Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfc.org

# American Eel Technical Committee & Stock Assessment Subcommittee Meeting Summary

Webinar
June 27, 2023

**Technical Committee Members:** Danielle Carty (TC Chair, SC), Casey Clark (ME), Chris Adriance (DC), Chris Wright (NOAA), Ingrid Braun (PRFC), Jen Pyle (NJ), Jim Page (GA), Jordy Zimmerman (DE), Keith Whiteford (MD), Kim Bonvechio (FL), Pat McGee (RI), Robert Atwood (NH), Tim Wildman (CT), Todd Mathes (NC), Troy Tuckey (VA), Zach Schuller (NY), Wendy Morrison (NOAA)

**Stock Assessment Subcommittee Members:** Sheila Eyler (SAS Chair, FWS), Matt Cieri (ME), Jason Boucher (NOAA), John Sweka (FWS), John Young (USGS), Troy Tuckey (VA), Keith Whiteford (MD), Margaret Conroy (DE), Laura Lee (NC)

**ASMFC Staff:** Kristen Anstead, Caitlin Starks

**Additional Attendees/Public:** Alan Bianchi, Emily Tekelenburg, Martin Gary, Raymond Kane, Philip Gwinnell, Jason Bartlett, Trey Mace

The American Eel Technical Committee (TC) and Stock Assessment Subcommittee (SAS) met via webinar to consider several items: (1) the Supplemental Report to the American Eel Benchmark Stock Assessment; (2) inclusion of an omitted survey index from South Carolina (SC) in the assessment; (3) updates on Maine's life cycle survey; and (4) Maine's aquaculture proposal for 2024.

**1. American Eel Supplemental Report**

The SAS was tasked with additional work following the peer review and Board review of the 2023 benchmark stock assessment. The tasks from the Board included providing justification for deviating from the peer review advice, providing additional analyses to show the influence of individual surveys on the resulting coastwide yellow eel index, considering other reference periods and configurations for $I_{TARGET}$, and discussing how the habitat model may help assess eel in the future.

The SAS Chair presented the report and its conclusions to the TC. The TC discussed the report and requested some minor edits. First, the TC requested the report clarify that the continued decline in the abundance trend in each assessment is specific to yellow eel, rather than all life stages. It also requested the addition of language acknowledging the lack of eel population data outside of the US Atlantic states range. Lastly the TC asked for the report to add more description of sensitivity run that included only the longest survey in each region.

With these changes, the TC approved the report for Board consideration at the August meeting.

**2. South Carolina Electrofishing Survey Index**

After reviewing a draft of the 2022 American Eel Benchmark Stock Assessment and Peer Review Report in the February 2023 meeting materials, South Carolina Department of Natural Resources (SC DNR) contacted ASMFC staff in April to inquire about the omission of the SC DNR Electrofishing Survey as an

index of relative yellow eel abundance. After investigating this issue, it appears that the survey data were provided for consideration to the SAS and meet the criteria developed for fishery-independent indices. However, the dataset was accidentally deleted from the data sharing site, and thus was not considered by the index group during the assessment.

To correct this error, the SAS evaluated the SC DNR Electrofishing Survey data, calculated a standardized index from the survey, and then re-ran the MARSS index, regime shift analysis, and $I_{TARGET}$ base run to include SC DNR Electrofishing Survey in addition to the 14 yellow eel surveys already used. The recommended harvest when SC DNR Electrofishing Survey was included was similar throughout the time series to the original base run. The TC and SAS agree that if the assessment is accepted for management use and options for $I_{TARGET}$ are developed by a Plan Development Team, the SC DNR Electrofishing Survey should be included as an index of relative abundance since its omission was an error. A section will be added to the supplemental report to address this issue.

**3. Maine Life Cycle Survey**

Maine Department of Marine Resources (ME DMR) staff presented recent data from the state's life cycle survey for American eel. The survey monitors each life stage (glass, yellow, and silver) using various methods in West Harbor Pond. The glass eel survey began in 2001, while the surveys for the yellow and silver eel stages began in 2018. The number of glass eel caught per year has varied, with 2022 resulting in the largest catch since the study began. All yellow eels are measured for length and weight and tagged with PIT tags. Silver eels are measured and weighed individually unless catches are large (typically > 50 individual eels), in which case a subsample is taken and the remaining eels are counted and weighed collectively. The number of silver eel captured peaked in 2021 and declined again in 2022. Maine also collects samples for otolith aging, sex determination, and presence of the swim bladder parasites from both yellow and silver eels.

**4. Maine Aquaculture Plan for 2024**

ME DMR staff presented Maine's proposal for aquaculture harvest in 2024, pursuant to Addendum IV to the American eel FMP. As in the previous three years, Maine's plan includes the harvest of 200 pounds of glass eel for use in domestic aquaculture facilities. Maine has again selected to work with American Unagi, which uses recirculating aquaculture system (RAS) technology. As in previous years, American Unagi is planning to source the glass eels from several regions in Maine's watersheds to limit the impacts to individual river systems and be consistent with the statewide approach of the existing fishery. The fishermen, volume, and harvest location will be identified for all eels entering the facility.

The Maine aquaculture plan is consistent with the requirements of Addendum IV. The TC has no concerns with the proposal and supports its approval.