

*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 II to Amendment 4  
to the Interstate Fishery Management Plan for Weakfish**

**February 2007**

March 2007: Clarification of Language on Commercial Trigger Calculation

## **Acknowledgements**

This Addendum was prepared by Braddock Spear and Nichola Meserve, the past and present chairs of the Atlantic States Marine Fisheries Commission's Weakfish Plan Development Team. Development of the document benefited greatly from the input of the Weakfish Plan Review Team, Technical Committee, Stock Assessment Subcommittee, and Advisory Panel. The Weakfish Management Board approved Addendum II on February 1, 2007.

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## 1.0 INTRODUCTION

This document incorporates information from earlier versions of Draft Addendum I and Draft Addendum II, the Supplement to Draft Addendum II, and comments from the Weakfish Management Board and the Weakfish Technical Committee.

The weakfish program functions under the Commission's Interstate Fisheries Management Program, with immediate oversight provided by the Weakfish Management Board (Board). An interstate Fishery Management Plan (FMP) was first adopted for weakfish in 1985 due to concern about stock status. Adopted in October 1991, Amendment 1 unsuccessfully aimed to improve the status of weakfish. Amendment 2, implemented in April 1995, resulted in some improvement of the resource. Amendment 3 was adopted in June 1996 to reduce fishing mortality (F) to 0.50 by 2000, restore an expanded age structure, and restore fish to their full geographical extent. In 2000, the Board approved Addendum I to Amendment 3 in order to extend the fishery management measures until Amendment 4 could be implemented.

Amendment 4 to the Weakfish FMP was approved in November 2002. It established the first biological reference points and set a rebuilding schedule if limits were exceeded. The amendment also provided a suite of recreational size and creel limit options from which states could choose. It maintained the commercial measures required under Amendment 3 and increased the plan's bycatch allowance. In November 2005, Addendum I to Amendment 4 replaced the mandatory biological sampling program in Section 3.0 of Amendment 4.

Following the development of Amendment 4, the Weakfish Stock Assessment Subcommittee conducted an assessment in 2004-2005 to determine the health of the resource, concluding that biomass fell suddenly after 1999 and approached the lowest level in the time-series by 2003 (Appendix 1). This result sharply contrasted the findings of the previous assessment that depicted weakfish on the path to recovery into the late 1990s (Kahn 2002). The 2004-2005 assessment showed that, while fishing mortality was low throughout the 1990s and 2000s, total mortality began a steady increase in the mid-1990s (Appendix 2). Concurrently, commercial and recreational coastwide landings consistently dropped after 1998 (Appendix 3). The large decline in biomass between 1999 and 2003 could not be attributed to a rise in fishing mortality. Instead, evidence suggested that a significant rise in natural mortality had caused weakfish stocks to decline.

The rapid decline in recent weakfish biomass and landings was reminiscent of the transitions between extended periods of high and low commercial landings dating back to the late 1920s. In theory, these abrupt changes could reflect an underlying environmental driver whose effect was accelerated by high fishing or predation rates. The Technical Committee developed and tested specific hypotheses to evaluate candidate predators/competitors (striped bass, summer flounder, bluefish, spiny dogfish and Atlantic croaker), forage species (Atlantic menhaden, bay anchovy, and spot), environmental factors (water temperature and North Atlantic Oscillation index), high bycatch losses, and overfishing. Insufficient forage, especially Atlantic menhaden, and increased predation by striped bass have emerged as leading hypotheses that support rising natural mortality as cause for stock decline (Appendix 4), but contributions by other species or factors may not have been completely detected or tested.

While the latest stock assessment was not upheld by a peer review panel in 2006, the Board accepted five conclusions from the report for management use: 1) the stock is declining; 2) total mortality is increasing; 3) there is little evidence of overfishing; 4) something other than fishing mortality is causing the decline in the stock; and 5) there is a strong chance that regulating the fishery will not, in itself, reverse stock decline.

The decline in landings and estimated stock size and projections indicating that fishing mortality cuts would be necessary for timely recovery if natural mortality declines led the Board to consider five options for reducing fishing mortality: 0% (status quo), 25%, 50%, 75%, and 100% (moratorium) based on a 2003-2004 reference period. This full suite of harvest reduction options was available for public comment in 2005 as part of Addendum I to Amendment 4. (In May 2005, the Board initiated an addendum to include options for a biological sampling program and management measures to reduce fishing mortality. The former was approved in Addendum I, while action on the latter was postponed until after the 2006 peer review of the last assessment. The fishing mortality reduction options were then developed into Draft Addendum II.)

