

## **Fiscal Impacts of Proposed Rule Changes to the American Eel Fishery Under the NC Interjurisdictional Fishery Management Plan**

**Rule Amendments:** 15A NCAC 03J .0301 POTS  
15A NCAC 03M .0510 AMERICAN EEL

**Name of Commission:** NC Marine Fisheries Commission

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**Impact Summary:** State government: No  
Local government: No  
Federal government: No  
Substantial impact: No

**Authority:** G. S. 113-134 (Rules); G.S. 113-173 (Recreational Commercial Gear License); G.S. 113-182 (Regulation of fishing and fisheries); G.S. 113-221.1 (Proclamations; emergency review); G.S. 143B-289.52 (Marine Fisheries Commission – powers and duties)

**Necessity:** As required under the North Carolina Interjurisdictional Fishery Management Plan and in accordance with Addendum III to the Atlantic States Marine Fisheries Commission Fishery Management Plan for American Eel, the proposed rule changes implement a nine-inch minimum size limit, a 25-fish recreational possession limit, and a no-take provision for American eels from September 1 to December 31 unless they are taken with baited pots. Additionally, there will be a minimum mesh size requirement of one-half by one-half-inch mesh for eel pots, allowing for a phase in period until January 1, 2017. Rule changes are proposed to allow state law to align with federal mandates and maintain consistency with rules regulating the American eel fishery in inland waters. Additionally, part of the proposed rule change regarding proclamation authority has been put forth as part of an ongoing attempt to standardize rule language granting proclamation authority throughout NC Marine Fisheries Commission rules.

### **I. Summary**

The proposed rule changes comply with the North Carolina Interjurisdictional Fishery Management Plan by adopting the required measures in Addendum III to the Atlantic States Marine Fisheries Commission Fishery Management Plan for American Eel and are expected to help rebuild depleted eel stocks as well as clarify proclamation authority. These rule changes are not expected to incur costs independent from federal requirements, as these changes conform to what is required by federal law. These rule changes will initially generate some costs to both the commercial and recreational fishing sectors; however, the commercial sector is expected to experience the majority of these costs. The cost to the recreational fishing sector is not quantified but is likely to be

minor. The upper bound of the estimated cost to the commercial fishing sector is between \$374,500 and \$409,500 in the first year, however the realized costs from the rule changes is likely to be lower. The rule changes allow the North Carolina commercial and recreational fisheries involving American eels to maintain federal compliance and continue to take place. Over the past five years (2009 to 2013), an average of approximately 70,000 pounds of American eels with an ex-vessel value of \$177,000 has been commercially landed annually in North Carolina.

## **II. Introduction and Purpose of Rule Changes**

American eels are managed by the Atlantic States Marine Fisheries Commission (ASMFC) Interstate Fishery Management Plan (FMP) for American Eel, adopted initially in 2000. The 2012 Benchmark Stock Assessment found that the American eel population in U.S. waters is depleted. The assessment concluded that “[t]he stock is at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, toxins and contaminants, and disease.” (ASMFC, 2013)

Federal law requires the conservation management actions approved through an ASMFC FMP be implemented by the state of North Carolina (US CODE TITLE 16 CHAPTER 71 § 5104 - STATE IMPLEMENTATION OF COASTAL FISHERY MANAGEMENT PLANS)<sup>1</sup>. From the North Carolina perspective, the Fisheries Reform Act of 1997 (S.L. 1997-400) mandates development of state FMPs. American eel is included in the NC Interjurisdictional FMP (IJ FMP). The goal of the IJ FMP is to adopt federal FMPs, consistent with North Carolina law, by reference and implement corresponding fishery regulations in North Carolina in order to maintain compliance or compatibility with approved federal FMPs and amendments, now and in the future. In the case of the American eel fishery, should the state of North Carolina choose to go out of federal compliance, the US Secretary of Commerce may declare a moratorium on the state’s fishery (US CODE TITLE 16 CHAPTER 71 § 5106 – SECRETARIAL ACTION)<sup>2</sup>.

Addendum III to the ASMFC American Eel FMP was approved for management at the ASMFC American Eel Management Board’s August 2013 meeting. This addendum had as its basis a peer-reviewed and board-approved stock assessment. The 2012 American Eel Benchmark Stock Assessment found the stock status of American eel to be depleted and recommended reducing mortality at all life stages, noting that fishing of young-of-the-year (glass eels) and out-migrating silver eels could be particularly detrimental. Addendum III incorporated management measures for each life stage -- glass eel, elver, yellow, and silver eel -- and must be implemented by January 1, 2014.

