

Atlantic States Marine Fisheries Commission

Working towards healthy, self-sustaining populations for all Atlantic coast fish species, or successful restoration well in progress, by the year 2015.

ATLANTIC STRIPED BASS TECHNICAL COMMITTEE REPORT #2004-1



**Striped Bass Technical Committee
Lord Baltimore Radisson Hotel
Baltimore Maryland
Thursday February 5, 2004
and Friday February 6, 2004**

TECHNICAL COMMITTEE MEMBERS IN ATTENDANCE:

Jason Dilday (NC DMF), Doug Grout (NH Fish & Game), Des Kahn (DE DFW), Dave Miko (PA Fish & Boat), Gary Nelson (TC Chair, MA DMF), Rob O'Reilly (VA MRC), Alexei Sharov (MD DNR), Gary Shepherd (NEFSC), Tom Squiers (ME DMR), Clif Tipton (USFWS), and Vic Vecchio (NY DEC).

OTHERS IN ATTENDANCE:

Linda Barker (MD DNR), Eric Durell (MD DNR), Megan Gamble (ASMFC), John Hoenig (VIMS), Harry Hornick (MD DNR), Najih Lazar (RI DFW), Phil Sadler (VIMS), Beth Versak (MD DNR), Lisa Warner (MD DNR), and Erik Zlokovitz (MD DNR).

DELAWARE'S RECREATIONAL PROPOSAL

For the October 2003 Technical Committee meeting, the state of Delaware submitted a proposal for conservation equivalency in the Atlantic striped bass recreational fishery. The conservation equivalency proposal was for one fish between 24 inches to 28 inches and a second fish above 28 inches. The proposal compared the spawning stock biomass generated under Delaware's current regulations compared the spawning stock biomass generated under the baseline recreational regulation required under Amendment 6 (two fish with a minimum size limit of 28 inches). The Technical Committee agreed that the proposal was conservationally equivalent to the Amendment 6 requirements, provided a harvest restriction was implemented to reduce the harvest by 33%.

Delaware's proposal for conservation equivalency, as well as the Technical Committee's recommendation, was presented to the Atlantic Striped Bass Management Board in December 2003. While the Delaware proposal included examples of how the state would achieve the 33% harvest reduction (shortened season), the Management Board referred the issue back to the Technical Committee. The Technical Committee was charged with reviewing the method for achieving the 33% reduction in harvest.

Delaware submitted a clarification of the proposal to the Technical Committee. The proposal applies the method described in Amendment 5's Appendix I to determine the seasonal reduction needed to achieve a 33% harvest reduction. Appendix I fits the striped bass harvest by region from the Weibull model to MRFSS data. The proposal outlines three seasonal closure alternatives for consideration and approval. The closures are as follows:

Delayed Opening: August 13 (35.6% harvest reduction)

Early Closure: October 14 (35.2%)

Mid-Season: Close June 4, reopen September 9 (35.6%)

After reviewing Delaware's proposal the Technical Committee agreed that all three seasonal reductions achieve the necessary 33% harvest reduction.

PROPOSAL TO STANDARDIZE CONSERVATION EQUIVALENCY PROPOSALS

The Technical Committee charged Des Kahn with devising a protocol for evaluating conservation equivalency proposals for Amendment 6. The basis for the proposed protocol is predicated on the female percent Maximum Spawning Potential (%MSP) or the percentage of

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spawning stock biomass that a given fishing pattern would accumulate as a proportion of that accumulated by a stock with no fishing mortality. The proposed protocol calls for conservation equivalency proposals to compare the female %MSP from an alternative regulation to the baseline %MSP generated from two fish at a 28-inch minimum size and a fishing mortality rate of 0.30 (Amendment 6 requirements). Each state proposal would need to achieve baseline regulation's %MSP of 22.2 to meet conservation equivalency. The protocol proposal goes on to suggest how a state could apply a seasonal reduction in combination with a smaller size limit to achieve conservation equivalency. While the proposed protocol uses a commercial regulation as one example, Des Kahn explained that the proposal is really intended to deal with recreational fisheries only and may not be applicable to commercial regulations.

John Hoenig suggested comparing the sensitivity of the fishing mortality rate in both a yield-per-recruit analysis and an egg-per-recruit analysis. An example of this comparison was conducted in the 2003 stock assessment for spiny dogfish (see SARC 37). Ideally, the long-term implications of the proposed regulation's percent spawning ration would be reviewed in addition to the short-term. There needs to be some stability in the regulations to ensure the conservation equivalency benefits. The states should investigate how long the regulation would need to stay in place to achieve the baseline.

