

**2003 REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION'S
FISHERY MANAGEMENT PLAN FOR
ATLANTIC STRIPED BASS
(*Morone saxatilis*)**



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I. Status of the Fishery Management Plan

<u>Date of FMP Approval:</u>	Original FMP: October 1981
<u>Amendments:</u>	Amendment 5: March 1995 (active through 2003) Amendment 6: February 2003 (active January 2004)
<u>Management Unit:</u>	Migratory stocks of Atlantic striped bass from Maine through North Carolina
<u>States With Declared Interest:</u>	Maine - North Carolina, including Pennsylvania
<u>Additional Jurisdictions:</u>	District of Columbia, Potomac River Fisheries Commission
<u>Active Boards/Committees:</u>	Striped Bass Management Board, Advisory Panel, Technical Committee, Stock Assessment Subcommittee, Tagging Subcommittee, Plan Review Team, and Plan Development Team

Jurisdictions with a declared interest in striped bass are Maine through North Carolina, including Pennsylvania, the Potomac River Fisheries Commission, and the District of Columbia. Under the Atlantic Striped Bass Conservation Act (P.L. 98-613), implementation of the FMP is mandatory. Implementation of the FMP is monitored by the Commission's Striped Bass Management Board (Board) and Striped Bass Plan Review Team (PRT).

Under Amendment 5, the standard minimum size for Atlantic striped bass is 20 inches in the bays and estuaries and 28 inches along the coast. In coastal jurisdictions, the standard recreational regulations are two fish per day and a 365-day fishing season. No annual harvest quotas or caps are mandated for the recreational fishery. Commercial fisheries are regulated through the same minimum size standards as the recreational fishery. The commercial quotas for each state are a percentage of coastwide reported commercial landings from 1972-1979.

States are granted the flexibility to deviate from these standards upon review by the Striped Bass Technical Committee and Advisory Panel and approval by the Management Board. Alternative proposals must be "conservationally equivalent" to the management standards, which has resulted in a wide variety of regulations among states (see Tables 6 and 7).

These management measures are intended to maintain the fishing mortality rate (F) at or below the target F (0.31). Since 1995, three addenda were approved to perpetuate the Amendment 5 standards from 1997 through 2000. Based on the 1999 stock assessment the Striped Bass Management Board developed Addendum IV to reduce fishing mortality on age 8 and older striped bass. Addendum IV detailed the required management measures for each state in 2000 and 2001 to achieve the necessary 14% reduction in the fishing mortality rate. In 2000, many states implemented changes to their management programs, but some states were already more conservative than the standards established in Amendment 5 and therefore were not required to make any reductions for 2000.

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The 2000 stock assessment indicated that no additional reductions in fishing mortality were necessary to reduce the pressure on age 8 and older striped bass during the 2001 fishing year. This information prompted the Management Board to initiate the development of Addendum V in 2000. Addendum V established the management standards for 2001 and 2002 and allowed states to either maintain their current striped bass fishery regulations or implement regulations comparable to those in place for 1998 and 1999.

Under Amendment 5 and its subsequent addenda, the Exclusive Economic Zone (EEZ) remained closed to the harvest and possession of striped bass by both commercial and recreational fishermen.

II. Status of the Stocks

Striped bass abundance has been increasing steadily since 1982 and reached a level around 45 million fish by 1996 and remained at this general level with some inter-annual variation until 2002. Population abundance peaked in 2002 to 52 million fish, but declined to about 44 million fish in 2003 due to a poor 2002 year class. Recruitment of the 2002 year class was estimated to be 3.6 million fish compared to the average of 7.3 million fish for 1982-2002. The 2001 year class was estimated at 16.9 million fish (age 2), which exceeds the size of the strong 1993 year class. The 1993 year class remains the most abundant among the exploited cohorts for the time series.

The female spawning stock biomass has been growing steadily since 1982 and stabilized at about 20 thousand metric tons by 1999-2001. Female SSB remained at a very high level, estimated at 22.3 thousand mt in 2002, assuming a 1:1 male-female ratio. In 2002, the striped bass management program was operating under Addendum V to Amendment 5, which does not have a biomass target or threshold. Female SSB far exceeds the threshold (~14 thousand mt) and target (17.5 thousand mt) SSB set in Amendment 6.

