

**PROCEEDINGS OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
TAUTOG MANAGEMENT BOARD**

The Westin Alexandria
Alexandria, Virginia
August 2, 2016

Approved October 25, 2016

TABLE OF CONTENTS

Call to Order, Chairman Adam Nowalsky 1

Approval of Agenda 1

Approval of Proceedings, February 2016..... 1

Public Comment..... 1

Regional Stock Assessments Reports..... 1

 Long Island Sound 1

 New Jersey/New York Bight 3

 Technical Committee Recommendations 7

 Peer Review Panel Report 9

 Consider Acceptance of Reports for Management Use 11

Consider Specific Regional Management Approach for Draft Amendment 1 13

Update on the Commercial Harvest Tagging Program (Tautog Tank Trial) 18

Adjournment..... 21

INDEX OF MOTIONS

1. **Approval of Agenda by Consent** (Page 1).
2. **Approval of Proceedings of February, 2016 by Consent** (Page 1).
3. **Move to approve the Long Island Sound and New Jersey-New York Bight stock assessment and peer review report for management use** (Page 12). Motion by Dave Simpson; second by Bill Adler. Motion carried (Page 13).
4. **Move to approve four region management approach for Tautog Draft Amendment 1** (Page 16). Motion by Tom Fote; second by Bill Adler. Motion carried (Page 18).
5. **Motion to adjourn by Consent** (Page 22).

ATTENDANCE

Board Members

David Pierce, MA (AA)	Tom Fote, NJ (GA)
Dan McKiernan, MA, Administrative proxy	Adam Nowalsky, NJ, proxy for Asm. Andrzejczak (LA)
William Adler, MA (GA)	John Clark, DE, proxy for D. Saveikis (AA)
Sarah Ferrara, MA, proxy for Rep. Peake (LA)	Roy Miller, DE (GA)
Bob Ballou, RI, proxy for J. Coit (AA)	Craig Pugh, DE, proxy for Rep. Carson (LA)
Eric Reid, RI, proxy for Sen. Sosnowski (LA)	Michael Luisi, MD, proxy for D. Blazer (AA)
Rep. Craig Miner, CT (LA)	Rachel Dean, MD (GA)
Dave Simpson, CT (AA)	Ed O'Brien, MD, proxy for Del. Stein (LA)
John McMurray, NY, proxy for Sen. Boyle (LA)	Joe Cimino, VA, proxy for J. Bull (AA)
James Gilmore (AA)	Kyle Schick, VA, proxy for Sen. Stuart (LA)
Steve Heins, NY, Administrative proxy	Derek Orner, NMFS
Emerson Hasbrouck, NY (GA)	Wilson Laney, USFWS
Russ Allen, NJ, proxy for D. Chanda (AA)	

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

Ex-Officio Members

Jason McNamee, Technical Committee Chair

Staff

Bob Beal	Ashton Harp
Toni Kerns	Megan Ware
Tina Berger	Katie Drew
Pat Campfield	Amy Hirrlinger

Guests

Mike Millard, USFWS	Jeff Deem, VMRC
Debra Lambert, NOAA	Jack Travelstead, CCA
Colleen Giannini, CT DEEP	Braxton Davis, NC DNR
Justin Davis, CT DEEP	Aaron Kornbluth, PEW
Brandon Muffley, NJ DFW	Arnold Leo, E. Hampton, NY
Mike Armstrong, MA DMF	Raymond Kane, CHOIR
Doug Christel, MA F&G	Jenny Zeng, Ofc. of NYS Governor, DC
Steve Doctor, MD DNR	Jacob Kasper
Lynn Fegley, MD DNR	Andrew Shiels, PA Fish & Boat Comm.

The Tautog Management Board of the Atlantic States Marine Fisheries Commission convened in the Edison Ballroom of the Westin Hotel, Alexandria, Virginia, August 2, 2016, and was called to order at 12:53 o'clock p.m. by Chairman Adam Nowalsky.

CALL TO ORDER

CHAIRMAN ADAM NOWALSKY: Good afternoon, everyone. I would like to call to order the Tautog Management Board.

APPROVAL OF AGENDA

CHAIRMAN NOWALSKY: Our first order of business this afternoon will be to approve the agenda as has been provided. Are there any changes to the agenda? Seeing none; is there any objection to acceptance of the agenda, as provided? Therefore, the agenda is adopted by consent.

APPROVAL OF PROCEEDINGS

CHAIRMAN NOWALSKY: Our next order of business is approval of the proceedings from the February, 2016 board meeting; any discussion about those proceedings? Any objection to accepting them as provided? Seeing none; they are hereby accepted.

PUBLIC COMMENT

CHAIRMAN NOWALSKY: Our next order of business will be public comment for any items that are not on the agenda today. Is there any member of the public that would like to comment on anything not on the agenda? Seeing none; we'll move right along.

REGIONAL STOCK ASSESSMENTS REPORTS

CHAIRMAN NOWALSKY: We'll next go through a couple of presentations about the regional stock assessments that have been done for Long Island Sound and the New Jersey/New York Bight regions. What we'll do is we'll receive those reports on those two assessments. After those two reports have been given, we'll stop and

pause for any questions that pertain to those reports.

We'll then go on to the presentation of the Peer Review Panel report, stop after that for questions, and then at that point the decision point before the board would be whether to accept those for management use. We're not making the decision about the amendment; we'll have that discussion afterwards, but we'll just have to decide whether to accept those assessment reports for management use. With that, I'll turn to Ashton, and she can direct the discussion of those stock assessments.

LONG ISLAND SOUND STOCK ASSESSMENT REPORT

MS. ASHTON HARP: I'm actually going to turn it over to Jacob to begin the Long Island Sound Stock Assessment report.

MR. JACOB KASPER: First of all, I would like to thank everybody who is involved in producing the Long Island Sound Stock Assessment and the New York/New Jersey Bight Stock Assessment; Dr. Eric Schultz, my advisory at UConn; Jeffrey Brust, unfortunately he can't be here today, and Jason McNamee is going to be presenting in his absence.

Greg Wojcik, Sandy Dumais, Dr. Katie Drew, Ashton Harp and there was significant input from the Technical Committee and the Stock Assessment Subcommittee. We're presenting here the Long Island Sound Stock Assessment, which is shown in green/yellow, and also the New Jersey/New York Bight, which is shown in orange.

Previously, tautog was assessed by a single stock unit. But there are some flaws in the coastwide single stock unit assumption, such as regional differences in the fishery, strong site fidelity, localized spawning, and variations in life history. In response to that in the previous benchmark stock assessment, an alternative stock

assessment structure was presented with three regions.

One was a southern New England, which included the Connecticut portion of Long Island Sound; the region further south from that was the New York/New Jersey, which included a portion of Long Island Sound. There was a highly regarded alternative to that, which grouped Connecticut with New York and New Jersey.

What we're presenting here is a Long Island Sound specific stock assessment, so we've split Long Island into north and south, and the north going to Long Island Sound and the south going to the New York/New Jersey Bight region. This keeps Long Island Sound as a continuous region. In addition to that, new data was accessed and included in this stock assessment.

This stock assessment runs from 1984 to 2014. We have recreational harvest and discards. For the recreational discards we've assumed a 2.5 percent mortality rate, which is consistent with the benchmark stock assessment. Commercial harvest runs from 1984 to 2014. Commercial discards were not included.

The commercial harvest is about 10 percent of the recreational harvest, and obviously, the discards are much lower than that. There wasn't enough data available to estimate that efficiently, so those were not included. There is fishery-independent survey data, fishery-dependent indexes included and also the biological samples are both fishery independent and dependent.

Data was treated in the following manner. Connecticut data was used as is with the assumption that all Connecticut harvest comes from Long Island Sound. New York had to be split to Long Island Sound and South Shore. For the recreational data, starting in 1988 there was a Long Island specific area code; which made the partitioning pretty straightforward.

