

# *Atlantic States Marine Fisheries Commission*

## **Addendum VI to the Interstate Fishery Management Plan for Horseshoe Crab**

*Delaware Bay Region Management Program*



### **ASMFC Vision:**

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

**August 2010**

## **1.0 Introduction**

The Horseshoe Crab Management Board approved the Interstate Fishery Management Plan for Horseshoe Crab (FMP) in October 1998. The goal of the FMP includes management of horseshoe crab populations for continued use by: current and future generations of the fishing and non-fishing public, including the biomedical industry, scientific and educational researchers; migratory shorebirds; and, other dependent fish and wildlife, including federally listed sea turtles. The Atlantic States Marine Fisheries Commission maintains primary management authority for horseshoe crabs. The management unit for horseshoe crabs extends from Maine through the east coast of Florida in state and federal waters.

Additions and changes to the FMP have been adopted by the Horseshoe Crab Management Board through various addenda. The Board approved Addendum I (2000) establishing a coastwide, state-by-state annual quota system to reduce horseshoe crab landings. Through Addendum I the Board recommended to the federal government the creation of the Carl N. Schuster Jr. Horseshoe Crab Reserve, an area of nearly 1,500 square miles in federal waters off the mouth of Delaware Bay that is closed to horseshoe crab harvest. The Reserve was established in 2000 and remains in effect to this day. The Board approved Addendum II (2001) establishing criteria for voluntary quota transfers between states.

Addenda III (2004), IV (2006), and V (2008) required additional restrictions on the harvest of horseshoe crabs of Delaware Bay origin. The provisions of Addendum V expire after October 31, 2010.

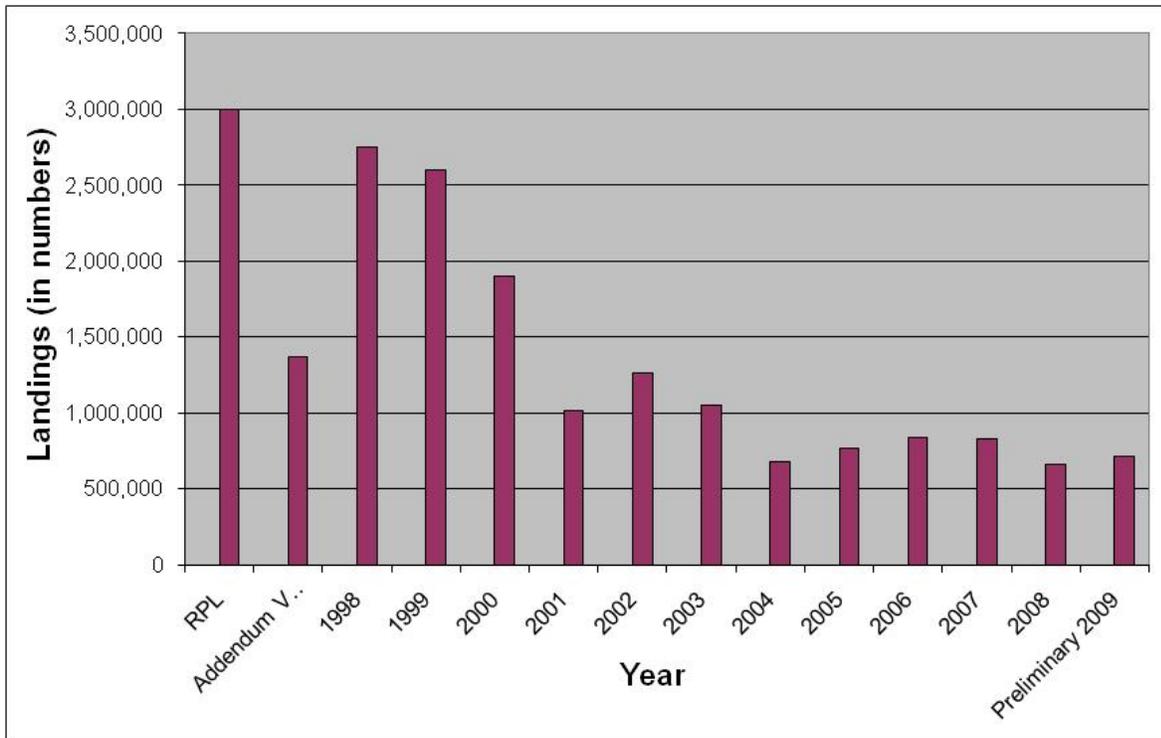
Addendum VI maintains a management program for the Delaware Bay Region (i.e., coastal and bay waters of New Jersey and Delaware, and coastal waters only of Maryland and Virginia) following the expiration of Addendum V after October 31, 2010.

