

**RI Marine Fisheries Council Menhaden Advisory Panel Meeting
Minutes
February 19, 2014, 5:00 PM URI Bay Campus, Coastal Institute**

D. Monti, Chairman	B. Ferioli*
R. Jobin*	T. Hoxsie
J. Macari	T. Kutcher
M. Bucko*	
E. Cook*	N. Lengyel, DFW staff
	J. McNamee, DFW staff

(*primary advisory panel member; ^A alternate member)

D. Monti began the meeting. He gave a brief outline of the agenda and then noted that the main goal of the meeting was to review the emergency regulations that had been filed by the DEM and develop some comments from the panel on these regulations. He then passed the meeting to J. McNamee of the Division of Fish and Wildlife (DFW). J. McNamee stated that he had a presentation (see attached) that covered the beginning agenda items. He began by noting that the Atlantic States Marine Fisheries Commission Menhaden Board had approved Amendment 2. This amendment would put some significant restrictions on the fishery. The other parts of the amendment were states allocation (quota) and the reporting requirements. As far as the current fisheries in RI waters, Ark Bait fished in RI waters but landed in MA, so these fish would not impact RI's quota. The main harvesters landing in RI were the floating fish traps. These gears were considered non-directed so these landings would be able to continue as long as they didn't land more than 6,000 pounds per day. There was also a technical addendum that had been approved. This addendum created the episodic event set aside. J. McNamee noted for the group that RI had submitted a memo to the ASMFC requesting access to the episodic event set aside program. This program allowed a state that opted in to harvest in state waters at 120,000 pounds per vessel per day from a set aside amount that was set aside for northern states that occasionally have high biomass levels that enter their state waters. If the set aside amount were not harvested, it was re-allocated to the fishery as a whole. J. McNamee noted that RI had opted in to the episodic event set aside program in 2013, but did not accrue any landings. Generally, the fishery performed well in 2013, and harvest was kept under the Narragansett Bay harvest cap. In addition, RI achieved its entire state waters allocation as well. J. McNamee concluded with some comments on the DFWs proposals for 2014. One additional element that was needed to enact the full requirements of Amendment 2 was a November 1 termination date for the episodic event set aside program. Any unused harvest from the episodic event program would go back in to the general coastwide pool on that date. The DFW was also requesting feedback on the designation of cast nets as a non-directed fishery.

D. Monti went to the group for discussion. R. Sousa stated that the state should enact a transiting provision so if he were fishing off NY, he would be able to pass through RI waters to land his fish in Fall River. J. McNamee stated that one of the provisions going to hearing in March was to generalize the transiting provisions to encompass all fisheries, so this would be accommodated in those changes. T. Hoxsie asked if cast nets were considered commercial or recreational. J. McNamee noted that it depended on what the person did with the harvested fish, if they sold them they were commercial, but there was a move at the ASMFC to make cast nets a non-directed fishery. To this point they had been considered directed.

The group then had a lengthy discussion about whether a commercial bass fisherman could have menhaden in possession while they were commercially fishing for striped bass when the Bay was closed. J. McNamee stated that this was a difficult one, but he thought they could as the menhaden were being used as bait and not being sold, but he thought this was a better question for legal counsel and enforcement.

D. Monti then noted that one additional proposal had been submitted from Save the Bay. He asked T. Kutcher to discuss the proposal (attached). The gist of the proposal was to close the Bay to purse seine fishing to allow menhaden to serve its ecological role. M. Bucko stated that the Save the Bay proposal made sense, but he felt the current management program found a balance between allowing the commercial fishery to continue in a controlled manner, and still leave some menhaden for its other ecological roles. He felt that there was some evidence of this in the Sulikowski work (Univ. of New England) that had been conducted in RI, as they saw some old fish in those samples. J. Macari also agreed with a lot of what was in the Save the Bay proposal. But agreed with M. Bucko that he felt the current management plan was a good compromise and had proven effective over the previous years. J. Macari made a comment that the Bay was actually too clean, and he felt this was one reason why menhaden did not go in to the Bay in large numbers anymore. He concluded with the idea that if some of the biomass wasn't removed, the Bay could incur some large fish kills, and that the fishery is historic and has some social value as well. E. Cook noted that since the new management went in to place he has heard far fewer complaints, so he took this as a sign that the program was working well.

