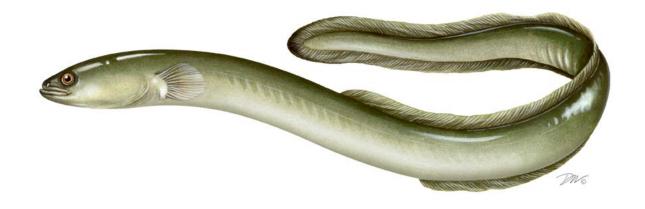
# REVIEW OF THE ATLANTIC STATES MARINE FISHERIES COMMISSION FISHERY MANAGEMENT PLAN FOR

# **AMERICAN EEL**

(Anguilla rostrata)

2009



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# 2009 REVIEW OF THE ASMFC FISHERY MANAGEMENT PLAN FOR AMERICAN EEL

(Anguilla rostrata)

#### I. Status of the Fishery Management Plan

Date of FMP approval: November 1999

Addendum I (February 2006)

Addendum II (October 2008)

<u>Management unit:</u> Migratory stocks of American Eel from Maine through Florida States with a declared interest: Maine through Florida, including the District of Columbia and

the Potomac River Fisheries Commission

Active committees: American Eel Management Board, Plan Review Team,

Technical Committee, Stock Assessment Subcommittee, and

Advisory Panel.

#### II. 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 the 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 are often a poor indicator of abundance because harvest is dependent upon demand and may consist of annually changing combinations 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 states (Maine to Florida)<sup>1</sup> indicate that the harvest fluctuated widely between 1970 and 1980, but showed an increasing trend and peaked in 1979 at 3,951,936 pounds. Harvest has declined since then, with the lowest harvest occurring at 641,225 pounds in 2002. Because fishing effort data is unavailable for the entire time series, finding a correlation between population numbers and landings data is difficult.

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 eel stocks worldwide. Available data for American eel suggests decreasing recruitment, combined with localized declines in abundance. This presents an opportunity for ASMFC to work in cooperation with other entities, such as the GLFC, to preserve American eel stocks in those areas.

A stock assessment was presented to the Management Board during the February 2006 Meeting Week. The stock assessment failed some of the terms of reference according to the peer review advisory report. In May 2006, the Board tasked the American Eel Stock Assessment Subcommittee with following up on specific recommendations in the peer review report to improve the 2005 stock assessment. The Stock

<sup>1</sup> Personal communication, National Marine Fisheries Service, Fisheries Statistics Division, Silver Spring, MD

Assessment Subcommittee follow up to the peer review report was presented to the Board at the October 2006 Annual Meeting.

In 2009, the Management Board initiated the start of a new assessment. The Stock Assessment Subcommittee met in late 2009 to begin work. The assessment is expected to be completed in 2012.

#### **III.** Status of the Fishery

American eel currently support commercial fisheries throughout their range in North America, with significant fisheries occurring in the US Mid-Atlantic region and Canada. These fisheries are executed in riverine, estuarine, and ocean waters. In the US, commercial fisheries for glass eel/elver exist in Maine and South Carolina, whereas yellow/silver eel fisheries exist in all states and jurisdictions with the exception of Pennsylvania and the District of Columbia (though in South Carolina and Georgia no commercial yellow or silver eel landings were reported in 2008).

#### **Commercial**

Commercial landings have decreased from the high of 3.95 million pounds in 1979 to a low of 641,000 pounds in 2002, and have not exceeded one million pounds since 1996<sup>2</sup>. State reported landings of yellow/silver eels in 2008 totaled 797,175 pounds<sup>3</sup>. Landings reported by NMFS totaled 714,723 pounds in 2008, which represents a 17% decrease in landings in 2007 (868,706pounds). State reported landings from New Jersey and Maryland each totaled over 100,000 pounds of eel, and together accounted for 63% of the coastwide commercial total landings in 2008. Landings of glass eels were reported from Maine and South Carolina in 2008 and totaled 6,051.1 pounds, with 0.1 pounds coming from South Carolina and the rest from Maine. This represents a 62% increase from 2007. Landings of glass eels have fluctuated from over 14,000 pounds in 1998 to a low of 1,282 pounds in 2004, with a general decline in landings seen over the past decade.

#### Recreational

Available information indicates that few recreational anglers directly target eel. For the most part, hookand-line fishermen catch eel incidentally when fishing for other species. The National Marine Fisheries Service (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 1990s.

