

*Atlantic States Marine Fisheries Commission*

**DRAFT ADDENDUM II TO AMENDMENT 6  
TO THE ATLANTIC STRIPED BASS  
INTERSTATE FISHERY MANAGEMENT PLAN  
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.*

**August 2009**

### Public Comment Process and Proposed Timeline

In May 2009, the Atlantic Striped Bass Management Board approved a motion to initiate the development of an addendum to the Interstate Fishery Management Plan (FMP) for Atlantic Striped Bass to consider roll over options for unused coastal commercial quota. This draft addendum presents background on the Atlantic States Marine Fisheries Commission's (ASMFC) management of striped bass, the addendum process and timeline, a statement of the problem, and options of striped bass management for public consideration and comment.

The public is encouraged to submit comments regarding this document at any time during the addendum process. Public comment will be accepted until 5:00 PM (EST) on October 16, 2009. 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.

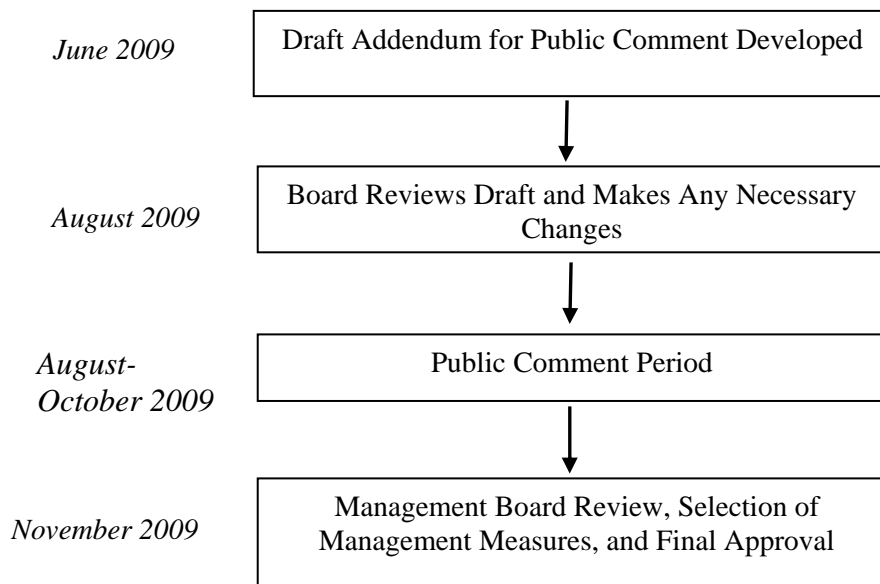
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## **1.0 Introduction**

The Atlantic States Marine Fisheries Commission (ASMFC) has coordinated interstate management of Atlantic striped bass (*Morone saxatilis*) from 0-3 miles offshore since 1981. The management unit includes all coastal migratory stocks between Maine and North Carolina. Atlantic striped bass is currently managed under Amendment 6 to the Fishery Management Plan (FMP), approved February 2003, and Addendum I to Amendment 6, approved October 2007. Management authority in the Exclusive Economic Zone (EEZ) from 3-200 miles from shore lies with NOAA Fisheries.

The purpose of this draft addendum is to consider options for rolling over unused coastal commercial quota of striped bass. Specific options include which states are eligible to roll over unused quota and the amount of unused quota that may be carried over. Procedures for implementing and monitoring quota roll over are defined. The recreational striped bass fishery is not addressed because it is not quota-managed.

## **2.0 Management Program**

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

The existing management program for Atlantic striped bass addresses coastal commercial quota overages, requiring payback of excessive harvest in the subsequent year, but it is silent on coastal commercial quota underages. Since the implementation of Amendment 6, coastal commercial quota underages have been more common than overages. While avoiding a quota overage signifies managerial success, a quota underage represents lost opportunity to commercial harvesters. Quota underages may result from changes in fish abundance or distribution, environmental factors, fishing effort, and regulatory measures.

