

# Public Comment Draft

## *Atlantic States Marine Fisheries Commission*



*ASMFC Vision Statement:*

Healthy, self-sustaining populations for all Atlantic coast fish species or successful restoration well in progress by the year 2015.

**ADDENDUM I**  
**TO THE**  
**INTERSTATE FISHERY MANAGEMENT PLAN**  
**FOR AMERICAN EEL**

Approved for Public Comment  
October 31, 2005

**PUBLIC COMMENT PROCESS AND PROPOSED TIMELINE**

The public is encouraged to submit comments regarding this document at any time during the addendum process. The final time and date that comments will be accepted is **5:00 PM on February 7, 2005**. Comments may be submitted by mail, email, or fax.

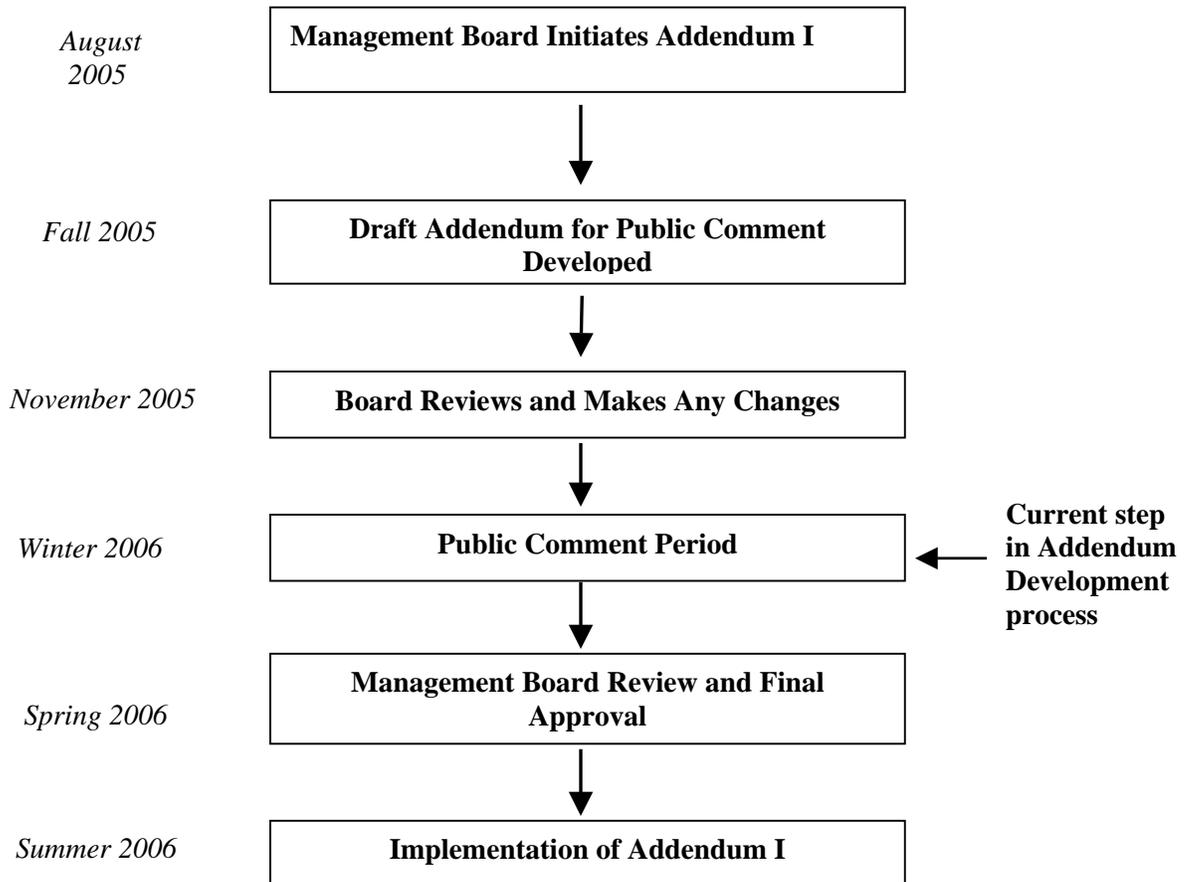
If you would like to submit comment in writing, please use the contact information below.

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**ASMFC's Addendum Process and Timeline**

The development of Addendum I to the Interstate Fishery Management Plan for American Eel (FMP) will follow the general process outlined below. Tentative dates are included to illustrate the timeline of the addendum process.



