Atlantic States Marine Fisheries Commission

DRAFT ADDENDUM VI TO THE INTERSTATE FISHERY MANAGEMENT PLAN FOR TAUTOG FOR PUBLIC COMMENT



ASMFC Vision Statement:

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

February 9, 2011:

Table 1 and Figure 1 have been updated from the January 2011 version.

Public Comment Process and Proposed Timeline

In May 2010, the Tautog Management Board (Board) initiated the development of an addendum to the Interstate Fishery Management Plan (FMP) for Tautog to restrict illegal harvest activities and prevent an increase in fishing mortality rate (F) before completion of the next stock assessment.

This draft addendum presents background on the Atlantic States Marine Fisheries Commission's (ASMFC) management of Tautog, the addendum process and timeline, and a statement of the problem. This document also provides management options for public consideration and comment.

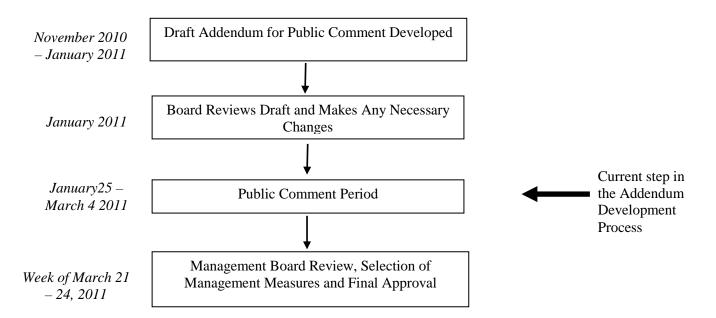
The public is encouraged to submit comments regarding this document during the public comment period. Comments will be accepted until **5:00 pm (EST) on March 4, 2011.** The Board will consider final action on this addendum during the week of March 21, 2011 at the ASMFC Winter Meeting.

Comments may be submitted by mail, email, or fax. If you have any questions or would like to submit comment, please use the contact information below.

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1.0 Introduction

This addendum proposes measures that would amend the Interstate Fishery Management Plan for Tautog to:

- 1.) Address the illegal trade of live tautog and;
- 2.) Prevent increases in fishing mortality (F) prior to the completion of the next assessment scheduled for completion around spring/summer 2011.

2.0 Management Program

2.1 Statement of the Problem

2.1.1 Illegal Live Market

While difficult to quantify, reports of illegal harvest of live tautog are common. The Tautog Technical Committee (TC) commented that poaching activities appear more widespread than previous years because unlicensed buyers now advertise in mainstream outlets such as Craigslist and newspaper classified ads and this practice was previously uncommon. Members of the Advisory Panel (AP) also expressed strong concern that poaching is common and requested that the Tautog Management Board (Board) initiate new management measures to address the problem.

2.1.2 Prevention of Fishing Mortality Increases

Addendum IV & V established a target fishing mortality rate (F = 0.20) that required states to reduce harvest by 25.6% from 2003 - 2005 levels. States were required to implement approved management programs by January 1, 2008 to achieve the necessary reduction. However, a regional VPA and recent landings data provide some evidence that the new regulations were insufficient to reduce F to the target level and new management measures may be necessary.

2.2 Background

2.2.1 Illegal Live Market

Poaching is attractive to fishermen because of the perceived low risk of being caught compared to the high ex-vessel value of live tautog. While the prices vary throughout the year, undersized live tautog can bring more than 10-dollars per pound from buyers in Asian markets in New York City and Philadelphia. Undersized (less than 14") tautog reportedly bring the highest ex-vessel price because the fillets are a single portion size that restaurants prefer. Due to limited enforcement resources and relatively low fines, there is concern that significant poaching is occurring.

Concern has been raised that poaching is so widespread that it is significantly impacting fishing mortality and preventing the stock from rebuilding. The Board adopted a fishing mortality target (F = 0.20) above the TC recommended target (F = 0.15) in part, because they did not want legal harvest to be further restricted to account for poaching removals. Illegal harvest is extremely difficult to quantify due to the underground nature of the illegal market so the impact on fishing mortality remains unknown. However, an informal analysis done by ASMFC staff in 2007 demonstrated that if poaching occurred

at a fishing mortality rate of 0.05 (the difference between the TC recommended target F=0.15 and the Board approved target of F=0.20), an illegal harvest of approximately 227 mt would have resulted (\sim 1.5 times the 2003 commercial catch). Given the nature of live tautog transport, where a large holding tank is necessary to keep the fish alive, it may be unlikely that amounts upwards of 1.5 times the commercial fishery catch are being transported covertly.

Buyers will pay the highest price for live fish and anecdotal information suggests that the price for a dead tautog is closer to 2-dollars per pound. The space and mechanical requirements for keeping tautog alive (water tanks), may allow opportunities for management measures that effectively reduce poaching operations while minimizing the impact on commercial and recreational fishermen.

2.2.2 Prevention of Fishing Mortality Increases

Addendum IV & V reduced the target fishing mortality rate from $F_{target} = 40\% SSB = 0.29$, to $F_{target} = 0.20$. The TC met in April of 2007 and agreed that a 25.6% reduction in harvest would achieve F = 0.20 based on the coastwide average F. Converting fishing mortality rate to harvest reduction allowed the TC to compare all state proposals based on the same metric and precluded states from having to convert their reductions from harvest into F.

The 2005 assessment and 2006 assessment update estimated the coastwide F=0.28 in 2005. Landings in 2006 & 2007 were higher than the years used in the assessment, and harvest reductions based on 2006+ levels were deemed unlikely to achieve the target. As such, the TC recommended that states reduce harvest based on the average of 2003-2005 levels. The TC recommended taking the average of the 2003-2005 harvest to smooth the inter-annual variability in recreational landings data.