Alexei Sharov cautioned that a reduction of fishing mortality by 30% does not directly translate into a 30% reduction in harvest. Most of the Technical Committee agreed the percentage reduction in F does not translate into the same percent reduction in harvest. The Technical Committee generally agreed with the way the proposal calculated the change in F , but the group had a difference in opinion on how to achieve the reduction in F .

Gary Shepherd was concerned that the proposal is based on female %MSP, when there are some fisheries that predominately harvest males. For these fisheries, it would be inappropriate to use the female %MSP. The sex ratio of the harvest is skewed by the location of the fishery. The implication for a male dominated fishery is no negative impact to the stock because there are no females in the fishery. This protocol may not be applicable to all recreational fisheries.

For mixed recreational fisheries, Des agreed to put the protocol in an outline or table format listing the steps a state would have to work through to produce a conservationally equivalent proposal. Des requested assistance in devising a protocol for achieving the necessary percent reduction in F .

Alexei suggested a table to present the output in terms of yield-per-recruit and spawning stock biomass per recruit. The proposed table would include fishing mortality rate, yield-per-recruit (in weight), yield-per-recruit (in numbers), SSB per recruit, %MSP, total biomass per recruit. These six variables would be need to determine the percent reduction in F . The table's output would provide the catch in numbers equivalent to the F reduction for the YPR created under a state's proposal.

The Technical Committee decided additional work on the protocol is necessary before forwarding it to the Management Board. Des and Alexei will revise the protocol proposal together and resubmit it to the Technical Committee for their review.

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REVIEW OF MARYLAND'S PROPOSAL TO CHANGE THE METHODOLOGY TO ESTIMATE F

Prior to the October Technical Committee meeting, Maryland submitted a proposal to change the methodology employed to estimate the annual fishing mortality rate on the Chesapeake Bay stock. The majority of the Technical Committee agreed that Maryland's spring tagging program could be substituted for the direct enumeration study to determine the annual Baywide F with one member dissenting due to the absence of Virginia data. During the December Management Board meeting, Virginia requested time on the agenda for Dr. John Hoenig to make the case that the Technical Committee's evaluation was not thorough enough and the issue needed to be scrutinized more closely. The Management Board agreed with the information presented and charged the Technical Committee with evaluating the information presented by Dr. John Hoenig and forwarding a new recommendation to the Management Board.

As part of Maryland's proposal, the summer-fall tagging program (part of the direct enumeration study) would be discontinued. John made the case that there is a lot of information to be gained from the direct enumeration study. The potential information should be considered before eliminating the program. John also made the case that the correlation between the summer-fall tagging program and Maryland's spring tagging program is poor. Maryland contends that the measurement of error is not significant enough. Alexei explained that one cannot estimate F with the level of precision that allows us to compare to r^2 . John also contends that the current procedure for estimating the Baywide F is grossly inefficient because it only uses about the r 's on the main diagonal of the recapture period. The recapture table provides additional information.

The Baywide direct enumeration study uses tagging data from each of the Bay jurisdictions, but the spring tagging data uses only Maryland tag releases. Using Maryland's spring tagging data, while excluding the Virginia spring data, means the sample used to estimate the Baywide F is not a representative sample. Virginia wants to have a Baywide approach to determining the annual Baywide fishing mortality rate. Before one tagging program is chosen over another, the Virginia spring tag releases should be examined for utility in estimating the Baywide F.

The Technical Committee agreed that the coefficients of variation around the annual estimates of both the summer-fall and spring programs should be examined and compared. The Technical Committee determined that Maryland's proposal needs further investigation to determine if switching to the spring tagging survey compromises the level of precision.

The proposal did not investigate the existing Virginia spring tag results, as to the impact from the model results that strictly used Maryland data. There was an oversight by Maryland regarding including Virginia data in the analysis. The data was requested by Maryland at the end of the previous Technical Committee meeting, but no work has been done to expand the analysis to incorporate the Virginia data to date. The Technical Committee agreed that there is a need to investigate the possibility of using the Virginia spring tag data in combination with Maryland's spring tag data.