Prior to that, there was no Long Island Sound specific area code, so we had to use a multiyear average to fill in those earlier years. Similarly, with commercial data, the Long Island Sound VTR statistical area started to be used in 1986, and then prior to that, we used the multiyear average. This is the harvest in metric tons for the time series for Long Island Sound.

As you can see, in the early decade and a half or so of the time series, we have a general decreasing trend and harvest. Since then, there have been pretty inter-annual fluctuations, but the harvest has generally increased. The next figure is the Long Island Sound catch-at-age. On the left we have on the Y axis the age of the fish, and on the X axis is the years. What we can see is in most recent years we have fewer older fish, and fewer smaller fish.

Obviously, the fewer younger fish are following increased regulation of minimum length. The indices included in this assessment are the Connecticut/Long Island Sound Trawl Survey, which is an adult index, the MRFS Catch-Per-Unit-Effort Index, which is also an adult index, New York Trawl Survey, which was used as an Age 1 index and two portions of the western Long Island Sound Survey, which is a young-of-the-year survey. Those sites are from Little Neck Bay and Manhasset. Generally, we see a decreasing trend in all these indices, some inter-annual variations as well. But the indices follow each other; the trends are pretty similar in the indices. The results of our model are as follows: we have our F and in red we have the three-year-average for fishing mortality.

We can see generally increasing F over the time series. Spawning stock biomass is generally decreasing over the time series, and the number of recruits is generally decreasing over the time series; with one large recruitment event most recently in 2013. The Technical Committee approved MSY as the biological reference point for this stock assessment.

There is a strong fit to the stock recruit relationship. We have included the SPR reference points for this, because the New Jersey/New York Bight region relied on SPR reference points. For MSY the target is F_{MSY} and the threshold is the F that produces 75 percent MSY. In either of these approaches, MSY or SPR were both in overfishing and have been overfished.

Looking at the stock status over time, including our target and threshold for fishing mortality, we can see that most of the last ten years, we hit it above our threshold. Here the orange color line is our three year F average. For spawning stock biomass, we are below our threshold for most of the last ten years.

To address model uncertainty, we looked at sensitivity to input data, so we dropped various indices in the survey. We added Millstone Survey Data; Millstone is a power plant in Connecticut which has collected larvae and egg abundances for a number of years tautog; so we included that in one of the sensitivity analyses.

We started in 1988 to eliminate estimation of landings in the early years. We ran it as using a 15-year-plus group instead of a 12-year-plus group, which is the base model. Then to address the issues of estimating the New York harvest, both recreational and commercial in the early years, for those early years we either included all of the New York harvest into Long Island Sound, or we excluded all of the New York harvest into Long Island Sound; to kind of look at the extremes of those assumptions impacted our stock assessment.

We also looked at sensitivity to model structure. We merged our selectivity blocks three and four into one selectivity box, and we ended up with three selectivity blocks. Then retrospective analysis was performed using a six-year peel. Please note that this crosses a selectivity block. There is nothing outstanding in the retrospective analysis, and there are extra slides if people are interested.

The sensitivity results are shown here. We have SSB trajectory. Again, a general decline over the time series and all of the different analyses are relatively similar. For F average, in each of the sensitivity analyses are quite similar and we have a general trend of increasing F . For estimating the number of recruits, generally decreasing over time, similar patterns in all the sensitivity analyses and the strong recruitment event in 2013 is pretty consistent.

Stock status sensitivity. Because of time constraints, we weren't able to calculate F threshold for each sensitivity analysis. Presented here is the terminal F , relative to F_{MSY} ; which is the target and not the threshold. Generally, what we see is terminal F is larger than F_{MSY} in all but one of our sensitivity analyses. The results of this assessment are that the model is robust to input data and model configuration. The stock is overfished and overfishing is occurring. The status is reasonably consistent with the alternate regional model configuration from the benchmark. In here I presented -- you can see the Long Island Sound MSY and SPR approaches as you've already seen, and in the last column is the Southern New England MSY from the previous benchmark. The trends are quite similar in all of these. That's what I have for Long Island Sound.

CHAIRMAN NOWALSKY: Thank you very much, Jacob, we'll go to Jay next to do the New York/New Jersey Bight, and then we'll come back to questions on both of these reports.

NEW JERSEY/NEW YORK BIGHT STOCK ASSESSMENT REPORT

MR. JASON McNAMEE: My name is Jason McNamee; I work for the Rhode Island Division of Marine Fisheries. Jeff Brust from New Jersey, who is the analyst on this assessment, couldn't attend; so I offered to pinch hit for him. I was involved enough that I think I have a decent feel for it, and Jeff and I talked a lot before this meeting; developing this presentation.

The format. It is very similar to what you just looked at, so at least you'll be seeing the same types of information. Hopefully, you'll be able to track this fairly well. This is now -- we're calling it the New Jersey/New York Bight Assessment. What you can see is we're talking about this orange area now on there, so it is the entirety of New Jersey and the South Shore of New York's Long Island.

Data types. Just to know up front, these are all consistent with choices that were made for the benchmark assessment; more or less. But we used recreational harvest from 1984 to 2014, recreational discards for the same time period, the assumption being that 2.5 percent of them end up as removals.

Commercial harvest for the same time period, commercial discards are not included; and this was also consistent with the benchmark. We did some sensitivity testing on that in the benchmark; we didn't do that here, just because of the timeframe that we were working with. We used fishery-independent survey data, fishery-dependent index data and fishery-independent and fishery-dependent biological samples.

The treatment of the data. The New Jersey data, was used as is; meaning New Jersey was easy to deal with. We just had to grab the New Jersey data; didn't have to do anything special to it. The New York data was split by area, so we had the Long Island Sound piece of New York and the South Shore piece of New York.

Based on the work that Jacob did for the Long Island Sound version, we just removed the remaining New York harvest and that was attributed to the South Shore. The recreational data goes from '88 to 2014. Just as Jacob described, this is when we can kind of pick out, from the MRIP data, this Long Island Sound specific area code. We can kind of identify it as occurring in Long Island Sound.

Prior to that, we used a multiyear average harvest approach, just like Jacob described. Again, the South Shore is all of New York minus New York information that is attributed to Long Island Sound. Commercial data, very similar approach, '88 to 2014, used VTR statistical areas, how we kind of partitioned that information up. Then in the period of time when we didn't have that '84 to '87, we, again, used a multiyear average harvest approach. Here is a look at harvest. You can see the top graph there on the Y axis is metric tons, along the bottom is year. You can see a lot of inter-annual variability; not surprising, given that this is a predominantly recreational fishery, so it is very much dependent on the estimates coming out of MRIP. You see that jagged but basically, you had a higher period of harvest early in the time series that has dropped down to a lower harvest in more recent time.

The bottom chart there, the bubble plot, what you have on the Y axis there is age. It goes from Age 1 up to Age 12 going up the Y axis. Along the bottom, again, is year. The idea here, couple of things you can get out of these plots. I don't know that you get either of them from this plot; but you can track cohorts to some degree. I would show you if I could get my cursor up there, but I can't.

You can use your imagination. What you're looking at is you're following things up diagonally from left to right going up the Y axis, and what you want to see are those bubbles kind of getting smaller in size, and that is kind of the decay that occurs on a cohort through time. It is not as pronounced in this graph. You saw it in Jacob's graph pretty nicely, but as management measures went in, you see that shift in harvest.

I don't know, if you use your imagination, maybe you can see it there, as well, but it showed up real nice in the Long Island Sound version. Okay, the fishery independent information that went into this assessment, the New Jersey Ocean Trawl was the main fishery-independent trawl survey that went into this.

There was also MRFSS or MRIP Catch-Per-Unit-Effort Index that went into this assessment; both of those alias adult portions of the population. Then there was the Jamaica Bay Seine Survey, so this is a piece of the Western Long Island Seine Survey, but this is a piece that we thought was a little more applicable to this stock assessment region; and so we kind of peeled off that data and used that as a young-of-the-year index.