Amendment 5 sets the target fishing mortality rate at 0.31 and the overfishing definition at $F_{msy} = 0.38$. Applying the same fully recruited ages as those used to calculate the reference points in Amendment 5 (ages 5-11), the VPA estimates the 2002 average fishing mortality rate to be 0.31. Under the new biological reference points developed in Amendment 6, the average F would be equal to 0.35 based on ages 8-11. The Amendment 6 target fishing mortality rate is 0.30 and the threshold is 0.41. Regardless of the fully recruited ages used to estimate the fishing mortality rate for 2002, the stock is not being overfished but is at or above the F_{target} .

The status of individual stocks has been determined based on tagging studies. Tag results are analyzed using several modeling approaches. Results for Chesapeake Bay striped bass greater than 28" indicate a fishing mortality between 0.09 and 0.31, both less than the fishing mortality threshold. The Delaware River stock also ranged from 0.09 to 0.33 while the Hudson River stock was 0.07 to 0.12. Total mortality estimates for smaller fish (≥ 18 ") was significantly higher, particularly in the Chesapeake stock. However, further investigation has been recommended to determine if this rise is the result of increased fishing mortality, natural mortality or model error.

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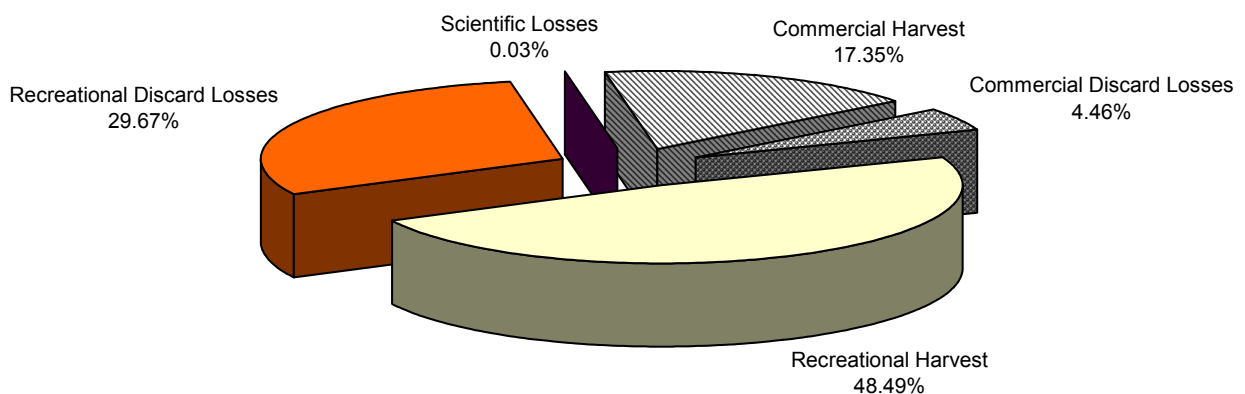
The results of the striped bass stock assessment for 1982-2002 indicate that the overall abundance of the stock has remained relatively stable since 1996. Based on current available information, the stock is not being overfished and overfishing is not occurring, but the stock should be considered fully exploited. Overall, the Atlantic stocks of striped bass appear to be abundant in number, capable of producing strong incoming year classes and are being fished at levels within the bounds of the current fishery management plan.

The Roanoke River/Albemarle Sound (NC) stock of striped bass was declared recovered by the Management Board in October 1997. This finding was based on the recommendation of the Technical Committee and assessment data compiled by the state of North Carolina. These data suggest that the spawning stock biomass in the Albemarle/Roanoke system has recovered to historical levels observed in the 1960s, and indicate that regulatory relaxation is permissible in certain areas. North Carolina was approved to fish at a higher fishing mortality rate (up to 0.28 at an 18 inch minimum size) in 1998, but the overfishing definition remained at 0.38. In the Albemarle/Roanoke system, the current fishing mortality on ages 3 – 7 is 0.19, well below the target for the North Carolina Striped Bass FMP of 0.22.

