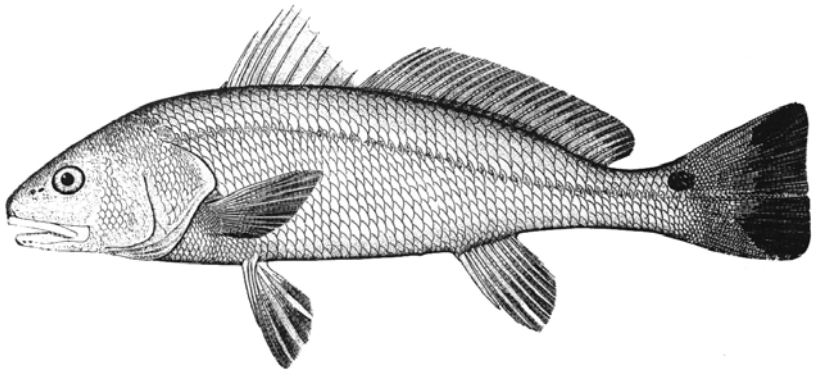
2003 REVIEW OF THE ASMFC FISHERY MANAGEMENT PLAN FOR RED DRUM (*Sciaenops ocellatus*)



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I. Status of the Fishery Management Plan

The Atlantic States Marine Fisheries Commission (ASMFC) adopted a *Fishery Management Plan (FMP) for Red Drum* in 1984. The original management unit included the states from Florida to Maryland. In 1988, the Interstate Fisheries Management Program (ISFMP) Policy Board requested that all states from Florida to Maine implement plan requirements to prevent development of northern markets for southern fish.

In 1990, the South Atlantic Fishery Management Council adopted an FMP for red drum that defined overfishing and optimum yield (OY) consistent with the Magnuson Fishery Conservation and Management Act of 1976. Adoption of this plan prohibited the harvest of red drum in the exclusive economic zone (EEZ). The Council FMP, in recognition that all harvest would take place in state waters, recommended that states implement measures necessary to provide the target level of at least 30% escapement. The moratorium on harvest of red drum in the EEZ still remains in effect.

The ASMFC updated its FMP to be consistent with the Council plan. The 1991 revision to the plan was Amendment 1, with a goal to attain optimum yield from the fishery over time. OY was defined as the amount of harvest that could be taken while maintaining the spawning stock biomass per recruit (SSBR) level at or above 30% of the level that would result if fishing mortality was zero. However, the lack of adequate information on the status of the adult stock resulted in the use of a 30% escapement rate of sub-adult red drum into the adult population.

Substantial reductions in fishing mortality were necessary to increase the escapement of sub-adults to the off-shore adult spawning stock. Because of a lack of data on the status of adult red drum along the Atlantic coast a "phase-in" approach was adopted that required all states to implement or maintain harvest controls necessary to attain at least a 10% SSBR ratio. All states in the management unit north of Florida modified regulations and/or commercial quotas to reach this goal. Florida maintained its strict regulations that were thought to exceed the target escapement rate. The harvest regulations remained unchanged from 1992-1998, except in Florida where regulations were relaxed somewhat by opening the previously closed March-May period. North Carolina, South Carolina and Georgia implemented substantive changes to their regulations from 1998-2001 that restricted the harvest of red drum and increase the escapement rate.

The Council adopted new definitions of OY and overfishing for red drum in 1998. Optimum yield was redefined as the harvest associated with a 40% static spawning potential ratio (SPR), an overfishing was an SPR less than 30%, with a threshold overfishing level of 10% SPR. In 1999, the Council recommended that management authority for red drum be transferred to the states, through the Commission's Interstate Fishery Management Program (ISFMP) process.

Management measures implemented by the states in response to the guidelines of Amendment 1 led to increased escapement rates of juvenile red drum. However, the overall exploitation estimates indicated that overfishing was still occurring with SPR values less than 30% for both the northern (North Carolina through New Jersey) and southern regions (South Carolina through

the east coast of Florida). These regions were based on stock identity, mark-recapture experiments, life history, habitat preferences, human dimensions of the fisheries and management goals (Ross and Stevens 1992, Pafford et al. 1990, Wenner et al. 1990). Management measures of Amendment 1 measures were an intermediate step in a phased approach to recovery of the red drum population, with an initial target of attaining an SPR of at least 10%.