Model results. Just as Jacob described, top left is fishing mortality, so fishing mortality increases going up the Y axis; year increases going along the bottom left to right. What you see is a solid blue line. That is the actual point estimate year to year, it is the median estimate; and then there are some bounds of uncertainty. Those are the hashed lines; 95th and 5th confidence interval.

But for tautog, what we've done in the past and what also came out of the benchmark is a three-year average. A lot of that is due to the inter-annual variability we get, so we use a three-year average and that is what that red line is that seems a little bit smoother; going across the blue line there.

What you can see is that fishing mortality, beginning in the early 2000s to present, has been kind of increasing, again, with some variability. Top right hand side – is that your right, yes, it's your right too – is SSB, spawning stock biomass; same sort of information without that three-year average here. But you've got the solid line as your median, point estimate with bounds of uncertainty, and then bottom left hand side is recruitment information.

Again, the median estimate is the solid blue line there, and you can see, I think there was -- in this case, I'm not sure if it is 2012 or 2013, but later in the time series is a large recruitment event in this information as well, which is interesting.

Biological reference points. In the case of New Jersey/New York Bight, the MSY based reference points were deemed unreliable. There was a poor fit to the spawner-recruit relationship.

There is an estimate of steepness that the model produces, and as it gets really close to one, what the model is telling you that there is no information with which to estimate that steepness parameter.

Take home point is we weren't able to use MSY based reference points here; we had to default to SPR based reference points for the New Jersey/New York Bight Stock Assessment. Based on what we agreed to in the benchmark assessment, the targets were 40 percent SPR metrics, and then the threshold was a 30 percent SPR metric; depending on which you're talking about F or SSB.

Again, these are consistent with the benchmark, and in the table there you can see what those targets and thresholds are for both fishing mortality and spawning stock biomass. I've got some graphs, so I won't linger on this too long; but it's here if you wanted us to flip back to it.

Stock status. Take home point here is that the New Jersey/New York Bight region is overfished, and overfishing is occurring. The top graph there is the stock status with regard to fishing mortality, and the orange hashed line is the threshold. The green dashed line is the target, and you can see, in particular when looking at the three-year average, which is the one that we're focused in on, we are above both the threshold and the target since the early 2000s for this region.

Bottom right hand side there is the stock status with regard to spawning stock biomass. Again, the green line is the target, orange line is the threshold, and you can see that spawning stock biomass has been below both for almost starting back in the early 1990s. It looks like it's kind of come up in the most recent period of time, and the uncertainty bounds kind of jump up above the threshold at least. But the terminal estimate for spawning stock biomass is below the reference point.

A little bit about model uncertainty. To test the sensitivity of the model to input data, we dropped individual surveys, reran and saw the effects. We also started in 1995, so that is a later start date to see the effect of some of the information that we interpolated.

Then we fixed the 1995 severe underestimation in the New Jersey recreational harvest. What we mean by that is there was an anomalously low estimate for New Jersey, which has a significant impact on the removals for that year, so we kind of looked at that; tested it by putting in a more averaged value, and so that was another sensitivity. You see how sensitive the model was to that single data point.

Sensitivity to the model structure. The base model had four selectivity blocks, but we added one with three selectivity blocks; and they are kind of outlined, there underneath the years. We chose the years based on major changes to the regulations during those periods.

Retrospective analysis. This was done just like Jacob noted. We did a six-year peel; that peel goes across the selectivity block. It is generally not a good idea to run retrospectives back over selectivity blocks; but the last selectivity block was so short for this model that there really wasn't much of an option there to get a decent retrospective peel, meaning the number of years you kind of go back and start the model over again. In general, nothing was particularly outstanding, so you can make that judgment for yourself. Here are some plots; the top left is average F. You can see that the majority of the sensitivity runs are all pretty tight, not wildly different from each other. I will note the one that catches your eye, or caught my eye, is that blue line that hangs down there. That is the three-block-selectivity run; that's what that is. Effect on F, fishing mortality. Just to the right of the average F plot is the spawning stock biomass, so it is SSB metric tons up the Y axis, year across the bottom; those all look pretty tight. Then recruits on the bottom, again nothing really remarkable there, none of the sensitivities

indicated there is some major misspecification in the model.

Stock status sensitivity. I'll orient you to this plot. It always takes me a minute to kind of adjust my brain to what I'm looking at. Here what Jacob showed you, was this same plot, but just with respect to the target. Here we've got both the target and the threshold; so the threshold is blue; the target is the red color.

The different sensitivity runs are the groupings along the X axis there, so those are the different selectivities. What you want to see on this plot is you want those bars to be below one, so you can see on the Y axis one, when you go about one-third of the way up there. You want those bars to be below one; that would mean that you are at or below your target or threshold. What you see in each case here is that with all of the sensitivities, they are all giving the same information, and that is that stock status in this region is not good.

Some conclusions. The smaller regional scale was not as problematic as we anticipated. We were a little nervous going into this. We didn't know if things were going to hang together, and it did. That was good. The models are robust to the input data and the model configuration, as indicated by the sensitivity runs, and the status is consistent with the alternative regional configuration from the benchmark.

We can talk about that. I bet we should probably hold off on talking about that until we get to the Peer Review Panel report. But a long story short, if you look over on the right, there is kind of a grayed out section. That is the Long Island Sound, just so you could kind of look at it and compare. That is Long Island Sound SPR.

But the two comparisons are Long Island Sound, which the Technical Committee preferred MSY, so you can see those targets, thresholds and stock status. Then the New Jersey/New York Bight is just to the right of that, and so it gives you a little bit of a reference there and

information in both cases is overfished and overfishing; there's a typo there, sorry about that.

TECHNICAL COMMITTEE RECOMMENDATIONS

MR. McNAMEE: Future assessments. The Technical Committee recommends conducting a benchmark assessment in 2021, so we'd like to dig back in, in a significant way in 2021; but we'll all do an update assessment in 2016. A lot of what we do will depend on the decisions that you make today. I think there are some important decisions that you all will be making later that will dictate how many updates we're doing in the end.

We're only proposing a single update at this time, but only because we don't know what the future holds at this point. When we get to 2016, we're poised to do an update in 2016, but we'll look at whether or not we need to, or we think it's recommended to add another update before that benchmark, which is a ways off. Okay, that is enough from me, so I will stop and take any questions you have. I think you can ask both Jacob and me any questions that you might have.

CHAIRMAN NOWALKY: Thank you, Jay, thank you, Jacob very much for those presentations. We'll turn to the board. We're going to have questions on these reports and the information presented therein. Then we'll get the peer review report, and make a decision whether to accept these for management use. Then we'll have the discussion about how to apply them to Draft Amendment 1. Questions? I had Jim Gilmore and then we'll go to Bill and Dan.

MR. JAMES GILMORE, JR.: That was a great presentation, guys. This question is actually for both of you. You can either team up or do them separately. It has to do with the data sources, and you probably know where I'm going with this. I think, Jason, when you talked about the Western Long Island Sound Study, and you separate out Jamaica Bay, it is pretty easy, because geographically, north and south of Long Island are pretty separate.

I guess overall you both separated the Long Island Sound, and then you had the South Shore of Long Island. But when you get out to the East End and it gets extremely dynamic, because you have the north side of the south fork and the south side of the north fork, and by Gardener's Island or whatever. There are actually three questions here. How did you actually separate all of that out, because that is a big management issue we're going to have to deal with, so how that works.

Secondly, depending on how you separate it out, how do you think that factors into the model and how much uncertainty that may have added, because you're not exactly sure whether it was from Long Island Sound data or South Shore data. Lastly, we all know the unreported landings in this may be pretty significant, so how that was factored, and particularly for the retrospective analysis; because that could maybe change that from nothing exciting to maybe something significant. Thanks.

CHAIRMAN NOWALKY: Great, and I'll turn to the presenters for attempts at those three.

