Fishery Management Report No. 32a
of the

Atlantic States Marine Fisheries Commission

Addendum I to the Fishery Management Plan for Horseshoe Crab

April 2000

Acknowledgements

This Addendum was prepared by the Commission's Horseshoe Crab Plan Review Team, composed of: Stewart Michels, Delaware Department of Natural Resources and Environmental Control; Thomas O'Connell, Maryland Department of Natural Resources; Paul Perra, National Marine Fisheries Service; and Eric Schrading, U.S. Fish and Wildlife Service. The Horseshoe Crab Management Board approved the Addendum on February 9, 2000.

Addendum I
to the
Atlantic States Marine Fisheries Commission
Fishery Management Plan for Horseshoe Crab

INTRODUCTION

The Horseshoe Crab Fishery Management Plan (FMP) was approved and adopted by the ASMFC on October 22, 1998. The goal of the FMP is to conserve and protect the horseshoe crab resource to maintain sustainable levels of spawning stock biomass to ensure its continued role in the ecology of coastal ecosystems, while providing for continued use over time. The FMP contains a monitoring program aimed at providing the necessary data to facilitate future management decisions, and maintains horseshoe crab harvest control measures recently put in place in NJ, DE and MD to protect horseshoe crab spawning within and adjacent to the Delaware Bay. The FMP directs the Management Board to implement a cap on horseshoe crab bait landings in 2000, and recommends that the Secretary of Commerce address and initiate controls over the harvest and use of horseshoe crabs in federal waters.

The Management Board met on November 3, 1999 to proceed with developing a coastwide cap on horseshoe crab bait landings to control the harvest and fulfill the goals and objectives of the FMP. Several management options were identified by the Management Board and incorporated into a Public Information Document, which was made available to the public in December 1999, and presented at state public hearings in January 2000. On February 9, 2000, the Management Board reviewed input from the Technical Committee, Advisory Panel and public, and approved Addendum 1 to the Interstate Fishery Management Plan for Horseshoe Crab. Addendum 1 sets forth changes to the harvest level threshold for horseshoe crab bait fisheries pursuant to Section 4.2 of the Fishery Management Plan, and establishes *de minimis* criteria for those states with a limited horseshoe crab bait fishery. State implementation of Addendum 1 is scheduled for May 1, 2000.

STATEMENT OF THE PROBLEM

Reported coastwide horseshoe crab bait landings were 2,756,949 horseshoe crabs in 1998. Restrictions imposed on the horseshoe crab bait fisheries in New Jersey, Delaware and Maryland substantially reduced landings in those states. Increased landings in other states largely negated these conservation efforts. Landings in Virginia increased from an estimated 203,326 horseshoe crabs to 1,015,700 in 1998. Pennsylvania, with no prior history of horseshoe crab landings, reported 75,000 horseshoe crabs landed in 1998. A large portion of the Virginia landings and all of the Pennsylvania landings were harvested from the Exclusive Economic Zone and were most likely comprised of horseshoe crabs that spawn in the Delaware Bay. Thus, management efforts in New Jersey, Delaware and Maryland to reduce exploitation on the Delaware Bay spawning population were not fully realized. It should be noted that Pennsylvania adopted regulations to prevent subsequent horseshoe crab landings.

The status of the coastwide stock remains unknown. The Stock Assessment Committee and Peer Review Panel (PRP) concluded that there was a lack of information for a coastwide stock assessment. Information is not presently available to establish biological reference points, fishing mortality rates, or recruitment estimates. In October 1999, the Plan Review Team (PRT) conducted a review of the horseshoe crab fishery, stock status, monitoring activities, management measures and state compliance requirements. The PRT recommended that the Management Board take a conservative, risk-averse approach to horseshoe crab management as recommended by the Technical Committee, Advisory Panel, Stock Assessment Committee, and the Peer Review Panel. This recommendation was based on increases in catch and effort, coupled with several surveys that suggested localized declines in relative abundance, slow maturation, susceptibility of spawning crabs to high harvest levels, population resiliency, and the need for sustainable biomedical and bait fisheries, and the importance of horseshoe crab eggs as a food source for hemispheric shorebirds.

The management of horseshoe crabs is a coastwide issue and involves many user groups including horseshoe crab, eel, and conch (whelk) fishermen, the biomedical industry, and migratory bird advocacy groups (e.g., conservation organizations). There continues to be significant concern regarding the sustainability of the current horseshoe crab bait harvest of horseshoe crabs by many user groups. However, the management recommendations supported by different user groups varies substantially, from unrestricted harvest to a coastwide cap on landings 60-80% below the reference period landings.