According to MRFSS<sup>4</sup>, 2008 total recreational catch was 48,808 American eels (PSE 21.7). This is a 65% decrease in the number of fish caught in 2007 (140,371fish). In 2008 approximately 3,485 American eel were harvested (PSE 56.9) and 45,323 American eel (~92%; PSE 26.6%) were released alive. This is a significant increase in the number of eels released alive from 2007, which was approximately 59% of the total catch. Recreational catch was over 10,000 American eel in Delaware and New Jersey. Recreational catch was also reported in Maryland, Florida, Georgia, Virginia, Massachusetts, South Carolina, New Hampshire, North Carolina, and New York (in descending order of catch in fish). Eel are often purchased

<sup>&</sup>lt;sup>2</sup> Personal communication, National Marine Fisheries Service, Fisheries Statistics Division, Silver Spring, MD

<sup>&</sup>lt;sup>3</sup> Harvest data for 2008 comes from the 2009 State Compliance Reports. All landings are preliminary and some are incomplete.

<sup>&</sup>lt;sup>4</sup> MRFSS Data for American Eel are unreliable. 2008 Proportional Standard Error (PSE) values for recreational harvest by state ranged from 0 to 100.

by recreational fishermen for use as bait for larger gamefish such as striped bass, and some recreational fishermen may catch their own eels to utilize as bait.

Table 1. State commercial regulations for the 2008 fishing year.\*

State	Size Limit	License/Permit	Other	
ME		Harvester license. Dealer license and reporting.	Seasonal closures. Gear restrictions.	
NH	6"	Commercial saltwater license and wholesaler license. Monthly reporting.	50/day for bait. Gear restrictions in freshwater.	
MA	6"	Commercial permit with annual catch report requirement. Registration for dealers with purchase record requirement.	Nets, pots, spears, and angling only. Mesh restrictions. Each of 52 coastal towns has its own regulations.	
RI	6"	Commercial fishing license.		
СТ	6"	Commercial license. Dealer reporting.	Gear restrictions	
NY	6"	Commercial harvester license and reporting. Dealer license.	Gear restrictions.	
NJ	6"	License required.	Gear restrictions.	
PA		NO COMMERCIAL FISHERY		
DE	6"	License required.	Commercial fishing in tidal waters only. Gear restrictions.	
MD	6"	Licensed required with monthly reporting.	Prohibited in non-tidal waters. Gear restrictions.	
DC		NO COMMERCIAL FISHERY		
PRFC	6"	Harvester license and reporting.	Gear restrictions.	
VA	6"	License with two-year delayed entry system. Monthly reporting.	Mesh size restrictions on eel pots. Bait limit of 50 eels/day. Seasonal closures.	
NC	6"	Standard Commercial Fishing License for all commercial fishing	Mesh size restrictions on eel pots. Bait limit of 50 eels/day. Seasonal closures.	
SC		License for commercial fishing and sale. Permits by gear and area fished.  Monthly reporting.	Gear restrictions.	
GA	6"	Personal commercial fishing license and commercial fishing boat license. Harvester/dealer reporting.	Gear restrictions on traps and pots. Area restrictions.	
FL		Permits and licenses.	Gear restrictions.	

<sup>\*</sup> For specifics on licenses, gear restrictions, and area restrictions, please contact the individual state.

Table 2. State recreational regulations for the 2008 fishing year.\*\*

State	Size Limit	Possession Limit	Other
ME	6"	50 eels/person/day	Gear restrictions. License requirement and seasonal closures (inland waters only).
NH	6"	50 eels/person/day	Coastal harvest permit needed if taking eels other than by angling. Gear restrictions in freshwater.
MA	6"	50 eels/person/day	Nets, pots, spears, and angling only; mesh restrictions. Each of 52 coastal towns has its own regulations.
RI	6"	50 eels/person/day	
CT	6"	50 eels/person/day	
NY	6"	50/eels/person/day	Additional length restrictions in specific inland waters.
NJ	6"	50 eels/person/day	
PA	6"	50 eels/person/day	Gear restrictions.
DE	6"	50 eels/person/day	Two pot limit/person.
MD	6"	No possession limit in tidal areas; 25/person/day limit in non-tidal areas	Gear restrictions.
DC	6"	10 eels/person/day	Five trap limit.
PRFC	6"	50 eels/person/day	
VA	6"	50 eels/person/day	Recreational license. Two pot limit. Mandatory annual catch report. Mesh size restrictions on eel pots.
NC	6"	50 eels/person/day	Gear restrictions. Non-commercial special device license. Two eel pots allowed under Recreational Commercial Gear license.
SC	None	None	Gear restrictions and gear license fees.
GA	None	None	
FL	None	None	Gear restrictions.