MR. McNAMEE: I guess I'll start with your first question about the data, how did you parse it out? It's a good question. First I'll offer a note of thanks to Greg Wojcik from Connecticut, who did a lot of that work. There are a couple of different things going on here, so you've got recreational and commercial data.

It was pretty tricky, and Greg did a lot of work digging into the MRIP data looking at the information available in there. There is an area designation that is in there, so long story short, Greg was able to parse it out. He also did a little work on whether there was a lot of scatter in that information; whether there was reason to believe that yes, the area code is X but it could have been X plus Y; or he could have gone way out of Long Island and could have been fishing in Narragansett Bay or something like that.

From the information that we looked at, it seems pretty reasonable to assume that – and I think a lot of it has to do with the nature of tautog fishing – but we didn't feel that there was a lot of reason to believe that people were dispersing very far from the areas that they were reporting. Hopefully, that answers it on the recreational side. On the commercial side there is a little less information to work with. We worked with statistical area to the extent possible. As far as assumptions go, keep in mind that the commercial portion of the harvest is very small; so if we were off there the impact on the overall model is probably not – not to say it's not important – but it's not very impactful to the outcome.

There was a lot of work done on that very issue, because that is the difficult issue with creating this assessment. It is, in fact, why we did not do it originally. But a lot of work went into that. I think it is good work. The Technical Committee was pretty comfortable with that and felt we did as good a job as we could; and felt it was pretty reliable; anything to add, Jacob?

MR. KASPER: Not right now.

MR. McNAMEE: Great. While I've been yammering away, Jim, I forgot the second part of your question.

CHAIRMAN NOWALSKY: Jim's second question was about how the modeling accommodated those data issues.

MR. McNAMEE: Okay. I think, in general, the movement to the statistical model helps that. You don't have to assume that catch is known perfectly, so there is statistical estimation going on in the model. Again, I think what we produced was pretty reliable as far as tautog data goes; so I'm pretty confident that if we were off here and there, I don't think it would have large impacts on the results.

CHAIRMAN NOWALSKY: Comments regarding how unreported catch might have factored into the modeling.

MR. McNAMEE: I can't say too much about that, Jim, other than to say in the Long Island Sound version of the universe, there wasn't a big retrospective pattern. A lot of times when you have missing catch, that can be one of the way it manifests. It is not always the reason for retrospective patterns, but the retrospective in the Long Island Sound version was not bad at all.

If there is a lot of unreported catch, of course, it's not a good thing. That means we're not working with good information, but again with regard to the fact that we're using a lot of uncertainty in the model, and that we're estimating things statistically; I think that helps that to some degree. If it is massive, two or three times what the actual harvest is, that is a problem that's not going to be solved by statistical estimation of a model.

CHAIRMAN NOWALSKY: Jim, if you have any questions during the Coastal Sharks Board, you'll need to get somebody else to ask them for you; next up, Bill Adler.

MR. WILLIAM ADLER: Going back to one of those charts for the New York Bight, New Jersey one with the SSB. It showed a little up, turn up, not good enough yet, not up to the threshold. Any reason why all of a sudden that happened like that? Is that a good sign that something good is happening down there?

MR. McNAMEE: Conjecture on my part, but it is coincidental with some pretty significant regulations that went into place during that period of time. I don't know if that's the cause, but that is something that is coincidental with that uptick in SSB.

MR. DAN McKIERNAN: Jay and Jacob, later in this meeting we're going to be talking about a tagging program, for the reasons that I think we just mentioned, the unreported commercial catch. In our conversations with Law Enforcement, there is a feeling that the unreported commercial catch may be, in some

discreet geographic areas, two or three times what is reported.

Our commercial quota is only 50,000 pounds in a year; and we've had some stunning busts with huge volumes of fish post season. There is that feeling. I don't know if you can address it either today or in the future. I think it probably should be addressed before we undertake such a massive administrative program to accomplish a solution to the problem; if the problem isn't really clearly manifested in the assessment.

Maybe not today, but maybe you could tease out those parameters in the assessment that could reveal we've accomplished some goal going forward, if we are solving this localized poaching issue. I guess that is my question. If we do solve the localized poaching issue, which parameters would reveal that in the model?

DR. KATIE DREW: Ideally, what we would hope to see would be some kind of response for the stock, so that if you eliminate the source of mortality that the overall total mortality on the stock would be less, and the stock would be able to grow faster. Right now, part of the problem is, the model really uses total catch as a way to scale some of the trends we see in the indices and in the age composition.

If you're missing catch, what you're going to see is the stock looks smaller than it really is, and fishing mortality looks higher, and the productivity of the stock looks lower, if you're taking out all these secret catches. The model can fit that. It just is basically thinking the catch that it sees is having more of an impact on the stock than it really is.

If we can eliminate some of this unreported catch, then hopefully, you would see the stock begin to recover, you'd see those F rates come down, and you'd see an uptick in the population. That ideally would be what we would want to look for. If there is a way we could get some better information on the scale of the problem, and a way that we can go back in time and maybe

back calculate some of these things, we can try and look at that from sort of a modeling perspective. But ideally, the result of improving our control over the fishery removals would be a better stock.

CHAIRMAN NOWALSKY: Any other questions on these two reports before we go to the Peer Review Panel Report on them? Okay, seeing none, we'll turn to Pat.

PEER REVIEW PANEL REPORT

MR. PATRICK A. CAMPFIELD: Because we did follow up regional assessment work after the original benchmark peer review, the commission organized a desk review for these new regional assessments; as we've seen Jacob and Jay presented Long Island Sound and New Jersey/New York Bight results. That is what the desk reviewers evaluated. We had two technical peer reviewers. In combination and expertise in population dynamics, stock assessment modeling, statistics and tautog biology. Their review focused on the data inputs that were selected and used in the models, and the overall quality of the assessment. As you have received, the products from the work are the stock assessment report for both sub-regions and the Desk Review Report. The two desk reviewers were Dr. Cynthia Jones from Old Dominion University, and Joe O'Hop from Florida Fish and Wildlife Commission's Wildlife Research Institute.

I'll note that Dr. Jones was the Chair of the Benchmark Review Panel. We asked her to continue in this desk review for consistency and her familiarity with not only tautog, but the assessment models we've used over time. The desk review took place; they received their reports in late June and concluded their desk review about three weeks later.

Let me stop and mention that the Review Panel commended the strong work that the Assessment Workgroup conducted here since the benchmark was completed, to tease out the

data and develop these new regional assessments. They said it was very well done. Their overall review findings are that the Long Island stock they agreed is overfished and overfishing was occurring in the terminal year of 2014, and the same case for the New Jersey/New York Bight Sub-Region.

The panel finds that the regional stock assessments are acceptable for management use. You saw these two figures in the earlier presentations, but on the left you have the fishing mortality trends for Long Island Sound, and again fishing mortality is above the target and threshold. That is also the case in New Jersey/New York Bight Region.

The first review Term of Reference was to evaluate the assessment data, how the assessment team selected or excluded data, and how they use them and the ASAP model. The panel concluded that all potential fishery-dependent and fishery-independent data sources were thoroughly reviewed and selected appropriately.

The Assessment Workgroup used four criteria to decide which datasets to use, such as the duration of a time series was at ten years or more, were there adequate sample sizes, et cetera. The tautog assessments, of course, rely heavily on the MRIP recreational survey estimates. The review agreed that although there are low sample sizes generally speaking for tautog, the MRIP data were sufficient for use in the stock assessment.

They did note in future assessments, most likely for the next benchmark, to keep an eye on the changes in the MRIP survey; notably the effort survey and new calibrations to the catch data that will result from that change in MRIP effort surveys. The panel also noted that in future assessment work, the team should explore correction to the growth curve parameterization where fishery dependent data are used.

This figure, it's a little small for you to see, but it is in the desk review report in your materials. There were challenges in estimating weights at age for the earliest age classes one and two. Because of the selectivity of the fisheries, because of the minimum sizes, they don't pick up a lot of these younger fish.