III. Status of the Fishery

In 2002, the total coastwide recreational and commercial striped bass catch (landings + discards) was estimated to be 3,770,486 striped bass, representing a 13.2% decrease in number from 2001. Commercial and recreational landings declined in 2002 to 2,482,429 fish or 11,132 metric tons. The recreational fishery landed 73.6% of the total number (1,828,367 fish or 8,409 mt), whereas the commercial fishery harvested 26.3 % (654,062 fish or 2,723 mt) (Figure 1 and Table 1). Compared to the 2001 harvest, the recreational landings (in numbers of fish) decreased by about 9.1% and commercial landings decreased by 30.5%. While total landings and total discard losses decreased between 2001 and 2002, the decline in commercial discard losses overshadowed the increase in recreational discard losses. Discard losses were estimated to be 34.1% of the total catch in 2002, compared to 31.9% in 2001. The 2002 recreational discard losses increased slightly compared to the 2001 levels (1.12 million fish v. 1.08 million fish) while commercial discard losses decreased significantly from 0.31 million fish in 2001 to 0.17 million fish in 2002.

Figure 1. 2002 Striped Bass Total Catch (3,770,486 fish).



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Table 1. 2002 and 2001 Striped Bass Landings (numbers of fish)

	Recreational Fishery		Commercial Fishery		Total Catch
	Harvest	Discard Losses	Harvest	Discard Losses	
2001	2,012,314	1,076,508	941,733	310,900	4,341,455
2002	1,828,367	1,118,538	654,062	168,201	3,769,168

IV. Status of Assessment Advice

The Atlantic striped bass coastwide stock assessment was peer reviewed by the 36th Stock Assessment Workshop/Stock Assessment Review Committee (SAW/SARC) in 2002 (NEFSC 2003). In addition to reviewing the results of the stock assessment, the SARC was asked to comment specifically on the model configuration of the VPA and provide advice on the plus grouping, oldest true age for fishing mortality, and the use of all striped bass fishery independent surveys. In the Stock Assessment Report for 2002, the Striped Bass Technical Committee, Stock Assessment Subcommittee, and Tagging Subcommittee have attempted to address the issues and advice provided by the SARC. The fully recruited F calculated in the 2002 assessment was based on ages 8-11 to conform to the biological reference points in Amendment 6. Consequently, the F estimate is not directly comparable with age 5-11 Fs used in previous assessments. The next time Atlantic striped bass will be peer reviewed by the SAW/SARC is in 2007.

V. Status of Research and Monitoring

Amendment 5 requires several jurisdictions to implement fishery dependent monitoring programs for striped bass. All jurisdictions with commercial fisheries (Massachusetts, Rhode Island, New York, Delaware, Maryland, Virginia, PRFC and North Carolina) are required to define the catch composition (age, length, sex) of these fisheries. Jurisdictions with significant commercial fisheries (Massachusetts, New York, Maryland, Virginia, and PRFC) are required to collect catch and effort data. Jurisdictions with significant recreational fisheries (Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Maryland, Virginia and PRFC) are required to follow specific guidelines for supplementing MRFSS collection of catch composition data and catch and effort information from these fisheries.

In addition to fishery dependent monitoring programs, Amendment 5 requires several states to monitor the striped bass population independent of the fishery. Juvenile abundance indices are determined by Maine, New York, New Jersey, Maryland, Virginia, and North Carolina. Spawning stock sampling is performed by New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina. Tagging is conducted by state and federal agencies to determine survivorship and migration patterns in the coastal migratory stock (NMFS, USFWS, Massachusetts, New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina).

Table 5 summarizes the status of the state reports on their fishery dependent and independent monitoring requirements.

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V. Status of Management Measures and Issues

2002 and 2003 Management Programs

The 2002 and 2003 state regulations should either comply with the management measures in Amendment 5 (reinforced through Addendum 5) or the more conservative management measures implemented through Addendum 4, which reduced fishing mortality on age 8 and older fish. States can vary their regulations yearly as long as the Technical Committee and Management Board accepted that a state’s proposal was conservationally equivalent to the Amendment 5 guidelines. Starting in January 2004, all of the jurisdictions in the striped bass management unit will be held to the management measures contained in Amendment 6.

