Atlantic States Marine Fisheries Commission

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Sturgeon Technical Committee (TC) and Stock Assessment Subcommittee (SAS)

Feb. 22, 2023

Committee Members in Attendance: Amanda Higgs (NY, TC Chair), Laura Lee (NC, SAS Chair), Brian Neilan (NJ), Christopher Davis (VA), Chuck Stence (MD), Dave Kazyak (USGS), Dave Secor (MD), Eric Schneider (RI), Ian Park (DE), Ingrid Braun (PRFC), Luke Lyon (DC), Margaret Conroy (DE), Mike Celestino (NJ), Syma Ebbin (CT)

ASMFC Staff: James Boyle (ISFMP), Kristen Anstead (Science), Katie Drew (Science)
Public: Alan Bianchi, Ashlee Horne, Ellen Waldrop, Steve Minkkinen

Major Decisions

- The TC/SAS recommended that the 2024 assessment for sturgeon be an update instead of a full benchmark.
- The TC/SAS approved the assessment schedule (*Table 1*) with the assessment update completed and presented to the Board in August 2024.

Next Steps

- Staff will set up a call for the Sturgeon Stock Assessment Subcommittee in March to discuss workload, tasks, and data needs
- The data request and template will be sent to TC members and other data providers in April

Discussion Summary

K. Drew presented a summary of the analyses completed for the 2017 benchmark assessment for sturgeon. The TC/SAS explored a number of different approaches, but the final stock status determination in recent years was based on the ARIMA analysis, the tagging model estimates of total mortality (Z), and the Z eggs-per-recruit (EPR) benchmarks. The ARIMA analysis was applied to the final set of fishery-independent indices of abundance and to estimate the probability of whether each of the DPS-specific indices was above the 1998 value (i.e., the start of the moratorium) or the first year of the index (if the index started later than 1998). The tagging estimates of Z were compared to the $Z_{50\%EPR}$ to determine the probability that Z was above the Z threshold, which would indicate total mortality was too high.

Ahead of the call, the TC and SAS was surveyed on new work that addressed the research recommendations from the 2017 benchmark assessment, and K. Anstead provided a summary of the information that was provided (full spreadsheet here). Several studies provided estimates of population size in different rivers through genetic work or a combination of tagging and side-scan sonar, and the time series of several shorter indices from the previous benchmark had been extended. In addition, more genetic samples have been collected, and an updated acoustic tagging dataset has been assembled, hopefully making the sharing of that data easier.

The TC and SAS then discussed the question of whether to complete an update or benchmark for 2024. The 2017 benchmark had recommended that an update be completed in 5 years and a benchmark in 10 years. An update cannot include new datasets or models, while a benchmark could but would require a full external peer review. Staff agreed that some of the new information discussed earlier could be incorporated during an update where it aligned with information or analyses conducted during the

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benchmark assessment. The estimates of abundance could be discussed and presented for context, but would not be used to determine stock status, mainly because no abundance or biomass reference points were calculated during the last benchmark. The TC/SAS agreed that an update was most appropriate at this time, to allow more work to be completed on on-going projects. However, the TC/SAS also requested that the SAS or another subgroup of the TC be tasked with beginning to work on abundance or biomass reference points or recovery targets ahead of the next benchmark, given the challenges of that work. K. Anstead presented the proposed timeline of the update, which would be completed by the summer of 2024, to be presented to the Board at the 2024 Summer Meeting in early August. The next step will be convening the SAS for a call in March to discuss data needs and tasks, and then to circulate a data request in April for submission in June. The terminal year of the update will be 2022.

K. Drew provided an update on the sturgeon ageing project. All samples have been received, but some metadata important for the project and necessary to obtain the NOAA letters to allow the exchange of sturgeon hard parts is still missing. D. Fox has indicated that information could be available by late February, so the ageing subcommittee will reconvene to determine an updated timeline for that project when that happens. Conducting the benchmark after the ageing exchange would allow for several years of data collected under consistent protocols to be incorporated.

Table 1. Timeline for 2024 Atlantic sturgeon assessment update

	Milestone	Date
✔	TC call to review TORs and timeline	February 2023
	SAS call to plan update, timeline, tasks	March 2023
	Circulate data requests to states/partners	April 2023
	Data through 2022 due	June 2023
	Develop fishery-independent indices, tagging model	July-August 2023
	Update methods and models	September-December 2023
	SAS writes update report	January-February 2024
	SAS call to finalize report	March 2024
	Report to TC for review	April 2024
	TC call to approve report	May 2024
	SAS finalizes report and includes in Board meeting materials	June 2024
	Present stock assessment update to the Board	July/August 2024