We want to go for a number of years and evaluate where we are and then make changes and then go a number of more years.

We kind of deviated from personally and I think within our agency, we deviated from that in this instance due to the impact that you guys were feeling. But what you said I believe is being supported right now. I just had a staff meeting this morning and it was reported to me that we saw more spawning fish on spawning grounds this year in our gill net surveys than any other time in our survey.

So the fish were here but there were less -- so we saw the most fish but there were the least amount of pre-spawn fish picked up in both the creel survey and in the spawning stock survey. Meaning that everything that we were catching was leaving the bay. So we started our survey probably a few weeks later -- we would start it every year the same week but the idea is that a lot of -- some of those fish came out and were gone before we even had -- before we even sampled them.

Because what we were catching was everything coming

out. So it backs up your -- what your observation was out there.

MR. LANGLEY: And I will tell you, Mike, I am going to jump back a little bit because what concerns me and I mean, I grew up locally fishing the Chesapeake Bay and its tributaries. And I can tell you the talk about flounder but at one time, flounder was pretty abundant in the bay. It was something that you could target. I don't I think I caught and could keep a flounder in the last two years in the Chesapeake Bay and most of the other captains and probably recreational anglers can substituant the same thing I am saying.

Why aren't we -- is it Global Warming? Is it water temperatures? It is migration?

MR. LUISI: I believe that it is -- it is my belief so flounder is spawned off shore. They got 30 miles off shore and they get on the edge of the shelf and that is where they spawn. And that is the -- the juveniles come back through just like in the crab fishery. They come back into our bays and estuaries. We are still seeing relatively decent abundance in Delaware Bay and Southern New Jersey and Ocean City, Maryland.

But I think because that stock has now -- the center point of that stock is now off of north -- Northern New Jersey and New York, we are just not getting the return into the Chesapeake Bay that we once did when that stock was centered

over Chesapeake Bay.

MR. LANGLEY: Well we have also got spot, croaker which are other species which the last two years, the numbers haven't been there. We are almost -- the Chesapeake Bay what a great estuary that it is, we are almost restricted to fishing for striped bass in the bay. And I am extremely concerned as a fisherman and for my kids in the future and grandchildren whatever to have a estuary and as far as to spot or croaker, do we need to get more aggressive? Are immature fish being caught in the southern states that we are no longer seeing these fish that they are being caught before they get to us?

I don't know what is happening but I have a grave concern that right now, majority of our eggs are being put into striped bass basket, okay for the recreational and charter fleet. It is the State fish but there should be other species to target in this bay and it has been for hundreds of years. And it seems like in recent history we are really struggling with that.

And as managers, we -- there is some issues that I think we need to take a stronger look at because as much as I like striped bass and they are the State fish, but I don't mind fishing for other species but I have to have other species to fish for. It looks like this year might be a good year for blue fish but that is --

MR. LUISI: And I just got back from a work shop where I attended -- I presented work like this flounder work. Yes, Ed is going to have to plug his ears, but the idea is that the South Atlantic species, red snapper, cobia, blue line tile fish, we are seeing more and more and more of those species moving northward from the southern region.

So it is not inconceivable that in 20 years time, we can have a red snapper fishery off shore or we may be now the focal point for the cobia fishery whereas it is now down in South Carolina. It is like you know we as managers are going to need to figure out that whole governance and we have to be able to adapt and be willing to change as an ocean changes. And we are seeing it. We are seeing it happen before our eyes and it is -- the velocity work is showing that it is getting -- the speed at which is changing is happening exponentially.

So it is just -- it is going to be a challenge -- it is one thing that will be challenged for the coming years, but not that we want red snapper up here all of a sudden or lion fish I guess that is the other one.

MS. DEAN: Sorry, I just wanted to thank the Department too because as they said on ASMFC that that has been kind of something that I have been hearing especially from our guys down south is the cobia. And you know as things are changing, how are we going to be able to stay in that game

or get in that game, especially when --- with Virginia and North Carolina, South Carolina. And I just -- I want to thank you guys because I know Lynn has kind of kept her ear to the ground for us because we don't think that it is a species that is that big of a deal to us right now but we see it coming and if things are changing, then you can't say it is not -- there is too many patterns. Then that could be a fish that we need to make sure that we get a piece of the pie on.

And I don't think that they are talking about State quotas yet, it is kind of like a regional management but if it goes to State quota, we don't have catch history to show that we are catching these fish. And I don't know if it is going to be too late now for us to get that. But in your catch logs, especially the charter guys, there is that blank spot there or something, just writing it in, do something and just give the Department, yeah we are here and -- because the northern states kind of chuckle -- they were like -- or the southern states kind of chuckled about it. They were like they are eating remora. They don't know what they are doing. They don't know what they are.