The Bay jurisdictions need to collectively determine the best possible procedure for estimating the Baywide F because the procedure has implications on direction of the Chesapeake Bay management program (i.e. moving to a harvest control model). Some Technical Committee members emphasized the importance of a Bay-wide tagging program, one where releases would take place from all of the jurisdictions. The Bay states should have some flexibility in

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implementing new monitoring programs, and in the case of this proposal, there is always the ability for the Technical Committee to review the program's progress on an annual basis. In addition, the VPA provides an F for ages 3-8 striped bass, and even if that F is for a mixture of stock, nonetheless, it gives information about the Chesapeake F. Further, Maryland initiated what is now the Bay-wide direct enumeration in F in 1993, so some consideration should be given to those efforts, relative to the proposal.

Charges: The Technical Committee recommends both Maryland and Virginia work together to re-evaluate the best possible Baywide F estimation procedure. The re-evaluation should investigate the following:

- 1. What would happen to the estimates if the Virginia spring tag data is included with Maryland's spring tagging survey?**
- 2. What sample sizes would be needed to achieve the same levels of precision in the spring tagging survey as those from the direct enumeration study?**
- 3. Investigate the first three suggestions in John's presentation (investigate the use of additional tag return data other than just the diagonal in the recovery table; derive survival estimates from the Brownie model; comparison of precision between the models).**
- 4. Look at a couple of compromise situations that could reduce the workload for the Bay jurisdictions.**

IMPLICATIONS OF EXCEEDING F TARGET FOR AGES 8-11

In the Stock Assessment Report for 2002, the VPA estimates that the fishing mortality rate on ages 8 to 11 has exceeded the F_{target} since 1997. The Stock Assessment Report also includes fishing mortality estimates for the individual components of the stock from the Tagging Report. These tagging estimates are a check against the VPA results for the coastal migratory stock. Most of the tagging estimates for the individual components were not above the target F. Amendment 6 does not include any management triggers when the fishing mortality target is exceeded. FMP Review for 2002 highlighted this issue and recommended that the Technical Committee look into the implications of exceeding the F_{target} several years in a row. The Management Board approved this charge with the approval of the FMP Review.

The PRT highlighted this concern because the stock assessment reports the fishing mortality exceeded the target F from 1997 through 2002. Additionally, the PRT was concerned about the potential increases to F as a result of new regulations implemented under Amendment 6 (i.e. the coastal commercial fishery; and unintended cumulative impacts of each conservation equivalency proposal).

The Technical Committee discussed the purpose of a control rule, emphasizing that it is constructed to allow the fishing mortality rate to exceed the target as long as the biomass threshold is not exceeded. As long as the fisheries are below the $F_{threshold}$, the control rule should allow the spawning stock biomass to expand. Some members expressed concern that if there are no management triggers associated with exceeding the F target, there is no deterrent to liberalizing the regulations until the $F_{threshold}$ is reached.

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The Technical Committee discussed the possibility of running simulations to determine the potential implications to the stock if the F target is exceeded for several years. Alexei Sharov cautioned that the stock assessment reports point estimates of fishing mortality; the report should include confidence intervals around the F estimates. Gary Shepherd suggested that there also be confidence intervals around the Fmsy estimate. Without the confidence intervals, it is difficult to assess the level of risk imposed with the current fishing mortality rates.

Des agreed to investigate what the rates would have to be to produce the divergence between the survival-based F estimates and the VPA estimates versus the exploitation tag estimates, which are highly sensitive to reporting rates.

Charge: The Technical Committee developed a charge to calculate the likelihood of exceeding the Fmsy given the VPA produced a fishing mortality estimate of 0.33. The charge will include the implications and probability of exceeding Fmsy. One of the objectives of Amendment 6 is to fill out the age structure of the population. The charge should investigate the implications of the current F on the older ages in the population. The Technical Committee assigned this charge to Gary Shepherd.

NORTH CAROLINA'S OREGON INLET FISHERY

The recreational fishery around the Oregon Inlet in North Carolina has grown significantly since the mid-1990's. The fishery targets the Atlantic migratory stock in fall and winter and the Albemarle-Roanoke stock in the late spring through the summer resulting in a year round fishery on striped bass 28 inches and larger. The line of demarcation between the Atlantic Ocean and the Albemarle Sound Management Area is the centerline line of the Bonner Bridge and east of the line is open to harvest year round. The line of demarcation creates regulatory differences on different sides of the bridge.