### **2.2 Background**

#### **2.2.1 Commercial Management Areas**

Amendment 6 commercial management differs between the coastal area, the Chesapeake Bay area, and the Albemarle Sound-Roanoke River area.<sup>1</sup> In addition to using area-specific minimum size limits to manage the commercial fisheries, Amendment 6 employs state-by-state quotas for the coastal area and target fishing mortality rates for the Chesapeake and Albemarle-Roanoke areas. Each state implements additional restrictions of its own choosing to restrict coastal harvest to its coastal quota, and, if applicable, Chesapeake Bay and Albemarle Sound harvest to area quotas based on the target fishing mortality rates. Any changes adopted through this addendum would apply only to the coastal commercial quotas (not the quotas established external to Amendment 6 for the Chesapeake Bay and Albemarle Sound-Roanoke River).

#### **2.2.2 Initial Coastal Commercial Quota Allocation**

Amendment 6 allocates each state in the management unit an annual (calendar year<sup>2</sup>) coastal commercial quota in pounds (Table 1). Allocation of quotas is based on 100% of each state's

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<sup>1</sup> The coastal area can be defined as the entire management unit (i.e., all coastal and estuarine areas of all states and jurisdictions from Maine through North Carolina) minus the Chesapeake Bay and Albemarle Sound-Roanoke River management areas.

<sup>2</sup> North Carolina operates its coastal commercial fishery on a harvest year from December through November. Based on previous Board action, the state's coastal commercial quota is monitored on a harvest year basis.

average coastal commercial landings during a base period of 1972-1979, except in Delaware where the state's 2002 commercial fishery quota was maintained<sup>3</sup>. Allocation of quotas is not based on striped bass abundance.

### 2.2.3 Adjustment to Coastal Commercial Quotas

Proactive adjustments to the Amendment 6 annual quotas occur for two reasons: 1) a state may opt to be more conservative at any time, thus implementing a reduced quota or prohibiting commercial harvest and sale altogether; and 2) a state may implement an approved equivalent management program (e.g., a conservationally equivalent reduction in quota to compensate for implementing a lower minimum size limit). As of July 2009, four states prohibit commercial harvest of striped bass, and three states have implemented equivalent management programs that resulted in quota reductions (Table 1). In New Jersey, the unused commercial quota is transferred to the recreational fishery and the resulting harvest is managed under the quota.

*Table 1. Amendment 6 coastal commercial allocations and modified coastal commercial quotas incorporating commercial prohibitions and management equivalencies*

State	Amendment 6 Allocation (lbs)	Coastal Commercial Quotas (lbs)
Maine	250	0 *
New Hampshire	5,750	0 *
Massachusetts	1,159,750	1,159,750
Rhode Island	243,625	239,963 †
Connecticut	23,750	0 *
New York	1,061,060	828,293 †
New Jersey	321,750	321,750 **
Delaware	193,447	193,447
Maryland	131,560	126,396 †
Virginia	184,853	184,853
North Carolina	480,480	480,480
<i>Total</i>	<i>3,806,275</i>	<i>3,534,932</i>

\* Commercial harvest/sale prohibited in Maine, New Hampshire, and Connecticut, with no re-allocation of quota.

\*\* Commercial harvest/sale prohibited in New Jersey, with re-allocation of quota to the recreational fishery through a Bonus Program.

† Quota reduced through management program equivalency.

Reactive adjustments to the coastal commercial quotas occur in the event that a state's harvest exceeds its quota. A state must deduct the amount in excess of its quota from its allowable quota in the following year. From 2003 through 2008, three states have had a combined twelve overages, each resulting in a reduced quota the subsequent year for that state (Table 2). The percent of each harvest overage is less than 6% with the exception of Massachusetts' 14% overage in 2006. The total coastal commercial harvests in Table 2 represent 8.5 to 10.5% of the total (commercial and recreational) coastwide harvest of Atlantic striped bass between 2003 and 2008.

