



American Eels
Draft Rule Amendment
September 11, 2014



Florida Fish and Wildlife Conservation Commission
Division of Freshwater Fisheries Management
Division of Marine Fisheries Management

This document summarizes proposed draft rule amendments that addresses management needs of the American eel fishery. These proposed changes are the result of a coordinated effort with the Atlantic States Marine Fisheries Commission to manage the American eel throughout its range along the east coast of the United States.

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Atlantic States Marine Fisheries Commission (ASMFC)

- Formed by 15 Atlantic coast states in 1942
- Coordinates management of 25 fish species along the U.S. Atlantic coast
- Federal law requires member states to conform to fishery management plans (FMP) for managed species
- Each state represented by three Commissioners



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The Atlantic States Marine Fisheries Commission (ASMFC) was formed in 1942 by the 15 coastal Atlantic states, in recognition that fish do not adhere to political boundaries and that cooperation among states is necessary to conserve their populations. The ASMFC is responsible for coordinating the interstate management of species that move extensively across state lines through interstate fishery management plans (FMPs). The federal Atlantic Coastal Fisheries Cooperative Management Act of 1993 gives the ASMFC authority to identify management actions necessary to ensure healthy, self-sustaining populations of managed species and requires that member states implement the identified measures. As a member state, Florida is required to adhere to the requirements of ASMFC FMPs. If a member state does not comply with the conservation requirements of a fishery management plan under ASMFC jurisdiction, the U.S. Secretary of Commerce has the authority to shut down the relevant fishery in state waters and prohibit interstate commerce.

Each member state is represented by three commissioners. One commissioner is governor appointed (William R. Orndorf of Melbourne), one is a current state legislator (Senator Thad Altman), and one is an agency representative. The FWC representative is Jim Estes of the Division of Marine Fisheries Management.

Need for American Eel Management Changes

- Interstate FMP amended in 2013
- Florida is now required to comply with the identified management measures
 - Currently no size nor bag limit
 - Proposed minimum size limit: 9 inches
 - Proposed recreational bag limit: 25 eels
- Proposed changes expected to have a minimal impact on Florida fishermen



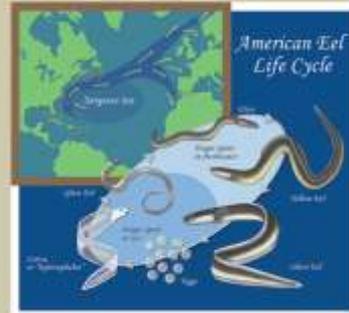
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The interstate FMP for American eel was amended by ASMFC in 2013. As a member state, Florida is now required to comply with those changes. In order for Florida to be compliant with the requirements of the interstate FMP and ensure Florida's fishery for American eels can continue to operate, staff is proposing implementation of a minimum size limit and recreational bag limit. These proposed changes are expected to have a minimal impact on Florida's eel fishery. The pot gear used in Florida to commercially target eels does not retain eels smaller than the proposed minimum size limit and the recreational fishery for eels is believed to be very small. Recreational cobia anglers use American eels as live bait, but these eels are typically purchased from retail dealers, not harvested recreationally.

Life History of the American Eel

- Only catadromous fish in North America
- Born in the Sargasso Sea
- Larvae take about a year to reach the Atlantic Coast
- Once reaching coastal waterways they transform into glass eels and start swimming upstream
- Spend 5-25 years in freshwater before returning to the Sargasso Sea to spawn



Natural History



Figueroa



FishBase.org



World Register of Marine Species



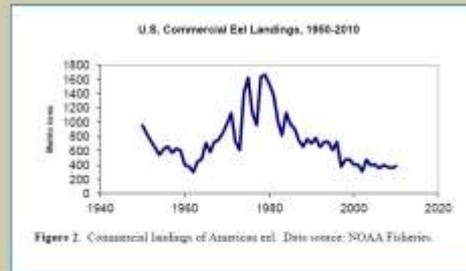
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The American eel is the only catadromous fish in North America, meaning it spends the majority of its life in freshwater lakes and rivers, but spawns at sea. In the case of the American eel, spawning takes place in the Sargasso Sea (a large region of the western Atlantic Ocean). Larvae are then carried by ocean currents to coastal areas. After the spawn, these larvae take about one year to reach the Atlantic coast.

Once they reach coastal waters, the larvae transform into slender, transparent eels, known as glass eels. As they move into the coastal rivers they soon turn a grey-brown (pigmented eels) and are referred to as elvers. These elvers (juvenile eels) migrate up rivers, making their way around barriers and obstacles. In the Northeast, elvers will spend up to 25 years in freshwater; those that end up in Florida will spend about 5-8 years in our freshwater systems. As the elvers become adults they change from pigmented to yellow eels to silver. At this final adult stage (silver eels) they migrate back to the Atlantic Ocean and ultimately to the Sargasso Sea for spawning.