R. Jobin made a motion to maintain status quo. The motion was seconded. R. Sousa voiced support for the motion stating that the program had worked OK in Ark Baits view. T. Hoxsie noted that closing the Bay was less important than controlling some of the other larger factors that are impacting this coastwide stock, like the large reduction and bait fisheries to our south. **The vote was unanimously in favor of the motion.**

J. Barker stated that the Save the Bay proposal should be brought forward for further discussion, at least to the RIMFC. The panel did not reach consensus on this comment.

M. Bucko stated that he agreed with the cast net proposal. There was discussion on this but no action was taken. M. Bucko went on to introduce a proposal to allow a small portion of the cap to remain in place so that small scale fishing could remain to continue to supply bait to bait shops. **He formed this in to a motion to drop the possession limit in the Bay to 6,000 lbs/day when fishing came within 100,000 lbs of the Bay cap. This was modified to state that the possession limit drop should occur at a level the DFW felt was reasonable,** due to a discussion between D. Beutel and J. McNamee stating that they did not think the menhaden model had a powerful enough resolution to determine when they were within 100,000 pounds of the cap. **The vote was unanimous to approve this motion.**

D. Monti adjourned the meeting.

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



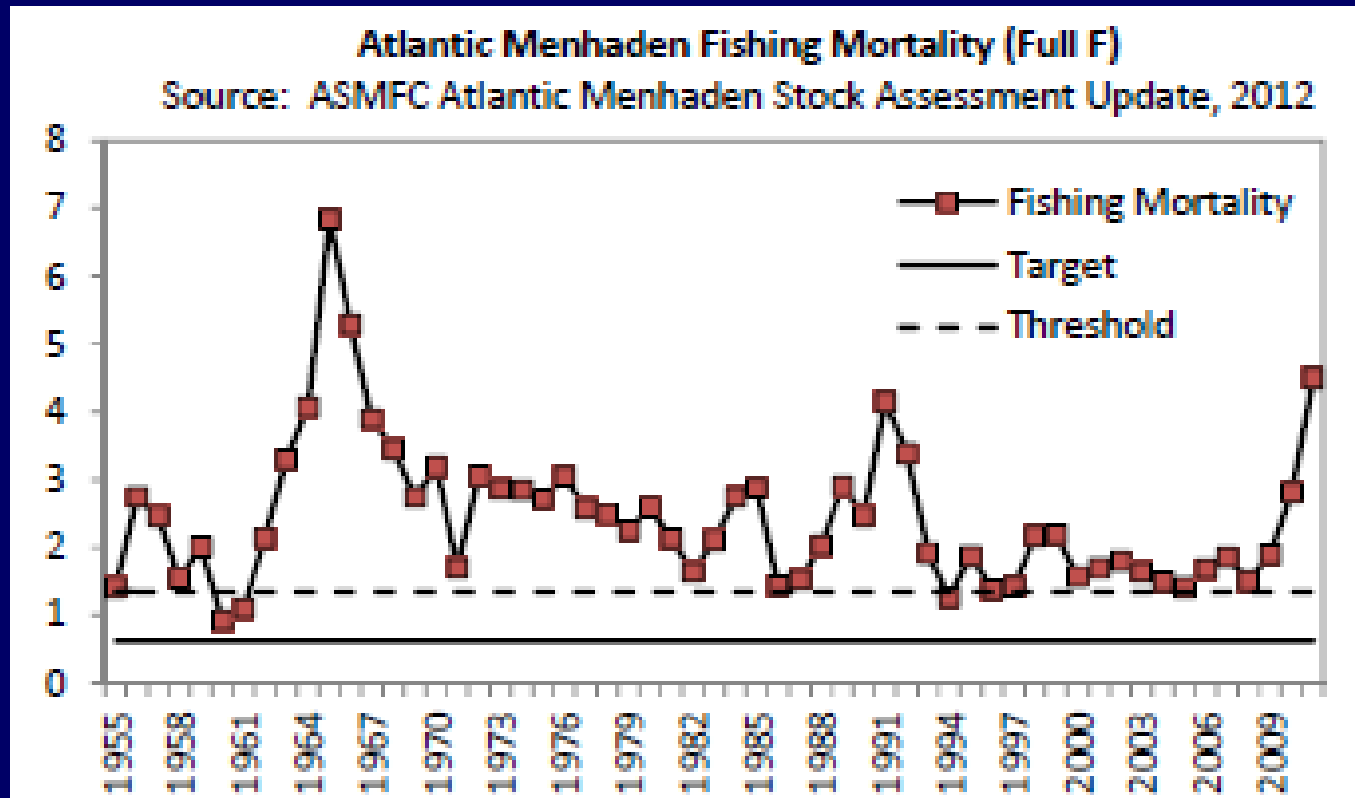
2012 Menhaden Coastwide Stock Status

- **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



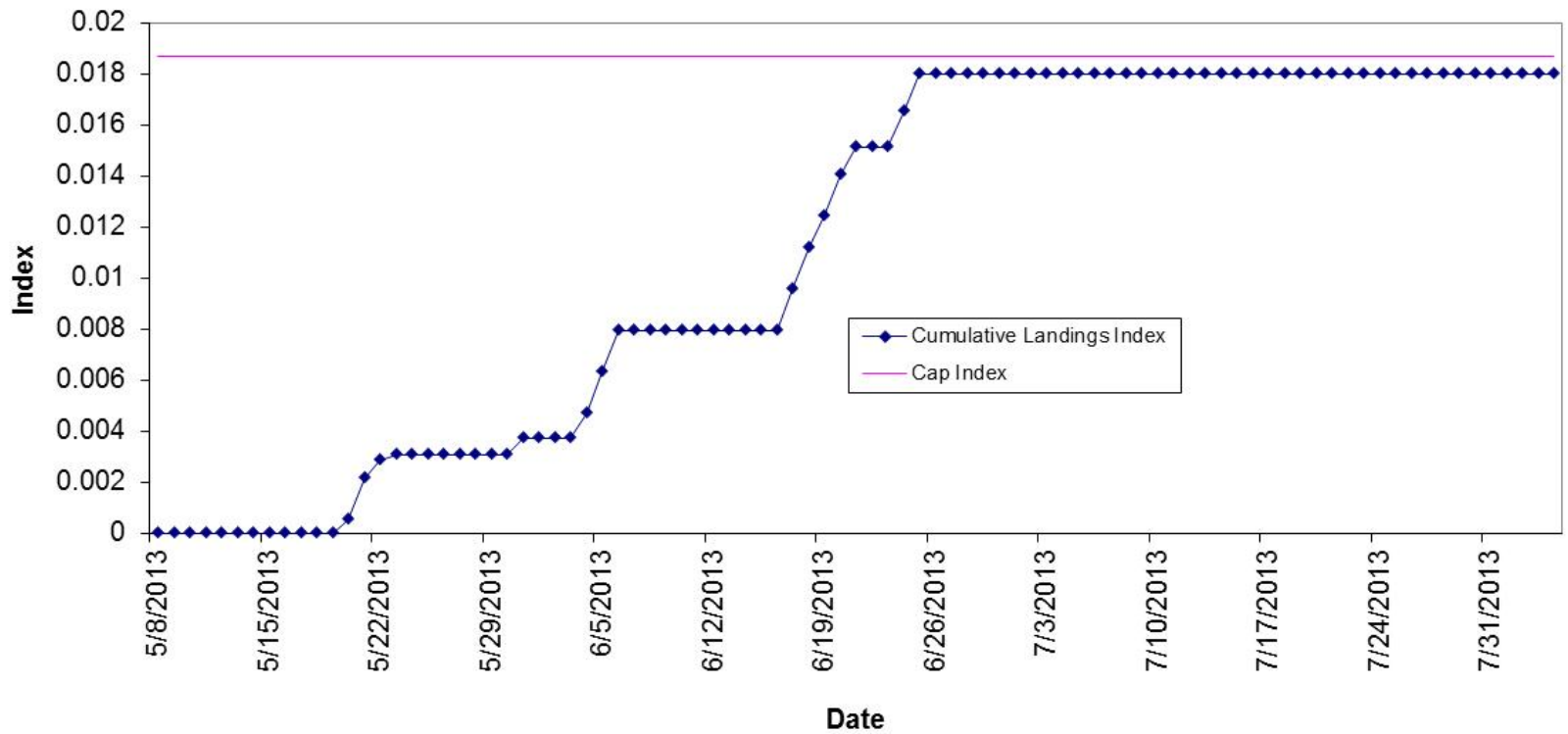
2013 RI Fishery

- 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



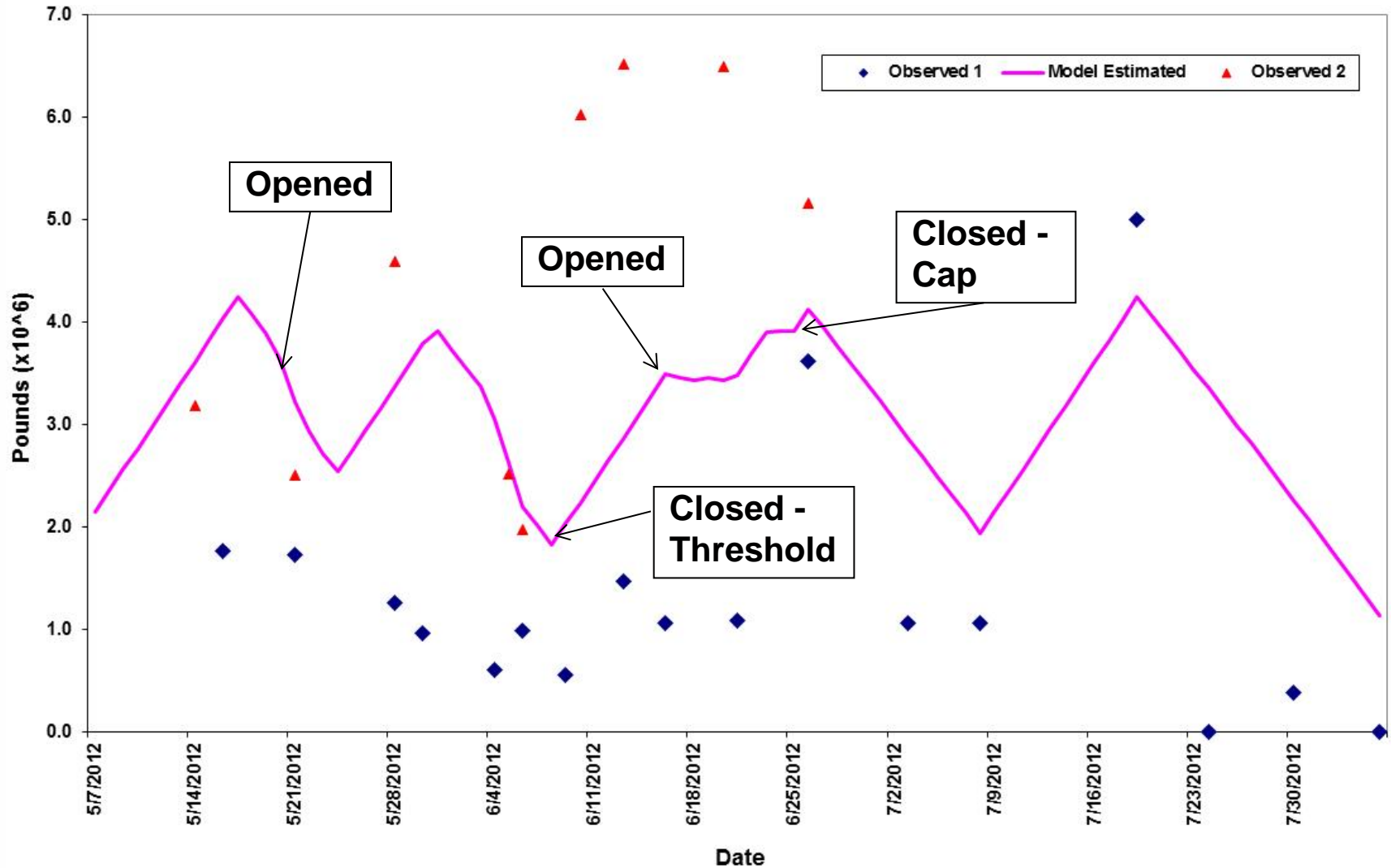
2013 RI Fishery

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**



February 14, 2014

Mr. David Monti, Chairman
Atlantic Menhaden Advisory Panel
Rhode Island Marine Fisheries Council
State of Rhode Island and Providence Plantations

Re: Proposal to Ban Purse Seining within Rhode Island State Waters

Save The Bay proposes changes in Rhode Island's regulation of the commercial harvest of Atlantic menhaden based on the ecosystem services, ecological functions, and economic value to the public clearly outweighing any benefit gained by their industrial harvest from state waters. We urge you to recommend that the Rhode Island Department of Environmental Management (DEM) ban the commercial purse seine fishery for menhaden in Rhode Island State waters, and recommend to the RI Marine Fisheries Council and the Director of DEM that these changes are implemented before the 2014 season.