<sup>3</sup> The decision to hold Delaware's commercial quota at the 2002 level was based on the fact that a return to the state's average 1972-1979 landings would have resulted in a decrease of Delaware's quota to 169,000 pounds, whereas all other state quotas would have been increased.

*Table 2. Coastal commercial quotas, harvests, and adjusted quotas (due to quota overages), 2003-2008; red cells highlight quota overages and green cells highlight quota underages. Harvest data are from annual state compliance reports.*

State	2003			2004			2005		
	Quota	Harvest	+/-	Quota	Harvest	+/-	Quota	Harvest	+/-
ME	0	0	0	0	0	0	0	0	0
NH	0	0	0	0	0	0	0	0	0
MA	1,036,880	1,055,439	18,559	1,141,191	1,206,305	65,114	1,094,636	1,104,737	10,101
RI	242,159	246,312	4,153	243,625	245,204	1,579	242,046	242,303	257
CT	0	0	0	0	0	0	0	0	0
NY	828,293	753,261	-75,032	828,293	741,668	-86,625	828,293	689,821	-138,472
NJ	321,750	121,410	-200,340	321,750	81,870	-239,880	321,750	29,866	-291,884
DE	193,447	188,419	-5,028	193,447	181,974	-11,473	193,447	173,815	-19,632
MD	126,939	98,149	-28,790	126,939	115,453	-11,486	126,939	46,871	-80,068
VA	184,853	159,786	-25,067	184,853	160,301	-24,552	184,853	184,734	-119
NC	480,480	434,369	-46,111	478,837	421,645	-57,192	480,480	454,521	-25,959
<i>Total</i>	<i>3,414,801</i>	<i>3,057,145</i>	<i>-357,656</i>	<i>3,518,935</i>	<i>3,154,420</i>	<i>-364,515</i>	<i>3,472,444</i>	<i>2,926,668</i>	<i>-545,776</i>
<i>Underage Total</i>			<i>-380,368</i>			<i>-431,208</i>			<i>-556,134</i>

State	2006			2007			2008		
	Quota	Harvest	+/-	Quota	Harvest	+/-	Quota	Harvest	+/-
ME	0	0	0	0	0	0	0	0	0
NH	0	0	0	0	0	0	0	0	0
MA	1,149,649	1,312,168	162,519	997,231	1,040,328	43,097	1,116,653	1,160,122	43,469
RI	243,368	238,797	-4,571	239,963	240,627	664	239,299	245,988	6,689
CT	0	0	0	0	0	0	0	0	0
NY	828,293	688,446	-139,847	828,293	729,743	-98,550	828,293	653,100	-175,193
NJ	321,750	23,656	-298,094	321,750	13,615	-308,135	321,750	7,345	-314,405
DE	193,447	185,987	-7,460	193,447	188,668	-4,779	193,447	188,719	-4,728
MD	126,939	91,093	-35,846	126,939	96,301	-30,638	126,939	118,005	-8,934
VA	184,853	194,934	10,081	174,772	165,587	-9,185	184,853	164,400	-20,453
NC	480,480	352,036	-128,444	480,480	424,723	-55,757	480,480	299,162	-181,318
<i>Total</i>	<i>3,528,779</i>	<i>3,087,117</i>	<i>-441,662</i>	<i>3,362,875</i>	<i>2,899,592</i>	<i>-463,283</i>	<i>3,491,714</i>	<i>2,836,841</i>	<i>-654,873</i>
<i>Underage Total</i>			<i>-614,262</i>			<i>-507,044</i>			<i>-705,031</i>

## 2.2.4 Coastal Commercial Quota Underages

Annual state harvest amounts less than the Amendment 6 quotas have been common. From 2003-2008, quota underages occurred in seven states for a combined 36 times (Table 2). The percent that harvest has been below quota varies between states, as well as within some states across years. From 2003-2008, the annual percent of quota underage ranged from zero to 98 percent (Table 3). The four states with the greatest average (2003-2008) percent underage are New Jersey, Maryland, North Carolina, and New York. Amendment 6 does not address quota underages, thus quota in the year following each underage has not been affected.

