



# Atlantic States Marine Fisheries Commission

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## Shad & River Herring Technical Committee Call Summary

October 2, 2016

**Technical Committee Members:** Brad Chase, Ken Sprankle, Mike Brown, Mike Dionne, Bryant Bowen, Brian Neilan, Genine Lipkey, Bill Post, Joe Swann, Jeremy McCargo, Eric Hilton, Holly White, Phil Edwards, Jacque Benway Roberts, Ruth Hass-Castro, Bob Adams

**ASMFC Staff:** Jeff Kipp and Ashton Harp

**Public:** Dave Cavanaugh, Middleborough-Lakeville Herring Fishery Commission, Wes Eakin

The Shad and River Herring Technical Committee (TC) met via conference call to discuss the following items: 1) 2017 update of existing Shad and River Herring Sustainable Fishery Management Plans, 2) review the Nemasket River Sustainable Fishery Management Plan, and 3) provide a spring 2016 update on run counts and harvest from each state.

Below is a summary of their discussion.

### 1) **2017 Update of Existing Shad and River Herring Sustainable Fishery Management Plans (SFMP)**

Commercial harvest of river herring or shad is allowed as long as the respective state has a sustainable fishery management plan (SFMP) to demonstrate a stock can support a commercial (or recreational) harvest that will not diminish potential future stock reproduction and recruitment. Data to substantiate these claims can include repeat spawning ratio, SSB, juvenile abundance levels, fish passage counts, bycatch rates, etc.

Currently Maine, New Hampshire, New York, North Carolina and South Carolina have SFMPs for river herring harvest. They were approved by the Board in 2011. Although the FMP does not require a review of river herring SFMPs at certain time intervals, the states with SFMPs agreed to review and update their SFMPs by March 15, 2017. Individual SFMP reviews (i.e. were monitoring targets met, etc) and updated SFMPs will be presented to the Technical Committee (TC) in April and the Shad and River Herring (SRH) Board at the May 2017 meeting.

Currently Connecticut, Delaware River Basin (a cooperative between Delaware, New Jersey, Pennsylvania and New York), Potomac River Fisheries Commission (a cooperative between Maryland, Virginia and the District of Columbia), North Carolina, South Carolina, Georgia and Florida have SFMPs for shad harvest. They were approved by the Board at in 2011/2012. Amendment 3 (American Shad Management) to the Shad and River Herring FMP requires SFMPs to be reviewed and updated on a five-year basis. States with a Shad SFMP agreed to review and update their SFMPs by March 15, 2017. Individual SFMP reviews (i.e. were monitoring targets met each year/within the five year timeframe, are run counts increasing,

etc) and updated SFMPs will be presented to the Technical Committee (TC) in April and the Shad and River Herring (SRH) Board at the May 2017 meeting.

## **2) Review of the Nemasket River Sustainable Fishery Management Plan**

The Commonwealth of Massachusetts prepared a Sustainable Fishery Management Plan for river herring recreational harvest in the Nemasket River in response to a 2013 request from the Middleborough-Lakeville Herring Fishery Commission. The primary sustainability measure to monitor run status is the ongoing run count. Harvest will be capped at 10% of the time series mean (TSM), to be calculated each year. The plan also details a threshold that will trigger management action (exceeding cap or below the 25<sup>th</sup> percentile) and the resulting management action (harvest reduced from 10% to 5% of the TSM or three-year closure)

Brad Chase, DMF, reviewed the details of the plan with the TC, then Brad and Dave Cavanaugh, Herring Fishery Commission, responded to TC questions, summary below:

