

Summary of the Rhode Island Menhaden Fishery with Stock Status and ASMFC Amendment 2 Updates



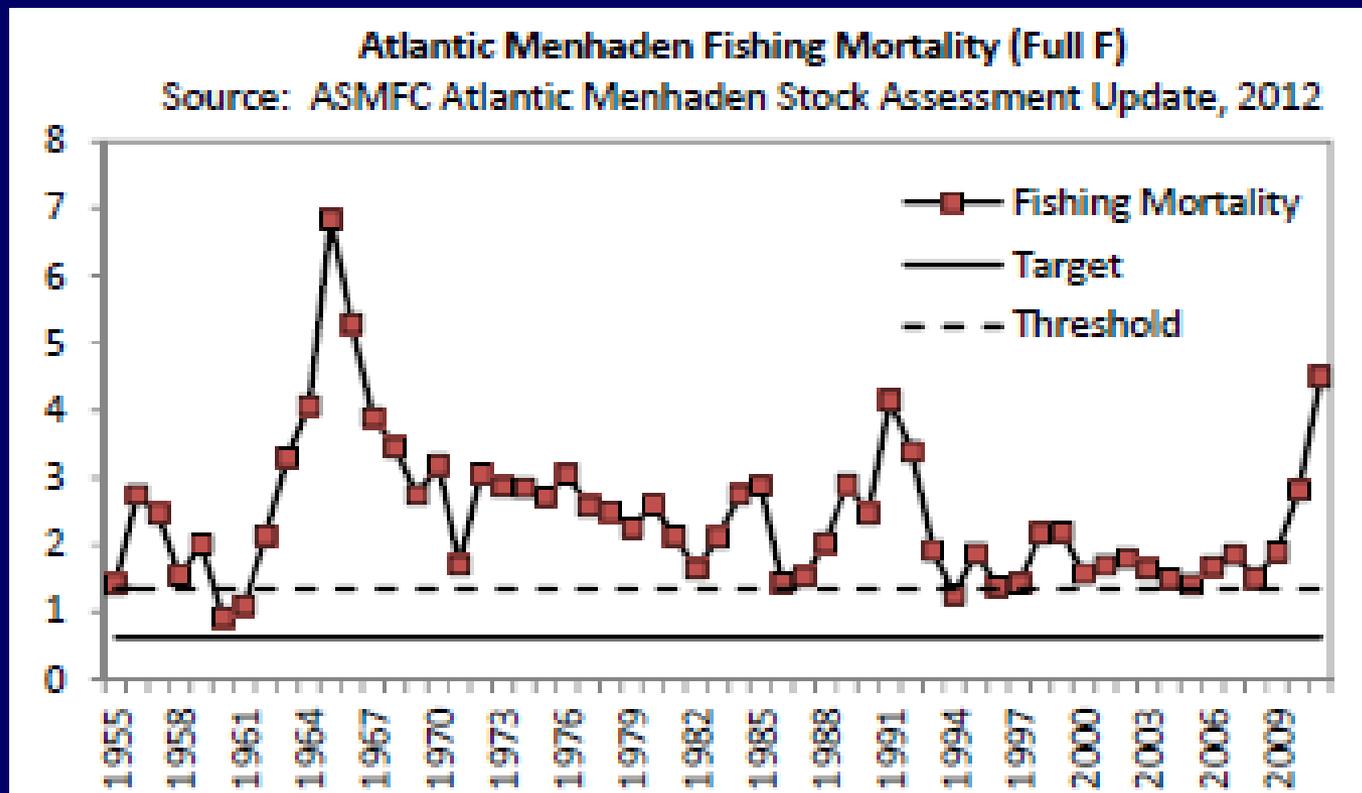
2012 Menhaden Coastwide Stock Status

- **The most recent stock assessment update for menhaden occurred in 2012.**
- **Fishing mortality and stock biomass estimates generated with a statistical catch at age model developed by Beaufort, NC marine fishery lab**
- **Forward projecting age structured model**
- **The stock status finding was: the menhaden stock may be overfished and overfishing is occurring.**



2012 Menhaden Coastwide Stock Status

- There were multiple issues found with the model and its output such as:
 - Retrospective pattern
 - Disagreement between survey indices and model
- Because it was an update, the stock assessment sub committee could not explore the causes of these issues