*Table 3. Annual coastal commercial quota percent underages by state, 2003-2008*

State	2003	2004	2005	2006	2007	2008	Average
ME	0	0	0	0	0	0	0
NH	0	0	0	0	0	0	0
MA	0	0	0	0	0	0	0
RI	0	0	0	2	0	0	0
CT	0	0	0	0	0	0	0
NY	9	10	17	17	12	21	14
NJ	62	75	91	93	96	98	86
DE	3	6	10	4	2	2	5
MD	23	9	63	28	24	7	26
VA	14	13	0	0	5	11	7
NC	10	12	5	27	12	38	17

Supposing that the management program had permitted unlimited roll over of unused coastal commercial quota beginning in 2003 or later, the 2004-2008 total commercial quotas in Table 2 could have increased by an average of 14.4% per year (Table 4). The percent increase in total (commercial and recreational) harvest that would have resulted assuming adjusted coastal commercial quotas were harvested in full would have averaged 1.7% (Table 4).

The hypothetical increases to total coastal commercial quota and total coastal harvest in Table 4 represent the upper limit that would have occurred in 2004 to 2008 if roll over were permitted from underages in the previous year due to two assumptions: 1) that 100% of all quota underage is rolled over; and 2) that adjusted coastal commercial quotas are harvested in full.

*Table 4. Percent increase in the total coastal commercial quota (TCCQ) that would have been achieved in 2004-2008 if the quota underages in 2003-2007 had been rolled over, and the percent increase in total harvest that would result assuming quotas are harvested in full; estimates were developed for each year as if roll over were first allowed in that year*

Year	TCCQ	TCCQ + Total Underage	Percent Increase in TCCQ	Percent Increase in Total Harvest
2004	3,518,935	3,899,303	10.8%	1.5%
2005	3,472,444	3,903,652	12.4%	1.4%
2006	3,528,779	4,084,913	15.8%	1.9%
2007	3,362,875	3,977,137	18.3%	1.9%
2008	3,491,714	3,998,758	14.5%	1.9%
<b>Average</b>	3,474,949	3,972,753	14.4%	1.7%

Under the hypothetical underage-adjusted coastwide quotas in Table 4, the resulting increase in harvest (assuming the total adjusted quota were harvested) would have had a relatively limited effect on the annual fishing mortality rate, according to a report by the Striped Bass Technical Committee (2009). In this report, the Technical Committee presents two methods to consider the effect that increasing the coastal commercial quotas by 10-30 percent in 2003 to 2006 would have had on the fishing mortality rate. Both analyses found that the fishing mortality rate would likely have increased by no more than 0.02 across this range of quota increases, with a 0.01 increase in fishing mortality occurring with a 15% quota increase.

In the same report, the Technical Committee further commented that the risk associated with a 0.01 increase to fishing mortality depends on the current estimate of fishing mortality. The two analyses described above relied on the methods and/or results of the statistical catch at age model used in the 2007 stock assessment of striped bass (NEFSC 2008), which estimated the 2006 fishing mortality on fully recruited fish to be 0.31 (95% confidence interval = 0.23-0.40). Because of uncertainty in the 2006 estimate of fishing mortality and there is no estimate of current fishing mortality, the Technical Committee preferred to have the results of the 2009 update stock assessment before fully assessing the impacts of an increase to the coastal commercial quotas.

The current fishing mortality target and threshold levels are 0.30 and 0.34, respectively.

