Atlantic States Marine Fisheries Commission

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MEMORANDUM

July 10, 2018

To: **American eel Management Board**

From: **American eel Stock Assessment Subcommittee**

RE: **Review of Maine's Life Cycle Survey, Maine's Aquaculture Proposal, and Draft Addendum V**

Attendees: Jordan Zimmerman (DE), Sheila Eyler (USFWS), Andrew Watson (SC), Patrick McGee (RI), Marty Gary (PRFC), Robert Eckert (NH), Ryan Harrell (GA), Gail Wippelhauser (ME), Derek Orner (NOAA), Ellen Cosby (PRFC), Todd Mathes (NC), Troy Tuckey (VIMS), Kim Bonvechio (FL), Danielle Carty (SC), Jen Pyle (NJ), Keith Whiteford (MD), Brad Chase (MA), Carol Hoffman (NY), Mike Kauffman (PA)

Public: Sara Rademaker (American Unagi)

Staff: Kirby Rootes-Murdy (ASMFC) and Kristen Anstead (ASMFC)

The Commission's American eel Technical Committee (TC) met via conference call on Tuesday July 10, 2018 to discuss the following items:

1. Status of Maine's Life Cycle Survey
2. Maine's Aquaculture Proposal
3. Draft Addendum V
4. Other Business

Call Summary and Recommendations:

1. Status of Maine's Life Cycle Survey

Maine began their survey in 2016 and improvements were made to sampling in 2017, resulting in higher catches of glass and yellow eels in the Cobboseecontee Stream. Sampling includes fyke nets for glass eels in the Coboseecontee near its confluence with the Kennebec River, eel ramp sampling at the first dam on the river, eel pot sampling and electrofishing in upstream areas, including Pleasant Pond, and silver eel sampling with fyke nets and by Didson monitoring at the American Tissue Dam. Good catches of glass eel occurred in the fyke nets in 2017 as well as in the eel ramps.

Eel potting had better results in 2017 than the previous year, likely because of modifications to the gear to reduce escapement. No silver eels were captured in the fyke nets and no confirmed silver eels were identified on Didson monitoring at the American Tissue Dam. Overall it appears that the three dams located on the lower portion of the stream are limiting eel expansion further in the system, resulting in low catches. The second dam on the river will be required to provide upstream and downstream passage through a hydropower license, but no plans are in place for eel passage at the other non-hydropower dams. Sampling is planned to continue for 2018, but it may be impacted by work in the basin, including replacement of a bridge and installation of a siphon hose in West Harbor Pond. The TC is satisfied with Maine's efforts in the survey and the only recommendation was to increase the number of eel pot sets and reduce the soak time from 48 hr to 24 hr to potentially increase catch to generate more useful CPUE and mark/recapture data

2. Maine's Eel Aquaculture Proposal

Sara Rademaker of American Unagi (AU) provided a presentation on the aquaculture proposal, requesting 200 lbs of glass eels in Maine. The TC reviewed the proposal and verified that all required components were included. The TC determined that the proposed harvest locations were not described as areas that would minimally contribute to the American eel stock, which is a requirement of the proposal. However, the TC acknowledges the difficulty in determining "minimal contribution," and because the harvest was to come from several locations, the aquaculture quota was a small proportion compared to harvest of glass eels allowed in Maine, and since Maine is already completing a Life Cycle Survey, there was not significant concern that this proposal did not focus on harvest strictly from areas of "minimal contribution." The TC requested data on survival in the facility after the harvest season was complete and before the current eels were combined in the facility with other cohorts. AU indicated they could provide this information. In discussing the proposal with AU, it was noted that over time, the facility would house cohorts from more than one year of harvest, and identifying different cohorts after the year harvested will likely not be possible due to variable eel growth rates. TC also would like to see more specificity in harvest area of the aquaculture set-aside although it is assumed that harvest of this allocation would generally come from commercial harvest areas. There were no additional concerns or comments on the proposal and the TC recommends approval of Maine's Eel Aquaculture Proposal for 2019.

3. Draft Addendum V

The TC was asked to review the Draft Addendum as well as provide comment on the same questions posed to the SAS. Briefly, these questions were in regard to a statement in the Addendum regarding American eel maturity and the yellow eel fishery, the implications to the stock if the coastwide cap was increased, and guidance for how to address overages to the coastwide cap.

Provide feedback on accuracy of statement*: American eels reach maturity at a younger age and smaller size in estuarine water than in fresh water (Clark 2009), and the 19-year time series of landings likely represents at least two generations*

(COSEWIC 2012) of estuarine yellow eels that have been exposed to the yellow eel fishery.

The TC recommends finding a different citation for the first statement. Clark 2009 describes landings information but does not address sex or size at maturity. The TC has no further concerns with this statement.

The TC was not able to assess the impact to the resource if the current coastwide cap is exceeded or if increased glass eel quota is approved for Maine. Generally the TC recommends no increases in landings at any life stage due to the depleted stock status identified in the stock assessment in 2012 and again in the stock assessment update in 2017. Any increase in landings could negatively impact the stock, but determining the extent of that impact is not possible at this time given the absence of biological reference points for the eel fishery in the stock assessment.

The TC recommended that seasonal restrictions in harvest may be helpful to address overages. However, a case-by-case analysis should be conducted when an overage occurs to determine why it occurred and those specific reasons should be addressed within one or more jurisdictions as appropriate.

The TC also discussed the language in the addendum specific to pooling of harvest for aquaculture purposes (Option 2 in section 3.2). It was noted that the option does not specify that each of the states can only contribute up to 200 lbs., so theoretically, one state could harvest up to 600 lbs. of glass eels under this option. The TC reiterated that any increase in landings- including the addition of glass eel harvest- could negatively impact the stock, but determining the extent of that impact is not possible at this time.

Last, the TC recommends changing the language in the Aquaculture Plan requirements regarding "minimal contribution." The TC acknowledges the current language is vague and difficult to evaluate. Instead of removing that requirement completely, as suggested in Option 2 of Addendum V, the TC requests the following language to be included to replace the "minimal contribution" language in that section of Addendum V:

> "States and jurisdictions may develop a Plan for aquaculture purposes. Under an approved Aquaculture Plan, states and jurisdictions may harvest a maximum of 200 pounds of glass eels annually from within their waters for use in domestic aquaculture facilities. Site selection for harvest will be an important consideration for applicants and reviewers. Suitable harvest locations will be evaluated with a preference to locations that have (1) established or proposed glass eel monitoring, (2) are favorable to law enforcement and (3) watershed characteristics that are prone to relatively high mortality rates. Watersheds known to have features (ex. impassible dams, limited area of upstream habitat, limited water quality of upstream habitat, and hydropower mortality) that would be expected to cause lower eel productivity and/or higher glass eel mortality will be preferred targets for glass eel harvest. This is not an exclusive requirement, because there will be coastal regions with interest in eel aquaculture where preferred watershed features do not occur or are not easily demonstrated. In all cases, the applicant should demonstrate that the above three interests were prioritized and considered."

4. Other Business

The TC received an update from Todd Mathes of NC regarding the status of the American Eel Farm (AEF). The AEF received approval for their aquaculture plan to harvest 200 lbs of glass eel for 2018 and 2019 from the Board with the condition that they would provide an update after the 2018 fishing season to check for violations. The AEF did not receive any violations in 2018. For the 2018 fishing season, the AEF caught some glass eels (<1 lb) which were all released. They encountered two elvers which were also released. The AEF fished for a limited number of weeks that were available to them and ultimately did not keep the glass eels they harvested.

The TC nominated Ellen Cosby from PRFC as the new Vice Chair and she accepted the position.