The second Term of Reference was to evaluate stock structure and geographical scale of the regional assessments. Very similar to the benchmark assessment and review findings, the growth rates were found to be similar from Connecticut to New Jersey. The growth information does not make an easy distinction between areas within Connecticut to New Jersey. Also, the genetic studies that have been completed to date are inconclusive relative to trying to split out Long Island Sound and the New Jersey/New York Bight Region; although there is a new genetic study underway coastwide for tautog. They found that the new regions are reasonable and acceptable, but not necessarily any better than the various regions that were assessed in the benchmark.

The third Term of Reference was to evaluate the methods and models used to estimate population parameters. Their overall review findings were that the age-structured-assessment-program model is appropriate for use of the selected input data. Compared to other models, this ASAP model is able to pull in a lot of the available data, and its results are justified for use in making management decisions.

Again, they did see some concerns relative to the weight at age and growth curve analyses, and encouraged the Assessment Committee to explore those further in future assessments. TOR 4; evaluate the methods to characterize uncertainty. The panel's conclusions were that sensitivity to a range of data inputs and model structures were well addressed and understood; as Jay and Jacob mentioned or displayed in their sensitivity runs. The overall outcomes relative to stock status are robust.

Relative to retrospective patterns, the Long Island Sound model had relatively small retrospectives, and are not a concern for management action. In the New Jersey/New York Bight model, there are larger retrospective biases. The panel said that they were worried about this, and that the retrospectives indicate the F and SSB estimates are more uncertain.

But they also noted that the direction of the retrospective patterns switched over time and actually switched to a more favorable pattern in the most recent time period. Again, they think these results are still useful; but to continue to keep an eye on retrospective patterns. The fifth Term of Reference was to evaluate estimates of stock biomass abundance and exploitation.

The panel concluded that the ASAP model and associated reference points provide the best estimates for determining stock biomass abundance and exploitation. They did raise minor concerns relative to the plus group designations, looking at 12 plus versus 15 plus; and otherwise model estimates are robust.

In a less concerning situation, you would see similar results regardless of these relatively high plus group designations, but they did see some different results. Again, they are encouraging the assessment team to explore plus group designation in the future. For New Jersey/New York Bight, there is greater uncertainty overall in the model outputs.

I think Jay touched on this. This is relative to a poor stock recruitment relationship and the larger retrospective patterns. Jay and Jacob also touched on this, but the desk reviewers had a notable concern about the erosion of older age classes. For tautog, this is one of four plots that were in your material, but it shows if you look at, these are time on the X axis and the biomass on the Y axis, broken down into the various age classes.

What they wanted to highlight is you can see sort of the last part of those bars, the green at the

top. That is the plus group, and it used to comprise roughly 20 percent of the overall composition in a given year. That was the case in the eighties and even into the nineties, but in the most recent years it's really less than 10 percent or even 5 percent of the biomass by age, so really the beginning of a truncation of the age structure for tautog. Finally, the last Term of Reference was to evaluate reference points and methods used to estimate them and recommend stock status.

The panel agreed with the stock assessments conclusions, and found that you could use either a spawning per recruit or MSY reference points for Long Island Sound; but should only use the SPR based reference points in the New Jersey/New York Bight region. Again, agreed with the overall conclusions that both regions are overfished and overfishing in the terminal year and that the Desk Review Panel finds the stock assessment acceptable for management use.

CONSIDER ACCEPTANCE OF REPORTS FOR MANAGEMENT USE

CHAIRMAN NOWALSKY: Questions for Pat on his presentation? Okay, seeing none; the next step before the board would be to consider using these as acceptable for management use. That is not a determination of which approach we're going to use in Amendment 1, but if we're going to consider them, we would need a motion to accept them for management use. I've got Dave Simpson's hand up.

MR. DAVID G. SIMPSON: Yes, move approval of the Long Island Sound and New Jersey/New York Bight stock assessments for management use.

CHAIRMAN NOWALSKY: Bill Adler will second that motion. We'll get that up on the board. Okay, move to approve the Long Island Sound and New Jersey/New York Bight stock assessments for management use; motion by

Mr. Simpson, seconded by Mr. Adler. Any discussion on the motion? Emerson.

MR. EMERSON C. HASBROUCK: In thinking about this motion, I actually do have a couple of questions for Patrick. Can I ask those at this time?

CHAIRMAN NOWALSKY: Go ahead.

MR. HASBROUCK: In the review of these two assessments, there were several issues that were highlighted. The models had some problems with weight at age and growth curve, and the selectivity estimates in one of the time blocks may indicate misspecification in the model. You mention those in your presentation, but are those issues going to be addressed or if we vote on this motion we're accepting it as it is, without any of the corrections to the model?

MR. CAMPFIELD: The nature of those concerns was relatively minor. They may change, for example, the fits of the growth curves. But they would not change the stock status results. In the communication with the Assessment Team, actually during the desk review with some of their preliminary findings, I think the approach moving forward was during the update and certainly through future benchmarks to explore those suggestions; but they didn't see it as a show stopper at this point, minor concerns.

CHAIRMAN NOWALSKY: As Pat was giving that answer, a brief sidebar with Katie. She indicated that if, depending on the discussion that goes on with the next item, those concerns would be discussed in a next assessment update; and Katie is nodding her head. Any other discussion on the motion, Tom Fote and then we'll go to Joe.

MR. THOMAS P. FOTE: We've put a lot of work - the Technical Committee and the staff has put a lot of work into bringing out this information. Even if there is not much difference, I think we should go ahead with this plan. We talked about regionalization, about breaking areas down into specific catch areas. We've talked about that

with many species, and this is the first opportunity to do this.

We might be able to refine it a couple years from now; we might find that you actually push southern New Jersey into a different area. But once we start with this information, we should continue using it, because even if it doesn't make much difference right now on the mortality or what we have to do. It is a good base to start from, and in the future, we accumulate more data; it will be very helpful, and to prove that we can do this with other species. That's what I'm looking at, so I support the motion.

MR. JOE CIMINO: I just want to thank this group for the work that they've done. Well, I guess it's a question. We recently had a weakfish assessment that was done by an outside group, and I know work is being done to transition that over so that staff -- and that we can move forward with updates to that in the traditional way that we have been, and I'm wondering if that's the same case with the Long Island Sound assessment. Is an update going to be able to be done in-house, or are there considerations for how that will happen?

DR. DREW: Unlike the weakfish assessment, all of these assessments are using the same software and the same programs; so basically, it's just a matter of making sure that we have the same data input files, and we can go forward with that. It's not a significant problem or hindrance here.

CHAIRMAN NOWALSKY: Any other discussion on the motion? Okay, seeing no other hands up I'll give the states a moment to caucus, and then I will ask if there is any objection to the motion. All right, all the states have had an opportunity to caucus. **Is there any objection to the motion as presented? Seeing none; the motion carries.**

CONSIDER SPECIFIC REGIONAL MANAGEMENT APPROACH FOR DRAFT AMENDMENT 1

CHAIRMAN NOWALSKY: That will then take us on to the next agenda item, Considering Specific Regional Management Approach. Question before we go on to that. Bill Adler.

MR. ADLER: Yes, it does say in the agenda; do we have to approve the Peer Review report, as well? I mean that motion didn't do it. Is that something that needs to be approved?

CHAIRMAN NOWALSKY: Accepting them for management use implies we've accepted all the reports.

MS. TONI KERNS: **If you just add Stock Assessment and Peer Review Report, because it is one report, the whole thing; the Peer Review and the Assessment is one individual report.**

CHAIRMAN NOWALSKY: **Is there any objection from the board in proceeding in that manner? Okay, so the previous motion will then include the Peer Review Report, as well.** Thank you, Bill. Okay. We'll turn to Ashton for a presentation on regional management approaches, how we're potentially going to use these for Draft Amendment 1.