Stock Status to Management

- ♦ **Menhaden stock assessment is currently being benchmarked, slated to be peer reviewed by SEDAR at the end of 2014**
- ♦ **With the stock assessment uncertainty, but some level of overfishing potentially occurring, Management Board initiated Amendment 2**



Menhaden ASMFC Amendment 2

- Amendment 2 was approved during December of 2012
- Establishes a 170,800 MT TAC beginning 2013 and continuing until completion of, and Board action on, the next benchmark stock assessment (2014)
- TAC represents a 20% reduction from average of landings 2009-2011
 - approximately 25% reduction from 2011 levels
 - TAC was developed ad hoc, could not quantify quota due to stock assessment uncertainty
- Board also adopted new biological reference points for biomass based on maximum spawning potential (MSP)
- Goal is to increase abundance, spawning stock biomass, availability as forage
- Allocates TAC on a state-by-state basis based on landings history from 2009-2011 (revisited in 3 years)



Menhaden ASMFC Amendment 2

- Reduces the Ches Bay reduction harvest cap by 20%
- States required to close their fisheries when state-specific portion of the TAC has been reached
- Overages must be paid back the following year
- Provisions for the transfer of quota between states
- Includes bycatch allowance of 6,000 lbs for non-directed fisheries operating after state TAC reached
- Also establishes reporting requirements and bio monitoring
- Additional modifications were made during 2013 and 2014 including episodic set aside program and cast net fishery



Menhaden ASMFC Amendment 2 and RI Management

- RI received a very small allocation due to the years chosen for average catch
- Majority of purse seine landings occur in MA, not RI, even though fishing occurs here
- Because of this, the DFW believes the menhaden monitoring program continues to serve an important role for management in state waters
- In addition, Amendment 2 management has a coastwide perspective and does not account for Narr Bay considerations
- Final note, the FFT sector, who account for the majority of the RI landings are exempted in Amendment 2 as a non-directed fishery but are capped at 6,000 lbs