But you know, I was like yeah that remora tasted really good. But anyway, so just like think about that and how we can start documenting that we are seeing these species and I know we can't do it for the red drum and there is not much we can do about letting our guys in the charter industry

have maybe one of those fish, but I don't want to see the cobia get to a point where the red drum are right now where they are off limits.

MR. LANGLEY: Captain Ed?

MR. O'BRIEN: Yeah, getting back to striped bass and there is a significant striped bass fishery developing in Canada now, let's put it that way. It is improving because of that northern migration. So that fits into this discussion. But it doesn't seem to be that we are going to lose our spawning ground for striped bass for quite a time. And we know that these striped bass when they get to be 18 inches are fast getting out of the bay.

And that has been one of our main points at the ASMFC as we have tried to get another inch. So I think that should still be the goal to have people recognize that when they are 18, they are leaving the bay and when they are 19, many of them have left the bay and by the time it is 20 inches, most of them are gone. And that is the key point. And that is what we have been trying to do at ASMFC is to get that flexibility to get one inch.

MR. LANGLEY: All right, any other questions for Mike? Comments?

(No Response)

MR. LANGLEY: Is there any public comments?

(No Response)

MR. LANGLEY: All right, well if there is no other comments.

Public Comments

MR. TRAGESER: Can I have one moment, Phil?

MR. LANGLEY: Oh yes, I am sorry.

MR. TRAGESER: While I have the commissioners here I want to make sure that everybody had received that e-mail that I sent out regarding adding our 13th member from the Black Bass Advisory Sub Committee. If there is anyone here that didn't get it, let me know. I tink I have all of the e-mails. If you have any questions, either send me an e-mail or send Dennis Fleming, our chair, an e-mail. But what I would hope to do is when we come back for our July meeting, that we have some sort of consensus at that point in time.

We don't have another meeting until October. But that October meeting will be before the SFAC October meeting. So I would like to have our 13th member on board by that time.

MR. LANGLEY: Roger, do you have any -- a list of anybody that you guys recommend at this point? Or are you still waiting for --

MR. TRAGESER: Well that was -- you saw on the e-mail that I sent out there was for the I believe 10 out of 12 of our members that weighed in on the recommendations. There is a list the candidates for lack of a better and the number

of recommendations that each one of them receives. I think it was like 6, 3, and 1 basically and then you had 1 that didn't get any. But I posted or gave you access to all of the applications that came in. I would say if nothing else look at them, read them and base a decision on what you are looking at there. To me it is pretty clear but you know I don't know how much I should weigh in personally --

MR. NEELY: 3 of the 4 resumes were really strong. I think there were 4 resumes.

MR. TRAGESER: Well, yes there were 4.

MR. NEELY: And 3 were really strong and very passionate. Pretty impressive.

MR. BLAZER: I just want to make one comment. You know, I am not sure who the Advisory Committee want to recommend but I do want to remind you a little bit of the history because we took a little bit of grief over the make up of this subcommittee being to tournament and fishing guide oriented, you know that as you look at these recommendations and I have seen them but it has been a couple of weeks, so I am not sure where they all lay out, but I recommend that you look at that again and look at the makeup of that committee because again balance was something that we had to talk about before with this group and you know, some of those recommendations. So I just want to remind you that we had a lot of discussions when this group first formed.

MR. LANGLEY: Thank you. John?

MR. WILLIAMS: I do have one public comment. I am really glad that you brought up the issue of the concentration of the --

MR. : Can you come up to the mic real quick, John Paige?

MR. WILLIAMS: Sure. I am glad that you brought up the issue of the heavy concentration of the recreational fishery in Maryland on striped bass. I don't have any solution God knows but I think it is a subject that merits some more discussion. Because it does tend to -- it increases the pressure on the fish and at the same time, is not a positive sign for the future of the recreational fishery.

I would love to see some more discussion on how to diversify Maryland's recreational fisheries. And I don't know whether that is going to mean some of it is going to mean management and some of it is going to mean habitat. Some of it is going to mean imagination of -- I saw what Claude Baine did down in Virginia around the bridge tunnel developing fisheries for sheepshead and tile fish and some of the other species.

And I don't know where we would go but I would love to see more discussion of what our options are and where -- just literally an exploratory group to talk about it.

MR. LANGLEY: Thank you, John. All right, ladies

and gentlemen, if there is no other new business, we will call this meeting adjourned.

(Whereupon, the meeting adjourned at 6:16 p.m.)