Upon review of the TC's recommendations, the Board approved the base years and F harvest reduction methodology. The compliance schedule in Addendum IV & V required states to implement regulations to achieve the reductions by January 1, 2008. All states implemented new regulations that were estimated to meet required reductions by January 2008.

On June 9, 2010 the TC reviewed a regional VPA assessment conducted by MADMF and RIDFW. The VPA results indicate that fishing mortality rates may have exceeded the target in 2008. While regional harvest declined in those years, several of the fisheries independent indices of stock size declined as well. Spawning stock biomass was estimated to have declined slightly in 2009 in the MA/RI region as well.

In addition, total coastwide harvest (combined commercial landings and recreational harvest) is 64.8% and 53.8% higher in 2008 & 2009 than the 2003-2005 baseline levels that state regulations were estimated to achieve (Figure 1 & Table 1). While harvest does not translate directly to F rate, harvest levels in 2008 & 2009 could be an indication that overfishing is occurring; in that it is unlikely that tautog biomass has increased 40% to 50%.

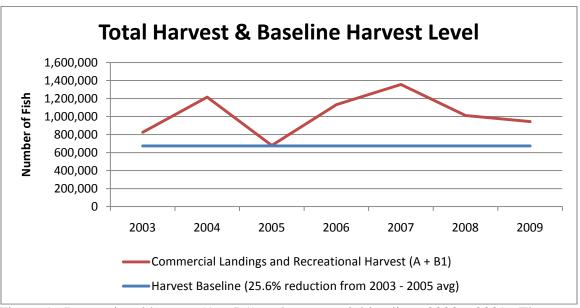


Figure 1. Recreational harvest (A + B1) and commercial landings 2003 - 2009. The base years for Addendum IV & V reductions are 2003 - 2005. States were required to implement reductions to reduce F based on the base years beginning in 2008. Source: Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division, Silver Spring, MD.

Table 1. Recreational harvest, commercial landings, total harvest, harvest baseline and percent over baseline 2003 – 2005. Source: Personal communication from the National

Marine Fisheries Service, Fisheries Statistics Division, Silver Spring, MD.

Year	Recreational (A + B1, # of Fish)	Commercial Landings (# of Fish)	Commercial Landings and Recreational Harvest (A + B1)	Harvest Baseline (25.6% reduction from 2003 - 2005 avg)	Percent Over Reduction	
2003	719,038	105,383	824,421		N/A	
2004	1,125,858	89,520	1,215,378		N/A	
2005	604,046	75,570	679,616		N/A	
2006	1,042,121	90,713	1,132,834	674,415	N/A	
2007	1,259,601	95,808	1,355,409		N/A	
2008	929,073	81,472	1,010,545		49.8%	
2009	878,342	65,123	943,465		39.9%	

Compounding the potential coastwide overfishing rate is concern that the current fishing mortality target = 0.20 may be insufficient to rebuild the stock (Figure 2 & 3, Table 2 & 3). During the development of Addendum IV, the TC recommended an F target of 0.15. They reiterated their concern during the development of this Addendum, that a fishing mortality rate of 0.20 may not be sufficiently low to allow for stock rebuilding. They

agree that the life history parameters of tautog indicate that an extended time period of F = 0.15 or lower is probably necessary to rebuild the stock in a reasonable time frame and as such, a reconsideration of the rebuilding target may be necessary. Rebuilding under Ftarget = 0.20 is unlikely if overfishing is occurring or if F rates have increased.

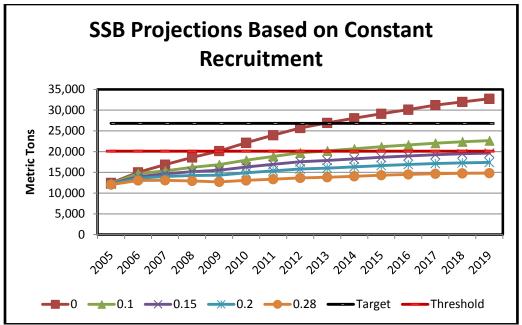


Figure 2. Tautog target, threshold SSB reference points and rebuilding projections based on constant recruitment (geometric mean of the past 5 years data). Under F = 0.20, the stock is unlikely to exceed the target biomass in 15 years. Source: Draft Addendum IV (2007) for public comment.

Figure 3. Tautog target and threshold SSB reference points, and rebuilding projections based on Beverton-Holt spawner-recruit relationship. Under F=0.20, the stock is unlikely to exceed the target biomass in 15 years Source: Draft Addendum IV (2007) for public comment.

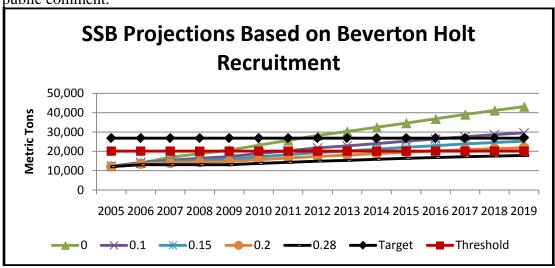


Table 2. SSB projections at various fishing mortality rates based on constant recruitment.

Source: Draft Addendum IV (2007) for public comment.