In reviewing this draft addendum, the Technical Committee made several additional points. First, the potential effect of roll over on the stock increases if quota underages occur due to population decline and fishers are still able to achieve the underage-adjusted quotas. Second, large fluctuations in recreational harvest, which is not regulated by quota, present a greater level of risk of exceeding the F target or threshold than allowing commercial quota roll over. Third, there may be a two to three year lag in reporting the fishing mortality rate estimate for any given year due to the one-year data lag and the biennial stock assessment schedule. Fourth, permitting roll over could create an incentive to under report harvest in order to increase the quota the following year, thus state commercial monitoring programs become critical. A summary of state commercial monitoring programs is provided as an appendix. Fifth, three other ASMFC-managed species allow some type of roll over of unused commercial quota, two of which have quotas based on abundance (spiny dogfish and scup) and one on historical harvest (menhaden).

### **2.3 Management Options**

The following options are proposed for considering roll over of unused coastal commercial quota. Adopted options (other than status quo) would modify Amendment 6, Section 4.3.2.

#### **2.3.1 Treatment of Unused Coastal Commercial Quota**

Option 1: Status Quo.

Under this option, unused coastal commercial quota would not be rolled over to the subsequent year.

Option 2: Allow Roll over.

Under this option, rolling over unused coastal commercial quota to the subsequent year(s) would be allowed. Restrictions regarding roll over would be specified in Sections 2.3.2 and 2.3.3.

#### **2.3.2 State Eligibility**

Option 1: No restrictions to eligibility.

Under this option, all states with coastal commercial quota allocations in Amendment 6 would be eligible to roll over unused coastal commercial quota.

Option 2: Eligibility restricted to states that allocate their striped bass coastal quotas, whether commercially or recreationally.

Under this option, states currently eligible to roll over unused coastal commercial quota would be Massachusetts, Rhode Island, New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina. Major regulatory changes could change a state's eligibility for roll over.

### 2.3.3 Amount of Roll Over

Option 1: No restrictions to roll over amount.

Under this option, any amount of harvest below a state's quota in one year could be added to the state's quota for the subsequent year.

Option 2: Roll over amount based on state striped bass quota (pounds).

Under this option, the amount of unused commercial quota that could be rolled over in any year would be a percentage of the state's quota. The maximum percentage that will be considered is 50 percent.

For example, under a 50 percent quota limit, a state with a 200,000 pound quota could roll over no more than 100,000 pounds to the subsequent year. If the state harvested 125,000 pounds in a given year, the full underage amount of 75,000 pounds could be rolled over, but if the state harvested 50,000 pounds, only 100,000 pounds could be rolled over (Table 5).

*Table 5. Roll Over Amount Option 2 Example: roll over amounts allowed assuming a 200,000 pound quota, various harvest amounts, and 10, 20, 30, 40, and 50 percent levels*

Base Quota	Percent Options	Maximum Roll Over	Harvest Amount	25,000	50,000	125,000	160,000	190,000
200,000	10%	20,000	Roll Over Amount Allowed	20,000	20,000	20,000	20,000	10,000
	20%	40,000		40,000	40,000	40,000	40,000	10,000
	30%	60,000		60,000	60,000	60,000	40,000	10,000
	40%	80,000		80,000	80,000	75,000	40,000	10,000
	50%	100,000		100,000	100,000	75,000	40,000	10,000

Option 3: Roll over amount based on striped bass quota underage amount (pounds).

Under this option, the maximum amount of unused commercial quota that could be rolled over in any year would be a percentage of the underage amount. The maximum percentage that will be considered is 50 percent.

For example, under a 50 percent underage limit, a state with a 200,000 pound quota that harvested 160,000 pounds in a year could roll over 20,000 pounds (Table 6).