During 2002 and through the present, the NOAA Fisheries maintains a ban on all striped bass fishing activity and possession of striped bass in the Exclusive Economic Zone (EEZ) with the exception of a defined route to and from Block Island in Rhode Island.

Status of Amendment 6

The interstate management program for striped bass is currently in transition because ASMFC approved Amendment 6 in February 2003. Effective with the approval of the Amendment, the coastal commercial quota for striped bass was restored to the state's historical average landings during the 1972-1979 base period. States could take advantage of the increase immediately as long as the states maintained a minimum size limit of 28 inches. The remainder of the Amendment 6 striped bass management program must be implemented by January 1st, 2004. States may implement prior to January 2004 if the Board has approved their implementation proposal. The delayed implementation was in response to lengthy rulemaking processes in several jurisdictions.

MA and RI Coastal Commercial Quota Overages

In 2002, Massachusetts and Rhode Island exceeded their coastal commercial quota. Amendment 5 requires quota overages in the commercial fishery to be deducted from the subsequent year’s total allowable catch. Table 2 describes the overage and penalty for each state in the 2003 fishing year.

Table 2. 2002 Commercial Overages & 2003 Commercial Quotas Adjusted for Penalties (in pounds).

State	2002 Commercial Quota	2002 Harvest	Overage	Adjusted 2003 Commercial Quota
Massachusetts	802,000	924,870	122,870	1,036,880
Rhode Island	167,000	169,404	1,466	242,159

Chesapeake Bay Spring Trophy Fishery Overage

In 2003, the harvest from the spring trophy fishery in the Chesapeake Bay exceeded the 30,000 fish quota with 43,490 fish. Amendment 5 requires that “if a jurisdiction uses harvest caps in its recreational fishery, any exceedance shall be subtracted from the following year’s recreational

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quota” (Section 4.2 Recreational Fisheries, page 31). While this overage occurred in the 2003 fishing year, the 2004 Spring Trophy Fishery will be over before the completion of the next FMP Review. Table 3 shows the penalty for the 2004 Spring Trophy Fishery with the current 30,000 fish quota, as well as the penalty with the proposal quota of 40,624 fish.

Table 3. 2003 Chesapeake Bay Spring Trophy Fishery Overage & 2004 Quota Adjusted for Penalties.

	2003 Quota	2003 Harvest	Overage	Adjusted 2004 Quota (30,000 fish)	Adjusted 2004 Proposed Quota (40,624 fish)
Chesapeake Bay	30,000 fish	43,490 fish	13,490 fish	16,510 fish	27,134 fish

Albemarle/Roanoke - Overage

Under Amendment 5, the Albemarle-Roanoke stock is managed by maintaining a target fishing mortality rate of 0.28. Using this target F and the current stock abundance, the annual allowable harvest is determined annually and divided between the Roanoke River recreational fishery, Albemarle commercial and recreational fishery. The Roanoke recreational fishery has exceeded its harvest allocation since 1997. While the Roanoke recreational harvest was reported annually, it was assumed the overage would be deducted in the subsequent year as required under Amendment 5. No overage penalty was applied to the Roanoke River recreational fishery in any of the subsequent years. The overage has been discussed in-state and will be addressed in the new management plan which will be sent to the ASMFC for review and endorsement by the Technical Committee and Management Board.

Table 4. Roanoke Recreational Fishery Overages (1997-2002)

	Allowable Harvest (lbs.)	Harvest (lbs.)	Overage
1996	29,400	28,178	-
1997	29,400	29,997	597
1998	62,700	73,541	10,841
1999	68,970	72,979	4,009
2000	112,500	120,113	7613
2001	112,500	112,823	323
2002	112,500	112,698	198

Albemarle/Roanoke – Consistent Management Measures

Striped bass management measures in the Virginia portions of Albemarle Sound watersheds are not in compliance with either Amendment 5 or the North Carolina plan. This issue was the subject of a recent meeting between the North Carolina and Virginia fishery management agencies and the U.S. Fish and Wildlife Service, and Virginia has proposed to bring their management measures into compliance with the plan, making them consistent with measures in effect in North Carolina.