MS. ASHTON HARP: This presentation is really just to give food for thought for the future discussion that is going to happen, which is considering a regional management approach for Draft Amendment 1. Right now, you'll see a timeline, and I want to caveat that this timeline assumes the board will choose a three or four region management approach; although I will present other actions that the board could take.

Now the TC would meet and provide a stock assessment update prior to the annual meeting. The results would be presented at the annual meeting. The PDT would also have a meeting prior to the annual meeting where they would review the Catch Reduction Analyses, which would also be presented at the annual meeting.

After that happens, the board would look at the results, and then task the PDT to start developing the options for Draft Amendment 1. Draft Amendment 1 would then be presented at the February meeting, and as you can see, we would move forward with public hearings in the spring and possibly approving Draft Amendment 1 at the May meeting.

If a management approach is not chosen at this meeting then it could delay the timeline. The Board can choose between a three or four region approach at this meeting. The three-region approach, which is one, Massachusetts through Rhode Island, two, Connecticut, New York and New Jersey, and three, Delaware, Maryland and Virginia.

The four region approach is Massachusetts and Rhode Island; Long Island Sound, New Jersey/New York Bight and Delaware, Maryland and Virginia.

I want to review some of the potential actions the board could take. The board could opt to select a regional management approach; three region, or the four region at this meeting. It is the preferred approach from the TC and the PDT, because then it would allow the TC to move forward on a specific management area for the stock assessment updates, and it would allow the PDT to review the Catch Reduction Analyses prior to the annual meeting.

It would streamline the tasks if we know exactly what we're going to do next with regard to regional management. However, there are other ways the board could go. Option Number 2 is the board could select a management region out of the three or four-region management approach at the annual meeting, so after the stock assessment update has been revealed and the results have been presented.

The TC would have to complete five regional stock assessment updates instead of either a three or a four region, so it does add additional work on behalf of the TC. The last option to

consider is to include both the three and four region management approaches into Draft Amendment 1.

This would recognize that the TC and PDT would have a significantly higher workload when developing the potential management options. There is a highly likely possibility that Draft Amendment 1 could be delayed if this option were chosen. With that, I will take questions.

CHAIRMAN NOWALSKY: Ashton, I'll ask you to put that last slide up on the board. Just to reiterate with those three options, the first one is we pick three or four region approach today. The assessment update that is going to take place later this year, with the most recent data available, would only apply to that and the status quo coastal update. We would just get that information back at the annual board meeting.

If the board went with Option 2 here, we would essentially be tasking the TC to do an update on all of those regions, and we would then get that information back at the annual board meeting. The third option here would then be further putting that decision off until some point in time, where we would get the update information later this year.

Then once we had that update information, we would then leave the decision point out into the draft amendment for public comment to determine which of those regional approaches we would chose as part of the entire amendment process.

The decision here today would be whether or not we want to narrow down the approach to the three or four region, or we want to allow the TC to go ahead, do the updates, and then get that back; review those at the annual meeting and potentially make a decision at the next board meeting. First, let me ask if there are any questions about those potential processes and options. Okay, question? Jim, go ahead.

MR. GILMORE: Just so I understand, on 2 and 3; they are sort of additive, so you're still, if you do Number 3, you're going to have to go through all the stock assessment updates; so that is going to be included in that. It just makes it a little bit longer.

CHAIRMAN NOWALSKY: Let me add first that yes, we would be making that decision further down the road, and it would be a question of whether the public weighs in on those decisions or not; and Katie wanted to add as well.

DR. DREW: The extra work on top of Number 3 would also be developing management options for all of the potential regions when we go forward with how much of a reduction we're going to take; so things like bag limit, size limit, season analyses, those would have to be done for all of the regions for both potential sets of regions.

In addition, just to point out that this decision or this question also went out to the public already in the form of the public information document. The public has had a chance to weigh in on this initial question, then it would be a matter of weighing in on the regions as well as the management options as part of that whole document. As you can imagine, that adds a tremendous amount of work for the TC, the PDT and staff in developing that third option.

MR. GILMORE: Katie, you're going to do size, season and bag for any one of those options. It is just that on Option 3, you are just going to have to do a lot more iterations on it.

DR. DREW: Right, so we would do a set of management options for all of the regions that the board wants to look at. If the board wants to make a decision on the options here today and say, okay going forward, we're going to break this stock into three regions; then the TC will update all three regional assessments; we'll do the catch reductions for all three regions; we'll do a size, season and bag limit analysis for all of those options; that would then go into the

document and be reviewed. But if the board does not make that decision here today or at annual meeting, then the TC would do that for the three-region assessment and the four-region assessment models. Depending on where the board makes that decision, that is the timeline.

CHAIRMAN NOWALSKY: Just so I can clarify, Katie, the size, season, bag limit reductions, if the board does not make a decision today, those are going to be done as part of the assessment update later this year? It was my belief those would not come until the board specifically tasks the TC/PDT to do those in constructing the draft amendment to go out for public comment.

DR. DREW: Right, we were tasked to present, or our understanding is that we were tasked to present overall catch reductions at the annual meeting. Basically saying, with this set of reference points you need to reduce F by this much; therefore, you need to reduce catch in this region by this much.

The options of how those would be handled would be then presented when the PDT is tasked with developing those options, so that would be the next meeting after that. That would be part of the third option, basically. Number 2, we're only doing the assessment update and the overall catch reductions. Option 3, we would be also adding the management options.

CHAIRMAN NOWALSKY: Today I think we're at the 1 or 2 decision point; you would agree?

DR. DREW: Yes.

CHAIRMAN NOWALSKY: Additional questions on the options here. Okay, I see Bill Adler has got his hand up for discussion or a motion, if applicable.

MR. ADLER: You know last time we had the meeting the discussion arose as to whether we could split off Long Island Sound into a separate area, and then the Technical Committee did that. I don't understand why, since we have this already at our fingertips, why we can't go ahead

with that; I guess you would say it is the four-area instead of three.

Because it seems like at the last meeting, we were looking for something like this. I don't know what the disadvantage would be, but somebody else may know it, why we can't just proceed on the four region, give them the job of doing the four-region option; unless somebody says no, we want the three or whatever. What do you think?

CHAIRMAN NOWALSKY: The only gain from the board's perspective is that we would then see the latest stock assessment update for both the three and the four-region approach. That would be the reason for not making a decision today; I don't know, does that help you?

MR. ADLER: No, I just thought to move this ahead, if we picked the four region one, and then proceed with whatever they have to do. If we're moving ahead on the four-region approach that we could make that decision today and send the Technical Committee off to do whatever they would do, rather than wait around and say, well should we do the three, should we do the four; and then wait another two months before we make that decision. I just thought why not move it ahead a little.

CHAIRMAN NOWALSKY: Well, that is the will of the board. Tom Fote.

MR. ADLER: Okay, do I make a motion that we pick the four region approach?

CHAIRMAN NOWALSKY: Well, I've got two more hands up. Let me go through those hands, and if there is no other motion at that point then we can come back to that. Go ahead, Tom.

MR. FOTE: I would like to make a motion that we actually go to the four-region. The reason I propose that motion right now is because we're right after the stock assessment. If we think the four-region is the best idea, I don't want to get between when we have three regions or four

regions and start cherry picking which is the advantage to one place over another.

If we do this before the stock assessment, we're saying this is the right method of doing this, because we basically are able to sample out of areas that we wanted to do purposefully. I don't want to know whether it is an advantage if I'm in a three regional or four regional. I want to make the decision now, and I'm taking a chance whether it's good or bad; but I think it's the proper thing to do. **With that, I'll make a motion that we go to the four-region approach and only the four-region approach, which I think is Option 1.**

CHAIRMAN NOWALSKY: Do I have a second to that motion, Bill Adler. Okay, discussion on the motion; let me see a show of hands of those people who would like to speak in favor of the motion. I've got Jim, Russ. Bob, do you want to speak in favor, also? Can I get a show of hands who would like to speak against the motion? All right, Tom, do you have anything additional to say in support of your motion before I go to the speaker list?