## **2.0 Management Program**

### **2.1 Statement of the Problem**

This Addendum responds to the ongoing public concern regarding the horseshoe crab population and its ecological role in the Delaware Bay, specifically its connection to the red knot population. The 2009 Horseshoe Crab Stock Assessment concluded that crab abundance in the Southeast and Delaware Bay Regions has increased and in the New York and New England Regions has decreased, over the respective time series. Since the 2008 fishing season, New York and Massachusetts adjusted their state regulations to protect horseshoe crabs and the fishery.

While horseshoe crab abundance in the Delaware Bay Region continues rebuilding, the red knot (*rufa* subspecies), one of many shorebird species that feed on horseshoe crab eggs, remains at low population levels. Red knots have shown no sign of recovery (Niles et al. 2008), despite a nearly four-fold reduction in horseshoe crab landings since 1998 (Figure 1). Technical advisors recommend continued precautionary management.



**Figure 1. Atlantic Coastwide Landings of Horseshoe Crabs for Bait.** [RPL = Reference Period Landings, used as a basis to setting reduced state quotas in Addendum I; Addendum V = Coastwide horseshoe crab harvest quota established by that addendum.]

## 2.2 Background

Provisions of Addendum V expire after October 31, 2010. The 2009 Horseshoe Crab Stock Assessment and Peer Review Reports provide managers information and recommendations to inform their decision making. In addition, an Adaptive Resource Management (ARM) Framework was completed and accepted by the peer reviewers and Board. The ARM Framework can help give managers guidance as they set future horseshoe crab harvest regulations with multispecies objectives, particularly red knot rebuilding, in the Delaware Bay Region (i.e., coastal and bay waters of New Jersey and Delaware, and coastal waters only of Maryland and Virginia). Development of the Framework will continue while Addendum VI is implemented.

## 2.3 Commercial Bait Harvest Management Measures

The provisions of Addendum VI are in place from November 1, 2010 through April 30, 2013. However, the Board may choose to replace Addendum VI with another addendum or amendment to the FMP prior to April 30, 2013. If Addendum VI expires and the Board does not take management action to follow Addendum VI, management measures for New Jersey, Delaware, Maryland, and Virginia revert back to those contained in Addenda I and III.

Addendum VI prohibits directed harvest and landing of all horseshoe crabs in New Jersey and Delaware from January 1 through June 7, and female horseshoe crabs in New Jersey and Delaware from June 8 through December 31. It also limits New Jersey and Delaware's harvest

to 100,000 horseshoe crabs per state per year. These provisions are in place for one year, from November 1, 2008 to October 31, 2009.

Based on tagging release and recapture information from the US Fish and Wildlife Service tagging database, the Horseshoe Crab Technical Committee and Plan Development Team found that at least a portion of crabs harvested in Maryland and Virginia waters are “crabs of Delaware Bay origin.” Crabs tagged in Delaware Bay have been recaptured in state waters of New Jersey, Delaware, Maryland, and Virginia from 1999 to the present.

To provide additional protection to crabs of Delaware Bay origin, Addendum VI prohibits directed harvest and landing of horseshoe crabs in Maryland from January 1 through June 7. It also prohibits the landing of horseshoe crabs in Virginia from federal waters from January 1 through June 7. Addendum VI mandates that no more than 40% of Virginia’s annual quota may be harvested east of the COLREGS line in ocean waters. It also requires that horseshoe crabs harvested east of the COLREGS line and landed in Virginia must be comprised of a minimum male to female ratio of 2:1.

### **3.0 Compliance**

Affected states must implement the measures contained in this Addendum no later than the following dates:

- September 1, 2010: States must submit state programs to implement Addendum VI, including management and monitoring programs, for approval by the Management Board.
- November 1, 2010: States with approved management and monitoring programs shall begin implementing Addendum VI.

### **4.0 Literature Cited**

Niles, L. J., H. P. Sitters, A. D. Dey, P. W. Atkinson, A. J. Baker, K. A. Bennett, R. Carmona, K. E. Clark, N. A. Clark, C. Espoza, P. M. Gonzalez, B. A. Harrington, D. E. Hernandez, K. S. Kalasz, R. G. Lathrop, Ricardo N. Matus, C. D. T. Minton, R. I. G. Morrison, M. K. Peck, W. Pitts, R. A. Robertson and I. L. Serrano. 2008. Status of the Red Knot in the Western Hemisphere. *Studies in Avian Biology* No. 36.