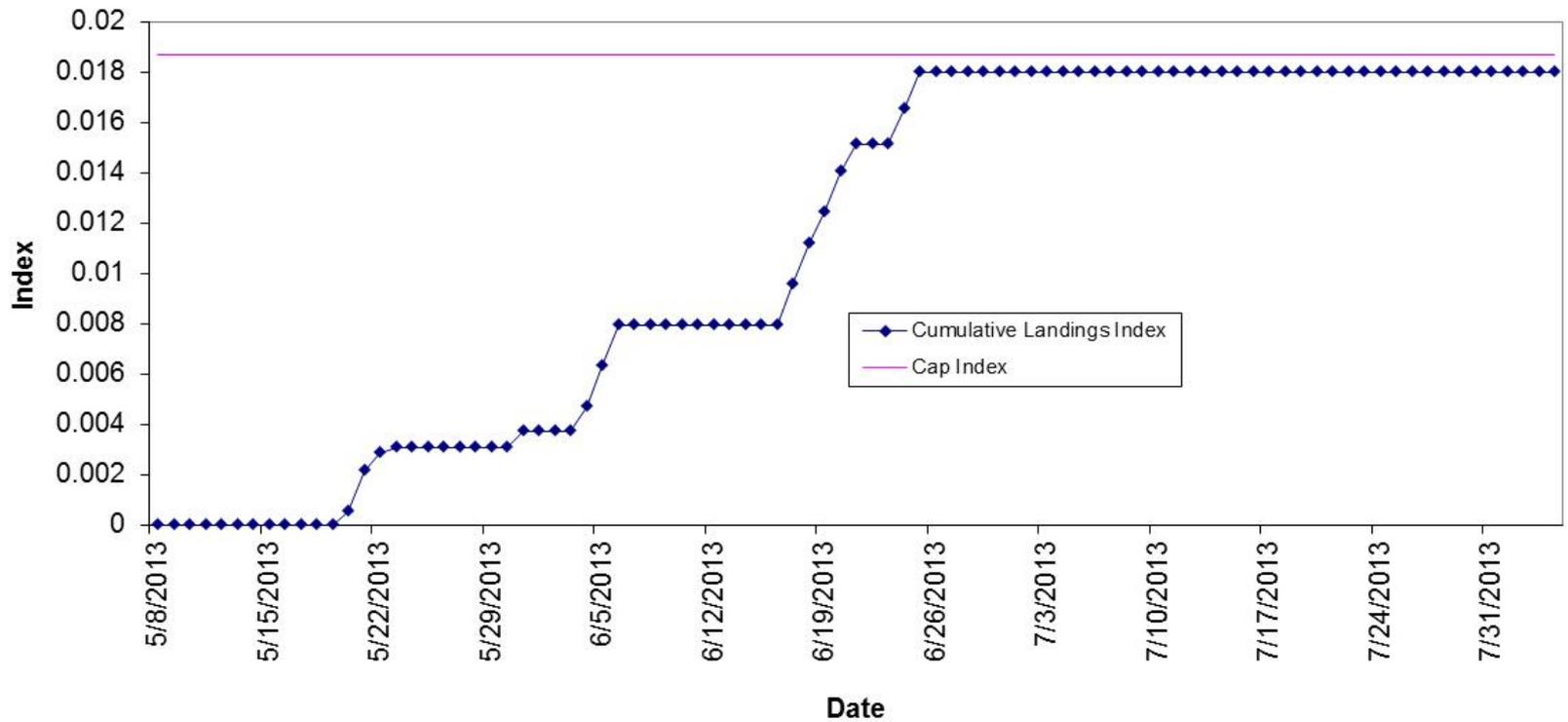
2013 RI Fishery

- Only one operation fulfilled requirements for fishing in Narr Bay in 2013
- After biomass levels were estimated and confirmed, fishing was allowed to commence on May 20, 2013
- The commercial bait fishery closed on June 10, 2013 in the Bay
- The commercial bait fishery reopened on June 17, 2013 in the Bay
- The commercial bait fishery closed on July 3, 2013 for the season in the Bay
- On July 28, 2013, RI met its state waters quota, therefore closed to all landings but the 6,000 lbs bycatch allowance
- On August 14, 2013, RI was accepted in to the episodic set aside program, so opened state waters outside of the Bay at 120,000 lbs