*Table 6. Roll Over Amount Option 3 Example: roll over amounts allowed assuming a 200,000 pound quota, various harvest amounts, and 10, 20, 30, 40, and 50 percent levels*

Base Quota	Percent Options	Harvest Amount	25,000	50,000	125,000	160,000	190,000
200,000	10%	Roll Over Amount Allowed	17,500	15,000	7,500	4,000	1,000
	20%		35,000	30,000	15,000	8,000	2,000
	30%		52,500	45,000	22,500	12,000	3,000
	40%		70,000	60,000	30,000	16,000	4,000
	50%		87,500	75,000	37,500	20,000	5,000



### **2.3.4 Roll Over Term**

Options are not being considered for the number of years unused quota could be rolled forward. With anything more than a one year roll over term, unused quota could accumulate across years and eventually result in a very large harvest in one year, which could have a more severe effect on the stock. Therefore, if options to allow roll over are approved, there would be a one year term on roll over. Unused quota would only be added to the subsequent year's quota, and if it is not harvested that year, the underage is not available for roll over into any other years.

## **3.0 Compliance**

### **3.1 Notification**

If this addendum is approved, states will be required to notify the Commission of their intention to implement regulations to allow roll over of unused coastal commercial quota. This notification must be received prior to the start of the fishing year that the regulations are to first become effective. When available, a copy of the new regulations must be sent to the Commission. The Striped Bass Plan Review Team will review all notifications and regulations and summarize them for the Striped Bass Management Board.

No part of this addendum shall require any state to implement unused quota roll over, nor will any state that implements the practice be required to continue it. If a state that has implemented unused quota roll over chooses to suspend the practice for a definite or indefinite amount of time, the Striped Bass Plan Review Team should be notified through the annual compliance report process.

### **3.2 Implementation**

The earliest that any state may implement regulations consistent with Addendum II (if approved) is for the 2010 fishing year, that is, unused coastal commercial quota in 2009 could be added to a 2010 coastal commercial quota. (North Carolina could adjust its December 1, 2009 to November 30, 2010 quota with underage from its December 1, 2008 to November 30, 2009 quota, whereas all other eligible states could adjust their January 1 to December 31, 2010 quota with underage from their January 1 to December 31, 2009 quota.)

Initial roll over amounts are likely to be determined by the states based on preliminary harvest data. States must revise their underage-adjusted quotas mid-year to reflect final harvest data when it becomes available.

## **3.3 Monitoring**

### **3.3.1 Monitoring of Quotas and Harvests**

The Striped Bass Plan Review Team will annually review the coastal commercial quotas and harvests, and provide the adjusted quotas incorporating quota overages and underages. Overages of underage-adjusted quotas will be treated the same as overages of base quotas; the harvest amount in excess of the quota will be subtracted from the subsequent year's quota.

### **3.3.2 Monitoring of Roll Over Effect on Population**

The Striped Bass Technical Committee evaluates the striped bass population's health every two years through standard stock assessment procedures. Any effect on the fishing mortality rate, spawning stock biomass, recruitment, or age structure of striped bass resulting from roll over of

unused commercial quota will be evaluated in these stock assessments. Additionally, the numerous young-of-year and spawning stock biomass surveys conducted by the states are reviewed by the Striped Bass Technical Committee on an annual basis.

In the event that any state, or the Commission, deems that continuation of roll over would unduly jeopardize the stock(s), the state or the Commission (through Board action) can decide to preclude roll over in a given year, on the stock(s) in question. Commercial quota roll over will be prohibited if the estimated striped bass fishing mortality rate for the coastal population exceeds the FMP target or if the estimated female spawning stock biomass is below the FMP target.

### **References**

Atlantic States Marine Fisheries Commission (ASMFC). 2003. Amendment 6 to the Interstate Fishery Management Plan for Atlantic Striped Bass. Washington (DC): ASMFC. Fishery Management Report No. 41. 63 p.

