



Atlantic States Marine Fisheries Commission

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

MEMORANDUM

July 19, 2019

To: American Eel Management Board
From: American Eel Technical Committee
RE: Technical Committee Review of Aquaculture Proposals

Attendees: Jordan Zimmerman (DE; Chair), Ellen Cosby (PRFC; Vice-Chair), Sheila Eyer (USFWS), Danielle Carty (SC), Patrick McGee (RI), Marty Gary (PRFC), Robert Atwood (NH), Ryan Harrell (GA), Gail Wippelhauser (ME), Wendy Morrison (NOAA), Todd Mathes (NC), Troy Tuckey (VIMS), Kim Bonvechio (FL), Jen Pyle (NJ), Keith Whiteford (MD), Brad Chase (MA), Carol Hoffman (NY)

Public: Sara Rademaker (American Unagi), Fisherman's Voice

Staff: Kirby Rootes-Murdy and Kristen Anstead

The Commission's American Eel Technical Committee (TC) met via conference call on Monday July 15, 2019 to discuss the following items:

1. North Carolina's Aquaculture Proposal
2. Maine's Aquaculture Proposal
3. Update on USGS GIS Project
4. Update on Canada DFO Data Workshop

Call Summary and Recommendations:

1. North Carolina's Aquaculture Proposal for 2020-2021

Beginning with the 2016 fishing year, NC DMF has submitted an application on behalf of NC's American Eel Farm (AEF) to harvest 200 lbs of glass eels for use in aquaculture as allowed under the Aquaculture Plan provisions of Addendum IV (2014) and Addendum V (2018) to the Interstate Fishery Management Plan. Todd Mathes (NC DMF) presented an update on the 2019 fishing season as well as a new two year proposal from AEF to harvest 200 lbs annually. Mathes reported that AEF fishermen fished fyke nets 14 of 22 possible weeks primarily from January 1-March 30, 2019 and ended 6 weeks early. Dip nets were only used on one occasion. Fishing occurred in canals and tributaries surrounding Lake Mattamuskeet. In total, 13.82 lbs of glass eels (approximately 42,000 eels) were harvested and approximately 980 glass eels were released alive. CPUE data was collected but caveats include differences in net dimensions, changing harvest locations, gear modifications, inconsistent fishing effort, periods of no fishing, and recorded weights that included water.

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No citations were given to AEF fishermen in 2019. In June, there was a total mortality event attributed to bad food given to the eels; no eels were raised and brought to market.

For the 2020-2021 proposal, much of the aquaculture plan remains the same from the previous plan (May 2017) with the following updates:

- The proposal changes the start of the fishing year from Jan 1 to Nov 1, ending on March 31 instead of May 30. This would mean the fishing season would overlap two calendar years starting this fall;
- The time when nets must be left open was changed from 12:01 p.m. to 3:00 p.m.;
- Language was added to require reporting the actual number of glass eels harvested and require the reporting of the number of dip nets used in the harvest of glass eels
- Change to weekly CPUE reporting;
- Requirement added for the AEF to call-in to NCDMF with total harvest prior to leaving the landing site; and
- Language was added to require reporting the actual number of glass eels harvested if weighting is impractical after harvest

The TC discussed the proposal and asked Mathes questions to confirm that no American eels made it to market due to the mortality event and glass eels released at the beginning of the season reflected production needs to harvest some minimum amount before starting to bring the eels back to the facility. There were many questions regarding the change of the start date from January 1st, 2020, to November 1st, 2019, for the fishing season. Mathes stated that AEF was interested in exploring the availability of glass eels during November and December based on some indication from South Carolina eel fishermen as well as data from the Beaufort Bridge Ichthyoplankton Sampling Program that glass eels may be present then. Danielle Carty (SC DNR) stated that the peak of harvest for glass eels in SC's commercial fishery is February-April and that they rarely see glass eels before January. There was a minority concern expressed from the TC that starting fishing prior to January 1st fishing could open enforcement considerations despite low potential for NC harvest. Ultimately, the TC approved the proposal as is because the data collected could provide information regarding glass eels in the region during part of winter that has been previously unknown. Additionally the TC indicated it was unlikely AEF would find glass eels at that time of year.