COMMERCIAL FISHERIES MANAGEMENT CHANGES

1. Harvest Level Threshold Alternatives

The Management Board approved the table of reference period landings (Table 1) on which the harvest level threshold is based, and includes modifications to MA, RI and GA landings. The revised reference period landings are the most reliable horseshoe crab bait harvest data currently available for the 1995 to 1997 time period. The ASMFC compiled reference period landings based on state submitted reports and National Marine Fisheries Service (NMFS) harvest data approved by the Horseshoe Crab Technical Committee. It should be noted that several states which did not have mandatory reporting prior to 1998 were allowed to utilize 1998 or 1999 harvest data as their reference period landings, but only if the state could justify that these landings more accurately reflected their horseshoe crab bait landings between 1995 and 1997, and were not the direct result of an increase in landings.

The Management Board established the following harvest levels for horseshoe crab bait fisheries pursuant to Section 4.2 of the Fishery Management Plan:

> **To establish a state-by-state cap on horseshoe crab bait landings at 25 percent below the reference period landings by May 1, 2000. Individual state horseshoe crab bait fisheries would be closed once their state's cap is reached.** [1]

[1] The harvest reduction of 25 percent below the reference period landings would be assessed for the entire calendar year (Jan. - Dec.). The Board would review overharvest (i.e., overages) by states in any particular year and would subtract the overages from subsequent harvest thresholds.

The Management Board recommended the following management measure to provide further protection to the Delaware Bay horseshoe crab population, recognizing its importance to migratory shorebirds:

> **To encourage states with more restrictive harvest levels to maintain those regulations, until such time that the state comes forward with a plan for adjusting their harvest that has been reviewed by the Technical Committee and approved by the Management Board.**

The Management Board also recommended the following management measure with respect to management in federal waters:

> **For the NMFS to close the harvest of horseshoe crabs in Federal waters within a 30 nautical mile radius of the mouth of Delaware Bay (Figure 1). The taking of horseshoe crabs for any purpose, including biomedical, would be prohibited in this area closure. Furthermore, the NMFS should prohibit the transfer of horseshoe crabs at sea in federal waters.**

2. De Minimis Status

The ASMFC Interstate Fisheries Management Fisheries Program Charter defines *de minimis* as "a situation in which, under existing condition of the stock and scope of the fishery, conservation, and enforcement actions taken by an individual state would be expected to contribute insignificantly to a coastwide conservation program required by a Fishery Management Plan or amendment."

States may apply for *de minimis* status if, for the last two years, their combined average horseshoe crab bait landings (by numbers) constitute less than one percent of coastwide horseshoe crab bait landings for the same two-year period (for 2000, Reference Period Landings would be used and for 2001, the average of reference period landings and 2000 landings would be used). States may petition the Board at any time for *de minimis* status, if their fishery falls below the threshold level. Once *de minimis* status is granted, designated States must submit annual reports to the Board justifying the continuance of *de minimis* status.

States that qualify for *de minimis* status are not required to implement any horseshoe crab harvest restriction measures, but are required to implement components A, B, E and F of the monitoring program (Section 3.5 of the FMP). Since *de minimis* states are exempt from a harvest cap, there is potential for horseshoe crab landings to shift to *de minimis* states and become substantial, before adequate action can be taken. To control shifts in horseshoe crab landings, *de minimis* states are encouraged to implement one of the following management measures:

1. Close their respective horseshoe crab bait fishery when landings exceed the *de minimis* threshold;

2. Establish a state horseshoe crab landing permit, making it only available to individuals with a history of landing horseshoe crabs in that state; or

3. Establish a maximum daily harvest limit of up to 25 horseshoe crabs per person per day. States which implement this measure can be relieved of mandatory monthly reporting, but must report all horseshoe crabs harvests on an annual basis.

CHANGES IN LAW ENFORCEMENT REPORTING REQUIREMENTS

This addendum requires that all state programs include adequate law enforcement capabilities for successfully implementing the jurisdiction's horseshoe crab regulations. The adequacy of a state's enforcement activity will be measured by annual reports to the ASMFC Law Enforcement Committee and the PRT. Such reports will be presented at the regular ASMFC spring meeting, and will follow the format shown in Figure 2. The reporting period will cover the period from January 1 to December 31.

Table 1. Horseshoe Crab Harvest Levels for Horseshoe Crab Bait Fisheries.

Jurisdiction	Reference Period Landings (# of HSCs)[1]	Years Used[2]	25% Coastwide Reduction (# of HSCs)[3]
ME	13,500	98	13,500
NH	350	99	350
MA	440,503	99	330,377
RI	26,053	99	26,053
CT	64,919	97	48,689
NY	488,362	96-97	366,272
NJ	604,049	96	453,037[4]
PA	-	95-97	-
DE	482,401	95-97	361,801
MD	613,225	96	459,919[4]
PRFC	-	95-97	-
DC	-	95-97	-
VA	203,326	95-97	152,495
NC	24,036	98	24,036
SC	-	95-97	-
GA	29,312	99	29,312
FL	9,455	97	9,455
TOTAL	2,999,491		2,275,296

[1]The Horseshoe Crab Management Board and Technical Committee reviewed and approved the reference period landings based on the reliability and accuracy of the best available data to represent horseshoe crab bait landings between 1995 and 1997.