Striped Bass Technical Committee. 2009. Final Report to the Striped Bass Management Board in Response to Seven Tasks. Washington (DC): ASMFC. 21 p. Available from: <http://www.asmfc.org/speciesDocuments/stripedBass/minutesandmeetings/tc/apr09TCreport.pdf>

Northeast Fisheries Science Center (NEFSC). 2008. 46th Northeast Regional Stock Assessment Workshop (46th SAW) Assessment Report. Woods Hole (MA): US Dept Commerce, NOAA Fisheries. NEFSC Ref Doc. 08-03a. 252 p.

## **Appendix. State Striped Bass Commercial Landings Monitoring Programs**

### *Massachusetts*

Fish dealers are required to obtain special authorization from the Division of Marine Fisheries (DMF) in addition to standard seafood dealer permits to purchase striped bass directly from fishermen. Dealer reporting requirements include weekly reporting to the DMF or Standard Atlantic Fisheries Information System (SAFIS) of all striped bass purchases. If sent to DMF, all harvest information is entered into SAFIS by DMF personnel. Harvest is tallied weekly to determine proximity of harvest to the quota cap. Following the close of the season, dealers are also required to provide a written transcript consisting of purchase dates, number of fish, pounds of fish, and names and permit numbers of fishermen from whom they purchased. Fishermen must have a DMF commercial fishing permit (of any type) and a special striped bass fishing endorsement to sell their catch. They are required to file catch reports at the end of the season, which include the name of the dealer(s) that they sell to and extensive information describing their catch composition and catch rates. If an angler does not file a report, he/she can not obtain a permit in the next year.

### *Rhode Island*

Commercial harvest is reported through Interactive Voice Recording (IVR) and SAFIS. The IVR is a phone-in system designed to monitor quota-managed species, including striped bass. The reported data are aggregated by dealer and include gear, pounds landed, and date landed. SAFIS collects trip level data over the web in accordance with data standards developed by the Atlantic Coastal Cooperative Statistics Survey (ACCSP). Specific data fields include: vessel name, vessel identification (state registration or US Coast Guard Documentation Number), RI commercial license number, port landed, species, reported quantity, unit of measure, date landed, and price. The commercial harvest reported for RI is considered a complete census. The RI Division of Fish and Wildlife (DFW) plans to implement a harvester logbook for the commercial finfish and crustacean fishery sectors next year. The resulting two-ticket data collection system will provide catch and effort statistics and the associated gear types, gear sets, and areas fished as well as validate data reported by dealers and commercial fishermen.

### *New York*

New York's annual quota (in pounds) is converted into a total number of fish, based on the mean weight of striped bass sampled during state monitoring efforts in the prior year. Each participant in the fishery is issued a fixed number of tags, as well as a set of state vessel trip report forms. The regulations governing the fishery require that a commercial harvester tag each legal fish taken within the slot limit for sale, and that individual vessel trip report forms are completed for each trip taken. If no trips were taken, harvesters are required to submit weekly "did not fish" reports. All reports are due monthly. At the conclusion of the commercial season, all reports are due and any un-used tags must be returned to the Department. Each participant's harvest records are examined to account for all tags issued. A complete census of the commercial harvest is reported to NMFS each year.

### *New Jersey*

New Jersey's historical commercial quota forms the basis of the Striped Bass Bonus Program (SBBP). As defined by regulation, recreational anglers intending to take one striped bass

measuring not less than 28 inches in length in addition to the normal possession limit must apply on-line to the Division of Fish and Wildlife for a “fish possession permit”. Applicants receive non-transferable permits to be filled out immediately upon capture of the bonus fish. Used permit and harvest information must be reported on-line and anglers are eligible to obtain an additional permit if available. Participating for-hire captains must record the permit and harvest information, similar to individual anglers, and must collect scale samples from all harvested Bonus fish. All information, both individual and for-hire harvest, is reported either on-line or via mail for monitoring, entry, and analysis.

#### *Delaware*

Each fisherman has an Individual Transferable Quota (ITQ), for which they are issued tags by the Division of Fish and Wildlife (DFW). Each harvested fish must be tagged by the fisher and then tagged by a certified weigh station, which must call in catch daily. Fishers must also submit a catch log.