As the Albemarle-Roanoke striped bass year classes have continued to increase, so has the availability of fish 28 inches and larger in the population. Even though the number of fish 28 inches and larger have increased, they still only represent a small percentage of the total population. These fish are considered prime spawners and should be provided protection.

51% of the tag returns from the striped bass tagged on the Roanoke River spawning grounds were returned from April to September and a growing number of the returns are 28 inches and larger. The MRFSS data for 2002 shows ~59,000 pounds of striped bass harvested from the ocean during May to October. Not only is this an increased source of mortality on the Albemarle-Roanoke spawning stock, but there may be an increased mortality on the sub-legal fish due to higher waters temperatures in the summer months.

In the NC Striped Bass FMP, NC DMF, NC WRC, USFWS, and the Central/Southern Advisory Committee recommended the closure of the Atlantic Ocean to the harvest of striped bass from spring to October 1 to coincide with the Albemarle Sound recreational closure. The NC MFC and the Albemarle-Roanoke Advisory Committee opposed the previously mentioned recommendation, preferring to remain status quo.

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ASMFC's Striped Bass PRT reported this issue in the FMP Review for 2002. The Management Board approved the PRT's recommendation to refer the issue to the Striped Bass Technical Committee for discussion on the most appropriate way to account for fish harvested in this area.

The Technical Committee commented that there has been continuing speculation about the potential for the Ablemarle-Roanoke stock mix with the coastal migratory population as the stock expands. The basis for managing this stock separately from the coastal migratory stock is that the fish do not make it to the ocean. The Ablemarle-Roanoke fish are found around the bridge because prey species are abundant in this area, prime feeding grounds.

Members of the Technical Committee recommended analyzing tag data to determine if the fishing mortality rate is exceeding the stock's target. If it is there may be justification for closing the fishery. The Technical Committee agreed that the harvest should be accounted for in the coastal migratory stock assessment, but the MRFSS harvest in waves 3, 4, and 5 should be counted in the AR stock assessment.

NORTH CAROLINA MRFSS WAVE 1

A significant recreational fishery has developed in ocean waters off of North Carolina during January and February. MRFSS does not sample in North Carolina at this time of the year, therefore the fishery is not being captured in the recreational fishery. It is likely that a significant source of mortality on the coastal migratory stock is not being captured by annual stock assessment. Some Technical Committee members noted, in some years, a similar fishery has occurred off Virginia. Des noted that a fishery also exists in Wave 1 off Delaware in most years, including charterboats.

***Recommendation:* The Technical Committee recommends the Management Board submit a request to NMFS that the MRFSS telephone survey be expanded to capture the striped bass recreational fishery's effort off the coast of North Carolina during wave 1. The Technical Committee recommends the Board seek funding to support the expansion of the MRFSS's telephone survey to cover North Carolina during wave 1. ACCSP is one avenue that could be pursued for funding.**

VPA SURVEY INDICES WORKSHOP

The Commission included in the striped bass management program budget a two day Workshop to review the VPA survey indices. Last year, the Technical Committee also created a charge to review the VPA indices and develop a set of criteria for determining which indices should be included in annual stock assessment. Gary Nelson was assigned the investigation into the Technical Committee's charge.

John Hoenig commented that any time the assessment procedure is changed the assessment should be run the old way as well as the new way to have greater confidence in the outcome. Need to determine if changes to the outcome are a methodology effect or represent something actually occurring in the stock. It is possible that each index could fail in any one year. It is not necessarily wrong if one index does not show what the rest of the indices show. The index could show something indicative to the stock in a particular region.

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Najih Lazar commented that currently the indices are not presented with variances. States should provide a brief description of how the survey is carried out and the variance associated with each survey. Gary Nelson explained that the assessment currently assigns a weight to each assessment. Indices with high partial variances were singled out and the stock assessment subcommittee decides if the index should be included in the VPA assessment.

To date, the stock assessment subcommittee decides which indices are excluded from the assessment based on the results of a run. Gary Nelson's proposal is to look at each of the indices before hand to determine if the index should be included in the assessment. The proposal is a pre-filtering process to occur before the assessment. The inclusion or exclusion of an index needs to be agreed to prior to conducting the assessment.

Najih suggested reviewing the index time series to determine if shows an appropriate trend. Additionally, the index's coefficient of variance should be examined as a criterion for inclusion in the assessment. John also suggested relating an index to other indices from the region, as well as to previous runs of the VPA, to determine if it is tracking the trends of the stock.