In August 2006, the Board met to review Draft Addendum II. Their deliberations focused largely on Option 1 (status quo) and Option 2 (25% reduction), as well as requirements for *de minimis* states. Due to the potential socio-economic impacts of a harvest reduction, uncertainty regarding the proper use of the 2004-2005 weakfish assessment, and the new analyses and information presented by the Technical Committee at the meeting, the Board requested that a Supplement to Draft Addendum II be prepared for written public comment prior to the October 2006 Board meeting. The Supplement included: updated stock and fishery information, a better description of how a mandatory 25% reduction in landings would affect the states' fisheries, reconsideration of *de minimis* state requirements, and a revised implementation schedule.

In October 2006, the Board reviewed the information in the Supplement to Draft Addendum II and the public comment received. The Board expressed strong concern on a number of issues. First, a landings reduction could result in a large and unquantifiable increase in discards without reducing fishing mortality. Second, determining the effect of an increase in management restrictions without an accepted estimate on stock biomass would be difficult. Third, fishermen should not be penalized for a stock decline beyond their control, particularly following the 32% reduction in fishing mortality implemented in Amendments 3 and 4. The Board opted to delay action, allowing staff and the Technical Committee to further develop the options included in the draft addendum. Significantly, the Board concluded that the addendum's objective should be to control expansion of the fishery in the event that stock status improves, rather than reduce the already low fishing mortality.

In February 2007, the Board reviewed the revised Draft Addendum II and approved the management measures as stipulated within this document for implementation as Addendum II to Amendment 4.

## **2.0 STATEMENT OF THE PROBLEM**

Overfished stock status is defined in Amendment 4 as a spawning stock biomass less than 31.8 million pounds. When the weakfish stock is overfished, Amendment 4 requires the Management Board to adjust the management program to rebuild spawning stock biomass to 30% of an unfished stock within 6 years (1 ½ generations) or less<sup>1</sup>. Based on the most recent stock assessment, biomass of weakfish in 2003 was approximately 13.77 million pounds, less than 22% of its recent peak in 1998.

The current condition of the weakfish stock warrants management action. However, presuming that reducing exploitation on the weakfish stock will result in recovery ignores the stock assessment's finding that increased total mortality (fishing mortality plus natural mortality) is the cause of low stock biomass. Indeed, high natural mortality does not provide managers many options for rebuilding the fishery. But because projections indicate that stock recovery will require low total mortality, a means to control expansion of the fishery (i.e., fishing mortality) may be required in the event that stock status improves through a decline in natural mortality.

## **3.0 MANAGEMENT PROGRAM**

Amendment 4 provides the current regulatory requirements for weakfish. In 2006, each state was found to be in compliance with these requirements. In order to achieve annual fishing mortality targets, recreational harvest in each non-*de minimis* state is constrained by a minimum size limit/maximum creel limit combination, and the commercial harvest is constrained by size limits, bycatch limits, gear restrictions, and season/area closures. As of February 2007, four states (Connecticut, South Carolina, Georgia, and Florida) are considered *de minimis* and have not been required to implement the regulatory requirements of Amendment 4.

The following regulations replace or supplement sections of Amendment 4 as noted.

### **3.1 RECREATIONAL FISHERY**

#### **3.1.1 Maximum Creel Limit**

*This section replace Section 4.1 in Amendment 4.*

The *de minimis* southeastern states (currently Florida, Georgia and South Carolina) will remain status quo in regard to maximum creel limit with the understanding that South Carolina is pursuing creel and size limits through its legislative process (10 fish creel limit, 12" minimum size limit). Should a state no longer qualify for *de minimis* status, the Management Board will reconsider its maximum creel limit.

All other jurisdictions (North Carolina, Virginia, Potomac River Fisheries Commission, Maryland, Delaware, New Jersey, New York, Connecticut, Rhode Island, and Massachusetts) must implement a creel limit no greater than six fish.

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<sup>1</sup> These criteria in Amendment 4 were based on the 2002 stock assessment (Kahn) that is not longer used.

### 3.1.2 Minimum Fish Size Limit

*This section replaces Section 4.1.1 in Amendment 4.*

All jurisdictions must at least maintain the minimum size limit in place in 2006 (or in the case of South Carolina, the size limit that will be implemented in 2007).

All other recreational management measures remain the same. Table 1 summarizes the minimum recreational regulations required of the jurisdictions.

