

Introduction

The Atlantic States Marine Fisheries Commission (ASMFC) was formed by the fifteen Atlantic Coast states in 1942 to coordinate the conservation and management of the near shore fishery resources shared by the states. The authority to manage shad and river herring lies with the coastal states and is coordinated through the ASMFC under the authority of the Atlantic Coastal Fisheries Cooperative Management Act.

By federal law North Carolina must enact the requirements of ASMFC Fishery Management Plans (FMPs) or risk federal sanctions against North Carolina fisheries. The N.C. Marine Fisheries Commission chose to adopt all ASMFC FMPs as North Carolina rules through an Interjurisdictional Fishery Management Plan (IJ FMP). American shad is one of the species included in the IJ FMP.

Process

The ASFMC is amending the existing Interstate Fishery Management Plan for Shad and River Herring and has published a public information document (PID) outlining issues the commission is considering for inclusion in the amendment (available online at <http://www.asmfc.org/>). This is the first step in the ASFMC's formal amendment process. After this initial phase of public input, the ASMFC will evaluate potential management alternatives and impacts. The next step is to develop a draft amendment to the FMP with the management measures identified for further public comment. The ASMFC will then finalize management measures to be included in the new amendment.

Purpose

The purpose of this document is to inform the public of issues under consideration by the ASMFC and any potential impacts to North Carolina's fisheries so that the public has opportunity to comment on:

- § Changes observed in the fishery;
- § Actions that should or should not be taken in terms of management, regulation, enforcement, research, development and enhancement; and

§ Other concerns about the resource or the fishery.

Input received at the start of the amendment development process can have a major influence in the outcome of the final amendment.

Current Management

North Carolina has managed the American and hickory shad fisheries under the ASMFC's Shad and River Herring FMP since 1985. North Carolina does not have a separate state FMP for these species. Migratory stocks of shad and river herring are currently managed under Amendment 1, Technical Addendum 1, and Addendum 1 to the FMP. Amendment 1 focuses primarily on American shad monitoring programs and contains three primary regulatory requirements:

- § A closure of the ocean-intercept fishery, which occurred on December 31, 2004;
- § Fishing mortality targets for specific in-river fisheries; and
- § A maximum aggregate 10-fish daily creel limit in recreational fisheries for American and hickory shad.

North Carolina currently opens and closes the American shad fishery by proclamation. Since 1995, the commercial fishery has been open from January 1 to April 14 of each year. The recreational hook and line season is open year around with a 10-fish creel limit. There is currently no size limit on American shad, nor is there a commercial quota. American shad harvest is managed through gill net area closures, yardage and mesh size restrictions.

North Carolina Shad Fishery

American shad formerly supported important commercial and recreational fisheries along the entire Atlantic Coast, but all of these fisheries have declined dramatically.

In North Carolina, American shad migrate up all coastal rivers and are most abundant in the Roanoke, Chowan, Tar-Pamlico, Neuse, Northeast Cape Fear, and Cape Fear rivers, as well as Albemarle and Pamlico sounds. Fishermen pursue shad extensively in the spring, both commercially and recreationally.

North Carolina commercial landings of American shad peaked in 1897 at 8.8 million lbs. and decreased to 1.5 million pounds by 1918. A second peak of just over 3.1 million pounds was reached in 1928. Commercial landings declined and stabilized from 1930-1970, averaging 891,000 pounds. Commercial landings further declined since the early 1970s to an average of 282,000 pounds from 1973-2005.

Commercial landings fluctuate greatly over time, but are currently around the long-term average of 128,448 pounds for Albemarle Sound and 29,028 pounds for the Neuse River. Current commercial landings are below the long-term norm of 23,135 pounds for the Pamlico River and 29,912 pounds for the Cape Fear.

Status of the Stocks

North Carolina conducted regional American shad stock assessments in 1990 and 1996 focusing on Albemarle Sound. The ASMFC also conducted coastwide assessments in 1988 and 1998.

A significant challenge in all previous assessments has been lack of catch and effort data. The ASMFC 1998 assessment was unable to produce estimates of fishing mortality, but noted a serious decline in overall abundance of shad in Albemarle Sound, as well as downward trends in landings from the Pamlico, Neuse and Cape Fear rivers. The assessments also indicated pollution and habitat destruction likely contributed to the depressed condition of the shad resource.

In 2007, the ASMFC completed a third American shad stock assessment, supported by an external peer review. Both of these documents are available at www.asmfc.org. The assessment and the peer review found American shad stocks are currently at all-time lows.

Management Issues

The goal of Amendment 1 to the ASMFC's FMP is to "protect, enhance, and restore East Coast migratory spawning stocks of American shad (*Alosa sapidissima*), hickory shad (*Alosa mediocris*), alewife (*Alosa pseudoharengus*), and blueback

herring (*Alosa aestivalis*) in order to achieve stock restoration and maintain sustainable levels of spawning stock biomass.”

The ASMFC’s Shad and River Herring Management Board is concerned current American shad management is not meeting the goals of Amendment 1 to the FMP.

Issues for Public Comment

The issues listed below are intended to focus public comment and provide the management board with input necessary to develop Draft Amendment 3. The public is encouraged to submit comments on these issues.

Issue 1. Incorporate the biological reference points and restoration goals of the *American Shad Stock Assessment Report for Peer Review(2007)* into the Fishery Management Plan

Since there are many competing theories on the causes of mortality for East Coast American shad stocks, the 2007 stock assessment identified new biological reference points based on total mortality (which is the sum of mortality from fishing and natural causes) to help managers determine if measures such as seasons, size and bag limits have been successful in rebuilding a population. The 2007 stock assessment focused on a regional approach for biological reference points. The regional target chosen to evaluate the health of American shad stocks was a total mortality rate that would protect 30 percent of the mature fish in an unfished population, also known as Z_{30} .

As an example, this mortality rate in Albemarle Sound would equate to an annual rate of removal of about 60 percent of the American shad population.

Question: Is the reference point mortality rate an appropriate benchmark for rebuilding American shad stocks in North Carolina?

Issue 2. Do not increase directed fisheries for American shad

The stock assessment and peer review have determined American shad stocks are currently at all-time lows and do not appear to be recovering. Evidence suggests current management is not meeting the goals of Amendment 1 to the Shad and River Herring FMP.

Low and stable stock abundance was indicated for several mid-Atlantic stocks, including Albemarle Sound.

A few stocks have rebounded in recent years, such as the Potomac River stock. The management board is considering a provision to reopen or reestablish fisheries for American shad once a stock has recovered.

Questions: What means could be implemented to prevent the expansion of American shad fisheries in North Carolina? Should fisheries be allowed to harvest from stocks that have been restored?

Issue 3: Restrict fisheries operating on stocks where total mortality is increasing and relative abundance is decreasing

The 2007 stock assessment recommends restricting fisheries where total mortality is increasing and abundance is decreasing. Any amount of fishing on these stocks will lead to further declines in abundance.

Questions: Should fisheries be restricted when they are operating on stocks with increasing total mortality rates and decreasing abundance? If so, to what extent should they be restricted?

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Marine Fisheries
Public Information Brochure
for the
Atlantic States Marine
Fisheries Commission
Amendment 3 to the Interstate
Fishery Management Plan
for Shad and River Herring**