[2]The reference period landings may either be an average of several years or an individual year depending on the availability and accuracy of data.

[3]States that qualify for *de minimis* status are not required to reduce horseshoe crab bait landings by 25 percent below the reference period landings.

[4]New Jersey and Maryland are encouraged to maintain its current harvest restrictions. These current harvest restrictions have resulted in an average horseshoe crab harvest between 1998 and 1999 of 187,500 and 269,568 in Maryland and New Jersey, respectively. Using these harvest numbers, the 2000 total coastwide harvest would be 1,819,408.

Figure 1. Proposed horseshoe crab sanctuary at the Delaware Bay pending approval by the National Marine Fisheries Service.

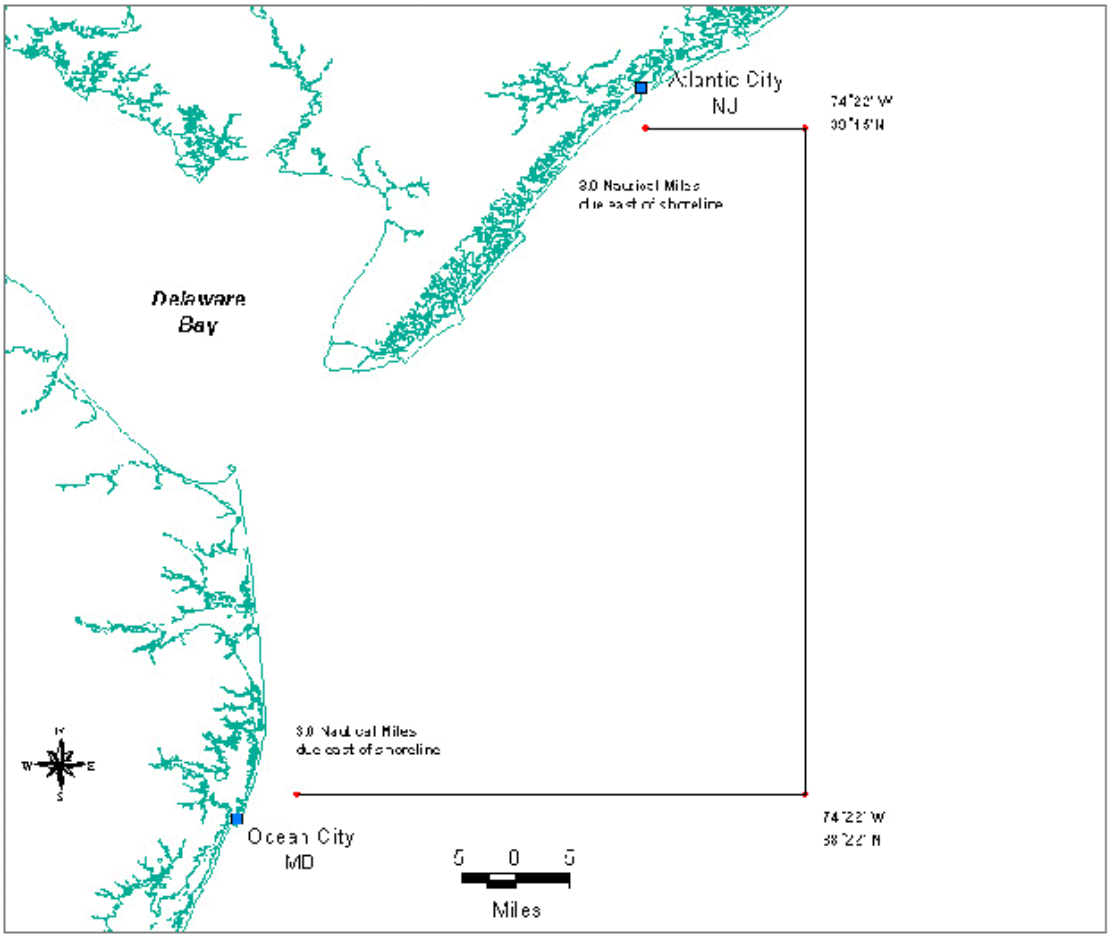


Figure 2. Format for annual law enforcement reports.

STATE _____ Reporting Period _____ 19___

Contact Person/Telephone _____

_____

Enforcement Data:

1. Total Staff-Hours Horseshoe Crab Enforcement _____

2. Total Number of Inspections Made _____

3. Total Number of Complaints Received _____

4. Total Number of Enforcement Actions Taken:

    a. Total Cases _____

    b. Total Warnings _____

    c. Total Revocations of Permits or Licenses _____

5. Total Number of Horseshoe Crabs Seized _____

_____

II Narrative Description: (Include for the commercial fishery: current regulations; current levels of participation and recent trends; general attitudes towards regulations and their effectiveness; regulatory problems, if any; recent large cases or major investigations.)