#### *Potomac River Fisheries Commission (DC)*

Mandatory reports of daily activity are submitted on a weekly basis. Failure to report can, and has, resulted in the loss of licenses. Harvest numbers are considered a complete census since all fishermen must report. Each fisherman is given a report book with one sheet for each fishing week at the beginning of the year. He/she records daily harvest (in pounds by market size category and the number of striped bass ID tags used, i.e. the number of fish harvested), amount of gear used (effort), the area of the river where the fish were caught and the port or creek of landing. The buyer records the average selling price and the estimated discards are reported for the week. The reports are mailed to the PRFC weekly and entered into the system and reported to NMFS via the Virginia Marine Resources Commission (VMRC).

#### *Maryland*

All commercially harvested striped bass are required to be tagged by the fishermen prior to landing with serial numbered, tamper evident tags inserted in the mouth and out through the operculum. These tags verify the harvester and easily identify legally harvested fish to the public and law enforcement. Each harvest day and prior to sale, all tagged striped bass are required to pass through a commercial fishery check station. Check station employees, acting as representatives of MD Department of Natural Resources (DNR), count, weigh, and verify that all fish are tagged. The check stations are required to call daily and report the total pounds of striped bass checked the previous day, as well as keep daily written logs detailing the activity of each fisherman, which are returned weekly by mail. Individual fishermen are required to report their striped bass harvest on monthly fishing reports and to return their striped bass permit to DNR at the end of the season.

#### *Virginia*

All permitted commercial harvesters of striped bass must report the previous month’s harvesting activities to VMRC no later than the 5<sup>th</sup> day of the following month, in accordance with the VMRC regulation that governs the mandatory harvester reporting program. This regulation requires that the monthly catch report and daily catch records shall include the name and signature of the registered commercial fisherman and his license registration number, buyer or private sale information, date of harvest, city or county of landing, water body fished, gear type

and amount used, number of hours gear fished, number of hours watermen fished, number of crew on board including captain, species harvested, market category, and live weight or processed weight of species harvested, and vessel identification (Coast Guard documentation number, VA license number or Hull/VIN number). Any information on the price paid for the catch may be provided voluntarily. In addition, all permitted commercial harvesters of striped bass must record and report daily striped bass tag use and specify the number of tags used on striped bass harvested in either the Chesapeake Area or Coastal Area. Daily striped bass tag use on striped bass harvested from either the Chesapeake area or Coastal area, within any month, must be recorded on forms provided by the Commission and must accompany the monthly catch report submitted no later than the 5<sup>th</sup> day of the following month. Any buyer permitted to purchase striped bass harvested from Virginia tidal waters must provide written reports to VMRC of daily purchases and harvest information on forms provided by VMRC. Such information shall include the date of the purchase; buyer and harvester striped bass permit numbers, and harvester Commercial Fisherman Registration License number. In addition, for each different purchase of striped bass harvested from Virginia waters, the buyer shall record the gear type, water area fished, city or county of landing, weight of whole fish, and number and type of tags (Chesapeake area or Coastal area) that applies to that harvest. These reports shall be completed in full and submitted monthly to VMRC no later than the 5<sup>th</sup> day of the following month. In addition, during the month of December, each permitted buyer shall call the VMRC interactive Voice Recording System, on a daily basis, to report his name and permit number, date, pounds of Chesapeake area striped bass purchased, and pounds of Coastal area striped bass purchased.

#### *North Carolina*

Commercial harvest is monitored real time through dealer reporting on a daily basis. Dealers report total numbers of fish and total pounds each day. Each fish must have a Division of Marine Fisheries (DMF) tag affixed through mouth and gills upon processing at the fish house. However, the final numbers and pounds used in reports come from the NC DMF trip ticket program. The trip ticket program collects gear data, species data, and total pounds per species each time a commercial fisherman makes a sale at a fish house.