In the past, some surveys are kept in the assessment regardless of its performance because it covered specific age groups that would be otherwise poorly represented or because the survey covers a long time series.

John emphasized the importance of documenting the assessment process to ensure the assessment can be duplicated. Each run conducted should be included in an appendix of the stock assessment report. Currently, the stock assessment reports changes made to the process, but all the runs conducted each year does not appear in the report.

Each jurisdiction will need to prepare an evaluation of all survey indices. The jurisdictions will need to provide the sample design and methods. The validation of each survey may require some guidance from the Technical Committee to determine which indices the survey should be validated against. Acceptable levels of precision will be determined at the workshop, but the states will provide the CVs for each index.

The criteria for evaluating the surveys will be developed during the Workshop as the surveys are reviewed. The evaluation will start with a candidate list of criteria that may be modified as the surveys are reviewed, so the criteria may evolve as the workshop proceeds. The criteria will be based on variance estimates, so the states must provide these ahead of time. For some indices, it may not be possible to provide variance estimates, but a state will need to explain why the variance can not be provided. For states that need assistance with the variance estimation, Gary Nelson should be able to assist.

States can submit additional surveys for review during the workshop, but priority will be given to those required under Amendment 6. States will be notified as to which surveys must be reviewed during the workshop. These other surveys may provide validation of the required indices.

Megan will send out a memo that outlines what each jurisdiction needs to provide for the Workshop, the surveys that will be covered in the Workshop, and the deadline to turn in the materials. The Management Board will be cc'd on the memorandum.

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The Tagging Subcommittee will meet either during the June Technical Committee meeting week or in early July to conduct the tagging analysis. The Workshop will be scheduled for the end of July. The Stock Assessment Subcommittee will meet in early August to run the VPA assessment. The Technical Committee will meet again in September to review the stock assessment report.

The Technical Committee agreed that the following are the Workshop Objectives:

- 1. Review the design of each index/survey.**
- 2. Evaluate the precision of each index and validate each index by comparing it to other indices in the area.**
- 3. Evaluate whether an index should be aggregated or if it would be more valuable to have age disaggregated data for the index.**
- 4. How can the design of the survey be changed to make it more valuable?**

Post-Workshop Evaluation

Determine the implications of the Workshop's recommended changes to the VPA assessment (i.e. compare runs of the VPA – one run using the previous year's process and one run with the recommended changes).

OTOLITH SUBCOMMITTEE PROGRESS

Last summer, the Technical Committee created a subcommittee charged with evaluating the catch in the 800 mm and above length groups, the current age samples for the same length groups, the costs in terms of money and time to collect and process the samples, and to develop a sampling intensity guideline based on scales and otoliths.

Gary Nelson distributed an email to the subcommittee to divide the responsibility of collecting information on otoliths from each state. Each member is responsible for responding to the questions in the otolith charge and gathering that information for a particular region.

The Technical Committee discussed the feasibility of ageing with otoliths in each state. Massachusetts currently has 225 otolith samples collected and 64 of the samples are from the greater than 800 mm category. Massachusetts does not have the equipment to process samples. New Hampshire could collect the larger fish if there was money available to assist. New Hampshire would probably enlist CCA to help collect the samples. Virginia is already collecting fish within this size range in their monitoring programs. Currently, VIMS has 50 - 80 fish collected from fish 900 mm and greater.

Processing the samples will be a problem for several of the states that do not possess the equipment. New York has the equipment to section otoliths and actively processes otoliths for fish with coded wire tags. New York has 300 otolith/scale pairs in its CWT collection. New York has the capability to process about 500 otoliths per year. New York could do some of the processing for other states.

The expense associated with processing otoliths is fairly reasonable. Resin is not very expensive, but the microscope slides can be expensive (\$150 - \$200 could mount 300-400 samples per year).

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Both Virginia and North Carolina (AR stock) have otolith samples from sub-legal fish that may be helpful in verifying the precision of otolith ageing compared to scales. Around 800 – 900mm is the line around which ageing problems begin with scales.

The Technical Committee agreed to develop regional otolith ageing keys. To ensure the samples are actually representative of the region, samples may need to be collected from the spawning grounds. Des Kahn suggested a comparison of the growth rates in each of the stocks. If the growth rates are variable, it may not be appropriate to pool certain areas together.

The purpose of moving to otolith ageing is to gain a better understanding of the older portion of the population's age structure. Additionally, otolith ageing may alleviate some of the problems associated with the plus group in the VPA. But, it will take several years before the VPA can rely on otolith age samples. In the meantime, the stock assessment will continue to plus the 13 and older age groups.