		Fis	hing Morta	lity	
Year	0	0.1	0.15	0.2	0.28
1	12,452	12,311	12,240	12,171	12,061
2	15,023	14,278	13,926	13,587	13,070
3	16,855	15,347	14,667	14,031	13,096
4	18,614	16,220	15,190	14,254	12,929
5	20,153	16,858	15,509	14,322	12,702
6	22,134	17,942	16,307	14,910	13,072
7	23,957	18,854	16,951	15,368	13,348
8	25,714	19,712	17,566	15,822	13,657
9	26,930	20,190	17,877	16,039	13,810
10	28,032	20,680	18,243	16,340	14,067
11	29,118	21,180	18,624	16,650	14,316
12	30,114	21,620	18,949	16,907	14,508
13	31,122	22,050	19,257	17,139	14,666
14	31,990	22,385	19,485	17,302	14,769
15	32,738	22,647	19,654	17,418	14,836

Table 3. SSB projections at various fishing mortality rates based on Beverton-Holt spawner-recruit relationship. Source: Draft Addendum IV (2007) for public comment.

		Fis	hing Morta	lity	
Year	0	0.1	0.15	0.2	0.28
1	12,452	12,311	12,240	12,171	12,061
2	15,023	14,278	13,926	13,587	13,070
3	16,869	15,361	14,680	14,044	13,108
4	18,775	16,372	15,338	14,398	13,066
5	20,637	17,302	15,932	14,725	13,074
6	23,148	18,837	17,144	15,690	13,763
7	25,646	20,285	18,259	16,555	14,349
8	28,197	21,734	19,371	17,420	14,941
9	30,302	22,842	20,198	18,047	15,355
10	32,414	24,019	21,115	18,779	15,880
11	34,625	25,250	22,070	19,530	16,400
12	36,820	26,428	22,962	20,214	16,848
13	39,069	27,585	23,818	20,855	17,254
14	41,170	28,609	24,559	21,397	17,589
15	43,131	29,526	25,213	21,874	17,884

2.3 Management Options

2.3.1 Illegal Live Market

ISSUE 1: PROHIBITION OF LIVE TAUTOG BY NON-COMMERCIAL FISHERMEN Members of the public and AP have expressed strong support for regulations that allow only commercial fishermen to keep live tautog. Proponents of this strategy believe that recreational anglers have no need for live tautog and prohibiting any non-commercial fishermen from keeping live tautog will reduce poaching. It has also been stated that the increased supply of illegal fish decreases the overall price.

Regulation options presented here are not designed to penalize recreational fishermen, but are intended to deter poaching by those operating under the guise of recreational fishing. In fact, if poaching is slowing or preventing rebuilding, significantly reducing illegal harvest will benefit the recreational sector if the stock rebuilds The following options were developed to prohibit non-commercial fishermen from keeping live tautog.

The Board may select one or more of the following.

- Option A. Status quo. Recreational Angers may possess live tautog.
- Option B. Prohibition of Retention of Live Tautog. Recreational anglers are prohibited from employing any equipment designed to keep tautog alive such as live wells, water filled coolers, mesh bags suspended over the side of a vessel, etc...
- Option C. Mandatory Bleeding of Tautog by Recreational Anglers. Recreational anglers must immediately 'bleed' any tautog that they intend to keep. To be in compliance with this option, recreational fishermen must make a cut behind the last gill arch or use a method that successfully kills the fish. Recreational anglers that possess living tautog would be in violation of this option.

Bleeding may be necessary because tautog are extremely hardy and can survive long periods of time out of water if kept cool. Un-bled tautog have a high likelihood for survival when moved to transport trucks equipped with holding tanks.

Option D. Identification Mark for Tautog. Recreational anglers are required to make a permanent, unmistakable marking on all retained tautog. These identification marks will allow law enforcement to identify any tautog that cannot be legally sold while allowing recreational fishermen to keep live fish for their personal consumption. It shall be illegal to sell any tautog that have identification markings. Examples of potential identification marks are included as suboptions below.

To work, the identification mark must be easy to identify and should not be placed on any body part that is commonly damaged by fish pots or other commercial fishing gear. For example, if tautog tails are commonly mutilated in fish pots, an identification mark on the tail may be problematic. A poacher could simply mutilate the tail of an illegally caught fish to cover up an identification mark.

Once a proper identification mark is selected, regulations will need to stipulate *prima facie* evidence that a violation has occurred if that body part is mutilated.

Sub Option A. Identification Triangles. Recreational anglers are required to cut two triangles into the tail fin of any tautog in their possession. Sides of the triangles must be at least ½" long.

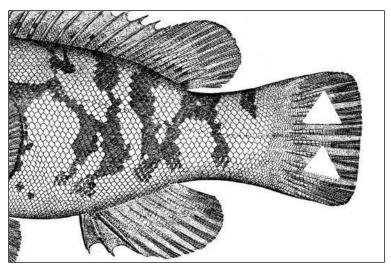


Figure 3. Tautog with recreational identification mark on tail (Sub Option A). Sides of triangles must be at least 1/4" wide. Triangles not drawn to scale.

Sub Option B. Identification V-notches. Recreational anglers are required to cut two v-notches into the tail fin of any tautog in their possession. Sides of the v-notch must be at least 1/2" long.

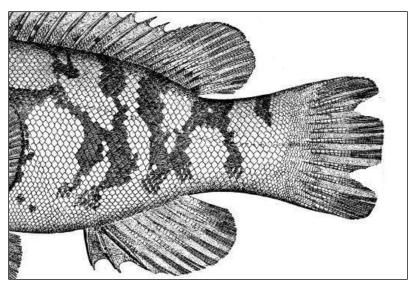


Figure 4. Tautog with recreational identification mark on tail (Sub Option B). Sides of triangles must be at least $\frac{1}{4}$ " wide. V-notches not drawn to scale.