We understand that the Atlantic menhaden population is largely controlled by the collective management of the Atlantic states, and that the RI and MA fisheries represent a small proportion of the overall pressure on the species. However, we feel that **the multiple benefits provided by living menhaden easily justify protecting all fish that enter Narragansett Bay for the entire season.** And, because menhaden continually move in and out of the Bay, we feel that also protecting menhaden in our coastal State Waters is necessary to protect the Bay population.

We also understand that current DEM regulations recognize the ecosystem functions of menhaden as forage for certain game fish species, and that a standing biomass of 2,000,000 lbs. has been identified by DEM as sufficient to provide that function for striped bass and bluefish in Narragansett Bay. However, we contend that this regulation underestimates the ecological contributions of menhaden to the Narragansett Bay system, and does not consider several additional ecosystem functions and values that menhaden provide. Additionally, we question whether DEM resources should be spent managing a sector of the menhaden fishery that does not directly benefit the Rhode Island economy or quality of life, and in fact, may diminish both.

Menhaden provide direct critical forage for a host of Bay species, not just for our two most visible game fishes. Menhaden serve a keystone role of converting abundant, planktonic and detrital resources into edible biomass for numerous game and commercial fish species, lobsters, crabs, wading birds, diving ducks, osprey, and seals. These species provide economic, environmental, and cultural benefits for the entire Narragansett Bay community.

Menhaden are an integral component in the food web of Narragansett Bay and may affect important species *indirectly*. For example, as the preferred food source for striped bass, menhaden abundance plays a critical direct role in the abundance and health of this important game fish (Uphoff 2003, Walter et al. 2003). In southern New England, striped bass feed primarily on lobsters and rock crabs during the spring, shifting to menhaden in the summer and fall, when they are abundantly available (Nelson et al. 2006). If menhaden are not readily available, striped bass will focus on other species, including lobsters

(Walter et al. 2003; Nelson et al. 2006). It has been estimated that striped bass consume three times the numbers of lobsters taken by southeastern New England fisheries (Nelson et al. 2006). DEM has reported a precipitous decline in lobster recruitment in Narragansett Bay in recent years, while the Bay lobster fishery has collapsed. Lobster survival may also be *directly* affected by the abundance of menhaden in the Bay, as they feed on menhaden remains dropped by feeding finfish.

Menhaden once spawned in Narragansett Bay. Menhaden spawn in New England coastal waters and embayments. Their eggs and larvae provide food for fish larvae and mollusks, while young of the year menhaden directly graze on phytoplankton blooms and provide preferred forage for a host of fish and wading birds. Juvenile menhaden are also an important food source for commercial and game fish species such as striped bass, bluefish, weakfish, and summer flounder. However, since the mid-1970s, breeding in Narragansett Bay has disappeared (Gibson 2007). It is unclear what the cause of decline was or if it can be reversed. However, it stands to reason that increasing menhaden residence time and densities in the Bay could contribute to any management program aimed at spawning recovery.

Menhaden can remove substantial nitrogen from Narragansett Bay. Durbin and Durbin (1998) estimated that menhaden removed 476,000 lbs. of nitrogen (net) from Narragansett Bay in 1976. That amount is a significant proportion of the nitrogen budget of the Bay. For context, that is over eight times the amount of additional nitrogen that is expected to be removed yearly by a recent \$13-million upgrade to the Narragansett Bay Commission's Bucklin Point facility (NBC, unpublished data). The potential value that living menhaden can provide for nitrogen removal clearly outweighs their market value for bait or reduction.

Menhaden can redistribute nutrients throughout the Bay. Menhaden eat plankton from nutrient rich areas and deposit waste products in other areas. This process can redistribute nutrients, transferring nutrients from nutrient-rich to nutrient-poor surface waters (Durbin and Durbin 1998).