**Table 1. Minimum recreational regulations required under Addendum II**

<b>Jurisdiction</b>	<b>Minimum Size Limit</b>	<b>Maximum Creel Limit</b>
Massachusetts	16	6
Rhode Island	16	6
Connecticut	16	6
New York	16	6
New Jersey	13	6
Delaware	13	6
Maryland	13	6
PRFC	12	6
Virginia	12	6
North Carolina	12	6
South Carolina	12	10
Georgia	13	6
Florida	12	4

## 3.2 COMMERCIAL FISHERY

### 3.2.1 Bycatch Limit

All non-*de minimis* jurisdictions must reduce the bycatch possession limit for non-directed fisheries from the Amendment 4, Section 4.2.1 allowance of 300 pounds per day or trip to 150 pounds per day or trip. All other language in Section 4.2.1 remains in place.

### 3.2.2 Management Trigger

*This section supplements the commercial fisheries management measures in Section 4.2 of Amendment 4.*

The Management Board will re-evaluate the commercial management measures when the coastwide commercial landings equal or exceed 80% of the mean commercial landings from 2000-2004 (3.73 million pounds). The coastwide commercial trigger is therefore 2.99 million pounds (80% of 3.73 million pounds). See Appendix 5 for the calculation of the trigger.

During the annual FMP review process, the Weakfish Plan Review Team (PRT) will compare the reported year's coastwide commercial landings to the 2000-2004 average commercial landings to evaluate if action is required. The PRT will include this information in a report to the Management Board at the next available opportunity.

### **3.3 COASTWIDE FISHERY**

#### **3.3.1 Management Trigger**

*This section supplements the management program in Section 4.0 of Amendment 4.*

The Management Board will re-evaluate the commercial and recreational management measures when any single state's landings exceed its five-year mean by more than 25% in any single year.

During the annual FMP review process, the Weakfish Plan Review Team (PRT) will check each state's reported landings against its five-year mean to see if action is required. The PRT will include this information in a report to the Management Board at the next available opportunity.

### **4.0 IMPLEMENTATION SCHEDULE**

States must implement Addendum II according to the following schedule:

- |                         |  |
|-------------------------|--|
| <b>April 6, 2007</b>    | States must submit programs to implement Addendum II for approval by the Management Board. Programs must be implemented upon approval.   |
| <b>May 7-10, 2007</b>   | The Management Board will review and consider approval of the state programs to implement Addendum II.   |
| <b>October 29, 2007</b> | States with approved management programs must implement Addendum II. States may begin implementing management programs prior to this deadline if approved by the Management Board. |