Sub Option C. Anal Fin Notch. Recreational anglers are required to notch the anal fin of any tautog in their possession. The notch must be made by closing a standard hole-punch deep on the anal fin and then pulling away from the fish.

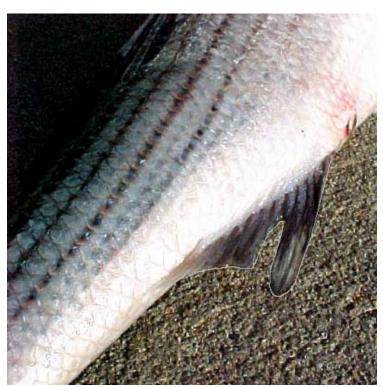


Figure 5. Example of an anal fin notch on striped bass (Sub Option C). Photograph courtesy of Massachusetts Division of Marine Fisheries.

Sub Option D. Different identification mark than listed in Sub Option A - C

2.3.2 Measures to Prevent an Increase in Fishing Mortality Prior to Completion of the Next Assessment.

Addendum IV & V established an F target = 0.20 and the TC calculated that a 25.6% reduction in coastwide harvest was necessary to meet the target. By January 1, 2008, states were required to implement regulations that reduced their harvest by 25.6% from 2003 - 2005 levels¹.

The state regulations implemented in 2008 were projected to achieve at least a 25.6% reduction from each states 2003 – 2005 average harvest. By comparing target harvest levels (25.6% reduction from 2003 – 2005 average) with the 2008 harvest, it is possible to determine whether states reached their Addendum IV & V estimated harvest levels (Table 4). Coastwide harvest in 2008 was well above the harvest target for most states.

Concern has been raised by some states that their 2003 – 2005 harvest numbers are inaccurately low which would increase their % overharvest as a result. If the Board selects harvest reductions under Issue 2 or 3 below, states may submit conservation equivalency proposals. The New Jersey Department of Environmental Protection has indicated that it is reviewing the 2003-2005 recreational fishery data and will likely submit a proposal for conservation equivalency.

Table 4. 2008 Harvest compared to the target harvest levels for 2008. Under Addendum IV & V, states implemented new regulations in 2008 designed to achieve a 25.6% reduction in the 2003 – 2005 average harvest. Harvested % is based on NMFS landings data. (Landings source: Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division, Silver Spring, MD).

	2008 Estimated Harvest Level Under New Regulations (25.6% Reduction from 03 - 05 Average,	2008 Total	
	# of Fish)	Harvest	% Above Estimated Harvest
MA (12%)	57,999	42,879	-26.1%
RI (12%)	128,276	111,095	-13.4%
СТ	91,041	182,150	100.1%
NY	170,556	279,297	63.8%
NJ^2	80,065	200,147	150.0%
DE	69,643	122,000	75.2%
MD	17,446	25,199	44.4%
VA	88,178	47,779	-45.8%
Coastwide	703,203	1,010,545	43.7%

 $^{^{1}}$ MA & RI presented regional VPA's showing that they only needed to reduce harvest by 12% to achieve the target F = 0.20..

² NJ DEP has indicated that they plan to submit a conservation equivalency proposal as described in Section 2.3.2.

ISSUE 2. ADJUSTED REGULATIONS FOR STATES THAT DID NOT ACHIEVE THE ADDENDUM IV AND V REGULATIONS.

The following options were developed to require states to implement further restrictions if their regulations were insufficient to meet the 2008 harvest targets deemed necessary to achieve F = 0.20.

The Board may select one or more of the following.

- Option A. Status Quo. States are not required to implement further harvest restrictions.
- Option B. States are not required to implement new regulations if their over-harvest (based on Option C or D) is less than 10%.
- Option C. Any state whose 2008 harvest exceeds the harvest target (Table 4.) must implement new regulations to reduce harvest to the 2008 target harvest level.
- Option D. Any state whose average harvest since 2008 exceeds the harvest target, after accounting for increases in stock size, must implement new regulations to reduce harvest to the 2008 target harvest level (Table 5). This measure is less conservative than Option C. A description of the methodology follows Table 5.

Table 5. Average annual harvest since 2008, harvest target plus a 10.6% increase, and percent above the harvest target. Updated projections under constant recruitment estimate spawning stock biomass to increase by 10.6% in 2009. (Landings source: Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division, Silver Spring, MD). Concern has been raised by some states that their 2003 – 2005 harvest numbers are inaccurate. Percentages will be adjusted (using the same method) as more accurate landings become available.

	Average Annual Commercial Landings & Recreational Harvest Since 2008 (# of Fish)	Harvest target + 10.6% Increase (# of Fish)	Percent above harvest target + 10.6% Stock Increase
MA	44,776	64,146	-33.8%
RI	105,207	141,873	-25.4%
• • •	,	,	
СТ	126,882	100,691	26.1%
СТ	126,882	100,691	26.1%
CT NY	126,882 316,443	100,691 188,635	26.1% 67.8%
CT NY NJ	126,882 316,443 184,916	100,691 188,635 88,552	26.1% 67.8% 101.6%

The 25.6% harvest reduction is a function of removals from the total population (exploitation rate). Harvest increases *can* occur without increasing the exploitation rate if the population increases at a sufficient rate. Simply put, if the population increases at a rate equivalent to increases in harvest, the exploitation rate will remain the same; if the population increases at a rate that is greater than increases in harvest, exploitation rate will decrease; if the population increases at a rate that is less than harvest, exploitation rate will increase.