One of the reasons the Council recommended the transferring of management authority to the ASMFC was the inability to accurately determine an overfished status and therefore, stock rebuilding targets and schedules under the new requirements of the revised Sustainable Fisheries Act (1996). With no estimate of the size of the adult population as well as what a rebuilt or healthy stock looks like, it is virtually impossible to determine a rebuilding schedule. However, the duration of a rebuilding schedule should include the generation time of the species. For a long-lived, species with an age of maturity at 3 to 5 years, such as red drum, mean generation time would be on the order of 15-20 years based on age-specific egg production (Vaughan and Carmichael 2000). The oldest of red drum in the northern region range from 50-60 years, whereas, in the southern region it is about 40 years. Given these factors only a considerable period of time will result in noticeable increases in the age structure of the adult population.

The ASFMC adopted Amendment 2 to the Red Drum FMP in June 2002. Its primary objective is to achieve and maintain SPR at or above 40 percent. To achieve this goal, Atlantic coast states from Florida through New Jersey have met appropriate bag and size limit combinations needed to attain 40 percent SPR. All states must also maintain current or more restrictive commercial fishery regulations.

II. Status of the Stocks

It is important to remember that the population models used in the coast wide assessments (specifically yield per recruit and static SPR) are based on equilibrium assumptions. Previous estimates of escapement rates (relative survival of red drum from age at entry to fishery to age 4) for 1992-94 ranged from 10.4% for the northern region and 17.2% for the southern region (Vaughan 1996). Escapement rate estimates for Florida Atlantic coast red drum (to age 4) during 1992-94 ranged from 30-64% depending on the assumed size structure of released fish (Murphy 2002). This may mean that rates in Georgia and South Carolina are lower than the regional estimate. Estimates of static SPR (the ratio of spawning stock biomass per recruit with and without fishing mortality) ranged from 9% for the northern region to 14% for the southern region. This may be an overestimate because most states north of North Carolina allow a fishery for adults and the analysis assumes no adult fishing mortality or any discard mortality from commercial fishing operations and recreational use of commercial (gillnet) gear.

Based on the most recent full assessment (Vaughan and Carmichael 2000), results for the northern region indicated that escapement rates were on the order of 18%, but may be overestimated due to the lack of discard data from both the commercial fishery and recreational netting practices. Also, the estimate for the southern region (15%) may not be reflective of escapement rates throughout the region, where there appears to be significant regional

differences between Florida and Georgia/South Carolina. The red drum population on the east coast of Florida appears to be recovering faster than in neighboring state waters, which may be a result of very strict harvest controls in Florida. The 1999-2000 estimates of annual escapement rates on Florida's Atlantic coast ranged 16-54% and was highly dependent on the assumed size structure of the released catch (Murphy 2002).

III. Status of the Fishery

Few commercial landings of red drum have been recorded in states north of Maryland since 1960 (Table 1). Only Rhode Island, New York and New Jersey have reported any commercial landings since 1980. Coastwide commercial landings show no particular temporal trends, ranging from 58,000 to 422,000 pounds annually from 1960-2002. Coastwide commercial landings for 2002 amounted to 87,600 pounds; the majority (91%) from North Carolina. Based on available information from tagging studies, a large portion of the harvest in state waters appears to be supported primarily by catch of sub-adult red drum ages 1-2 years.

Historically, the major commercial harvesters were North Carolina and Florida. However, commercial harvest has been prohibited in Florida under state regulations, since January 1989. An annual cap of 250,000 pounds controls the commercial harvest of red drum in North Carolina. The North Carolina Marine Fisheries Commission recently approved a new red drum FMP that: prohibited the possession or sale of red drum larger than 27 inches; reduced the recreational bag limit to 1 fish per day between 18-27 inches; imposed a commercial daily trip limit of seven (7) fish with a 250,000 pound annual cap; and required fishermen to attend gill nets less than five-inch stretch mesh from May 1-October 31 in order to reduce regulatory discards.

The number of red drum harvested by recreational fishermen has generally been in the 300-500,000 range since 1981. Over a million fish were taken in both 1984 and 1985, but this was exceptional. The recreational harvest for 2002 was almost 350,000 fish, with most the majority of which were taken by Florida and Georgia anglers. (Table 2). Florida anglers harvested more red drum than any other state; however the number fish taken decreased from the previous year (2001). The number of red drum harvested increased in Maryland, Virginia, and North Carolina from the previous year. The number of red drum released by recreational fishermen was approximately 2.4 million in 2002, a large increase from the previous years (Table 4).

IV. Status of Research and Monitoring

In cooperation with the states, the NMFS laboratory in Beaufort, North Carolina has compiled information and performed analyses on status of the stocks periodically since 1989. Fishery independent data collected by the states (North Carolina, South Carolina, Georgia, Florida) have been utilized in coastwide stock assessment. Virtual population analyses utilize the MRFSS as the primary data source.

