

Atlantic States Marine Fisheries Commission

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MEMORANDUM

April 20, 2015

To: Atlantic Striped Bass Management Board
From: Atlantic Striped Bass Technical Committee and Tagging Subcommittee
RE: Tagging/Monitoring, and Seine Calibration Proposals

The Atlantic Striped Bass Technical Committee (TC) met on March 24, 2015. The agenda included a request from Virginia for the TC to review two proposals: 1) changes to the current Virginia striped bass tagging and monitoring program and, 2) studies to calculate calibration factors for the seine nets used by Maryland and Virginia for the striped bass juvenile abundance index in the Chesapeake Bay. The following is a summary of the TC's discussion.

1. Proposed Changes to the Virginia Striped Bass Tagging and Monitoring Proposal

In cooperation with the Virginia Marine Resources Commission (VMRC) the Virginia Institute of Marine Sciences (VIMS) has been conducting the Virginia striped bass tagging and monitoring survey since 1987. There is a pound net survey in the Rappahannock River and a gill net survey in the Rappahannock and James Rivers. Currently the pound net survey is used as an index of abundance in the stock assessment, and fish captured from the pound net survey are tagged for use in the coast wide tagging programs. The fish captured in the gill net survey are not tagged due to the current 24 hour soak time, and the gill net survey data are currently not used as a tuning index in the stock assessment.

The proposed protocol changes are to eliminate the 24 hour soak time gill net survey in the Rappahannock and James rivers, and initiate a short set (0.5-2 hours) gill net survey in the Rappahannock, James, and York rivers to expand the tagging into the James and York rivers. Tagging from the pound nets in the Rappahannock will continue. Expanding the tagging program to include the James and York rivers will be more reflective of the multiple stocks that make up the Virginia striped bass population. Shorter gill net sets should improve condition of striped bass caught and allow more fish to be tagged. Another goal of the new short set gill net survey in the Rappahannock, James and York rivers is to create a tuning index of relative abundance to be used in the stock assessment. The following suggestions were made from the TC for consideration in the final development of the new survey design:

- Consider tagging fish smaller than the legal size as this information will be important for looking at migration rates for stock specific reference points, particularly if the fish start migrating at smaller sizes.
- The upper end of 2 hours for the soak time may be too much and the fish at the end of the net may not be in good enough condition for tagging. Maryland recommends using 20-30 minute soak times instead.

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- Be aware of the differing selectivity between gear types. If you are seeing differences in catchability this could be due to differing gear types or due to availability of fish in different rivers.
- If possible, align the start of the survey with water temperature instead of a set start date.
- The TC approves the proposed changes but the above suggestions should be considered.

2. Virginia and Maryland Seine Calibration Proposal

This project seeks to determine if it is necessary to establish calibration factors for the seine nets currently used by Maryland and Virginia to conduct the annual juvenile striped bass abundance index survey for the Chesapeake Bay. The calibration factors may be necessary because the material from which these nets are currently constructed is no longer available and new material of unknown efficiency will need to be used starting 2015.

The Virginia Institute of Marine Sciences is proposing to conduct the survey. The methodology includes conducting side by side comparison sweeps using seine nets constructed with the new material and the material currently being used, and two block net studies to determine the relative catch efficiency of the new seine mesh material. The following suggestions were made from the TC for consideration in the final development of the new survey design:

- Concern about possibility of tag shedding occurring within a 1 week time frame. Literature based tag retention estimates would need to be incorporated into any analysis to account for this.
- It was suggested that a hatchery pond could be used instead of a block-net to eliminate some variability. This would also eliminate the need for tagging. This may be ok for striped bass but may pose problems for some of the other species the proposal is aiming to study. Would also not capture any variability in catchability due to turbidity and tidal conditions.
- TC had concerns over having a large enough sample size. If the study is conducted during a year of poor recruitment, may not have a large enough sample size, particularly for the approach of using a linear model.
- The shape of the sweep can be a big factor in catchability so that should be standardized as much as possible.
- By looking at sandy sites only, may not get a conversion factor applicable to more historical data.
- TC approves the study but the above suggestions should be considered.