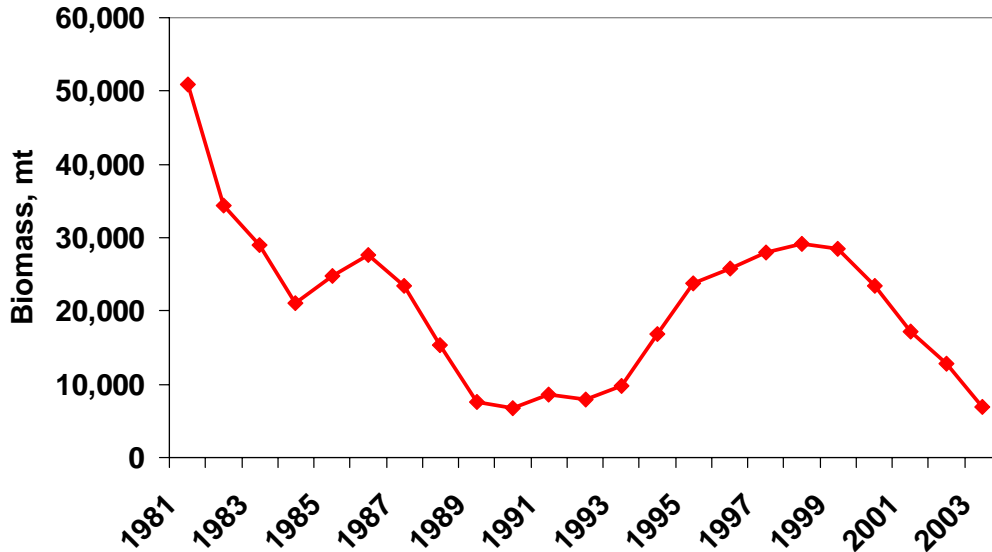
### **5.0 REFERENCES**

- Atlantic States Marine Fisheries Commission. 2002. Weakfish Fishery Management Plan Amendment 4. ASMFC, Washington, D.C. Fishery Management Report No. 39. 84 pp.
- Atlantic States Marine Fisheries Commission. 2005. Weakfish Fishery Management Plan Addendum I to Amendment 4. ASMFC, Washington, D.C. Fishery Management Report No. 39a. 5 pp.
- Kahn, D.M. 2002. Stock assessment of weakfish through 2000, including estimates of stock size on January 1, 2002. A Report to the Weakfish Technical Committee of the Atlantic States Marine Fisheries Commission. 88 pp.
- Mercer, L. P. 1985. Fishery Management Plan for Weakfish. Atlantic States Marine Fisheries Commission, Washington, D.C. Fishery Management Report No. 7. 129 pp.
- Seagraves, R.J. 1991. Weakfish Fishery Management Plan Amendment 1. Atlantic States Marine Fisheries Commission, Washington, D.C. Fishery Management Report No. 20. 68 pp.

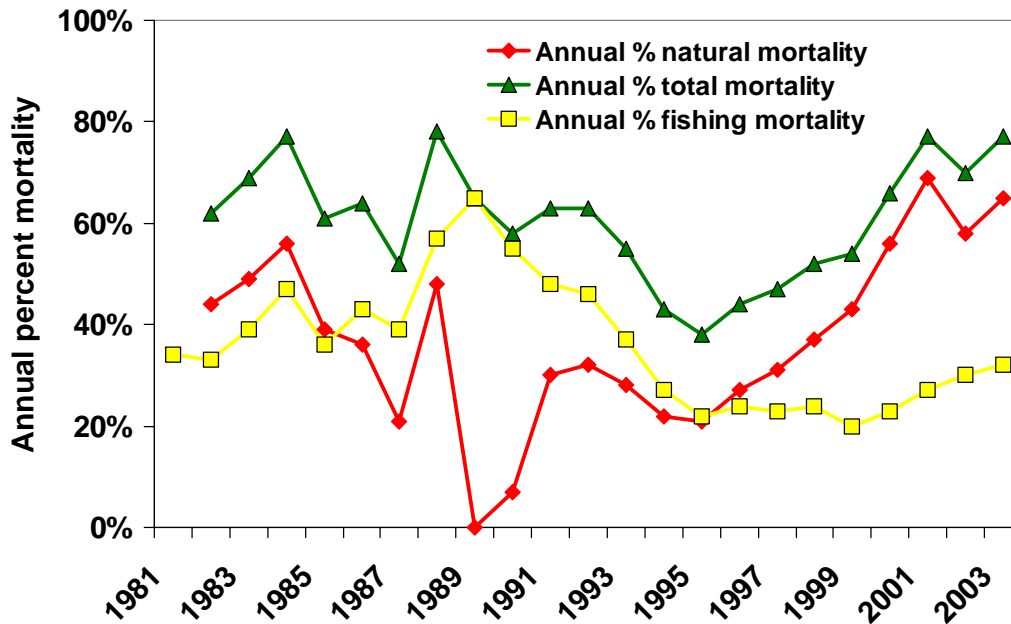


## 6.0 APPENDICES

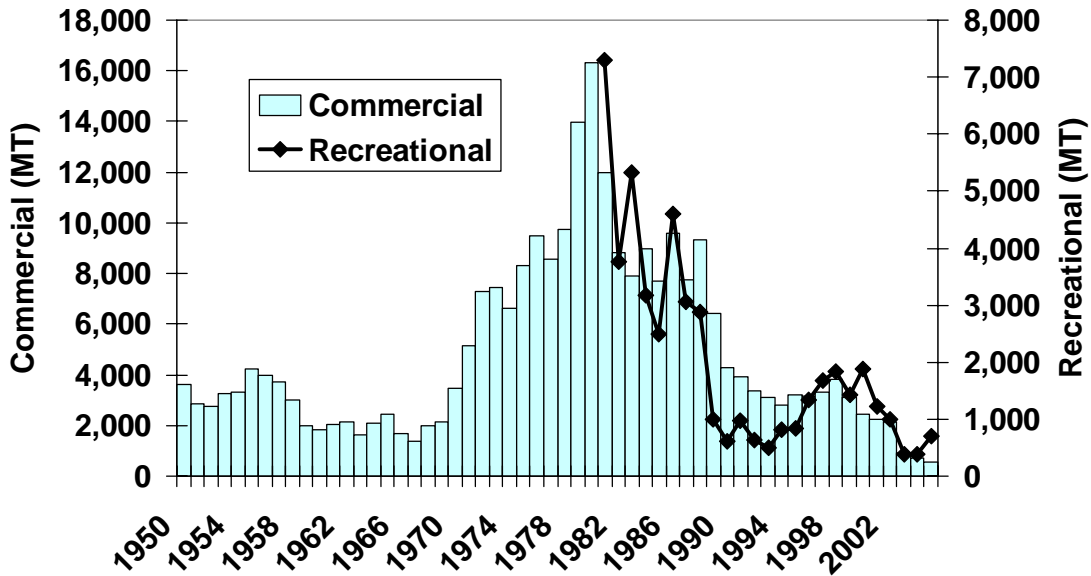
**Appendix 1. Estimated coastwide weakfish biomass**  
(ASMFC Weakfish Technical Committee, 2006)