- *Do stakeholders support a conservative approach or do people want to see the fishery managed as it was prior to 2006 (i.e. before the fishery shut down)?*  
DMF and the Herring Commission met several times over the last two years to develop the SFMP. Stakeholders are conscious of the need to approach management differently this time.
- *Describe the reporting process.*  
Permits and daily trip cards will be issued to each harvester. The permit holder will need to have the physical daily trip card in hand when in possession of a river herring.
- *Is there an American Indian harvest?*  
Yes, tribes harvest SRH throughout Massachusetts including the Nemasket River. It is typically a couple of thousand fish per year. Tribal harvest is not included in the SFMP. DMF is working with tribes on reporting, however they are not bound to the SFMP requirements.
- *Prior to the fishery closure, the residents of Middleborough and Lakeville were allowed unlimited permits. How many residents were harvesting river herring?*  
Generally 600-700 permits were issued for local residents, in addition to the 300 non-resident permits.
- *What was the average weekly harvest?*  
The high number of fish harvested was ~50,000 fish per year and right before the fishery closure in 2006 it was ~30,000 fish per year.
- *Will visual run counts continue?*  
Yes, it is the primary index and serves as the basis for determining the harvest cap. Visual counts are not preformed at night and DMF is now realizing a lot of fish move at night. So the day visual counts could be a conservative number.
- *Thoughts on a biological metric?*  
DMF has collected annual biological sampling of alewife and blueback sex, size and age data since 2004. They collect 100 samples per week during runs. DMF has decided not to employ a biological metric at this point because the time series is not long enough yet

(11 yrs of data only tracks 2 generations) and at this time it is not possible to clearly identify thresholds associated with the biological data.

- *What is the breakout between alewife and blueback herring?*

The river appears to be dominated by alewives, but sampling is only done once per week. Generally the larger alewives are the first to arrive. If there was a delayed opening then the harvest might consist of more blueback herring. If it was a short season then minimal amounts of blueback herring would be harvested. Wardens from the Herring Commission will be out each day of the harvest, but the wardens will not be able to discern between the two species in all cases.

DMF presented three potential management options, 1) use the measures prior to the fishery closure, 2) harvest target management or 3) open access with reduced harvest. The TC preferred a combination of options 2 and 3. Following the call DMF revised the document to include only one preferred management approach which includes an allowance of unlimited resident permits and limits the non-resident permits to 250 per year. The harvest period includes 3 days of fishing per week over 5 weeks and a weekly catch limit of 20 fish. The TC approved the SFMP with the revised management option.

### **3) Spring 2016 Update on Run Counts and Harvests from Each State on the Call**

**Maine** – 2016 was a unique year because of the weather, there was a cold snap during the spring that affected the runs. There were a lot of river herring this year, but overall harvest was down because the market for river herring as lobster bait was lower than normal. Commercial harvesters are required to collect scale samples once per week from 25 fish; DMR gets 2000-3000 commercial samples each year. They also get a handful of recreational samples.

**New Hampshire** – Did not see fish until around May 1 this year due to colder weather in the spring. In 2015, improvements were made to the Cocheco River fish ladder, resulting in a record of ~100,000 river herring returning in 2016. Also had a record run from on the Lamprey River with ~92,000 river herring. Both runs are primarily alewives. Exeter River fish ladder had 6,600 river herring, which is the second highest run on this fish ladder. In 2016 the Exeter River dam and fish ladder were removed so there will not be a head of tide count in spring 2017, but there is a fish way on the second dam on that river where run counts will continue. Blueback herring do not seem to be doing as well, they had an all-time low of 800 fish at the Oyster River which is a blueback herring dominated run. The Winnicut River also did poorly, they did not see any fish pass. Only 10,000 fish can be harvested annual as dictated in the SFMP. Harvester reports are collected annually so a 2016 harvest cannot be estimated yet.

**Massachusetts** – Runs were better in early April but then a cold snap mid-April slowed the run. There are ~80 active herring runs, 33 have a counting group underway, 14 involve video/electronic counting and 8 of those have biological sampling. DMF tries to have at least 1 counting station at each of the 6 major coastal drainage areas that has an electronic counter and biological sample. Since the moratorium has been in place there have been modest and steady improvement since then 2011-2014 there was sharp improvement at most sites. In

some areas there have been some decreases since the 2011-2014 peaks which seem to be regional and mostly below Cape Cod. Areas above Boston did quite well in 2015/2016.

**Rhode Island** – In 2015, all major runs decreased. In 2016, runs started fairly early in late February but the cold snap in March/April slowed them down. Runs are not what they were between 2010-2014. There are active projects that involve dam removals and nature like fishways.