## INTRODUCTION

The American Eel Technical Committee recommends that, at a minimum, states be required to provide accurate catch and effort data for use in future stock assessments. Many states have expressed continued difficulty in obtaining accurate data on catch and effort for eels. As a result, the Technical Committee recommends the implementation of a specific eel harvester permit/license for each state, with each license requiring reporting of catch and effort. The permit/license should be required for all eel harvesters, including those who harvest eels for use as bait. The Technical Committee also recommends a specific eel report and license/permit from dealers, including bait dealers. Harvester and/or dealer reports must differentiate between the amount of eels used/sold for food and the amount of eels used/sold for bait. In August 2005, the American Eel Management Board directed the American Eel Plan Development Team (PDT) to initiate an Addendum to establish a mandatory catch and effort monitoring program for American eel.

This draft addendum presents the background on the Atlantic States Marine Fisheries Commission's (ASMFC) management of American eel, the addendum process and anticipated timeline, and a statement of the problem. This document also provides for public consideration and comment on the measures presented.

### Background

The American eel occupies fresh, brackish and coastal waters along the Atlantic from the southern tip of Greenland to northeastern South America. The species is catadromous, spawning only in the Sargasso Sea and then migrating toward land and into freshwater, where it spends the majority of its life. After hatching and ocean drift, initially in the pre-larval stage and then in the leptocephalus phase, metamorphosis occurs. In most areas, glass eel enter the nearshore area and begin to migrate up-river, although there have been reports of leptocephali found in freshwater in Florida. Eel are found in the marine environment during various parts of their life cycle. Elvers, yellow eel, and silver eel make extensive use of freshwater systems. Therefore, a comprehensive eel management plan and comprehensive set of regulations must consider the various unique life stages and the diverse habitats used, in addition to society's interest and use of this resource.

American eel (*Anguilla rostrata*) occupy a significant and unique niche in the Atlantic coastal reaches and its tributaries. Historically, American eel were very abundant in East Coast streams, comprising more than 25 percent of the total fish biomass. Eel abundance declined from historic levels but remained relatively stable until the 1970s. More recently, fishermen, resource managers, and scientists postulated a further decline in abundance based on harvest information and limited assessment data. This resulted in the development of the Atlantic States Marine Fisheries Commission (ASMFC) Interstate Fishery Management Plan (FMP) for American eel. The goals of the Interstate Fishery Management Plan for American Eel are:

1. Protect and enhance the abundance of American eel in inland and territorial waters of the Atlantic States and jurisdictions and contribute to the viability of the American eel spawning population; and
2. Provide for sustainable commercial, subsistence, and recreational fisheries by preventing overharvest of any eel life stage.

In support of this goal, the following objectives were included in the FMP:

- Improve knowledge of eel utilization at all life stages through mandatory reporting of harvest and effort by commercial fishers and dealers, and enhanced recreational fisheries monitoring.
- Increase understanding of factors affecting eel population dynamics and life history through increased research and monitoring.
- Protect and enhance American eel abundance in all watersheds where eel now occur.
- Where practical, restore American eel to those waters where they had historical abundance but may now be absent by providing access to inland waters for glass eel, elvers, and yellow eel and adequate escapement to the ocean for pre-spawning adult eel.
- Investigate the abundance level of eel at the various life stages, necessary to provide adequate forage for natural predators and support ecosystem health and food chain structure.

### **Status of the Stock**

Current stock status for American eel is poorly understood due to limited and non-uniform stock assessment efforts and protocols across the range of this species. Reliable indices of abundance of this species are scarce. Limited data from indirect measurements (harvest by various gear types and locations) and localized direct stock assessment information are currently collected.

Although eel have been continuously harvested, consistent data on harvest are often not available. Harvest data is often a poor indicator of abundance, because harvest is dependent on demand and may consist of annually changing mixes of year classes. Most of the data collections were of short duration and were not standardized between management agencies. Harvest data from the Atlantic coastal state (Maine to Florida), indicate that the harvest has declined after a peak in the mid-1970s. Annual eel catch ranged from 913,251 lbs. to 3,626,936 lbs. between 1970 and 2000. The lowest harvest (between 1970 and 2001) was 898,459 lbs., which occurred in 2001. Because fishing effort data is unavailable, however, finding a correlation between population numbers and landings data is problematic.

As stated in Section 2 of the FMP, the purpose of this management effort is to reverse any local or regional declines in abundance and institute consistent fishery-independent and dependent monitoring programs throughout the management unit.