**Appendix 2. Coastwide weakfish annual total, natural, and fishing mortality percentages**  
Rates were translated into annual percentages, thus fishing and natural mortality are not additive.  
(ASMFC Weakfish Technical Committee, 2006)



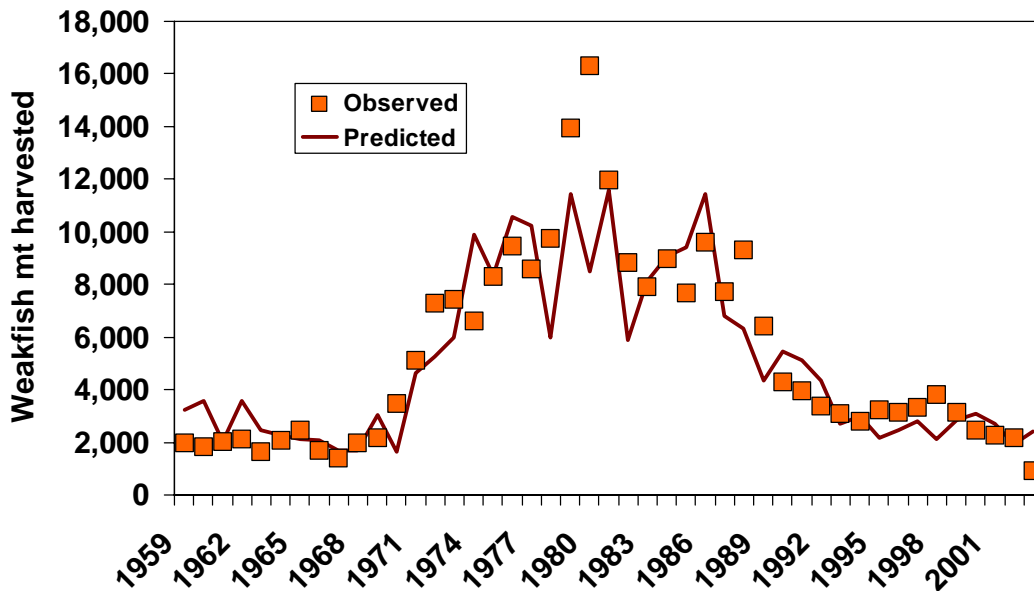
**Appendix 3. Atlantic coast harvest of weakfish, 1950 – 2005**  
 (ASMFC Weakfish Technical Committee, 2006)



**Appendix 4. Food web hypothesis**

Weakfish commercial landings are predicted by indices for large striped bass and menhaden juveniles.

(ASMFC Weakfish Technical Committee, 2006)



### Appendix 5. Commercial Fishery Management Trigger

State commercial landings used to calculate the commercial fishery management trigger as reported by states or as reported by NMFS and approved by states. The 2000-2004 coastwide average landings equal 3,733,163 pounds.

The coastwide commercial trigger is 2.99 million pounds (80% of the 2000-2004 coastwide average landings).

Year	E. FL	GA	SC	NC	VA	PRFC	MD	DE	NJ	NY	CT	RI	MA	Total
2000	2,141	0	0	1,869,041	1,316,218	68,574	145,918	328,269	1,071,428	352,832	7,920	189,362	527	5,352,230
2001	2,465	0	0	1,960,324	1,129,961	44,219	153,865	190,093	837,550	578,797	6,774	109,568	231	5,013,847
2002	1,309	0	0	1,828,150	1,129,170	57,818	79,734	165,191	863,088	513,977	10,223	122,781	842	4,772,283
2003	580	0	0	848,822	455,500	5,273	31,215	91,460	340,269	144,416	3,059	63,337	524	1,984,455
2004	587	0	4	685,408	325,882	1,986	50,519	49,052	204,587	178,414	6,206	40,286	68	1,542,999
<b>AVG</b>	1,416	0	1	1,438,349	871,346	35,574	92,250	164,813	663,384	353,687	6,836	105,067	438	<b>3,733,163</b>