In November 1994, the states of North Carolina, South Carolina and Georgia initiated a multi-year study to collect fishery independent data utilizing trammel nets and tagging techniques. The Florida Fish and Wildlife Commission's Florida Marine Research Institute has monitored juvenile fishes and animals, including red drum, abundance in the northern Indian River Lagoon since 1990, in the southern Indian River Lagoon since 1997, and in the lower reaches of the St. Johns, St. Marys and Nassau rivers since 2001. Beginning in 1997 in the Indian River Lagoon and in 2001 in the lower reaches of the three major rivers in northeast Florida, the programs expanded to include the use of a 183-m haul seine to monitor larger-sized fishes and animals. Age data are collected from random samples of red drum captured in the 183-m haul seine and the age and length data are used to create age-length keys. A coastwide red drum stock assessment was completed in late 1999, and peer-reviewed by both the Red Drum Technical Committee and the SAFMC Science and Statistics Committee during 2000. A revised bag and size limit analysis was developed for each region using the new overfishing definitions and standards as benchmarks (Vaughan and Carmichael 2001).

V. Status of Management Measures

Discussions between the Council's Red Drum Management Committee and the South Atlantic Board, led the Council to recommend in December 2000 the transferal of management authority to the states. This necessitated the development of Amendment 2 to the current Interstate FMP. The Board's intent had been to initiate the development of Amendment 2 after the update and review of the stock assessment. This occurred in 2000-01 and Amendment 2 was developed (2001-2002) and approved by the Board (May 2002).

The approval of Amendment 2 in 2002, required states to implement appropriate bag and size limits to attain the management goal of 40% SPR (Table 5). All states also implemented a 27" total length or smaller maximum size limit for red drum. In order to avoid the establishment of any new commercial fisheries for red drum, all states shall maintain their current level of restrictions.

VI. Implementation of FMP Compliance Requirements as of October 1, 2003

There are three compliance criteria in Amendment 2: 1) states are required to implement harvest controls (e.g. bag and size limits) to achieve a minimum 40% Spawning Potential Ratio (SPR); 2) a maximum size limit of 27 inches or less; and 3) states must maintain their current or more restrictive commercial fishery regulations for red drum. All states have implemented these criteria and have been approved by the Board. The first compliance report submission deadline is May 1, 2004.

VII. Status of Assessment Advice

The last red drum assessment was conducted in 1999 and reviewed by the Council's Scientific and Statistical Committee in 2000. Recreational and commercial catches were converted to catch in numbers at age using available length-frequency distributions and age-length keys. Separable and tuned virtual population analyses were conducted on the catch in numbers at age to obtain estimates of fishing mortality rates (F) and population size. These estimates of F combined with estimates of growth, sex ratios, sexual maturity and fecundity are used to estimate yield per recruit, escapement to age 4, and static (or equilibrium) spawning potential ratio (static SPR, based on both female biomass and egg production). The FADAPT VPA methodology was chosen by the Technical Committee as the population modeling approach to determine the status of the stock.

VIII. Recommendations of FMP Review Team

Management and Regulatory Recommendations

1. ASMFC and the Regional Fishery Management Councils should continue to collaborate on cooperative review of stock assessments and formulation of management measures.
2. States north of New Jersey should adopt management measures to avoid open ports for commercial landings (formal request included in Amendment 2).
3. States should maintain annual age-length keys.
4. States with significant fisheries (over 5,000 pounds recorded by MRFSS) should collect socioeconomic data on red drum fisheries through add-ons to the MRFSS or by other means.

<u>Prioritized Research and Monitoring Recommendations</u>

(H) = High, (M) = Medium, (L) = Low

Stock Assessment and Population Dynamics

- Design an appropriate state or estuary-specific fishery-independent survey of sub-adult and adult red drum to be implemented in Virginia, North Carolina, South Carolina, Georgia, and Florida. (H)
- Each state should develop an on-going red drum tagging program that can be used to estimate both fishing and natural mortality and movements. This should include concurrent evaluations of tag retention, tagging mortality, and angler tag reporting rates. (M)
- Improve catch/effort estimates and biological sampling from recreational and commercial fisheries for red drum, including increased effort to intercept night fisheries for red drum. This should include significant efforts to determine the size and age structure of regulatory discards of live red drum. (H)
- Determine the chronic mortality rate of red drum following regulatory and voluntary discard from commercial and recreational fishing gear, including recreational net fisheries. Evaluate effects of water temperature and depth of capture. (M)
- Evaluate alternatives to VPA for red drum stock assessment. (M)