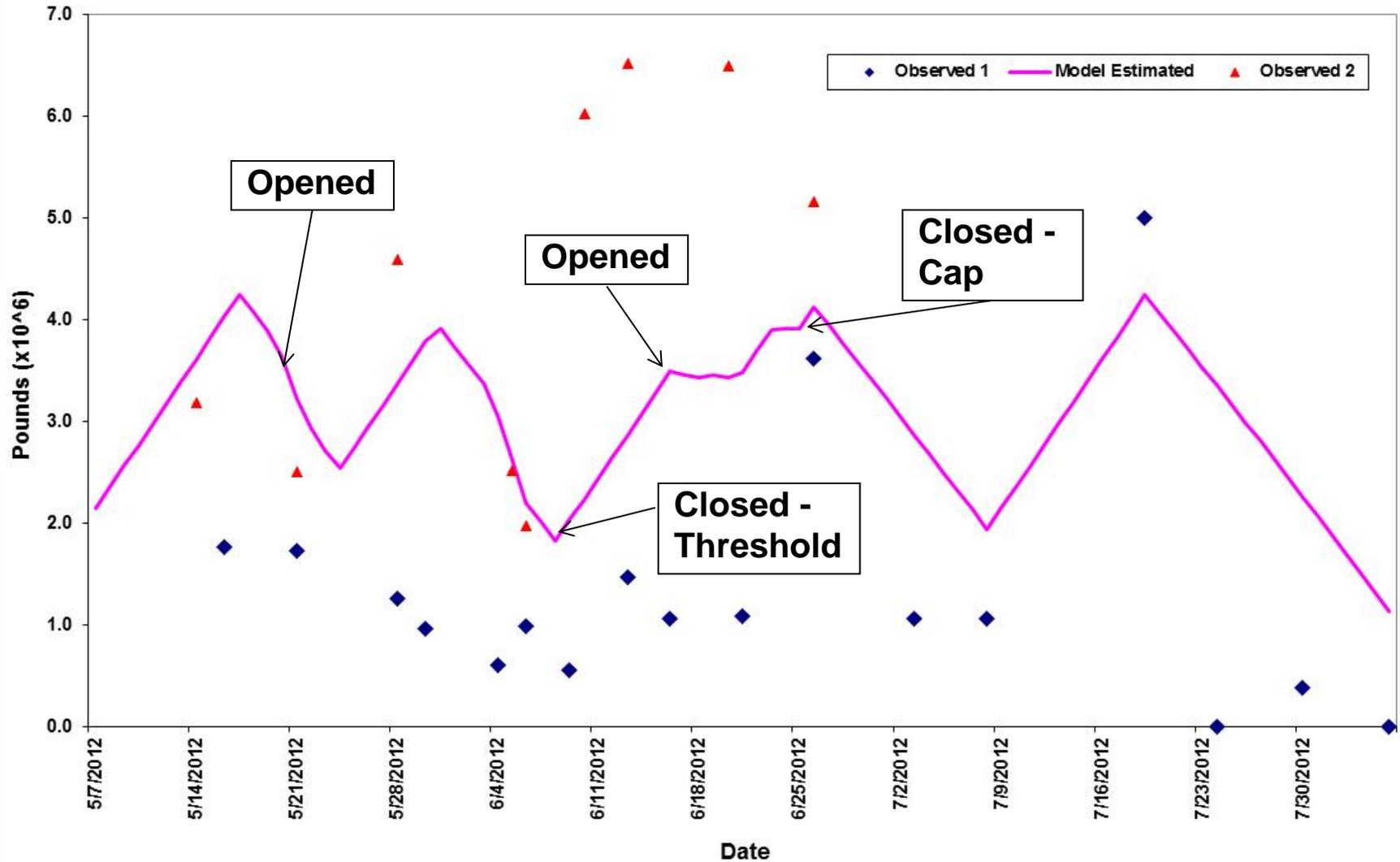
2013 RI Fishery

Landings vs Cap 2013



2013 RI Fishery

Observed and Model Estimated Spotter Index of Menhaden in Narragansett Bay in 2013



Methodology for Monitoring Menhaden Abundance

- ♦ **RIDFW, created a depletion model for open populations to monitor menhaden abundance in close to real time**
- ♦ **Model uses several data sources:**
 - ♦ **Floating fish trap data for movement of fish in Narr Bay**
 - ♦ **Purse seine vessel landings data for fishery removal**
 - ♦ **Spotter plane data as index of absolute abundance in Bay**
 - ♦ **Helicopter overflights**



Regulatory Structure for Monitoring Menhaden Abundance

- Estimate of abundance compared to an abundance cap
- Cap is set at 50% of the estimated total abundance in the Bay minus a 1.5 mlbs threshold
- Biomass in Bay must be over the threshold (>2 mlbs) to provide a level of exploitable biomass
- Landings remained under the cap in 2013 by less than 1 full possession limit, closures were triggered by biomass dropping below the 1.5 mlbs threshold and then meeting the fishery cap
- Closed areas; Prov River above Conimicut and Western GB



Analysis of 2013 Program and Fishery

- ♦ Helicopter observations for school counts were begun in 2009, which continued through 2013
- ♦ The model will continue to be analyzed and improved as the dataset gets larger and sources improve
- ♦ It is evident that in years where biomass in Bay is low and/or fishing activity is low, modeling approach is weak
- ♦ Additional difficulties:
 - ♦ Conflicting estimates between contracted spotter and new spotter hired by Ark Bait
 - ♦ DFW chose to use both estimates with weighting
 - ♦ Interplay between RI program and Amendment 2 created complexity
 - ♦ Despite difficulties, program worked well in 2013



Division of Fish and Wildlife Proposed Changes

- ♦ **DFW continues to work with spotter pilots to better standardize spotter information. Put flight contract out to bid in 2014**
- ♦ **One additional element needed to enact episodic event set aside program – November 1 termination date**
- ♦ **Would like feedback on designation of cast nets as non-directed fishery**
- ♦ **Points of clarification:**
 - ♦ **Biomass threshold is a static number year to year**
 - ♦ **Fishing cap is dynamic and changes year to year depending on magnitude of fish**
 - ♦ **Vessel hold capacity cert. will only be required of new entrants and/or new vessels**
 - ♦ **All other gear requirements will be in place in 2013**