MR. FOTE: Yes, I'm looking to cut down the load on the Technical Committee. When we require more information, when we require all that, it is tasking people that are overworked, overstressed already; and basically I'm trying to be conservative on their time. I know we have limited amount of personnel in New Jersey that can do this, so we're asking one person to do a lot of the tasks.

If we really think that this is the best approach and we're able to do it, that would actually give us regions. The only reason that will make us wait for the stock assessment is if we wanted to cherry pick. But like I said, well, this way I only have to make this much reduction or that reduction. It is not really planning to do the right thing. That is why I'm saying we should do this now.

CHAIRMAN NOWALSKY: I'll go to Jim Gilmore next, speak against the motion.

MR. GILMORE: I'm not completely against the motion, it is a conditional issue. Maybe to get to Bill Adler's question before. The problem we have is biologically, the assessments are fine, and I understand them. That is why we are in complete agreement; I think the assessments were done right. I think biologically, it makes sense.

Management wise it becomes extremely difficult for the east end of Long Island. It is probably one of the super border areas, because even like separations between Delaware and New Jersey or New York and New Jersey, they are relatively fine areas. You get to the east end of Long Island, and you try to split it; it gets very difficult to enforce it. That really goes to my questions about size limits. The only way this would work is if we have some incredible cooperation about having the same relative size, season and bag limits for that area. But it is a chicken and egg thing right now. If we're going to go with a four-region approach, and we have that commitment that that is what is going to happen, then I have less of a concern about it.

However, if we go with a four-region approach, and then we've got very different limits between Long Island Sound and New England and then the New Jersey Bight Area or whatever, it is going to be a mess and it is going to be unenforceable. I think one of the things we need to get through this is some feedback from the Law Enforcement Committee about, if we go with very disparate measures, are we going to shoot ourselves in the foot?

Because if this looks good on paper but it can't be enforced, we're going to have overharvest; just everyone is going to go out and do what they want to do. That is why it's a conditional opposition to this is that we really need to get a commitment that if we're going to go down this road, we have to have the same measures in the

New York and Long Island Sound area, or else this is not going to work.

CHAIRMAN NOWALSKY: Russ, in favor.

MR. RUSS ALLEN: I think this is the right way to move forward at this point. We've tasked the Technical Committee, the PDT, everyone to do a heck of a lot of work; and they've come back and given us what we were looking for. I think this is the best time to move forward this way. I understand Jim's concerns, because we all have those concerns for different areas in all our states.

But I think that can be part of the amendment as it's going forward, and some of the concerns that the PDT can look into and how to manage that area as best as possible. That doesn't alleviate all Jim's concerns that's for sure, but we would be willing to work with New York and trying to make sure we could do the best we can.

I mean, that's all we can put out there for now, until we see exactly what the options are. As I said, they've done a yeoman's job on coming up with the different assessments for the different areas, and done everything we've asked them to do over the last couple years; and I think it's time to move all of this forward as fast as possible.

CHAIRMAN NOWALSKY: Do I have any other speakers against the motion? Emerson Hasbrouck.

MR. HASBROUCK: In addition to the issues that Jim raised, which I agree with, one of the recommendations or one of the comments in the review of the two new assessments was that the new regions are reasonable and acceptable; but not necessarily better than the benchmark regions. The review said yes, they're good, but they're not necessarily any better. Why are we going to go through a process that may not be any better than what we had with the benchmark assessment?

CHAIRMAN NOWALSKY: Bob Ballou, speaking in favor of the motion.

MR. BOB BALLOU: I support the motion. It seems to me, the crux of this is whether we try to fit the management to the region or the region to the management. I think it is the former, and I think that is what this motion would do. Just in response to Jim's comments. As soon as you move down the road of regional management, you're going to inevitably have an issue of disparity, or potential disparity, between the regions.

Whether you take a three-region approach or four, you still have that same issue; maybe it just moves a little bit, but you still have that issue of how you deal with differences between the regions. The fact that we seem to be inevitably moving down the road toward regional management for tautog, I do think the four-region approach makes the most sense; and I support the motion.

CHAIRMAN NOWALSKY: Okay, let me get another show of hands, anyone who would like to speak against the motion; anyone else to speak in favor of the motion, Tom Fote.

MR. FOTE: What I wanted was to do is clarify Emerson's statement. When the stock assessment was done, it was done on one region. What they recommended was that we split up regions, we do different regions; because with the original stock assessment it, was based on one region, not multiple regions.

CHAIRMAN NOWALSKY: Let me let Katie respond to that as well.

DR. DREW: Right, so the most recent benchmark assessment did have the three-region approach, and I think the peer reviewers comments were more to the fact that we don't have strong biological reasons to split the stock at Long Island Sound versus lumping New Jersey in with that region. The evidence is very muddy. There is no clear biological ways to draw the line. In light of that, then management priorities can take over.

If the priority is to keep a consistent region across New Jersey, New York, Connecticut then you would go with a three region. If the management concern is that we want separate information on the Long Island Sound portion versus the New York/New Jersey Bight area, then you would go with the four-region. There isn't strong scientific or biological evidence as it is now, as the data stand now to support one regional breakdown over the other; and thus management concerns can take priority in this case.

CHAIRMAN NOWALSKY: Okay, let me make one last call for anyone to speak for or against the motion. Seeing no one else wishing to speak, **the motion before the board is move to approve the four-region-management approach for Tautog Draft Amendment 1. Motion by Mr. Fote, seconded by Mr. Adler, we'll take a moment to caucus.**

Okay, we'll now put the question before the board. All those in favor of the motion, please raise your right hand, one vote per state, please. Put your hands down, please. All those opposed. **One opposed; any abstentions, two abstentions, any null votes? Motion carries.** Okay, that concludes that agenda item.

We'll now move on to a brief update on the Commercial Harvest Tagging Program, and we'll also have a question for the board about how that may interact with the amendment; before we go on to that, Dave.

MR. SIMPSON: One question for the next step is when or have we already made a decision about reference points, whether we use MSY in some areas or SPR in some areas? When do we revisit that, or do we revisit that? I just want to make sure I know where we are with that.

CHAIRMAN NOWALSKY: Is it the intention of the TC, PDT to do the update with both of those, right now?

DR. DREW: Yes, it is very simple to present the SPR versus the MSY reference points when we come back with the updated information, so we can make that decision then.

CHAIRMAN NOWALSKY: Dave, a follow up?

MR. SIMPSON: Yes, just follow up to that. It would be great to see more elaboration on the stock recruitment relationship. I'm skeptical that there is one. I would like to see better evidence. When I look at a time series that I have confidence in, I see a period over time rather than relationship to the stock.

One of those is a parallel with the Millstone Environmental Data they've been sampling for forty years, and we see a lot of consistency between tautog larval abundance and cunner larval abundance. One is fished and one is not. But I think they're both responding to similar environmental conditions, so I'm really interested in that.

CHAIRMAN NOWALSKY: Okay, we're good with that. We'll move on to Ashton's presentation on the Tank Trial.

UPDATE ON THE COMMERCIAL HARVEST TAGGING PROGRAM, THE TAUTOG TANK TRIAL

MS. HARP: I'm going to present an update of the Tautog Tank Trial. An overview. The Law Enforcement Subcommittee was developed by the Tautog Board in 2015. This subcommittee has met numerous times via conference call to develop program objectives; the goal is to see if a commercial harvest tagging program is viable. To do that, first the subcommittee developed program objectives, which were approved by the Board at the February meeting.

Then staff procured potential tags to include in this program. These were reviewed with the subcommittee, and law enforcement tested these tags in person as well, and gave feedback via conference call. Staff preformed commercial harvester interviews to get a better idea of the

handling practices used to capture tautog and how long they had tautog, and these were all used to then develop the parameters of the tank trial.

I will paraphrase the objectives. It is to implement a tagging program to reduce illegal, unreported and unregulated fishing that we know has been prevalent in this fishery for quite some time. To standardize tags across states, instead of having different tags across states, we wanted one simple tag.