It is possible to determine if states regulations have likely achieved the 25.6% reduction by comparing 2008 and 2009 (full years since regulations were implemented) harvest to stock projections. The TC developed stock projections in October 2006 during the development of Addendum IV. The projections were developed for various levels of fishing mortality using two different assumptions about stock-recruit relationships (Figure 2 & 3, Table 2 & 3). The TC agrees that constant recruitment is most appropriate for the life history parameters of tautog making these projections the "best available" for tautog.

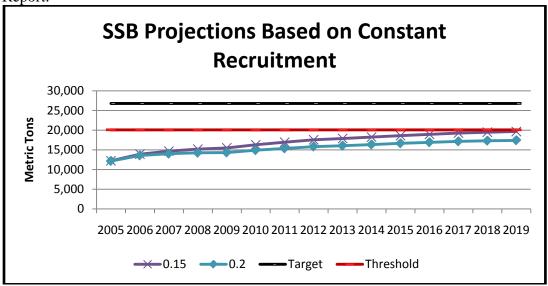
Updated projections estimate that under a F = 0.28 from 2005 - 2007 (fishing mortality rate prior to Addendum IV & V reductions) and F = 0.20 for 2008 onward, a stock increase of 10.6% was possible by 2009.

Given that harvest has exceeded the harvest target in 2008 and 2009 by 50 and 40 % respectively (Table 1), it is unlikely that a 25.6% harvest reduction was achieved for these years and as such the coastwide F is likely higher than 0.20. Therefore, the updated projections likely overestimate potential increases in biomass.

ISSUE 3. FISHING MORTALITY RATE REDUCTION

The fishing mortality target F = 0.20 may be too high to promote rebuilding of the tautog stock. Projections estimate that the stock will not reach the threshold or target SSB under a fishing mortality rate = 0.20 in the near future (Figure 6).

Figure 6. SSB projections under constant recruitment. Source: 2006 Tautog Projections Report.



The TC recommended a target F rate of 0.15 during the development of Addendum IV and agree that F = 0.20 is unlikely to rebuild the depleted tautog stock in a reasonable time frame. The TC agrees that the life history parameters of tautog indicate that an extended time period of F = 0.15 or lower is necessary to rebuild the stock in a reasonable time frame.

Specifying a target F=0.15 is consistent with the 1996 Tautog FMP. The 1996 FMP set the F target = 0.15 and gave states 2 years to ratchet down their fishing mortality through new regulations. The implementation of the target F=0.15 was twice delayed through Addendum I (1997) & II (1999) and replaced when Addendum III (2002) established a target $F=40\%_{SSB}=0.29$. Addendum IV & V set the new F target at 0.20,25% higher than the TC recommendation.

As such, a reconsideration of the rebuilding target may be necessary, especially if the state regulations are insufficient to achieve the 25.6% harvest reduction necessary to achieve the current $F_{target} = 0.20$ as discussed in Issue 2.

Option A. Status Quo. Target F = 0.20

Option B. Target F = 0.15.

Option C. Target F different than Option A or B.

ISSUE 4. RECOMMENDATIONS TO THE SECRETARY OF COMMERCE

Concern has been raised that the absence of tautog regulations in federal waters allows for loopholes that contribute to overfishing. The ASMFC plan does not include recommendations for measures in federal waters. Current regulations vary by state (Table 6 & 7) and lack continuity on a regional or coastwide basis. The lack of cohesive state regulations impedes development or implementation of complementary federal regulations because the federal plan would require a different set of rules adjacent to each state. For these reasons, it appears a complementary federal plan would be difficult to implement.

Table 6. Commercial Tautog Regulations

Tuble 0. Comme	rciai Tautog R			
STATE	SIZELIMIT	POSSESSION LIMITS	OPEN SEASONS	QUOTA
			April 16-May 15	
Massachusetts	16"		September 1-	64,753 lbs
		40	November 30	
			April 15 - May 30	51,348 pounds
			August 1 - September	divided equally
Rhode Island	16"		15	among 3 open
			October 15 -	seasons.
			December 15	
			January 1-April 30	
Connecticut	14"		June 15 - August 31	
Connecticut	14	a	October 15 -	
			December 6	
			January 1 - February	
New York	14"	b	28	
			April 8 - December 31	
			January 1 - 15	
Many breeze	14"		June 5 - 30	100 000lb a
New Jersey	14		November 1 -	103,000lbs
			December 31	
	14"	10	January 1 - March 31	
	15"	3	April 1 - May 11	
Delaware	14"	10	July 1 - August 31	
	14"	10	September 29 -	
			December 31	
		4	Jan 1- May 15	
Maryland	14"	2	May 16 - October 30	
		4	November 1 - 30	
			January 1 - April 15	
Virginia	14"		October 3 - November	
Virginia	14		31	
			December 16 - 31	

a The trawl fishery has a possession limit of 50 fish, the commercial hook, fish pot, trap net, fyke net, and gill net fisheries the possession limit is 25 fish, and in the lobster pot fishery the possession limit is 10 fish. Holders of Connecticut Marine Pound Net Registration may possess up to twelve fish year round except that during the May 1 through June 14 closed season all female tautog must be released without avoidable injury. All possession limits are daily limits.

b New York has a 25 fish vessel trip limit for commercially caught tautog, except only 10 per vessel are allowed when lobster pot gear and more than six lobsters are in possession.