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Albemarle/Roanoke – Oregon Inlet Recreational Fishery

A new recreational fishery for large striped bass, conducted in and near Oregon Inlet, may have increased the harvest of spawning stock biomass from Albemarle-Roanoke stock. Returns of large fish tagged on the Roanoke River spawning grounds from or near Oregon Inlet suggest that at least some portion of the spawning stock biomass is now subject to harvest in the new fishery. The North Carolina Plan Development Team recommended a seasonal closure for the Oregon Inlet fishery in order to reduce mortality on the brood stock. The North Carolina Marine Fisheries Commission has not approved the measure for implementation. While tagging studies indicate the fish harvested in this recreational fishery are from the Albemarle/Roanoke stock, the harvest is attributed to the coastal migratory stock. The Management Board may wish to refer this issue to the Technical Committee for their review of appropriate accounting of the mortality occurring in the new fishery, as well as appropriate management measures.

Law Enforcement

The Law Enforcement Report submitted to the Plan Review Team identified two areas of concern. In New York, there is concern about a black market for untagged and illegally caught striped bass, which are then sold to restaurant and other retail markets. In Maryland, the law enforcement report noted concern for increase mortality on the stock due to a prevalent catch and release fishery where power plants discharge warm water.

Juvenile Abundance Indices

The juvenile abundance indices in New York, New Jersey, Maryland and Virginia declined in 2002. Under Amendment 6, which will be effective in 2004, new management triggers require the PRT and Board to monitor the JAI trends. “If any JAI shows recruitment failure (i.e. JAI is lower than 75% of all other values in the dataset) for three consecutive years, the Management Board will review the cause of the recruitment failure and determine the appropriate management action” (Amendment 6, p.31). Because several of the JAIs were low in 2002, the PRT will closely monitor the indices over the next couple of years to keep the Board apprised of any recruitment concerns.

VI. Annual State Compliance

Based on the annual state compliance reports, the Plan Review Team determined that each state/jurisdiction implemented a management program that was approved by the Striped Bass Management Board for the 2002 fishing year and was consistent with the requirements of Addendum V to Amendment 5 (Tables 6 and 7). Two jurisdictions altered their management program from the previous year (2001), the District of Columbia and Maryland implemented the management programs that were approved by the Management Board in May of 2002.

Amendment 5 has several compliance requirements as part of the Interstate striped bass management program including both monitoring and regulatory requirements that are enforceable through the Atlantic Striped Bass Conservation Act. The monitoring requirements for each jurisdiction are summarized in *Section V* of this report. Compliance with these requirements is summarized in Table 5. The table notes the state of New York did not meet the

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compliance standards for fishery independent monitoring because the annual Hudson River spawning stock survey was not conducted in 2002.

Amendment 5 also requires states to submit semi-annual law enforcement activity reports (which was changed to an annual report through Addendum IV). These reports, in a standardized format, detail the effort and success involved in enforcing striped bass regulations in each jurisdiction. For the 2002 fishing year, the states submitted their law enforcement reports to the Commission's Law Enforcement Coordinator and one Law Enforcement Report was submitted on behalf of all the states in the striped bass management unit.

Table 5. Status of compliance with monitoring and reporting requirements.
(Y = compliance standards met, N = compliance standards not met, N/A = not applicable)

State	Fishery-independent monitoring	Fishery-dependent monitoring	Annual reporting
ME	Y	N/A	Y
NH	N/A	N/A	Y
MA	Y	Y	Y
RI	N/A	Y	Y
CT	N/A	Y	Y
NY	N	Y	Y
NJ	Y	Y	Y
PA	Y	N/A	Y
DE	Y	Y	Y
MD	Y	Y	Y
PRFC	N/A	Y	Y
DC	N/A	N/A	Y
VA	Y	Y	Y
NC	Y	Y	Y

VII. Recommendations

Regulatory Recommendations

All of the jurisdictions with a declared interest in the management of Atlantic striped bass had regulations in place for the 2002 fishing year that were in compliance with Addendum V to Amendment 5 to the Interstate Fishery Management Plan for Atlantic striped bass.