In 2003, declarations from the International Eel Symposium (AFS 2003, Quebec City, Quebec, Canada) and the Great Lakes Fisheries Commission (GLFC) highlighted concerns regarding the health of American eel stock. Available data points to decreasing recruitment, combined with localized declines in abundance. This information is cause for concern and represents an opportunity for cooperation with other entities such as the GLFC to preserve the American eel stock.

In 2005, the ASMFC American Eel Stock Assessment Subcommittee conducted a stock assessment for American Eel. This assessment has been reviewed by the ASMFC American Eel Technical Committee and will undergo an independent peer review in December 2005. The results of the stock assessment and peer review will be presented to the ASMFC American Eel Management Board in February 2006.

### **Status of the Fishery**

American eel currently support important commercial fisheries throughout their range. Fisheries are executed in rivers, estuaries, and the ocean. Commercial fisheries for glass eel/elver exist in Maine, South Carolina, and Florida (though in South Carolina and Florida, no commercial glass eel/elver landings were recorded in 2004), whereas yellow/silver eel fisheries exist in all states/jurisdictions with the exception of Pennsylvania and the District of Columbia.

#### Commercial:

Commercial landings decreased from the high of 1.8 million pounds in 1985 to a low of 649 thousand pounds in 2002. Landings in 2004 totaled 921,896 pounds. The states of New Jersey, Delaware, Maryland, Virginia, and North Carolina each landed over 100,000 pounds of eel, and together accounted for 88% of the coastwide commercial total landings in 2004.

#### Recreational:

Few recreational anglers directly target eel. Hook and line fishermen, for the most part, catch eel incidentally when fishing for other species. The NMFS Marine Recreational Fisheries Statistics Survey (MRFSS), which has surveyed recreational catch in ocean and coastal county waters since 1981, shows a declining trend in the catch of eel during the latter part of the 1990's. According to MRFSS<sup>1</sup>, 2004 recreational total catch was 112,001 fish, which represents a slight decrease in number of fish from 2003 (156,381 fish). New Jersey and Delaware combined represented 40% of the recreational American eel catch, and New York and Delaware combined represented 62% of the recreational

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<sup>1</sup> MRFSS Data for American Eel are unreliable. 2004 Proportional Standard Error (PSE) values for recreational harvest in Connecticut, New York, New Jersey, Delaware, Maryland, and North Carolina are 100, 74.1, 100, 47.3, 83.5, and 100, respectively.

American eel harvest in 2004. About 79% of the eel caught were released alive by the anglers in 2004 (MRFSS 2004 total recreational harvest was 23,442 fish). Eel are often purchased by recreational fishermen for use as bait for larger gamefish such as striped bass, and some recreational fishermen may catch eels and then utilize them as bait.

## **STATEMENT OF THE PROBLEM**

The 2000 Interstate Fishery Management Plan for American Eel (FMP) includes a requirement for states to institute licensing and reporting mechanisms to ensure that annual effort (including total units of gear deployed) and landings information by life stage (glass eel/elver, yellow eel, and silver eel) are provided by harvesters and/or dealers. The stock assessment also recommends improved catch and effort monitoring for improvement of future stock assessments. In addition, the ACCSP will require a comprehensive permit/license system for all commercial dealers and fishermen.

The 2000 FMP requires states to report the following information each year.

### Commercial fishery

- Estimates of directed harvest, by month, by region as defined by the states
  - Pounds landed by life stage and gear type (defined in advance by the ASMFC)
  - Biological data taken from representative sub-samples to include sex ratio and age structure (for yellow/silver eels), length and weight if available
  - Estimated percent of harvest going to food versus bait
- Estimates of export by season (provided by dealers)
- Harvest data provided as CPUE (by life stage and gear type)
- Permitted catch for personal use, if available

### Recreational fishery

- Estimate of recreational harvest by season (if available)
  - Biological data taken from representative sub-samples to include sex ratio, age structure, length and weight (if available)

The 2005 stock assessment for American eel was still in draft form during development of this Addendum. An independent peer review of the stock assessment is scheduled for December 2005. In the stock assessment for American eel, the Stock Assessment Subcommittee makes the following recommendation for improving future stock assessments: Improve catch and effort monitoring by requiring trip-level landing and effort data by state. States should be required to report catch and effort in standardized units. Effort should be reported by gear type, on the number of units of gear fished per person per trip, including soak time or fishing time. The SASC also recommends that states be required to report these effort data annually. States should be required to implement commercial eel harvest and dealer permits as a measure of participation.