Biological

- Fully evaluate the effects and effectiveness of using cultured red drum to restore native stocks along the Atlantic coast. (H)
- Explore methods to effectively sample the adult population in estuarine, nearshore, and open ocean waters. (H)
- Continue tagging studies to determine stock identity, inshore/offshore migration patterns of all life stages (i.e. basic life history info gathering). Specific effort should be given to developing a large-scale program for tagging adult red drum (M).
- Determine habitat preferences, environmental conditions, growth rates, and food habits of larval and juvenile red drum throughout the species range along the Atlantic coast. Assess the effects of environmental factors on stock density/yearclass strength. (M)
- Refine maturity schedules on a geographic basis. Thoroughly examine the influence of size and age on reproductive function. Investigate the possibility of senescence in female red drum. (L)

Social

- Examine the effectiveness of controlling fishing mortality and minimum size in managing red drum fisheries.
- Encourage the NMFS to conduct socioeconomic add-on surveys via the MRFSS that are specifically oriented to red drum recreational fishing (Example: the 2000 Northeast Summer Flounder Survey).

Economic

- Encourage the NMFS to continue funding socioeconomic add-on surveys via the MRFSS that include data elements germane to red drum recreational fisheries management.
- Where appropriate, encourage member states to conduct studies to evaluate the economic costs and benefits associated with current and future regulatory regimes impacting recreational anglers including anglers oriented toward catch and release fishing trips.
- Fully evaluate the efficacy of using cultured red drum to restore native stocks along the Atlantic Coast including risk adjusted cost-benefit analyses.
- Conduct a special survey and related data analysis to determine the economic and operational characteristics of the "for-hire sector" targeting red drum especially fishing guide oriented businesses in the South Atlantic states.
- Estimate the economic impacts (e.g. sales, jobs, income, etc.) of recreational red drum fisheries at the state and regional level including the "for-hire sector" (e.g. fishing guides). (Note: The economic impact analysis [Southwick Associates 2001] cited in this document is considered preliminary.)
- Encourage the NMFS to continue funding research on projecting future participation in marine recreational fishing in the Atlantic states with an emphasis on forecasts for major fisheries such as red drum.

Habitat

- Identify spawning areas of red drum in each state from North Carolina to Florida so these areas may be protected from degradation and/or destruction. (H)

- Identify changes in freshwater inflow on red drum nursery habitats. Quantify the relationship between freshwater inflows and red drum nursery/sub-adult habitats. (H)
- Determine the impacts of dredging and beach re-nourishment on red drum spawning and early life history stages. (M)
- Investigate the concept of estuarine reserves to increase the escapement rate of red drum along the Atlantic coast. (M)
- Identify the effects of water quality degradation (changes in salinity, DO, turbidity, etc.) on the survival of red drum eggs, larvae, post-larvae, and juveniles. (M)
- Quantify relationships between red drum production and habitat. (L)
- Determine methods for restoring red drum habitat and/or improving existing environmental conditions that adversely affect red drum production. (L)

Identified Management Needs/Issues

- none at this time

Research Needs Identified as Being Met

- none at this time.

References

Murphy, M.D. 2002. Stock assessment of red drum, Sciaenops ocellatus, in Florida: status of the stocks through 2000. In-House Report 2002-016, Florida fish and Wildlife Commission Florida Marine Research Institute, St. Petersburg, 32 p.

Vaughan, D.S. and J.T. Carmichael. 2000. Assessment of Atlantic red drum for 1999: northern and southern regions. NOAA Tech. Mem. NMFS-SEFSC-447, 54 p. + app. U.S. DOC, NOAA, Center for Coastal Fisheries and Habitat Research, Beaufort, NC.

Vaughan, D.S. and J.T. Carmichael. 2001. Bag and size limit analyses for red drum in northern and southern regions of the U.S. South Atlantic. NOAA Tech. Mem. NMFS-SEFSC-454, 37 p. U.S. DOC, NOAA, Center for Coastal Fisheries and Habitat Research, Beaufort, NC.

Table 1. Commercial landings (in pounds) of red drum along the Atlantic coast, 1960-2002 (source: pers. comm. NMFS, Fish. Stats. & Econ. Div.).