<sup>\*\*</sup> For specifics on licenses, gear restrictions, and area restrictions, please contact the individual state.

#### IV. Status of Research and Monitoring

The FMP requires states and jurisdictions with a declared interest in the species to conduct an annual young-of-the-year survey for the purpose of monitoring annual recruitment of each year's cohort. The FMP does not require any other research initiatives in participating states and jurisdictions. Nonetheless, the American Eel Technical Committee has identified several research topics that could further understanding of the species' life history, behavior, and biology. Research needs for American eel include:

#### High Priority

- Accurately document the commercial eel fishery so that our understanding of participation in the fishery and the amount of directed effort could be known.
- Investigate, develop, and improve technologies for American eel passage upstream and downstream at various barriers for each life stage. In particular, investigate low-cost alternatives to traditional fishway designs for passage of eel.
- A coastwide sampling program for yellow and silver American eels should be formulated using standardized and statistically robust methodologies.
- Regular periodic stock assessments and establishment of sustainable reference points for eel are required to develop a sustainable harvest rate in addition to determining whether the population is stable, decreasing, or increasing.
- Research the effects of swim bladder parasite *Anguillacolla crassus* on the American eel's growth and maturation, migration to the Sargasso Sea, and the spawning potential.
- Evaluate the impact, both upstream and downstream, of barriers to eel movement with respect to population and distribution effects. Determine relative contribution of historic loss of habitat to potential eel population and reproductive capacity.

#### Medium Priority

- Investigate survival and mortality rates of different life stages (leptocephalus, glass eel, yellow eel, and silver eel) to assist in the assessment of annual recruitment. Continuing and initiating new tagging programs with individual states could aid such research.
- Tagging Programs: A number of issues could be addressed with a properly designed tagging program. These include:
  - Natural, fishing, and/or discard mortality; survival
  - Growth
  - Validation of aging method(s)
  - Reporting rates
  - Tag shedding or tag attrition rate
- Research contaminant effects on eel and the effects of bioaccumulation with respect to impacts on survival and growth (by age) and effect on maturation and reproductive success.
- Investigate: fecundity, length, and weight relationships for females throughout their range; growth rates for males and females throughout their range; predator-prey relationships; behavior and movement of eel during their freshwater residency; oceanic-behavior, movement, and spawning location of adult mature eel; and all information on the leptocephalus stage of eel.
- Assess characteristics and distribution of eel habitat and value of habitat with respect to growth and sex determination.
- Identify triggering mechanism for metamorphosis to mature adult, silver eel life stage, with specific emphasis on the size and age of the onset of maturity, by sex. A maturity schedule (proportion mature by size or age) would be extremely useful in combination with migration rates.

# Low Priority

- Perform economics studies to determine the value of the fishery and the impact of regulatory management.
- Review the historic participation level of subsistence fishers in wildlife management planning and relevant issues brought forth with respect to those subsistence fishers involved with American eel.
- Examine the mechanisms for exit from the Sargasso Sea and transport across the continental shelf.
- Research mechanisms of recognition of the spawning area by silver eel, mate location in the Sargasso Sea, spawning behavior, and gonadal development in maturation.
- Examine age at entry of glass eel into estuaries and fresh waters.
- Examine migratory routes and guidance mechanisms for silver eel in the ocean.
- Investigate the degree of dependence on the American eel resource by subsistence harvesters (e.g., Native American Tribes, Asian and European ethnic groups).
- Examine the mode of nutrition for leptocephalus in the ocean.
- Provide analysis of food habits of glass eel while at sea.

#### V. Status of Management Measures and Issues

The FMP required that all states and jurisdictions implement an annual young-of-the-year (YOY) abundance survey by 2001 in order to monitor annual recruitment of each year's cohort. In addition, the FMP requires all states and jurisdictions to establish a minimum recreational size limit of six inches and a recreational possession limit of no more than 50 eels per person, including crew members involved in party or charter (for-hire) employment, for bait purposes during fishing. Recreational fishermen are not allowed to sell eel without a state license permitting such activity. Commercial fisheries management measures stipulate that states and jurisdictions shall maintain existing or more conservative American eel commercial fishery regulations, including gear specification contained in Table 2 of the FMP, for all life stages.