The ACCSP commercial data collection program will be a mandatory, trip-based system with all fishermen and dealers required to report a minimum set of standard data elements (refer to the ACCSP Program Design Document for details). Submission of commercial fishermen and dealer reports will be required after the 10<sup>th</sup> of each month.

Any marine fishery products landed in any state must be reported by a dealer or a marine resource harvester acting as a dealer in that state. Any marine resource harvester or aquaculturist who sells, consigns, transfers, or barter marine fishery products to anyone other than a dealer would themselves be acting as a dealer and would therefore be responsible for reporting as a dealer.

The ACCSP recreational data collection program for private/rental and shore modes of fishing will be conducted through a combination telephone and intercept survey. Recreational effort data will be collected through a telephone survey with random sampling of households until such time as a more comprehensive universal sampling frame is established. Recreational catch data will be collected through an access-site intercept survey. A minimum set of standard data elements will be collected in both the telephone and intercept surveys (refer to the ACCSP Program Design Document for details). The ACCSP will implement research and evaluation studies to expand sampling and improve the estimates of recreational catch and effort.

States currently have varying types of license structures and reporting requirements. Specifics of the existing state programs are summarized in Table 1 for the commercial fishery and Table 2 for the recreational fishery. All states except New Jersey and Rhode Island have implemented mandatory reporting for the commercial fishery, but the level of reporting varies from daily to monthly to annually/by season. Units of effort collected through these reporting programs include pounds per month, pounds per unit of gear per day, and eels per pot-hour. Some states have a specific eel license, but a general commercial fishing license is the most common license type.

For the recreational sector, many states have a freshwater recreational fishing license but few require a saltwater recreational fishing license. Virginia has a recreational eel pot license with mandatory reporting, but no reporting is required for a saltwater license, which allows the license holder to use up to two eel pots. North Carolina has a Recreational Commercial Gear License, and 33% of license holders are surveyed each year to obtain an estimate of recreational catch and effort. The remaining states do not currently have recreational mandatory reporting.

The ASMFC American Eel Technical Committee noted that a large percentage of eel catch and effort takes place in inland areas and under the jurisdiction of multiple state agencies. Full implementation of this Addendum will require cooperation and communication between state agencies to ensure coverage in all areas where eel harvest occurs.

Table 1. American eel commercial reporting and license requirements by state as of November 2005.

State	Commercial Mandatory reporting?	Schedule of commercial reporting?	Commercial Effort type reported	Commercial License Type	Dealer Or Harvest data	Gear types
ME - elver fishery	Yes	Season report	Total pounds per month reported, Pounds per net by month calculated assuming all gear fished	Specific elver license	Dealer	Dip net, mostly fyke net
ME - pot fishery	Yes	Season report	Pounds per month, pots fished, and days fished reported	Specific license	Harvest	Pot
ME - weir fishery	Yes	Season report	Pounds per month reported, days fished reported, Pounds per weir per day calculated	Specific license	Harvest	Weirs
NH	Yes	Monthly reports with daily information	Pounds landed, hours or days gear fished	General commercial license	Harvest	Pot
MA	Yes	Annual catch reports	Pounds per pot per night (beginning in 2003)	General commercial license, specific endorsement for eel	Harvest	Pot
RI	No	N/A	N/A	Multipurpose license	IVR System	Pot
CT	Yes	Monthly reports with daily information	Pounds per day	General commercial license	Harvest	Pot
NY - marine district	Yes	VTR	Catch (pounds) per trip	General commercial license	Both (VTRs and IVRs)	Pot
NY - inland	Yes	Season report	Catch per unit of gear per day	Each piece of gear is licensed	Harvest	Weir and Pot
NJ	No	N/A	N/A	General commercial license	None	Pot
PA	N/A	No commercial fishery	N/A	N/A	N/A	N/A
DE	Yes	Monthly	Pounds landed, pots fished per day	Specific eel license	Harvest	Pot
MD	Yes	Monthly reports with daily information	Pounds per pot per area per day	General commercial license	Harvest	Pot
DC	N/A	No commercial fishery	N/A	N/A	N/A	N/A
PRFC			Pounds per license, pounds per pot, pounds per day			Pot
VA	Yes	Monthly reports with daily information	Soak time for gear used, number of pots fished, pounds landed, water body	Each gear has a specific license (including eel pots), Dealer license required to purchase from a harvester	Harvest and Dealer	Mainly eel, fish, and peeler pots
NC	Yes	Trip level	Per trip (per purchase)	Standard Commercial Fishing License (SCFL)	Trip Tickets since 1994	Pot
SC	Yes	Monthly reports with daily information	Eels per pot-hour	General freshwater commercial license, General saltwater commercial license	Harvest	Pot, dip net, fyke net
GA	Yes	Monthly reports with daily information	Eels per pot-hour	Commercial fishing license, commercial boating license	Harvest	Pot, trap
FL	Yes	Monthly	Since 2003 have pounds per pot per day	Specific permit for those who use HSC as bait (until 7.1.06), all commercial harvesters have a generic commercial license, as of 7.1.06 a specific eel permit will be required	Harvest	Pot

Table 2. American eel recreational reporting and license requirements by state as of November 2005.

