

# Atlantic States Marine Fisheries Commission

## Horseshoe Crab Advisory Panel Conference Call

Thursday, July 25<sup>th</sup>, 2019

1:00 – 3:00 p.m.

### Meeting Summary

#### 1) Welcome/Introductions

**Advisory Panel (AP):** Allen Burgenson, Benjie Swan, Brett Hoffmeister, George Topping, Jay Harrington, John Turner, Nora Blair

**ASMFC Staff:** Dr. Kristen Anstead, Dr. Mike Schmidtke

**Guests:** Dr. James Cooper

- M.Schmidtke assisted with introductions.
- A.Burgenson provided the agenda for the meeting.
- *Walker Golder was unable to attend the call but listened to a recording and provided comments. Mr. Golder's comments are listed as an addendum to this summary.*

#### 2) Update from Previous Board Meeting

- M.Schmidtke provided a review of the last Horseshoe Crab Management Board (Board) meeting.
- Adaptive Resource Management (ARM) Subcommittee and Delaware Bay Ecosystem Technical Committee will meet in September in Arlington will discuss how to incorporate Catch Multiple Survey Analysis population estimates into the ARM model.
- Next Board Meeting: Summer Meeting, Aug. 6<sup>th</sup>, Arlington, VA

#### 3) Presentation of 2019 Benchmark Stock Assessment

- Dr. Anstead provided an overview of the 2019 Horseshoe Crab Benchmark Stock Assessment.
  - (a) History
  - (b) Regional assessments
  - (c) Tagging data analysis

(d) Coast wide bait landings

(e) Biomedical mortality

(f) Next assessment

- Discards are believed to be a much bigger factor than previously thought.
- There were comments regarding the 15% mortality estimate and how some believed this was still very/too high.
- G. Topping thought the data was not robust as it did not record many juveniles, nor was it done at the times most crabs were available to be caught. Gear used does not catch crabs well.
- G. Topping asked if anyone had considered the impact of windmills on areas like the Carl Schuster reservation or crabs in general.
- J. Harrington made the suggestion of sending video to regulators. He had hours of video of crabs on the beach.
- J. Harrington also mentioned HSC as predators of shellfish.
- B. Swan made mention about wanting to make comments about Stock Assessment, K. Anstead stated that B. Swan's letter was included in the appendix of the Stock Assessment.

#### 4) **Potential Management Responses and Outstanding Items Postponed until Stock Assessment Completion**

- Discussion regarding J. Cooper's memo to the biomedical group.
- General discussion regarding biomedical mortality data.
- B. Hoffmeister questions methods for reporting biomedical data within ARM. M. Schmidtke answers that data would be reported as an aggregate.
- Regarding Addendum 8 all AP members on the call agreed that biomedical data should not be included in the ARM and if it were it should be reported as an added source of mortality. *W. Golder supports inclusion of biomedical mortality in the ARM model.*
- ARM review. M. Schmidtke presented some options for discussion including "double loop" and a shorter term option. No recommendation was made.

## 5) Panel Discussion of Stock Assessment and Potential Management Responses

- NY and CT have declining trends, but not harvesting near ASMFC quota. Overharvesting is not yet defined. Declining trends are evident.
- The group agreed that action including possible quota reduction, enforcement, lunar closures, and discards be discussed at the Summer Meeting.
- J. Turner asked if ASMFC should reduce NY's HSC quota.
- M. Schmidtke mentioned that that would be a discussion for the Board, one perspective would be that if NY is not overfishing so a reduction would potentially negatively affect the fishery. If already fishing at state quota (about half of ASMFC quota), would a harvest reduction really affect population?
- A. Burgenson stated that the decline may be an effect of crabs not being reported or of poaching.
- M. Schmidtke agreed that poaching would be a problem, suggested if that is the case to communicate with local law enforcement, suggested that environmental impacts may be a factor.
- N. Blair mentioned that bycatch could also be a significant factor, per assessment results.

## 6) Panel Discussion of Rich Wong's Request for Use of Biomedical Data

- There was a brief discussion regarding Richard Wong's desire to publish a paper outlining the Delaware Bay HSC population estimation methodology to include biomedical data.
- M. Schmidtke pointed out that the Rich still needs permission from many sources including all biomedical companies and fishery-independent data sources (Virginia Tech, New Jersey, and Delaware).
- A. Burgenson pointed out it was great to have good news for a change.
- B. Swan suggested that this was a discussion to be held privately among the companies and not an AP call. Most agreed and the discussion ended.