Table 7. Recreational Tautog Regulations

Table 7. Recleation	iai Taulog Kegula		
		POSSESSION	
STATE	SIZELIMIT	LIMITS	OPEN SEASONS
Massachusetts	16"	3	Year round
Rhode Island	16"	3	April 15 - May 31
(Max 10 fish max	16"	3	July 1 - October 16
vessel limit during open periods.)		6	October 17- December 15
	14"	4	January 1-April 30
Connecticut	14"	2	July 1 - August 31
	14"	4	October 1 - December 6
N. V. I	14"	4	January 17 - April 30
New York	14"	4	October 1 - December 20
	14"	4	January 1 - April 30
New Jersey	14"	1	July 16 - November 15
New dersey	14"	6	November 16 - December 31
	14"	10	January 1 - March 31
	15"	3	April 1 - May 11
Delaware	14"	10	July 1 - August 31
	14"	10	September 29 - December 31
		4	Jan 1- May 15
Maryland	14"	2	May 16 - October 30
		4	November 1 - 30
***	1.411	4	January 1 - April 30
Virginia	14"	4	June 25 - December 31

Landing and possession restrictions have been used successfully to control fishing for other species in federal waters, and may be useful for management of tautog. While fishermen are not bound by state regulations when fishing in federal waters, landing limits prevent fishermen from bringing these fish on shore and possession limits prevent their transport into or through state waters. Preventing the possession or landing in state waters should significantly decrease the incentive to keep fish in excess of bag limits or above minimum size limits.

The following options contain language that regulates possession to help shrink or close regulatory loopholes.

The Board may select one or more of the following.

- Option A. Status quo. States maintain current regulations.
- Option B. Possession Restrictions. States are required to prohibit *possession* for all tautog regardless of where the fish were caught (including federal and other state waters). For example, a state with a 3 fish recreational bag limit is required to prohibit recreational anglers from *possessing* more than 3 tautog. States with existing possession restrictions are not required to adjust their regulations.
- Option C. Recommendation for 14" Size Limit in Federal Waters. The Tautog FMP contains a 14" minimum size limit requirement for all states. As such, it may be reasonable for the NMFS to implement a 14" size limit in federal waters. Under this option, Addendum VI would contain a recommendation that the federal government implement a 14" minimum size limit for tautog.
- Option D. Recommendation for a 10-Fish Recreational Bag Limit in Federal Waters. The largest recreational bag limit by any state is a maximum of 10 tautog per person per day. Therefore, a 10-fish recreational bag limit could be implemented by NMFS to prevent anglers from retaining an excessive number of tautog.. Under this option, Addendum VI would contain a recommendation that the federal government implement a 10 fish recreational bag limit for any fisherman who does not have a valid state commercial permit.

3.0 Compliance Schedule

States must implement Addendum VI according to the following schedule to be in compliance with the Tautog FMP:

XXXXXX: States submit proposals to meet compliance requirements contained in this Addendum.

XXXXXX: Management Board reviews and takes action on state proposals.

XXXXXX: States implement regulations to meet compliance requirements contained in this Addendum

4.0 Potential Future Management Measures

During the development of Draft Addendum VI, the Board explored a number of other options for the management of tautog. The Board agreed that these options would require additional development before being considered for implementation. The Board does not intend to implement the following measures through this Addendum. However, the Board is seeking public comment on the following options for consideration if these issues are revisited in the future.

Potential Future Measure 1: Permit or Paper Trail for Live Fish

The Board suggested a tautog permit or paper trail system during the discussion of this addendum. Requiring a permit or establishing a paper trail system to possess live tautog would make compliance (or non-compliance) more transparent. Fishermen, dealers, and/or restaurants would be considered in violation if they have live fish but do not possess the necessary permit or paperwork. Permits to hold live tautog could be required for fishermen, dealers, carriers/transporters, and restaurants. A paper trail system would need to include all persons involved from the fishermen to final place of sale. There is no coastwide permit system that could serve as a live tautog permit. Some states may be able to modify their existing permit system to cost-effectively establish a live tautog permit. Other states will require additional infrastructure to implement a tracking system.

Similarly, there is no coastwide reporting system with a built-in receipt requirement that could be modified to create a paper trail for live tautog.

Potential Future Measure 2. Tautog Tags

Establishing a commercial or commercial-live tautog tag system could help law enforcement more effectively monitor and enforce tautog regulations. Under this system, only tautog with a valid commercial tag could be sold.

This measure would require the establishment of a tagging system and development (or identification) of tags that are difficult to counterfeit, remain on a fish without killing it, and cannot be reused. Implementation of commercial quotas may be necessary under this option so that the number of commercial tags is equal to the commercial tautog allowance.

Fishery specific tags are used in the lobster and striped bass FMPs but these tags are unlikely to work for live tautog.

The ASMFC lobster FMP uses tags as the mechanism to regulate the number of traps that recreational and commercial fisherman can, set as specified in Addendum I to Amendment 3 to the Lobster FMP (Addendum I). Addendum I requires states to use color coded truck seal trap tags in the commercial fishery that include the following information: issuing authority, fishing area designation and permit or license number.

The FMP also requires the used of trap tags in the recreational trap fishery and requires the following information on the tag: issuing authority (state), year(s) tag is valid, and unique recreational designation. Addendum I also includes recommendations to standardize the tag cost across states and requirements to hold workshops informing fishermen of the tagging requirements. The full text relating to lobster tags from Addendum I to Amendment 3 can be found in Appendix 1. Lobster trap tags permanently attach to traps and not individual lobster.

Tagging is used in the striped bass fishery to monitor quotas and reduce poaching. The Striped Bass FMP *does not* require states to implement tags, but *recommends* non-removable tags to individually tag each striped bass. Amendment 6 to the Striped Bass FMP recommends that tags include the state of landing, unique numerical identifier, and the year the tag is valid. The full text relating to striped bass tags from Amendment 6 can be found in Appendix 2.