In addition to these mandatory regulations, federal agencies are working to implement the recommendations to the Secretaries as listed in the FMP.

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. The Board approved Addendum I at the February 2006 Board meeting. At that same meeting, the Board tasked the American Eel Technical Committee (TC) with reviewing state proposals for implementation of Addendum I to the American Eel Fishery Management Plan. The TC provided their comments on the state's proposals to the Board in a memo on July 7, 2006.

In January 2007, the Management Board initiated the development of a draft Addendum with the goal of increasing the escapement of silver eels to the spawning grounds. In October 2008, the Management Board approved Addendum II to the American Eel FMP, with some modification. The Addendum places increased emphasis on improving the upstream and downstream passage of American eel and maintains the status quo on management measures. The Management Board chose to delay action on management measures in order to incorporate the results of the upcoming 2010 stock assessment, which will present new and updated information on American eel stock status.

Delegates from the Atlantic States Marine Fishery Commission met with representatives from the Great Lakes Fishery Commission in April 2008 to begin discussions on working together to improve American

eel management. The two groups agreed to jointly develop a Memorandum of Understanding that would outline a strategy to work together to more effectively manage this international resource.

#### VI. Current State-by-State Implementation of FMP Compliance Requirements

The PRT reviewed the state compliance reports for 2008. The PRT finds that all states are currently implementing the required provisions of the American Eel Fishery Management Plan.

Section 4.4.2 of the FMP stipulates that states may apply for *de minimis* status for each life stage if (given the availability of data), for the preceding two years, their average commercial landings (by weight) of that life stage constitute less than 1% of the coastwide commercial landings for that life stage for the same two-year period. States meeting this criterion are exempted from having to adopt commercial and recreational fishery regulations for a particular life stage listed in Section 4 and any fishery dependent monitoring elements for that life-stage listed in Section 3.4.1.

In 2009, the states of New Hampshire, Massachusetts, Pennsylvania, South Carolina, Georgia, Florida and the District of Columbia requested and met the qualification criteria for *de minimis* status. Qualification for *de minimis* was determined from state reported landings found in compliance reports and the NMFS website for the years 2007 and 2008. The states of Massachusetts, Pennsylvania, South Carolina, Georgia, and Florida requested and were previously granted *de minimis* status in 2008.

# VII. Recommendations/Findings of the Plan Review Team

- 1. The PRT requests that state personnel highlight notable trends in annual reports. The PRT also requests that state personnel describe any circumstances that prevented sampling from occurring as required in the FMP and Addendum I, or reasoning for sampling not occurring in a manner consistent with previous years.
- 2. Landings, effort, and biological data are needed to complete stock assessments. The PRT continues to express concern over the lack of data available for states to report landings by life stage. States are strongly encouraged to collect biological data from landings.
- 3. The PRT affirms the value of the young-of-the-year surveys and is adamant that they need to be performed on an annual basis. The PRT strongly recommends that all states and jurisdictions continue to implement the young-of-the-year survey.

# **Plan Review Team Report**

#### **Introduction**

The Interstate Fishery Management Plan for American eel requires that states submit annual reports detailing each state's regulations, catch, harvest, bycatch, fishery-dependent and independent surveys, and characterization of other losses for American eel. These reports are utilized by the ASMFC Plan Review Team to determine compliance and must be submitted to the ASMFC by September 1 of each year.

#### **2009 Compliance Review**

The Plan Review Team (PRT) reviewed 2009 state annual compliance reports for the 2008 fishing year to determine compliance status. As described in Section 5.2 of the Fishery Management Plan, under Procedures for Determining Compliance, the PRT has summarized the compliance on a state-by-state basis below.

#### **State-By-State Evaluation**

#### MAINE

Comments or trends highlighted in state report:

- Fourth largest total catch YOY.
- 88% of elvers moved up in just two nights

*Unreported information:* 

None

Areas of concern:

- No biological data were collected from the commercial fishery.
- Discrepancy between state-reported landings (10,967 pounds yellow (coastal and inland) and 6,951 pounds elvers) and NMFS reported landings (8,475).
- Dealer reported glass eel landings are 1,000 pounds higher than harvest reported landings.

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

None

#### **NEW HAMPSHIRE**

Comments or trends highlighted in state report:

• Commercial harvest totaled 25.25 pounds and came from five individuals

*Unreported information:* 

None

Areas of concern:

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

The state of New Hampshire requests *de minimis* status for the fishing year 2010. The total landings in New Hampshire are below 1% of the total 2008 coastwide landings, thus New Hampshire meets the requirements for *de minimis*.