## 7) Other Business/Adjourn

- No other business was discussed.
- Adjourned approx. 3:30pm

## Addendum

### Walker Golder's comments:

- *I greatly appreciate the presentation by you and Kristen. And I appreciate the lively discussion, as well as the desire to get an accurate stock assessment. With that said, I assume that the methodology used for the stock assessment has been fully vetted, is appropriate for horseshoe crabs, and is scientifically defensible.*
- *I disagree with any change to the stock assessment methodology to focus on times or areas with high concentrations or peak abundance, as suggested on the call. It is impossible to count every horseshoe crab and I do not see that as a goal of the stock assessment. It is very important for the stock assessments and methodologies to be comparable across all years.*
- *The large number of juvenile crabs in MD is interesting. Having additional information about the distribution and abundance of juvenile crabs and all life stages could be very important in the overall management decisions.*
- *I have serious concerns about discards and discard mortality. I would like to see additional studies to assess discards and discard mortality. It seems that this could be having a significant impact on the population.*
- *I believe that harvesters are doing their best to handle the biomed harvest crabs appropriately and I appreciate the concerns over the well-being of the biomed harvest crabs.*
- *Given the uncertainty surrounding the impact of harvesting, maybe an independent observer program that followed the crabs from capture to release, assessed post-release mortality, other physical or physiological impacts, and fecundity of harvested crabs would clear things up. This could result in better qualitative and quantitative data on the effects of harvesting, and clear up any perceived bias from the existing studies. I believe it is important to understand the overall impact of harvesting on the crabs, even those that appear to be alive when released. Those reported to die during capture, transportation, bleeding, and/or release may not be the complete picture of the overall impacts.*
- *The DE Bay population appears to remain low and has not recovered since the excessive harvest during the 1990s. While there may have been a slight increase in the population in recent years, the population still remains well below the early 1990s. Is the population trend statistically significant? Overall, I am concerned that the population is being managed for maximum harvest and remains well below the population level needed to support shorebirds, fisheries, sea turtles and other wildlife that depend on horseshoe crabs.*
- *The benchmark stock assessment appears to be inconsistent with the other potential indicators, like egg density on spawning beaches. If there has been any increase in the population, it does not appear to be indicated by the number of females spawning and/or egg density on DE Bay beaches. I am concerned that fecundity and/or the spawning population remains low and has not recovered from extensive harvest in the 1990s. This could be the result of over harvest (I realize the models indicate overharvesting is not occurring), stress from biomedical processing, relocation of potentially spawning crabs as a result of harvest, bycatch, or other factors.*
- *The egg density on DE Bay beaches remains alarmingly low; only ~15% of the number of eggs/m<sup>2</sup> (85% decline) found in the 1990s. Egg density is critical to shorebirds, like federally-listed Red Knot, as well as other shorebird species that are in decline and of conservation concern. The crash of the Red Knot population mirrors the decline of horseshoe crabs and the status of horseshoe crabs was a factor in the listing. Recovery of horseshoe crabs will be important to the recovery of shorebirds. The horseshoe crab population impacts hemispheric shorebird populations; it's not just a state issue.*

- *Can egg density on spawning beaches be included as an indicator of the overall horseshoe crab population status?*
- *I do not agree with the opinion expressed on the call that the population is fine, that there are plenty of horseshoe crabs. I don't think the stock assessment indicates this and other indicators, like egg density on beaches, don't support this. I am glad to see the apparent improvements in recent years, but more is needed.*
- *Biomed mortality, included or not: I believe biomed mortality should be included in the ARM model. Is this a decision by the ARM subcommittee, Board, or other? All mortality and contributing factors should be included in population assessments, even if the impact/potential impacts does not have an apparent impact on the outcome. This is fairly common for species that are harvested.*
- *I feel strongly that ALL factors that contribute to or could contribute to mortality should be included in the in the model, regardless of whether or not they currently seem to have a significant impact on the population, including entrainment and mortality from power plants. Leaving out any factor that could contribute to mortality could be a problem for the future.*