Several states have implemented commercial striped bass tags such that the number of tags is equal to the quota divided by the average weight of harvested fish. Striped bass tags are generally hooked through the gills of dead fish and are unlikely to work for a live fishery.

Similar to *Potential Future Measure 1. Permit or Paper Trail* there is no coastwide tag system that could be modified to include live tautog tags. While some states may be able to modify an existing system, this requirement could be very burdensome for states without an existing system.

Options B through D are not considered viable options at this time because the impact on states is not currently known. They were included to show potential management measures if a tagging system is successfully established.

- Option A. Status Quo. Tags are not required to buy or sell a tautog.
- Option B. All tautog in possession for the purpose of sale must be identified with a state approved tag. Tags must be attached directly and permanently to the fish. To maximize the effectiveness, tags should be difficult to counterfeit or reuse.
- Option C. All *live* tautog in possession for the purpose of sale must be identified with an approved tag. Tags must be attached directly and permanently to the fish. To maximize the effectiveness, tags should be difficult to counterfeit or reuse and remain on the fish without killing it.
- Option D. States are required to implement a commercial quota and distribute a maximum number of tags equal to the commercial quota divided by the average weight of tautog (specific to the fishery in that state). Average weight may change by harvest location caught or gear type used.

Option E. States are *encouraged* to require individual tags for all live tautog intended for sale. To maximize the effectiveness, tags should be difficult to counterfeit or reuse and remain on the fish without killing it.

Potential Future Measure 3: Fines and Loss of License for Poaching Live Tautog

During the discussion of Draft Addendum VI, the Board asked the PDT to include options for a stringent fine structure and/or loss of license to help deter poaching.

The PDT asked the Law Enforcement Committee (LEC) for input concerning fine structures and license revocation. The LEC stressed that fine structure is only one of three principles that increases compliance with regulations. Public support and fear of detection/apprehension also contribute to public compliance. Fines and other penalties must be of sufficient impact as to deter violations.

The LEC cautioned the Board that the judicial and legislative branches of government cannot be "told" who or what to prosecute nor can they be told what sanction should be imposed—they can only be educated as to the importance of certain penalties and laws. Requests can be made for increased sanctions when the cases are adjudicated in a court of law.

The ASMFC successfully petitioned NMFS for increases in the fine structure for illegal harvest of striped bass. The striped bass penalty has been doubled for summary settlement violations to \$100 per fish up to 6 fish, however there are still reports of considerable poaching of striped bass.

Potential Future Measure 4: Consistent Tautog Regulations

Under Addendum IV & V (consistent with previous ASMFC tautog management strategies), states are required to implement regulations to achieve F=0.20 and are allowed to achieve this target F as best meets their needs. State regulations to achieve F=0.20 generally have different bag/possession limits, size limits, and seasons. When a state reduces its possession limits or shorten its seasons, fishermen often travel to states with less restrictive regulations. As a result, the estimated fishing mortality reduction is not achieved as projected. Implementing consistent regulations will increase the chance of state regulations achieving the target F.

Any regional or coastwide regulations should minimize the impact to existing fisheries to the greatest extent possible. To craft potential regional or coastwide regulations, an understanding of each states fishery is necessary. The TC is supportive of consistent regulations as a means to better achieve the target F but noted additional analyses are needed to develop a suite of potential measures.

Table 8. Recreational regulations by state. Each date represents a 2-week period. For example, January 1 = January 1 - January 14. Seasons that do not align exactly with the 1 or 15 calendar blocks were marked based on the closest block. Information within the table is a maximum bag limit. See Table 6 & 7 for detailed state regulations.

2-week block	MA	RI	CT	NY	NJ	DE	MD	VA
Size Limit	16	16	14	14	14	14/15	14	14
1-Jan	3		4		4	10	4	4
15-Jan	3		4	4	4	10	4	4
1-Feb	3		4	4	4	10	4	4
15-Feb	3		4	4	4	10	4	4
1-Mar	3		4	4	4	10	4	4
15-Mar	3		4	4	4	10	4	4
1-Apr	3		4	4	4	3	4	4
15-Apr	3	3	4	4	4	3	4	4
1-May	3	3				3	4	
15-May	3	3					2	
1-Jun	3					10	2	
15-Jun	3					10	2	
1-Jul	3	3	2			10	2	4
15-Jul	3	3	2		1	10	2	4
1-Aug	3	3	2		1	10	2	4
15-Aug	3	3	2		1	10	2	4
1-Sep	3	3			1		2	4
15-Sep	3	3			1		2	4
1-Oct	3	3	4	4	1	10	2	4
15-Oct	3	6	4	4	1	10	2	4
1-Nov	3	6	4	4	1	10	4	4
15-Nov	3	6	4	4	6	10	4	4
1-Dec	3	6	4	4	6	10		4
15-Dec	3				6	10		4

Table 9. Commercial Regulations. Each date represents a 2-week period. For example, January 1 = January 1 - January 14. Seasons that do not align exactly with the 1 or 15 calendar blocks were marked based on the closest block. Information within the table is a maximum bag limit. See Table 6 & 7 for detailed state regulations.