- 1) The 2003 coastal commercial quota for Massachusetts and Rhode Island should be lowered by the amount over their 2002 allocation (see Table 2). The Commonwealth of Massachusetts indicated via email that a deduction would be made from the 2003 coastal commercial quota.

- 2) The 2004 Chesapeake Bay Spring Trophy quota should be reduced by 13,490 fish (Table 3). The actual quota for the Chesapeake Bay jurisdictions will depend upon the Board's review of the proposal to increase the quota for the spring trophy fishery.

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3) The Roanoke River recreational fishery has exceeded the allowable harvest from 1997 to 2002 and never took a penalty for the annual overage (Table 4). The PRT recommends no action at this time. The new North Carolina Estuarine Striped Bass Fishery Management Plan should address the overages in the recreational fishery. The new management plan should be reviewed to determine if further action is required.

4) Under Amendment 5, New York is responsible for annually conducting a spawning stock survey in the Hudson River (Table 1 of Amendment 5, page 23). The state of New York was unable to report results from the Hudson River spawning stock survey because the survey was not conducted in 2002.

Management Recommendations

The Plan Review Team identified a number of concerns during the annual compliance review. The following recommendations have been developed to address the PRT concerns.

1) The management triggers provided by Amendment 6 do not require action if the fishing mortality exceeds F_{target} but is below $F_{threshold}$ and above the biomass thresholds. The recent stock assessment indicates fishing mortality has met or exceeded F_{target} each year since 1997. The PRT recommends the Management Board charge the Technical Committee with evaluating the significance of exceeding the target fishing mortality and report back to the Management Board.

2) To determine the appropriate accounting of the mortality occurring in and around the Oregon Inlet in the new recreational fishery, the Technical Committee should be tasked to review the tagging results and, if necessary, recommend appropriate management measures to protect the Albemarle –Roanoke spawning stock.

Research Recommendations

STOCK ASSESSMENT AND POPULATION DYNAMICS

High Priority

- Review relationship between tag-based survival estimates and VPA estimate of mortality in a management framework.
- Conduct analysis on current state and federal fishery dependent and independent monitoring programs to determine which, if any, accurately reflect population status.
- Develop method to integrate VPA and tagging models to produce a single estimate of F and stock status.
- Evaluate alternative catch at age models for striped bass.
- Develop maturity ogive applicable to coastal migratory stock.
- Examine potential biases associated with the number of tagged individuals, such as gear-specific mortality (associated with trawls, pound nets, gill nets, and electrofishing), tag-induced mortality, and tag loss.
- Develop methods for combining tag results from programs releasing fish from different areas on different dates.
- Examine reporting rates by commercial and recreational fishermen using high reward tags.

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Medium Priority

- Improve methods for determining population sex ratio for use in estimates of spawning stock biomass and biological reference points.
- Develop refined and cost-efficient coastal monitoring regime for striped bass stocks, including spawning stock biomass modeling and virtual population analysis (VPA).
- Quota calculation methods should be refined which allow better estimates among various components of the fishery.
- Examine methods to estimate annual variation in natural mortality.
- Examine trend models with simulated data.
- Examine causes of different survival estimates among programs estimating similar segments of the population.
- Evaluate truncated matrices and covariate-based models.
- Examine differences between R/M exploitation and survival rates.

Low Priority

- An evaluation of the overfishing definition should be made relative to uncertainty in biological parameters.
- Simulation models should be developed to look at the implications of overfishing definitions relative to development of a striped bass population that will provide “quality” fishing. Quality fishing must first be defined.
- Examine issues with time saturated models for the ≥ 18 inch length group.

RESEARCH AND DATA NEEDS

High Priority

- Increase sea sampling of commercial fisheries to better estimate levels of discards.
- Continue in-depth analysis of migrations, stock compositions, etc. using mark-recapture data.
- Evaluate the percentage of fishermen using circle hooks.