The purse seine fishery provides little or no benefit to the public. In fact, it delivers a net loss. For the last several years, a single purse seine participant has exploited RI waters in Narragansett Bay and has landed its catch in Massachusetts. The gains to the State of RI from licensing fees total about \$300 for this company to remove up to 120,000 lbs of menhaden daily. For this small fee, this fishery has been granted the right to reduce the nutrient removal benefits provided by menhaden, weaken a recreational fishery that contributes nearly \$180 million and 1,200 jobs to the RI economy, and directly diminish the ASMFC allocation available to RI recreational and commercial fishermen to only 78,000 lbs. of menhaden yearly (a direct result of the company fishing in Narragansett Bay and landing in MA). As a result, a single, partial haul from a purse seiner landed in Rhode Island will close the fishery to all for the season. Gibson (2007) cites RIGL 20-3.2-1(e) as a guiding principle of DEM's menhaden management. The law states "*Rhode Island has historically managed its marine fisheries for the benefit of the people of the state, as an ecological asset, and as a source of food, income, and recreation*". The current menhaden purse seine regulations do not effectively promote those benefits, and in fact, harm several.

DEM manages the Narragansett Bay menhaden fishery at RI taxpayer expense; this includes weekly helicopter surveys, and staff time to compile and analyze the data, send out advisories, and report on findings. DEM has reported that this management program is not sustainable (Gibson 2007). Closing the purse seine fishery would substantially reduce the costs of menhaden management.

Most other Atlantic states have banned or restricted purse seining for menhaden in all or parts of their state waters, recognizing the damaging effects of this practice on local ecosystems and communities. New Hampshire, Connecticut, Delaware, Maryland, and North Carolina prohibit purse seining in all state

waters; Massachusetts prohibits mobile gear in Buzzards Bay and seasonally around Cape Cod, and New York bans purse seining in Long Island Sound. Narragansett Bay and our surrounding state waters are no less worthy of such protection.

The health of Narragansett Bay depends on DEM implementing ecosystem-based management.

Aquatic species exist in a complex food web in which the status of every species is dependent on its competitive and predatory interactions with several other species. NOAA has recently recognized the importance of ecosystem interactions in fisheries management in their latest Draft Five-Year Strategic Plan. Menhaden's role as a keystone species is an exemplary testament for prudent ecosystem-based management in marine waters. While the recovery of the larger population of Atlantic menhaden is being pursued through the collective management of the Atlantic states, the Narragansett Bay community will not enjoy the benefits of species recovery unless a framework is put in place to ensure that abundant menhaden remain in Narragansett Bay throughout the season. We urge DEM to choose to manage menhaden for the recovery of Narragansett Bay and for the multiple benefits and services that menhaden provide to the public, and not for the profit of very few at the loss of all others.

We propose that it is DEM's obligation to immediately prohibit purse seining in Rhode Island State waters in the clear interest of the public. Thank you for considering this proposal. Should you have any questions, please do not hesitate to contact me at 272-3540 x116.

Respectfully submitted,



Tom Kutcher
Narragansett Baykeeper

CC:

Janet Coit, Director of DEM

Mark Gibson, Deputy Chief, DEM Division of Fish and Wildlife

Literature Cited

- Durbin, A. G., & Durbin, E. G. (1998). Effects of menhaden predation of plankton populations in Narragansett Bay, Rhode Island. *Estuaries*, 21(3), 449-465.
- Gibson, M. (2007). Estimating seasonal menhaden abundance in Narragansett Bay from purse seine catches, spotter pilot data, and sentinel fishery observations. Rhode Island Department of Environmental Management, Division of Marine Fisheries, Jamestown, RI.
- Nelson, G. A., Chase, B. C., & Stockwell, J. D. (2006). Population consumption of fish and invertebrate prey by striped bass (*Morone saxatilis*) from coastal waters of northern Massachusetts, USA. *J. Northw. Atl. Fish. Sci*, 36, 111-126.
- Uphoff, J. H. (2003). Predator-prey analysis of striped bass and Atlantic menhaden in upper Chesapeake Bay. *Fisheries Management and Ecology*, 10(5), 313-322.
- Walter, J. F., Overton, A. S., Ferry, K. H., & Mather, M. E. (2003). Atlantic coast feeding habits of striped bass: a synthesis supporting a coast-wide understanding of trophic biology. *Fisheries Management and Ecology*, 10(5), 349-360.