**Connecticut** – The only proxy for the shad population in the Connecticut River is the Holyoke Dam. Over the past 5 years the Holyoke run has seen an increase. In 2016, the run count was around 385,000 fish which is a higher number than 10 years ago. Connecticut aged ~600 scale samples; the bulk of the age structure is age 4-5. Juvenile American shad and blueback herring samples are collected weekly at 7 stations; in 2016 they collected over 24,000 juvenile shad and ~2,000 blueback herring. The relative abundance of BBH from electrofishing efforts was low in 2016. Seeing an increase in mean size which can be attributed to a strong year class in 2010. Commercial fishery operates in the lower portion of the river with 12 permits and about 7 active boats. Harvest ranges from 12,000-14,000 shad.

**New York** – Also tracking the strong 2010 blueback herring year class, 2014 had the biggest YoY in the blueback herring index. Have been collective samples for a river herring spawning stock index since 2012. They do not have a spawning stock index for shad. Commercial river herring fishery had increased restrictions in 2015, mainly no nets in the tributaries of the Hudson River. They receive commercial reports monthly from commercial fishermen which indicate this restriction has decreased landings.

**New Jersey** – River herring is closed to the commercial and recreational fishery in New Jersey. There is a shad commercial/recreational fishery on the Delaware River basin. American shad is closed on the coast. Paper harvest reports are collected and indicate low effort in the past couple of years. Recently started an adult and juvenile river herring survey.

**Maryland** – Alewife run started early this year then there was a cold snap which stopped everything and it tricked from there. The run of blueback was subpar compared to last three years. In 2015, shad showed the highest juvenile index on record and river herring also had above average juvenile indices.

**District of Columbia** – There is a monthly electrofishing survey. Adult number for river herring are average in 2016. The juvenile indices look low in comparison to the adult indices.

**Virginia** – Shad sampling on Rappahannock, James and York River which is continuation of the time series since 1998; 2016 numbers are the lowest in the time series for American shad adult spawning stock. In 2015, a fishery independent river herring anchored gill net survey began in the Chickahominy River, a Rappahannock survey began in 2016. Run a night time surface trawls once a week from June- September for river herring to get a better handle on the YoY in the Chickahominy to complement the adult sampling.

**North Carolina** – There is a gillnet survey in the Albemarle Sound. There are reduced commercial landings due to low effort or lack of fish due to environmental factors. The electrofishing surveys for shad are on the spawning grounds. The Roanoke River has been on a

decreasing trend and 2016 was the lowest CPUE on record. On Cape Fear there is an increasing trend in electrofishing abundance. A fish passage was added to the first dam on the Cape Fear River in 2012 and it appears to be helping shad upstream. On the Neuse River they are seeing alewife further south than they have before.

**South Carolina** – The 1000 year flood in October 2015 complicated things, it kept the water table high throughout the spring flows. The commercial catches and passage numbers were down most likely due to environmental factors such as cooler and turbid water that stayed in the system and deposited huge amounts of sediment. Shad numbers are average or slightly increasing in terms of YoY surveys.

**Florida** - Florida currently has 14 years of continuous fishery independent data for the shad and river herring runs in the St. Johns River. These data include electrofishing CPUE, length, and sex. The CPUE index is based on two representative strata that together cover about 40 river kilometers of spawning habitat. The 2016 American Shad run was near the median value for the time series with one stratum having a CPUE that was the 3rd lowest on record and the other stratum having a CPUE that was the 2nd highest on record. The average total length of males and females has increased during the last six years. This is reflected in a higher representation of 5 and 6 year old fish in the runs. There is no significant trend in American Shad YOY CPUE in either sample stratum. The CPUE for blueback herring has been above the median in each of the last 3 years. Catches of post-larval Blueback Herring in the YOY survey indicated that the Blueback Herring spawning grounds may extend well below the American Shad spawning grounds where the spawning stock survey occurs. Recreational effort increased from 2011 to 2014 as run sizes increased and word got out the fishing was improving. Effort decreased sharply in 2015 and 2016 but that was likely driven by environmental factors that made fishing difficult. Catch and release remains the primary mode of fishing.