	MA	RI	CT	NY	NJ	DE	MD	VA
Size Limit	16	16	14	14	14	14/15	14	14
Quota	64,753	51,348	No	No	103,000	No	No	No
1-Jan			50/25/10	25/10	0	10	4	0
15-Jan			50/25/10	25/10		10	4	0
1-Feb			50/25/10	25/10		10	4	0
15-Feb			50/25/10	25/10		10	4	0
1-Mar			50/25/10			10	4	0
15-Mar			50/25/10			10	4	0
1-Apr			50/25/10			3	4	0
15-Apr	40	0	50/25/10	25/10		3	4	
1-May	40	0		25/10		3	4	
15-May		0		25/10			2	
1-Jun				25/10	0		2	
15-Jun			50/25/10	25/10	0		2	
1-Jul			50/25/10	25/10		10	2	
15-Jul			50/25/10	25/10		10	2	
1-Aug		0	50/25/10	25/10		10	2	
15-Aug		0	50/25/10	25/10		10	2	
1-Sep	40	0		25/10			2	
15-Sep	40			25/10			2	
1-Oct	40		75/25/10	25/10		10	2	0
15-Oct	40	0	75/25/10	25/10		10	2	0
1-Nov	40	0	75/25/10	25/10	0	10	4	0
15-Nov	40	0	75/25/10	25/10	0	10	4	0
1-Dec		0	75/25/10	25/10	0	10		
15-Dec				25/10	0	10		0

Appendix 1.

Lobster Tag Regulations from Addendum I to Amendment 3 to the American Lobster FMP.

Trap Tag Type and Information

Trap tags shall be truck seal design similar to those used in the states of Maine and Massachusetts during 1999. Each trap tag shall be color-coded coastwide by fishing year. Information printed on commercial trap tags shall be: issuing authority (state/NMFS), area(s) tag is valid including state/EEZ, year(s) tag is valid, and permit or license number. Information printed on recreational trap tags shall be: issuing authority (state), year(s) tag is valid, and a unique recreational designation.

States must be in compliance with the preceding requirement beginning January 1, 2000.

Transferability of Trap Tags

All trap tags shall be a permanent design not transferable once attached to a trap. All commercial lobster traps aboard a vessel must be tagged. All recreational lobster traps must be tagged. Trap tags must be permanently attached to the trap frame, clearly visible for inspection.

States must be in compliance with the preceding requirement beginning January 1, 2000.

Tag Issuance

Trap tags shall be issued annually during January 1-May 31 coastwide, and shall be valid for one fishing year. Trap tags shall be renewed each year by June 1.

States must be in compliance with the preceding requirement beginning January 1, 2000.

License holders/vessels may be issued their allotment plus 10% to cover routine losses. States will have the flexibility to issue a higher percent over-allotment to license holders fishing in locations where they can document higher historic routine losses, subject to Board approval.

The area management program shall determine which parties (license holder or vessel) will receive trap tags.

License holders/vessels may trade old trap tags in to the issuing authority for replacement tags on a one-for-one basis to allow for necessary gear rotation and maintenance.

Catastrophic Tag Losses

Catastrophic loss shall be defined as losses that exceed the initial allocation for routine loss. When a catastrophic loss occurs, an entirely new allotment of tags shall be issued, at cost to the fishermen, and replacement tags will be distinguished from original tags (i.e. color). Original tags will not be valid once replacement tags are placed in traps. Replacement tags in Area 3 must be placed in traps within 20 days after issuance of replacement tags and in Areas 1, 2, 4, 5, 6, and the Outer Cape within 10 days after issuance of replacement tags.

In the event that replacement tags are not immediately available, states may issue an exemption letter to allow license holders to fish new pots until new tags are issued for a time period not to exceed two months.

The issuing authority shall have the right to invoke emergency measures to suspend trap tag regulations in the event of area-wide catastrophic losses, for a time period not to exceed two months.

Lobster Trap Tag Program Enforcement Standard

In order to have effective enforcement of the trap tag system, it is recommended that law enforcement agencies should have the authority and ability to actively haul lobster gear to check for trap tags. This includes both equipment and training for law enforcement personnel. Additional funding for law enforcement agencies is critical for the implementation and success of the trap tag program.

It is also recommended that untagged traps may be seized and forfeited. States should attempt to standardized permit sanctions for trap tag violations. Such sanctions could include, but are not limited to, suspension of license or reduction in the number of trap tags issued. The ASMFC Law Enforcement Committee should develop further requirements for law enforcement, such as developing enforcement programs and reporting of enforcement activity.

Trap Tag System Management Costs

Each issuing authority shall determine which costs shall be included in its program. Costs may include, but are not limited to, the cost of the trap tag, administration, enforcement and research.

States issuing trap tags in the same management area should attempt to standardize costs as much as possible so as to avoid widely divergent trap tag costs within the same area.

Program Public Outreach

Informational workshops shall be held for state and federal regulatory staff, law enforcement agents, Lobster Conservation Management Team members, and other industry members to develop widespread understanding and support for the goals of the program.

These workshops shall be coordinated through ASMFC and held within the first year of program implementation, and may be held thereafter every two years to review the effectiveness of the program.

Appendix 2.

Striped Bass Tag Regulations from Amendment 6 to the Atlantic Striped Bass FMP.

4.3.3 Commercial Tagging (Identification)

All jurisdictions that currently tag commercially caught striped bass with non-removable tags are encouraged to continue to individually tag each striped bass. Any jurisdiction tagging commercially caught striped bass at the time Amendment 6 was implemented must notify the Commission through the annual compliance report if the jurisdiction plans to discontinue the tagging program. Each tag is should to include the following:

- 1) State of Landing
- 2) Unique numerical identifier
- 3) Year the tag is valid

Tagging (identification) of commercially caught striped bass identifies fish that were caught from wild populations versus fish harvested from aquaculture operations. Commercial tagging allows law enforcement officials to determine if fish are in violation of the minimum size limits in the state of landing.