Addendum III is currently being implemented through temporary suspension of current rules and issuance of proclamation (via rule 15A NCAC 03I .0102 TEMPORARY SUSPENSION OF RULES and 03M .0512 COMPLIANCE WITH FISHERY MANAGEMENT PLANS) for compliance of North Carolina eel fisheries with federal requirements. In addition to meeting federal requirements, rule changes are proposed instead of addressing the management of the eel fishery completely through

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<sup>1,2</sup> Text available in the NC Interjurisdictional Fisheries Management Plan at ([http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=ea2668aa-71db-4393-b401-2c72a1154b2f&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=ea2668aa-71db-4393-b401-2c72a1154b2f&groupId=38337))

proclamation in order to maintain consistency with rule changes for eel pots in inland waters under the jurisdiction of the North Carolina Wildlife Resources Commission (15A NCAC 10C .0404). Also, NCDMF expects that proposed measures in the ASMFC Interstate FMP for American eels will remain in place for several years. Putting long-standing measures into rule benefits the public through improved accessibility and greater awareness of requirements among the regulated community.

Several considerations for rule changes exist. Addendum III requires eel pots to be constructed of one-half by one-half-inch or larger mesh with a three-year phase-in period allowed, during which a four-inch square escape panel of one-half by one-half-inch or larger mesh may be used. North Carolina currently requires this four-inch square escape panel constructed of one-half by one-inch-mesh. Previously, pots could be constructed of any mesh size as long as they had the required escape panel. To comply with ASMFC rules, eel pots must be constructed entirely of one-half by one-half-inch mesh by January 1, 2017. In conjunction with the mesh size requirement, the ASMFC implemented a nine-inch minimum size limit for American eel. This requires North Carolina to raise its minimum size limit from six inches to nine inches and reduce the recreational bag limit from 50 to 25 American eels per person per day effective January 1, 2014. However, party/charter boats are allowed to continue to possess 50 American eels per crew/captain for the purpose of transporting bait and participating in charter operations.

Addendum III also requires a harvest moratorium on eels from gear types other than baited traps and pots or spears annually from September 1 through December 31. Thus, eels cannot be retained from gear types such as fyke nets, pound nets, gill nets, trawls, or any other type of commercial fishing gear during these months. These gear types may still be used for fishing, but the retention of eels from these gear types is not allowed.

Additionally, part of the proposed rule change regarding proclamation authority has been put forth as part of an ongoing attempt to standardize rule language granting proclamation authority throughout NC Marine Fisheries Commission rules. NC Division of Marine Fisheries (NCDMF) staff has identified that proclamation authority across several rules is generally similar in nature; however, the specific rule language stating the proclamation authority often differs greatly from rule to rule. In an attempt to improve consistency across rules and public clarity of proclamation authority, NCDMF seeks to standardize rule language describing proclamation authority when possible. These general rule changes are not intended to alter the scope of the proclamation authority, nor are they being proposed with the intention of changing current management.

### **III. Costs**

Eel fishermen will face costs from the federally mandated requirements; however, NCDMF does not expect the related proposed rule changes to create costs outside of meeting the minimum federal requirements, as these changes conform to what is required by federal law. The proposed rule change clarifying proclamation authority is not expected to incur any costs, as it not intended to alter the scope of the proclamation authority or management practices.

The annual harvest moratorium on eels from gear types other than baited traps and pots or spears from September 1 through December 31 may incur some minimal costs. This

measure will cause less than a 0.001-percent reduction in eel landings during these months based on commercial landings data; therefore, NCDMF expects these costs to be negligible. These gear types may still be fished but the retention of eels from these gear types would not be allowed.

The increased size limit for eels will generate costs for fishermen, as a larger percentage of the catch will be discarded. The precise extent to which the catch will be decreased is unknown. However NCDMF has estimated the cost based on the value of the entire commercial catch. The commercial eel fishery in North Carolina has incurred landings worth an average of \$175,155 over the past five years (2009-2013). Assuming a 10-percent to 30-percent reduction in landings due to the increased size limit, which is seen as a reasonable range by NCDMF staff, the cost to commercial fishermen is estimated to be approximately \$17,500 to \$52,500 annually.

Decreasing the recreational bag limit from 50 eels to 25 eels is expected to incur minor costs. Some recreational fisheries such as the cobia and striped bass fisheries do utilize eels for bait. The bag limit of 25 eels per person will still allow the use of eels as bait to continue in these fisheries. Additionally, for-hire operations will still be allowed to possess 50 eels per person for the captain and crew.