#### MASSACHUSETTS

Comments or trends highlighted in state report:

- Eel landings increased slightly from 2007
- Permit holder compliance on catch reports reached 97% in 2008.
- FI monitoring in the Acushnet River caught 4,635 YOY eels in 2008, up from 180 in 2007.
- FI monitoring in the Saugus River caught 6,353 YOY eels, down from 9,000+ in 2007.

# *Unreported information:*

None

Areas of concern:

- No biological data were collected from the commercial fishery.
- State reported landings totaled 3, 296 pounds; NMFS did not report any landings.

# Compliance issues:

None

Recommendations for action by the American Eel Management Board:

The Commonwealth of Massachusetts requests *de minimis* status for the fishing year 2010. The total landings in Massachusetts are below 1% of the total 2008 coastwide landings, thus Massachusetts meets the requirements for *de minimis*.

#### RHODE ISLAND

Comments or trends highlighted in state report:

- There was an eight-fold increase in commercial catch in 2008, with 8,866 pounds landed, as compared to 2007 and 2006 when 1,230 and 1,034 pounds were landed respectively.
- Recreational anglers did not report any catch in 2008.
- There was a slight decrease in American eels observed in the FI trawl and beach seine surveys.

# *Unreported information:*

None

Areas of concern:

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

None

#### **CONNECTICUT**

Comments or trends highlighted in state report:

- State reported landings: 6,012 pounds; NMFS reported landings: 6,046 pounds
- Changed location of YOY sampling from CT River to Fishing Brook Pass

*Unreported information:* 

No report of 1) pounds landed by gear type, 2) estimate of harvest going to bait vs. food or 3) estimate of exports by season

*Areas of concern:* 

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

None

#### NEW YORK

Comments or trends highlighted in state report:

- Reported commercial landings from NMFS: 2,111 pounds
- Recreational harvest estimate: 319 eels (discarded)
- Highest catch of pigmented eels since the survey started (lowest rainfall)

*Unreported information:* 

Estimate of exports is for the entire US and not New York

Areas of concern:

None

Compliance issues:

None

*Recommendations for action by the American Eel Management Board:* 

None

#### **NEW JERSEY**

Comments or trends highlighted in state report:

• State reported commercial landings: 132,712 pounds (slight decrease from 2007); NMFS reported landings: 133,776 pounds

*Unreported information:* 

None

Areas of concern:

None

Compliance issues:

Export estimates have been requested from Delaware Valley Seafood, the main dealer in New Jersey, but has not been provided yet

Recommendations for action by the American Eel Management Board:

None

#### PENNSYLVANIA

Comments or trends highlighted in state report:

• 879,655 pounds of American eels were imported by dealers in PA (including 103 pounds for food and 1,609 pounds for food from PA?) and 839,903 pounds (including 360 pounds for bait and 1,125 pounds for food) were sold by dealers in PA in 2008.

*Unreported information:* 

The compliance report does not characterize other losses to the eel population. The report does not identify the projects planned for the next five years.

*Areas of concern:* 

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

Pennsylvania requests *de minimis* for the fishing year 2010. There is no commercial fishery for eel in the State. American eels cannot be taken from the wild and sold, traded, exported, etc.

#### **DELAWARE**

Comments or trends highlighted in state report:

- State reported commercial landings: 80,002 pounds (41% decrease and lowest on record since logbooks became mandatory in 1999); NMFS reported commercial landings: 27,630 pounds
- This was the first year that bait eels comprised less than 20% of the commercial catch
- Mean length and weight of commercially sampled eels decreased by 21 mm and 24.4 grams respectively from 2007
- Estimate of 12, 621 eels caught by recreational anglers in 2008 (MRFSS) which was a 23% reduction from 2007
- The 2008 glass eel catch was 87% lower than 2007 and 51% lower than 2003, the previous lowest catch on record. The low catch in 2003 was attributed to extreme temperature and flow conditions, both of which were favorable for glass eels in 2008.