Conservation Status

- 2012 ASMFC stock assessment
 - Stock designated as depleted
- Subject to threats at all life stages
- In recent years, increased market demand for glass eels due to declines in Asian and European populations
- ASMFC FMP amended in 2013 to conserve the eel resource
- Goals of the amendments are to prohibit development of additional glass eel fisheries and reduce mortality on all life stages



ASMFC American Eel Benchmark Stock Assessment 2012



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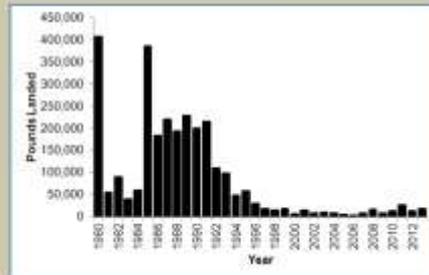
Following a recent stock assessment from the ASMFC in 2012, the ASMFC Panel review concluded that the American eel population is depleted in U.S. waters, and is at or near historically low levels. This is likely due to a combination of factors, including historical overfishing, habitat loss due to damming main stems and tributaries of rivers, mortality from passing through hydroelectric turbines, pollution, possibly parasites and disease, and unexplained factors at sea.

In the U.S., eels are harvested for food, bait, and export markets, with all life stages subject to fishing pressure. Glass eel fisheries are permitted in Maine and South Carolina. Yellow and silver eel fisheries exist in all Atlantic Coast states with the exception of Pennsylvania. However, the degree of fishing has varied over time. In recent years, demand for glass eels has increased, due in part to declines in Asian and European populations. In 2010, the European Union banned exports of the European eel due to declining population. In 2011, the earthquake and tsunami that hit Japan decimated its eel farms. The declines in supply from the European and Asian markets led to dramatic increases in prices for glass eels in 2012, culminating in a \$38 million fishery in Maine.

Following the results of the 2012 stock assessment, the interstate FMP for American eel was amended to further conserve the American eel resource, ensure ecological stability, and provide sustainable fisheries by prohibiting the development of additional glass eel fisheries and reducing mortality on all life stages. The amendments to the FMP and corresponding compliance measures were designed to achieve these goals. Implementing a nine-inch minimum size limit for all eel harvested in Florida and creating a recreational bag limit of 25 eels will bring Florida into compliance with the interstate FMP and ensure the future of Florida's eel fishery.

Commercial Harvest in Florida

- Commercial fishery concentrated on in the St. John's River Basin
- Highest reported harvest was in 1980 followed by steady decline
- Annual permits are required for the commercial harvest
- Permittees submit monthly summary reports detailing harvest and sale information
- 77 permits issued for the 2014 season
 - FL residents: 55
 - Non-Residents: 22
- Fishery focuses primarily on the harvest of adult eels



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American eels can be found in most river systems in Florida, however, most of the commercial harvest occurs on the east coast. Permitted eel harvesters have been surveyed for harvest information each year, prior to FY2006, this information was only collected for harvesters using horseshoe crabs as bait. In FY2003-2005, additional information was requested: number of pots deployed each month, percentage of harvested eels that were sold for food versus bait, and type of markets to which eels were sold (in-state vs. out-of-state). Since FY2006 when the new permitting system was implemented requiring all commercial harvesters to obtain permits, these data have been submitted on a trip-level basis and via a monthly sales summary form.

Summary of Proposed Changes

- To achieve ASMFC conservation goals for the American eel, staff is proposing the following:
 - Establish a minimum size limit of nine inches for commercial and recreational harvest of American eel
 - Establish a recreational harvest limit of 25 American eels per angler per day with an exemption for anglers that purchase American eels as bait
- Technical Changes:
 - Update forms referenced in rule
 - incorporate the existing commercial American eel harvest permit in rule



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ASMFC

American Eel Regulations – Staff will present proposed rule changes to establish bag limits on recreational harvest and a minimum size limit on the recreational and commercial harvest of American eels. These proposed rules would be consistent with the management rules adopted by the Atlantic States Marine Fisheries Commission.

Technical changes are required to update forms referenced in rule and to incorporate the American Eel Commercial Harvest Permit in rule.

Proposed Draft Rules

68A-23.005 Bag Limits, Length Limits, Open Season: Freshwater Fish

- *Minimum size limit of nine inches total length for recreational and commercial harvest*
- *Recreational bag limit of 25 per angler per day*
- *Allow an exemption for recreational anglers purchasing American eels as bait*

68A-23.015 Regulations Governing the Taking and Possession of Alligator Gar, Eels and Freshwater Mussels

- *Update the American eel permit application*



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The proposed draft rule Amendment would create 68A-23.005 (6)(e) to ensure that Florida is in compliance with the American Eel Fishery Management Plan that has been approved by the Atlantic States Marine Fisheries Commission. Through this cooperative effort by the members of the Atlantic States, the American Eel would benefit from increased protections throughout its range.

68A-23.015(2) is revised to update the American Eel Permit Application form to include appropriate references.

Staff Recommendation

Approve the proposed amendments to 68A-23.005 and 68A-23.015

- Implementing a nine inch minimum size limit
- Establishing a recreational bag limit of 25 eels
- Allow exemption for recreational anglers purchasing eels as bait
- Updating references to the commercial permit and application

If approved, the rule will be noticed and filed without further hearing unless requested



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Mass Register of Marine Species

Staff is requesting Commission approval to advertise the proposed amendments with no hearing unless requested and file for adoption as soon as possible. Staff has evaluated the rules under the standards of 68-1.004, FAC and found them to be in compliance.