The majority of the cost of the proposed rule change stems from the new mesh requirement for an eel pot. All pots that have a mesh size of less than one-half by one-half-inch will need to be replaced by January 1, 2017. While the actual number of pots to be replaced is unknown, eel logbook data indicates that the average number of eel pots fished per person from 2009 to 2013 was 204 pots. Over this same time frame there was an average of 25 participants in the eel pot fishery annually. It is estimated that a fully rigged eel pot costs approximately \$70 per pot. Assuming that all participants had to replace all eel pots due to the proposed rule change, the estimated cost would be approximately \$357,000. This is an upper-bound estimate of cost to fishermen, as it is likely that some of the eel pots will need to be replaced due to damage to the gear in the absence of the proposed rule changes. The rule changes may accelerate the cost of gear replacement forward several years for some industry participants, but it is not likely that all gear will need to be replaced solely to meet the new mesh size requirements. Furthermore, some eel pots may already meet the mesh-size requirements and eel pots that need to be replaced before the required implementation date of January 1, 2017 will likely meet the new mesh standards as fishermen will have had several years of advanced notice of the new mesh size requirements.

#### **IV. Benefits**

The proposed rule changes may help maintain and rebuild American eel populations and improve public clarity of eel regulations by allowing rules to comply with the updated federal requirements as mandated by the ASMFC, which in turn allows North Carolina to maintain compliance with federal mandates (US CODE TITLE 16 CHAPTER 71 § 5104 - STATE IMPLEMENTATION OF COASTAL FISHERY MANAGEMENT PLANS). Aligning rules with federally mandated requirements as well as the eel management rule for inland waters helps the regulated public more clearly understand eel fishery management regulations as well as allows the fishery to continue to take place (US CODE TITLE 16 CHAPTER § 5106 – SECRETARIAL ACTION). Over the past five years (2009 to 2013) an average of approximately 70,000 pounds of American eels with an ex-

vessel value of \$177,000 has been commercially landed annually in North Carolina. This fishery along with the use of eels as bait in recreational fisheries could potentially be put in jeopardy should the fisheries management measures outlined in Addendum III to the ASMFC American Eel FMP not be implemented. This is an upper-bound estimate of the benefits of the rule changes, as fishermen could switch to other fisheries if the eel fishery were closed and because there is the possibility that the federal government would not shut down North Carolina's eel fishery in the absence of the proposed rule changes. Also, the clarification of proclamation authority makes this rule language consistent with other rules granting proclamation authority. This consistency among rules granting proclamation authority aids in public awareness of what type of fisheries management measures may be specified by proclamation.

## V. Comprehensive Statement of Costs and Benefits

Rule changes associated with the ASMFC Interstate FMP for American Eel are expected to have a combined cost and benefit that will not meet the statutory threshold for a substantial economic impact of \$1 million in aggregate costs and benefits in any given 12-month period.

NCDMF's estimates of the total costs and benefits of the proposed rule changes include:

1) Modification of 15A NCAC 03J .0301 and 15A NCAC 03M .0510 will not impose costs beyond what is required by federal law. The upper-bound estimate of these costs is \$374,500 to \$409,500 in a single 12-month period. The rule change made outside of federal requirements in 15A NCAC 03J .0301 that clarifies proclamation authority will not impose any costs, as this rule change is not intended to alter the scope of the proclamation authority or management practices. Implementing the proposed rule changes will continue consistency with rules regulating American eel fishing in inland waters as well as maintain federal compliance of the North Carolina American eel fishery, thereby allowing this fishery to continue to occur. This fishery has accounted for an average of approximately 70,000 pounds of American eels with an ex-vessel value of \$177,000 annually over the past five years (2009-2013). This is the upper-bound estimate of the benefit of the rule changes. Finally, clarifying rule language aimed at proclamation authority aids in public awareness of what type of fisheries management measures may be specified by proclamation.

Table 1. Summary of estimated costs and benefits from proposed rule changes.

<b>Rule</b>	<b>Estimated Cost</b>	<b>Estimated Benefit</b>
15A NCAC 03J .0301 and 15A NCAC 03M .0510	\$357,000 (upper-bound of cost occurring one time) \$17,500 to \$52,500 (annual)	\$177,000 (upper-bound of benefit occurring annually)
Total	\$374,500 to \$409,500 (upper-bound of cost in a single 12-month period)	\$177,000 (upper-bound of benefit occurring annually)

## VI. Certificate of Federal Requirement

In accordance with requirements outlined in G.S. § 150B-19.1. (g), the proposed rule changes in 15A NCAC 03J .0301 and 15A NCAC 03M .0510 are being put forth to maintain compliance with the ASMFC Interstate FMP for American Eel Addendum III. Federal law requires the conservation management actions approved through an ASMFC FMP be implemented by the state of North Carolina (US CODE TITLE 16 CHAPTER 71 § 5104 - STATE IMPLEMENTATION OF COASTAL FISHERY MANAGEMENT PLANS).