*Unreported information:* 

Estimate of harvest by gear type

Areas of concern:

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

None

#### MARYLAND

Comments or trends highlighted in state report:

- State reported commercial landings: 369,890 pounds; NMFS reported landings: 415,091 pounds
- CPUE (yearly eel pot) for 2008 was the second highest since 1999, while eel pot

effort (eel pots \* boat days) has been decreasing

- Prevalence of nematode swim bladder parasite in commercially sampled eels was 16% (Fishing Bay) and 25% (Patuxent River), while in the FI survey in the Sassafrass River was 73%.
- The mean length of commercially eels sampled decreased by 16% (Fishing Bay, from 2004) and 13% (Patuxent River, from 2006). Patuxent eels sampled were dominated by three 20 mm length groups.

*Unreported information:* 

None

Areas of concern:

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

None

#### DISTRICT OF COLUMBIA

Comments or trends highlighted in state report:

• FI elever monitoring caught no eels. FI backpack electrofishing caught 350 eels (1 YOY, 212 elvers, and 33 yellow)

*Unreported information:* 

None

*Areas of concern:* 

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

The District of Columbia requests *de minimis* status for the fishing year 2010. There is no commercial fishery for American eel in the District.

#### POTOMAC RIVERS FISHERY COMMISSION

Comments or trends highlighted in state report:

• Reported commercial harvest: 51,655 pounds (lowest on record since 1964)

*Unreported information:* 

None

Areas of concern:

No biological data are collected from the commercial harvest.

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

None

# VIRGINIA

Comments or trends highlighted in state report:

- State reported commercial landings: 99,345 pounds (with an estimated 97,080 harvested in state waters); NMFS reported landings: 81,249 pounds
- CPUE was slightly higher in 2008 than in 2007
- An estimated 739 eels were harvested and 1,588 eels were released by recreational anglers
- A total of 319,670 frozen Anguilla were exported from VA in 2008
- A third ladder was added to the Luray Dam in 2009
- A new study found that survivorship of eels migrating out of the Shenandoah River, from above the dam, is 47% (all mortality suspected to be turbine related), and confirmed presence of the swim bladder parasite in the upper portions of the Potomac River and into West Virginia.

*Unreported information:* 

None.

Areas of concern:

None.

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

None

#### NORTH CAROLINA

Comments or trends highlighted in state report:

- State reported commercial landings: 18,260 pounds (eel logbooks) and 23,671 (dealer reports); NMFS reported landings: 24,658 pounds
- The NCDMF recreational survey was terminated in 2008 due to financial constraints.
- The YOY survey was terminated in 2009. The NOAA Beaufort Lab bridge net survey could be a possible source of elver data for North Carolina.

*Unreported information:* 

The report does not provide 1) an estimated percent of harvest going to food versus bait, 2) estimates of export by season, or 3) commercial catch permitted for personal use.

Areas of concern:

No biological data were collected from the commercial fishery.

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

None

#### SOUTH CAROLINA

Comments or trends highlighted in state report:

- State reported commercial landings: 521 pounds
- A study on upstream passage of eels at St. Stephens Dam was not conducted due to

low water levels.

*Unreported information:* 

None

Areas of concern:

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

The State of South Carolina requests *de minimis* status for the fishing year 2010. The total landings in South Carolina are below 1% of the total 2008 coastwide landings, thus South Carolina meets the requirements for *de minimis*.

#### GEORGIA

Comments or trends highlighted in state report:

- Landings are considered confidential due to the low number of dealers who report harvest. No eels were reported landed in 2008.
- The recreational harvest of eels in Georgia in minimal at best, Therefore, Georgia does not regulate nor plan to regulate the fishery at this time. In 2007, the Wildlife Resources Division estimated that 3,492 eels were released alive from 15,692 non-targeted trips in the Altamaha River and 340 eels were released alive from 9,100 non-targeted trips in the Savannah and Ogeechee Rivers. No eels were kept.

*Unreported information:* 

The compliance report does not directly address projects planned for the next five years.

Areas of concern:

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

The State of Georgia requests *de minimis* status for the fishing year 2010. The total landings in Georgia are below 1% of the total 2008 coastwide landings, thus Georgia meets the requirements for *de minimis*.

# **FLORIDA**

Comments or trends highlighted in state report:

• State reported commercial landings: 15,624 (double from 2007 and the highest catch since 1999)

*Unreported information:* 

The report does not characterize other losses to the eel population.

*Areas of concern:* 

None

Compliance issues:

None

Recommendations for action by the American Eel Management Board:

The State of Florida requests *de minimis* status for the fishing year 2010. The total landings in Florida are below 1% of the total 2008 coastwide landings, thus Florida meets the requirements for *de minimis*.