Medium Priority

- Develop studies to provide information on the magnitude of hook and release and bycatch mortality, including factors that influence their magnitude and means of reducing or eliminating this source of mortality.
- Continue to conduct research to determine limiting factors affecting recruitment and possible density implications.

Low Priority

- Determine inherent viability of eggs and larvae.
- Additional research should be conducted to determine the pathogenicity of the IPN virus isolated from striped bass to other warm water marine species, such as flounder, menhaden, shad, largemouth bass and catfish.
- Conduct study to calculate the emigration rates from producer areas now that population levels are high and conduct multi-year study to determine inter-annual variation in emigration rates.

Completed

- Further study should be conducted on the discrepancy in ages between scale-based and otolith-based ages. Particular emphasis should be placed on comparisons with known age fish determined from coded wire tags. Comparisons should be made among age readers and areas.

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Table 6. 2002 COMMERCIAL FISHERY REGULATIONS – ATLANTIC STRIPED BASS*

* All regulations are subject to change. Readers should contact their state fisheries offices for detailed regulations.

STATE	SIZE LIMITS	SEASONAL QUOTA (LB)	OPEN SEASON
Maine	No Fishery		
New Hampshire	No Fishery	4,000	
Massachusetts	34" minimum	802,000	July 3 until quota is reached
Rhode Island	28" min. (trap fishery) 34" min. (hook & line)	61,909 (trap) 106,029 (H & L)	1 June – September 30 (4 fish, H&L – 90% of quota) October 1 until quota reached (3 fish, H&L – 10% of quota)
Connecticut	No Fishery		
New York	24" – 36"	547,215	July 1 - Dec. 15
New Jersey	No Fishery	Bonus fishery of 225,000 lbs. from Comm. cap	
Pennsylvania	No Fishery		
Delaware	20" Minimum	182,835 lb. (took a penalty for an overage in 2001)	Gillnet 1 March – 30 April, 1 Nov. – 30 Dec. Hook and Line 1 Sep. – 31 Dec. Spawning Grounds 1 Jan. – 31 March 1 June – 31 December
Maryland	Bay and Rivers 18" – 36" Ocean 24"	Bay and Rivers 1,760,000 lb. (portion of 10,500,000 lb. baywide quota) Ocean 91,000 lb.	Bay Pound Net 1 June – 30 Nov. Bay Haul Seine 1 June – 30 Nov. Bay Hook and Line 18 June – 30 Nov. Bay Drift Gill Net 1 Jan. – 26 Feb., 2 Dec. – 30 Dec. Ocean All Year
PRFC	18 – 35"	883,850 lb. (part of 10,500,000 lb. baywide quota)	Seasons for fyke nets, haul seines, gillnets, poundnets, and hook and line fisheries.
District of Columbia	No Fishery		
Virginia	Bay and Rivers 18" min & 28" max from March 26 - June 15 Ocean 28" minimum	Bay and Rivers 1,602,748 lb. (portion of 10,500,000 lb. baywide quota) Ocean 98,000 lb	Bay and Rivers 1 Feb – 31 Dec. Ocean 1 Feb – 28 May
North Carolina	Albemarle Sound 18" Atlantic Ocean 28"	Albemarle Sd. 215,514 Atl. Ocean 336,000	Albemarle Sound Spring and Fall Seasons Atlantic Ocean Seasons Based on Gear Type

Table 7. 2002 RECREATIONAL FISHERY REGULATIONS – ATLANTIC STRIPED BASS*

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* All regulations are subject to change. Readers should contact their state fisheries offices for detailed regulations.