All proposed rule changes regarding the management of the American eel fishery are being put forth as part of this federal requirement other than a change to rule language clarifying proclamation authority in the eel fishery. This measure is not specified in the ASMFC Interstate FMP for American Eel Addendum III. This proposed rule change is being put forth as part of an ongoing attempt to standardize rule language granting proclamation authority throughout NC Marine Fisheries Commission rules. NC Division of Marine Fisheries (NCDMF) staff has identified that proclamation authority across several rules is generally similar in nature; however, the specific rule language stating the proclamation authority often differs greatly from rule to rule. In an attempt to improve consistency across rules and public clarity of proclamation authority, NCDMF seeks to standardize rule language describing proclamation authority when possible. These general rule changes are not intended to alter the scope of the proclamation authority or current management.

## VII. Works Cited

Atlantic States Marine Fisheries Commission (August 2013). *Addendum III to the Fishery Management Plan for American Eel*.

[http://www.asmfc.org/uploads/file//amEelAddendum\\_III\\_Aug2013.pdf](http://www.asmfc.org/uploads/file//amEelAddendum_III_Aug2013.pdf).

North Carolina Department of Environment and Natural Resources (June 2008). North Carolina Division of Marine Fisheries. *North Carolina Interjurisdictional Fisheries Management Plan*. [http://portal.ncdenr.org/c/document\\_library/get\\_file?uuid=ea2668aa-71db-4393-b401-2c72a1154b2f&groupId=38337](http://portal.ncdenr.org/c/document_library/get_file?uuid=ea2668aa-71db-4393-b401-2c72a1154b2f&groupId=38337).

## Appendix: Proposed Rule Changes

NOTE: CHANGES TO 15A NCAC 03J .0301 INCLUDE CHANGES FOR EEL POTS AND CHANGES TO THE MANAGEMENT OF USER CONFLICTS WHICH ARE COVERED IN A SEPARATE ANALYSIS.

### 15A NCAC 03J .0301 POTS

(a) It is unlawful to use pots except during time periods and in areas specified herein:

- (1) In Coastal Fishing Waters from December 1 through May 31, except that all pots shall be removed from ~~internal waters~~ Internal Waters from January 15 through February 7. Fish pots upstream of U.S. 17 Bridge across Chowan River and upstream of a line across the mouth of Roanoke, Cashie, Middle and Eastmost Rivers to the Highway 258 Bridge are exempt from the January 15 through February 7 removal requirement. The Fisheries Director may, by proclamation, reopen various waters to the use of pots after January 19 if it is determined that such waters are free of pots.
- (2) From June 1 through November 30, north and east of the Highway 58 Bridge at Emerald Isle:
  - (A) In areas described in 15A NCAC 03R .0107(a);
  - (B) To allow for the variable spatial distribution of crustacea and finfish, the Fisheries Director may, by proclamation, specify time periods for or designate the areas described in 15A NCAC 03R .0107(b); or any part thereof, for the use of pots.
- (3) From May 1 through November 30 in the Atlantic Ocean and west and south of the Highway 58 Bridge at Emerald Isle in areas and during time periods designated by the Fisheries Director by proclamation.

The Fisheries Director may, by proclamation authority established in 15A NCAC 03L .0201, further restrict the use of pots to take blue crabs.

(b) It is unlawful to use pots:

- (1) in any navigation channel marked by State or Federal agencies; or
- (2) in any turning basin maintained and marked by the North Carolina Ferry Division.

(c) It is unlawful to use pots in a commercial fishing operation unless each pot is marked by attaching a floating buoy which shall be of solid foam or other solid buoyant material and no less than five inches in diameter and no less than five inches in length. Buoys may be of any color except yellow or hot pink or any combination of colors that include yellow or hot pink. The owner shall always be identified on the attached buoy by using engraved buoys or by engraved metal or plastic tags attached to the buoy. Such identification shall include one of the following:

- (1) gear owner's current motorboat registration number; or
- (2) gear owner's U.S. vessel documentation name; or