The Technical Committee also discussed potential implications of creating fishery dependent verses and fishery independent age-length keys. The length frequencies should be reviewed to determine if there is a significant difference. For time being, states should make the effort to collect otolith samples from fishery dependent surveys.

The subcommittee will continue to develop a program for regional otolith-based age keys. The Technical Committee defined the regions as follows:

Coastal Programs

Northeastern Massachusetts, New Hampshire, Maine
Southeastern Massachusetts, Rhode Island, Connecticut, New York
New Jersey, Delaware, Maryland,
Virginia and North Carolina

Bay Programs (grouped separately)

Maryland
Delaware
Hudson River

MEAN WEIGHTS AT AGE

The 36th SARC identified a decline in the mean weights at age used in the annual stock assessment. In response to the SARC's concern the Technical Committee developed a charge to review the derivation of the mean weights at age used in the annual stock assessment. Gary Nelson was assigned the responsibility of carrying out the examination. Due to an overwhelming number of responsibilities, the charge was transferred to Maryland DNR's Linda Barker.

The Technical Committee agreed that a weight at age matrix should be included in each of the state compliance reports. Gary Shepherd will create a spreadsheet for length and weight data. The spreadsheet will be filled in annually by each jurisdiction. The jurisdictions should provide the length frequency from each fishery, sample size, the length-weight equation used to characterize the fishery, total catch in numbers, age-length keys used to convert the lengths to

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weight and finally, the weight at age matrix. Consideration will need to be given to the weight at age associated with each spawning areas.

PROPOSAL TO REVISE FORMAT OF STATE COMPLIANCE REPORTS

The Stock Assessment Subcommittee charged Andy Kahnle with developing a proposal to revise Compliance Report outline and format of the annual state compliance reports. The revision would facilitate the compilation of data for the annual stock assessment reducing the duration of the annual stock assessment subcommittee meetings. In addition to modifying the state compliance report outline, the proposal suggests the states would submit spreadsheets containing the state's historical data, as well as data from the most recent year. Finally, the proposal revises the deadline for submitting state compliance reports from May 15th to July 15th. If a state does not provide the necessary data by the deadline and it is available, the Board will be notified of the states omission recognizing late reports delay or compromise the stock assessment subcommittee's ability to complete the annual update to the stock assessment.

In addition to the spreadsheets, each jurisdiction would submit text explaining the method of data collection as well as caveats regarding the data. The Technical Committee suggested that the compliance reports could refer to the Indices Workshop proceedings for the description of the fishery independent survey designs unless a change was made to the survey design. Andy Kahnle and Gary Shepherd will work on the standardized spreadsheets and distribute the spreadsheets to each of the jurisdictions.

The Technical Committee added a weight at age table to the outline, as well as a description on the discard estimation, if the information is collected by a state.

The suggestion to delay the compliance report deadline was originally proposed to compensate for the availability of MRFSS data, but it is now available by April 15th. There are several spring surveys that necessitate a later submission deadline, such as Maryland's spring survey. North Carolina's trip ticket data is not ready until right around May 15th. New Jersey has a difficult time submitting trawl survey data by May. Finally, Massachusetts does not finalize the catch data until the start of the next fishing season.

The Technical Committee approved the stock assessment subcommittee's proposal to modify the content state compliance reports. Megan will modify the compliance report outline that current appears in Amendment 6 to incorporate the recommended changes from the Stock Assessment Subcommittee. The revised outline and request to change the compliance report deadline will be submitted to the Management Board for their consideration.

VIC CRECCO'S PAPER "METHOD OF ESTIMATING FISHING (F) AND NATURAL (M) MORTALITY RATES FROM TOTAL MORTALITY (Z) AND EXPLOITATION (U) RATES FOR STRIPED BASS"

Vic Crecco requested time on the agenda to present a paper to the Technical Committee. Vic was unable to attend the Technical Committee meeting due to inclement weather. The Technical Committee agreed to submit comments on the paper to Vic directly. Time will be provided on the next Technical Committee agenda for Vic to present the paper and respond to the Technical Committee's comments.

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ELECTION OF A VICE CHAIR TO THE STRIPED BASS TECHNICAL COMMITTEE

The Technical Committee unanimously elected Doug Grout as vice chair of the Striped Bass Technical Committee.

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