It should be clear that proposal's November 1, 2019 would shift the fishing season to cover two calendar years. If approved, the new proposal could have harvest in one calendar year count towards two separate 200 lb harvest allowances for aquaculture. Addendum IV indicates that aquaculture proposals can propose harvest up to 200 pounds annually; the Board will need to determine whether to accommodate a proposal specifying harvest to a fishing season that occurs over two calendar years.

2. Maine's Eel Aquaculture Proposal for 2020

Sara Rademaker of American Unagi (AU) presented a report to the TC on the 2019 fishing season, which was their first year applying and getting approved, and a proposal for the 2020 season to harvest 200 lbs of glass eels. Rademaker stated that several commercial eel fishermen in Maine were contracted to fish for glass eels for AU, and all of the fishermen worked together to help this program run smoothly. Each fisherman had ten or twenty pound allotments to fish their fyke nets, and they took their catch to a buying station with a swipe card system, as required by ME DMR. It was a slow start to the season due to a cold spring in the region and most of the fishing took place from mid-April through May. AU made the decision to only use 130 lbs of their 200 lbs. quota in 2019 so as to not stress the facility and production in their first year with aquaculture quota. Law enforcement visited the facility and had no issues with the program.

For the 2020 season, Rademaker requested 200 lbs. of glass eels. AU plans on working with licensed commercial fisherman again and believes that they are better equipped to harvest more eels this year.

The TC approved the proposal for the 2020 fishing year.

In regard to both proposals, and any proposals that come to the TC in future years, Brad Chase (MA DMF) recommended the following with full TC support:

- 1.) To provide more information related to the Addendum V language on "suitable harvest locations", add a table to proposals with information on harvest sites. Possible table fields if available: watershed name, tributary name, drainage area, average seasonal discharge, river mile, tidal amplitude, years sampled, presence of hydropower, number and river mile of impassible dams and passible dams.
- 2.) Add section (1-2 paragraphs with table) on previous year's harvest to annual aquaculture proposals.
- 3.) Require CPUE reporting for all approved plans that have similar provisions as NC with enhanced reporting by location and set numbers. Include an abbreviated table of this reporting in the annual reporting/proposals. The goal would be to gain standardized fyke net catch and effort information at locations with consistent aquaculture harvest that could augment the state's monitoring of glass eel.

3. Update on USGS GIS Project

Kristen Anstead (ASMFC) updated the TC on a collaboration between ASMFC and USGS. Recently, John Young (USGS Leetown Science Center) approached ASMFC with a proposal to develop a habitat or GIS modelling framework for American eel to address several of the research recommendations from the stock assessment. In the initial phase, the TC compiled a spreadsheet of all available data sets from each respective state and jurisdiction and indicated the level of data available (i.e., environmental variables collected, biosampling data, location data). Young et al. reviewed the data summaries and requested several in raw form to explore some modelling approaches for the Delaware

River basin/Chesapeake Bay drainage area. Anstead has been working with TC members to get the raw data and will continue to keep the TC informed as the project progresses.

4. Report on Canada DFO Data Workshop

Anstead updated the TC on a workshop she and Kirby Rootes-Murdy (ASMFC) attended regarding a range-wide assessment for American eel by Canada's Department of Fisheries and Oceans (DFO). DFO received some funding to compile their fishery-dependent and – independent data across provinces and discuss all available data throughout American eel's range, similar to an ASMFC data workshop. At the workshop, participants discussed data strengths and weaknesses and methods currently used by the ASMFC (i.e., ARIMA, DBSRA) that could be applied in Canada. An assessment workshop will be held in October to review the model development by DFO staff and Laura Lee (Previous Stock Assessment Subcommittee Chair) will represent ASMFC. Anstead and Rootes-Murdy will continue to keep the TC updated on any collaboration between or meetings with DFO.