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- (3) gear owner's last name and initials.
- (d) Pots attached to shore or a pier shall be exempt from Subparagraphs (a)(2) and (a)(3) of this Rule.
- (e) It is unlawful to use shrimp pots with mesh lengths smaller than one and one-fourth inches stretch or five-eighths-inch bar.
- (f) It is unlawful to use ~~eel-pots~~ to take eels with mesh ~~sizes-lengths~~ smaller than ~~one inch by one-half inch~~ unless such pots contain one-half inch by one-half inch, except until January 1, 2017 eel pots of any mesh length with an escape panel that is at least four inches square with a mesh size-length of one inch by one-half inch located in the outside panel of the upper chamber of rectangular pots and in the rear portion of cylindrical pots, except that not more than two eel pots per fishing operation with a mesh of any size may be used to take eels for bait. pots are allowed.
- (g) It is unlawful to use crab pots in ~~coastal fishing waters~~ Coastal Fishing Waters unless each pot contains no less than two unobstructed escape rings that are at least two and five-sixteenths inches inside diameter and located in the opposite outside panels of the upper chamber of the pot, except the following are exempt from the escape ring requirements:
- (1) unbaited pots;
  - (2) pots baited with a male crab; and
  - (3) pots set in areas and during time periods described in 15A NCAC 03R .0118.
- (h) The Fisheries Director may, by proclamation, exempt the escape ring requirements described in Paragraph (g) of this Rule in order to allow the harvest of mature female crabs and may impose any or all of the following restrictions:
- (1) ~~specify areas;~~
  - (2) ~~specify time periods; and~~
  - (3) ~~specify means and methods.~~
  - (1) specify time;
  - (2) specify areas;
  - (3) specify means and methods;
  - (4) specify seasons; and
  - (5) specify quantity.
- (i) It is unlawful to use more than 150 crab pots per vessel in Newport River.
- (j) It is unlawful to remove crab pots from the water or remove crabs from crab pots between one hour after sunset and one hour before sunrise.
- ~~(k) User Conflicts:~~
- (1) ~~In order to address user conflicts, the Fisheries Director may by proclamation impose any or all of the following restrictions:~~
    - (A) ~~specify areas;~~
    - (B) ~~specify time periods; and~~
    - (C) ~~specify means and methods.~~

~~The Fisheries Director shall hold a public meeting in the affected area before issuance of such proclamation.~~

- ~~(2) Any person(s) desiring user conflict resolution may make such request in writing addressed to the Director of the Division of Marine Fisheries, P.O. Box 769, 3441 Arendell St., Morehead City, North Carolina 28557-0769. Such requests shall contain the following information:~~
- ~~(A) a map of the affected area including an inset vicinity map showing the location of the area with detail sufficient to permit on-site identification and location;~~
  - ~~(B) identification of the user conflict causing a need for user conflict resolution;~~
  - ~~(C) recommended solution for resolving user conflict; and~~
  - ~~(D) name and address of the person(s) requesting user conflict resolution.~~
- ~~(3) Upon the requestor's demonstration of a user conflict to the Fisheries Director and within 90 days of the receipt of the information required in Subparagraph (k)(2) of this Rule, the Fisheries Director shall issue a public notice of intent to address a user conflict. A public meeting shall be held in the area of the user conflict. The requestor shall present his or her request at the public meeting, and other parties affected may participate.~~
- ~~(4) The Fisheries Director shall deny the request or submit a proclamation that addresses the results of the public meeting to the Marine Fisheries Commission for their approval.~~
- ~~(5) Proclamations issued under Subparagraph (k)(1) of this Rule shall suspend appropriate rules or portions of rules under 15A NCAC 03R .0107 as specified in the proclamation. The provisions of 15A NCAC 03I .0102 terminating suspension of a rule pending the next Marine Fisheries Commission meeting and requiring review by the Marine Fisheries Commission at the next meeting shall not apply to proclamations issued under Subparagraph (k)(1) of this Rule.~~

~~(k)~~ It is unlawful to use pots to take crabs unless the line connecting the pot to the buoy is non-floating.

~~(l)~~ It is unlawful to use pots with leads or leaders to take shrimp. For the purpose of this Rule, leads or leaders are defined as any fixed or stationary net or device used to direct fish into any gear used to capture fish. Any device with leads or leaders used to capture fish is not a pot.

*Authority G. S. 113-134; 113-173; 113-182; 113-221.1; 143B-289.52*

#### **15A NCAC 03M .0510 AMERICAN EEL**

It is unlawful to:

- (1) Possess, sell or take American eels less than six-nine inches in length; ~~and~~
- (2) Possess more than 50-25 American eels per person per day for recreational ~~purposes~~, purposes, except the master and each mate of for-hire vessels that hold a valid for-hire license may possess 50 eels each per day; and

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- (3) Possess American eels from September 1 through December 31 except when taken by baited pots.

*Authority G.S. 113-134; 113-182; 143B-289.52*