State	Recreational License Type	Recreational Reporting?
ME - elver fishery	N/A (no recreational fishing for elvers)	N/A
ME - pot fishery	None	
ME - weir fishery	N/A (no recreational weir fishing)	N/A
NH		
MA	None	None
RI	No saltwater recreational license	None
CT	No saltwater recreational license	None
NY - marine district	No saltwater recreational license	None
NY - inland	Recreational license above the first dam impassable to fish	None
NJ	No saltwater recreational license	None
PA	Freshwater fishing license required	
DE	No saltwater recreational license	None
MD	Tidal recreational license, Non-tidal recreational license	None
DC	Recreational fishing license	
PRFC		
VA	Saltwater fishing license, freshwater fishing license, recreational eel pot license	Saltwater license allows 2 eel pots with no reporting requirement (as of 7.1.05), no reporting for freshwater license, Mandatory reporting for recreational eel pot license
NC	Recreational Commercial Gear License in marine waters, inland rec license through WRC	RCGL survey: 33% of license holders. Survey asks total number of trips per month, average number of eel pots per trip, water body most often fished, catch information, species, number kept, and number released
SC	Tag required to use commercial gear in freshwater, Saltwater recreational fishing license	None
GA	General state recreational fishing license (freshwater and saltwater)	None
FL	General state recreational fishing license	None

## **MANDATORY CATCH AND EFFORT MONITORING PROGRAM**

### **Option 1**

#### **Specific Eel Permit with Mandatory Reporting**

The ASMFC American Eel Stock Assessment Subcommittee, Technical Committee, and Advisory Panel recommend implementation of a catch and effort monitoring program for American Eel. All three groups recommend collecting this information by requiring eel harvesters to obtain a permit allowing individuals to harvest eels. This permit would be issued with requirement to report eel catch and effort on a trip-level basis. Completion of reporting would be a condition of permit renewal. All groups recommend that this permit be applied to the commercial, recreational, and personal-use sectors of the fishery. The Board may choose which sectors to apply such a permit to under Option 1A and 1B if a permit were implemented.

One important consideration for the ASMFC in implementation of a license and reporting program for American eel is that many American eel are landed in freshwater or inland jurisdictions. A specific eel permit and reporting program would need to be implemented in all areas where eels are harvested to provide a complete picture of catch and effort for the fisheries and useful data for a stock assessment.

With this type of system, it would be important to require the reports to be completed each time a trip is completed, noting soak time and number of units of gear fished, as well as pounds landed by life stage.

The American Eel Advisory Panel has recommended that fishermen and dealers be involved in the design of such a reporting system to make the system as effective as possible, yet still convenient for harvesters to complete.

The two sub-options listed below allow the Board flexibility in determining which sectors would be required to obtain a permit that would allow harvest of eels. The Board may choose to adopt one or both of these options, allowing them to apply the permit and mandatory reporting requirements to the commercial sector only, the recreational and personal-use sectors only, or all sectors of the eel fishery.

Efforts to collect catch and effort information should be consistent with the ACCSP standards listed above.

### **Option 1A**

#### **Commercial Permit with Mandatory Reporting**

Under this option, a permit allowing commercial harvest with mandatory reporting of eel catch and effort would apply only to the commercial sector of the eel fishery.

### **Option 1B**

#### **Specific Recreational and Personal Use Eel Permit with Mandatory Reporting**

Under this option, a permit allowing recreational and personal-use harvest with mandatory reporting of eel catch and effort would apply only to the recreational and personal-use sectors of the eel fishery.

**Option 2**  
**Dealer Permit with Mandatory Reporting of Purchases**

Implementation of a dealer permit with a mandatory purchase-reporting requirement would provide an important validation of the catch and effort data being reported by harvesters. A dealer permit alone would not provide as accurate a measurement of effort as harvester reports. However, requiring a dealer permit would address the concern that a portion of the bait market is conducted on a cash basis and is not reported or is underreported.