It has been difficult to find a tag that works on a live fish, so it is easier just to find one tag and use it across all states in general. The tag needs to be a single use tag. If one were to take it off they couldn't reuse it on another fish and therefore perpetuate illegal fishing. It needed to be easy to put on but hard to take off. The last goal, it also needs to accommodate the live market fishery, so it needs to have an applicator, for ease of use for fishermen.

It also needed to not affect fish quality for its resale. With that in mind, staff presented about 12 to 15 different tags that could be used in a tank trial and eventually in a commercial harvest tagging program. The Law Enforcement Subcommittee reviewed these tags and selected three tags to move forward with in a tank trial. The three tags are shown here and I also have some on me; so if you want to see some after this meeting I can show to anyone who is interested.

There is a button tag, which is commonly used actually in live stock, so we're testing this on a fish to see if it is actually even possible. The metal one is a strap tag, it is made for a fish. It comes with an applicator. The bottom one is a Rototag, and this one is used on fish in aquaculture.

The research team is applying these to dead fish to see exactly where we would put them on the fish, and then they will be applied to live fish; and I'll go over that. Next for the harvester feedback,

I talked to a couple of fishermen over the phone about the potential for this program.

I have feedback on how they fish for tautog, what the market is like, what their handling practices are like. They said the tautog fishery was very much linked to the black sea bass fishery. They target tautog when the black sea bass fishery closes. When the black sea bass fishery is open, they usually catch tautog as incidental catch; meaning they retain and will sell, but it is not the main fish that they are going out for.

They generally fish out to ten miles, but will go further if targeting black sea bass. They noted that tautog is not as resilient in warm water or during spawning, so tags could increase mortality during this time. I also received feedback that it is a very decentralized market, with lots of small scale dealers and buyers; and a couple of wholesalers.

It is not just, you go to one dealer and then that dealer sells to a restaurant. The fish can go to one dealer then it could go to another dealer before ending up at a buyer and then go to a restaurant. We also realized that live tautog are held by buyers and dealers for weeks, even months at a time.

When I asked how long do you generally keep these fish, or do you know how long they're kept in captivity, they said, well, you can keep a tautog alive as long as you want. They are very hardy fish. We know what to do; we know how to keep them alive. It is not like this fish is coming out of the water, hitting the dock and then going on to someone's plate. There is quite some time that passes in between catching the fish and then eating the fish.

There is a full list of harvester comments that is in the May Law Enforcement Subcommittee meeting summary. I also have a different presentation, a longer presentation I presented to the Law Enforcement Subcommittee on this issue as well.

Now, I'm going to go over the parameters of the tank trial. This is being led by the New York Division of Marine Resources and Stony Brook University. Currently fish traps are collecting tautog and New York DMR modified lobster traps to become fish traps to collect tautog. They actually created a huge pen to then hold the tautog at the dock until we have the number of fish needed to then move them to the wet lab, and overall they plan to collect 80 tautogs to then transfer to the wet lab; and it will be in two different batches.

We're going to have two trials of 40 fish and then 40 fish. Each tag will be applied to 20 fish; so 60 fish in total. There are going to be 20 fish that will serve as the control group; thereby equaling 80 fish. Each fish will be tagged and monitored for four weeks. We went back and forth on the length of time that the tags should be on the fish and determined that four weeks is long enough to see if it would affect the fish, if there would be any kind of infections with the fish from the tag; and to make sure to see if there is any mortality as a result of the tag on the fish.

The trial is expected to begin this month. It is going to be underway shortly. Looking ahead, I just kind of wanted to give an update on next steps. At the annual meeting the results of the tagging tank trial will be presented. I'll also have a Law Enforcement Subcommittee meeting before the annual meeting as well, so they can review the results and they can give recommendations and feedback that will also be presented at the annual meeting.

Then at the annual meeting the board can opt to task the PDT with developing Draft Amendment 1 options for a commercial harvest tagging program; because the goal of the Law Enforcement Subcommittee was really to investigate the feasibility of such a program. If the board thinks it is a viable program, the tags are working, the fish are not dying. Then the board could task the PDT with developing options for Draft Amendment 1. With that, I'll take questions.

CHAIRMAN NOWALSKY: With reference to Ashton's last slide, there is no decision point here today; but the public information document that went out included as an item, the unreported harvest; and it has certainly been an issue before this board for some time. When we first looked at the timeline it seemed that the two actions would need to be decoupled, to keep the draft amendment moving forward.

When the decision was made to do the Long Island Sound Assessment, basically at this point we're looking at a decision next year and implementation likely in 2018. That would potentially present the opportunity to include the commercial harvest tagging program now, as part of the draft amendment, if we chose to task the PDT to develop options at the annual meeting.

That is where we're at. There is no decision that needs to be made today, but I wanted to bring that to the attention of the board that where it had previously looked like it was going in a decoupled manner, there may be the opportunity to bring the two back together again. With that, any questions for Ashton on her presentation?

MR. JOHN CLARK: Ashton, I was curious as to why the trial is only for four weeks. If I recall, they said that a lot of times these fish are kept for up to six months, even longer in tanks. If we're going to get an idea what the shedding rate of these tags might be, that seems kind of short; considering how long they're kept.

MS. HARP: Like I said, there was a bit of discussion on the length of the trial, and just from talking to people there was such a variability in how these fish were kept and the length that they were kept; that it was really hard to mimic the exact conditions that the fish would be going through if it was actually going through the supply chain. When I talked to them about, what are the different tanks sizes, what is the water flow size? It was so different across the different fishermen; that you couldn't

exactly have a trial that would replicate any one way that this fish went through the supply chain. Four weeks was seen as a compromise.

CHAIRMAN NOWALSKY: Any additional questions? Bob Ballou.

MR. BALLOU: Ashton, you may have already covered this, but it just occurs to me. Why the need to explore tags other than those that have traditionally been used to track fish for migratory purposes. I mean, clearly those have demonstrated their efficacy. Is there any thought given to just using the same tags that have always been used; maybe a different color, to see how they compare with these new styles?

MS. HARP: Yes, there was and that would be definitely the easiest option and would be preferred, although it didn't meet one of the objectives put forth by the Law Enforcement Subcommittee, which was that it needed to be a one-time-use tag. When looking at those tags, those tags could just be easily ripped out of the fish and then reused again; therefore defeating the purpose.

MR. ROY MILLER: Many years ago I recall using those particular metal jaw tags in tagging Salmonids, and if memory serves, those particular tags caused the decrease in the growth rate of the animal when it was released back into the wild; thus providing a competitive disadvantage for tag fish violating one of the tagging assumptions. But I assume, since these are tanks and these fish will be fed ad libitum, or in other words as much as they'll eat, that won't be a consideration in these particular trials.

MS. HARP: The growth rate of the fish after it's captured was not a consideration for this trial.

CHAIRMAN NOWALSKY: Follow up, Roy.

MR. MILLER: Yes, I was not so concerned about the growth rate, it is just about the condition of the fish that would be a factor in its marketability.

CHAIRMAN NOWALSKY: That was definitely the major concern of the harvesters; and we hope to get some information from the trials on that. Ashton.

MS. HARP: Just when talking to the harvesters about this program, there were only two, I mean there weren't a lot of people, there were like ten people that I was talking to; but only two people were dramatically opposed to such a program. They did see that there is a problem in this fishery with the black market and with illegal and unreported fishing going on.

They were happy that I had called them and happy to provide feedback. They hoped that such a program would work for them. They don't want this to affect the amount of time that they put into this fishery, but if it could help them, then they were for it.

ADJOURNMENT

CHAIRMAN NOWALSKY: Okay, is there any other business to come before the board today? Okay seeing none; and having covered the business on the agenda, the board is hereby adjourned. Thank you everyone.

(Whereupon the meeting ended at 2:27 p.m.
on August 2, 2016)