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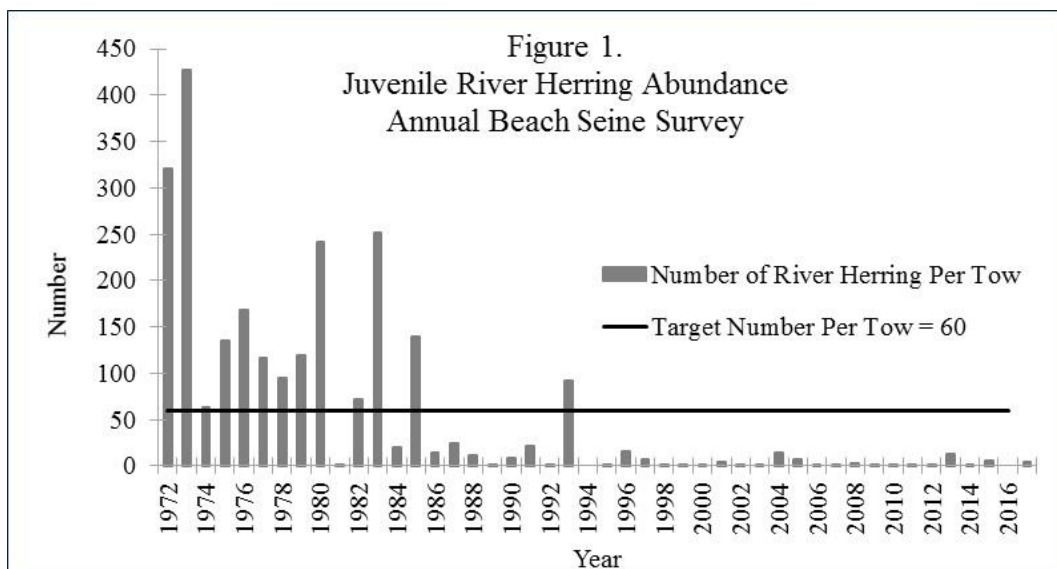
## RIVER HERRING IN NORTH CAROLINA



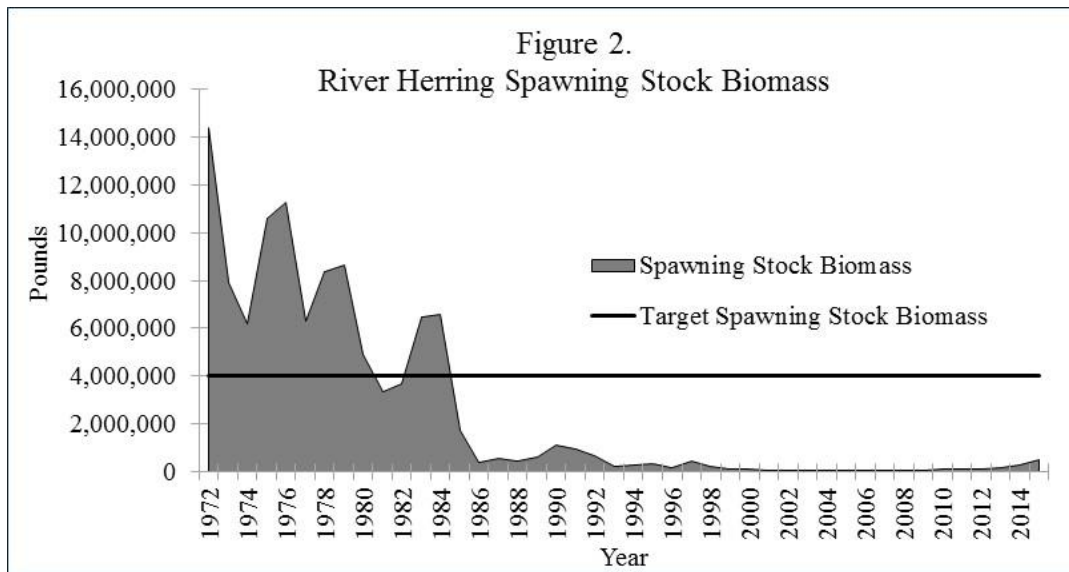
River herring fisheries in North Carolina's coastal sounds and rivers were once among the largest freshwater fisheries in the world. The major concentrations of river herring historically and currently are found in the Albemarle Sound and its tributaries, with the Chowan River accounting for most of the landings. From 1950 through the early 1980s, landings averaged 13 million pounds annually. Due to habitat loss, water quality degradation, and high levels of fishing mortality, river herring landings in North Carolina began to decline in the mid to late 1980s. Since 2007, the commercial and recreational harvest of river herring has been prohibited in all coastal and joint waters of the state. North Carolina is not the only state experiencing a decline in river herring, the most recent Atlantic coastwide stock assessment update, completed in the August 2017, indicates river herring remain depleted and at near historic lows on a coastwide basis.

The Division of Marine Fisheries has been monitoring the river herring population in the Albemarle Sound and Chowan River on an annual basis since 1972. One of the main monitoring programs used to determine the abundance and health of the river herring population is our juvenile abundance survey. From June through October each year, division staff use a 60-foot beach seine to monitor river herring spawning success and juvenile abundance at sites throughout the Chowan River and Albemarle Sound.

From 1972 to 1993 (the last year the catch of juveniles was above the target catch number), staff caught an average of 4,351 juvenile river herring annually. From 1994 to 2017, staff caught an average of 193 juvenile herring each year, with some years not catching a single juvenile fish (Figure 1). This is a classic example of a stock that has crashed, that is to say, there are not enough females in the population to produce enough juveniles each year to replace the fish that could potentially be harvested.



The other main piece of information used to determine the abundance of the population is a stock assessment which estimates the amount of female spawning stock biomass, which is the number of breeding females in the population. The most recent assessment was conducted in 2017 and included data through 2015. The estimates of spawning stock biomass from 1972 through 1984 averaged 7,587,039 pounds each year. From 1985 through 2015, the estimates of spawning stock biomass averaged 311,007 pounds each year (Figure 2).



The fact that the division and the public are seeing spawning river herring in some creeks and streams is indeed a great sign and is an indication that the harvest moratorium is working and the stock abundance is improving, albeit very slowly. There was a slight increase in the estimate of spawning stock biomass in 2014 and 2015. However, sound management practices adopted under Amendment 2 to the River Herring Fishery Management Plan require harvest be delayed until the stock has enough breeding females to produce the number of juvenile river herring each year like observed in the 1970s and early 1980s. Once targets for the number of juvenile river herring and spawning stock biomass are reached, the division will evaluate re-opening the fishery to harvest.

To learn more about the river herring stock in North Carolina, visit <http://portal.ncdenr.org/web/mf/river-herring-as>.

Please contact Charlton Godwin at 252-264-3911 or [charlton.godwin@ncdenr.gov](mailto:charlton.godwin@ncdenr.gov) if you need additional information and data surrounding the management of river herring in North Carolina.