STATE	SIZE LIMITS	DAILY BAG LIMIT	SEASONAL QUOTA (LB)	OPEN SEASON
Maine	20 – 26” 40” minimum	1 fish between 20” and 26” <u>OR</u> 1 fish above 40”	None	All Year, except catch & release only in spawning areas b/n May 1 – June 30
New Hampshire	28” minimum	1 fish	None	All year
Massachusetts	28” minimum	1 fish	None	All year
Rhode Island	28” minimum	2 fish	None	All year
Connecticut	Shore/Private Boats 24 – 32” 41” minimum Party/Charter Boats 28” minimum	1 fish between 24” and 32” <u>AND</u> 1 fish above 41” 2 fish	None	All year
New York	Hudson River 18” minimum Ocean and Delaware River 28” minimum	Hudson River 1 fish Ocean 1 fish Charter and Delaware River 2 fish	None	Hudson River 15 Mar. - 30 Nov. Ocean 8 May – 15 Dec. Delaware River All year
New Jersey	24 – 28” 28” minimum Bonus Program 28” minimum	1 fish between 24” and 28” <u>AND</u> 1 fish above 28” Bonus Program 1/day in addition to regular fishery	Bonus program of 225,000 lbs. from commercial cap	All year, except <u>Delaware River spawning grounds:</u> 1 Jan – Mar 31 1 June - 31 Dec <u>Other Rivers:</u> 1 Mar – 31 Dec.
Pennsylvania	24 – 28” 28” minimum	1 fish between 24” and 28” <u>AND</u> 1 fish above 28”	None	Non-Tidal All year Tidal Delaware River March, 1 June – 31 Dec
Delaware	24 – 28” 28” minimum	1 fish between 24” and 28” <u>AND</u> 1 fish above 28”	None	All year, except <u>Delaware River spawning grounds:</u> 1 Jan – Mar 31 1 June - Dec 31

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Table 7 (continued). 2002 RECREATIONAL FISHERY REGULATIONS – ATLANTIC STRIPED BASS*

* All regulations are subject to change. Readers should contact their state fisheries offices for detailed regulations.

STATE	SIZE LIMITS	DAILY BAG LIMIT	SEASONAL QUOTA (LB)	OPEN SEASON
Maryland	Spring 28" minimum Summer/Fall 18 – 28" 28" minimum Ocean 28" minimum	Spring 1 fish Summer/Fall 2 fish between 18 - 28" <u>OR</u> 1 fish between 18 - 28" <u>AND</u> 1 fish above 28" Ocean 2 fish	Spring Part of 30,000 fish cap Summer/Fall 3,764,450 lb. (portion of 10,500,000 lb baywide quota) Ocean None	Spring Bay: 20 Apr. – May15 Potomac tribs: 20 Apr. – 15 May Summer/Fall Bay: 1 June – 15 Dec Potomac tribs: 16 May – 31 Dec. Ocean All year
PRFC	Spring 28" minimum Summer/Fall 18" (28")	Spring 1 Summer/Fall 2 fish, only one of which may be larger than 28"	Spring Portion of 30,000 fish cap Summer/Fall 723,150 lb. (portion of 10,500,000 lb baywide quota)	Spring 15 April – 15 May Summer/Fall 16 May – 31 December
District of Columbia	18" Minimum 36" Maximum	1	None	4 May – 31 July 1 Sept. – 17 Nov.
Virginia	Spring 18 – 28" Trophy 32" minimum Fall 18" Ocean 28"	Spring 2 fish Trophy 1 fish Fall 2 fish Ocean 2 fish	Trophy Portion of 30,000 fish cap Spring/Fall 1,701,748 lb. (portion of 10,500,000 lb baywide quota) Ocean None	Spring 16 May – 15 June Trophy 1 May – 15 May Fall 4 Oct. – 31 Dec. Ocean 1 Jan – 31 Mar 16 May – 31 Dec
North Carolina	Roanoke River 18" Min, but no fish between 22 - 27" Sounds and Rivers 18" minimum Atlantic Ocean 28" minimum	Rivers 3 fish Albemarle Sound 2 fish Atlantic Ocean 2 fish	Roanoke River 112,500 Albemarle Sound 56,250 spring 56,250 fall Other Areas None Atl. Ocean None	Roanoke River Zone 1: 15 Mar – 30 April Zone 2: 1 Mar – 14 April Albemarle Sound Wed., Fri., Sat., Sun. Other areas All year Atlantic Ocean All year