Year	RI	NY	NJ	DE	MD	VA	NC	SC	GA	FLEC	Total
1960					200	29,400	79,300	4,200	400	129,000	242,500
1961						12,000	89,700	900	1,000	114,500	218,100
1962						12,900	60,900			149,300	223,100
1963						2,700	71,200			134,200	208,100
1964						4,600	101,500	11,500		119,000	236,600
1965					1,200	94,900	71,400			146,300	313,800
1966					200	3,100	35,200	200	2,700	153,000	194,400
1967						1,100	12,800	900	5,800	147,100	167,700
1968						100	12,500		5,500	167,000	185,100
1969					400	700	3,900	700	2,700	119,000	127,400
1970						100	7,500	400	2,200	146,800	157,000
1971						700	17,200	1,300	1,200	85,200	105,600
1972						5,900	42,900	1,200	3,400	128,400	181,800
1973				900		6,200	70,300	600	3,700	166,500	248,200
1974						15,700	142,000	2,300	3,100	137,300	300,400
1975				200		19,600	214,000	12,400	10,000	83,300	339,500
1976						18,600	168,200	2,600	7,300	106,000	302,700
1977				200		300	19,700	800	5,000	103,500	129,500
1978				300		2,100	21,774	4,325	328	104,696	133,523
1979					100	1,900	126,517	1,767	935	92,684	223,903
1980						400	243,223	4,107	1,493	191,222	440,445
1981						200	93,420		261	258,374	352,255
1982						1,700	52,561	2,228	251	139,170	195,910
1983					100	41,700	219,871	2,274	1,126	105,164	370,235
1984						2,600	283,020	3,950	1,961	130,885	422,416
1985						1,100	152,676	3,512	3,541	88,929	249,758
1986					1,000	5,400	249,076	12,429	2,939	77,070	349,669
1987						2,600	249,657	14,689	4,565	42,993	314,814
1988					8,100	4,000	220,271		3,281	284	235,936
1989					1,000	8,200	274,356	165	3,963		287,684
1990					29	1,481	183,216		2,763		187,489
1991					7,533	24,771	96,045		1,637		129,986
1992					742	2,352	128,497		1,759		133,350
1993					121	8,637	238,099		2,533		249,390
1994	5,094				1,152	4,080	142,160		2,141		154,627
1995		668			6	2,992	248,200		2,578		254,444
1996		8				2,073	113,401		2,271		117,753
1997	43				24	4,049	52,548		1,395		58,059
1998	165	57	311		419	6,436	294,415		672		302,475
1999		47	241		707	12,368	372,996		1,115		387,474
2000		1,215			877	11,457	271,013		707		285,269
2001		58	14		727	5,318	149,674				155,791
2002		116				7,752	79,767				87,635
Total	5,302	2,169	566	1,600	24,637	394,266	5,776,653	89,446	98,215	3,566,871	9,961,790

Table 2. Recreational harvest (numbers of A + B1 fish) of red drum along the Atlantic coast, 1981-2002 (source: pers. comm. NMFS, Fish. Stats. & Econ. Div.).

Year	DE	MD	VA	NC	SC	GA	FLEC	Total
1981		601	49,630	15,054	27,319	6,323	75,244	174,171
1982				16,445	160,760	30,757	204,401	412,363
1983		2,413	32,940	81,528	104,806	56,854	344,513	623,054
1984			1,457	108,787	129,547	258,188	549,381	1,047,360
1985			0	22,077	530,110	183,837	265,185	1,001,209
1986		12,804	28,139	17,501	193,188	102,279	113,440	467,351
1987			2,186	61,100	522,420	138,062	51,225	774,993
1988			4,311	142,626	287,916	147,042	9,542	591,437
1989		1,014	12,007	62,359	127,492	51,557	34,748	289,177
1990		1,279	0	33,149	118,666	76,304	44,280	273,678
1991		2,745	17,119	38,658	125,833	162,802	102,727	449,884
1992			13,275	23,593	112,534	83,861	104,265	337,528
1993			14,005	49,493	119,189	105,710	65,140	353,537
1994			1,378	28,953	129,515	134,214	120,938	414,998
1995			3,665	88,593	202,430	134,915	96,927	526,530
1996			572	36,746	130,649	60,251	146,823	375,041
1997	0		1,920	8,749	129,022	39,041	75,235	253,967
1998		0	13,070	114,638	46,509	24,929	107,982	307,128
1999		0	12,425	64,739	44,069	67,283	126,180	314,696
2000		0	22,603	61,618	37,217	94,144	191,070	406,652
2001	275		6,967	23,142	61,420	90,376	177,633	359,813
2002	275	5,521	49,795	42,541	41,190	90,993	119,010	349,325
Total	550	26,377	287,464	1,142,089	3,381,801	2,139,722	3,125,889	10,103,892

Table 3. Recreational harvest (pounds of A + B1 fish) of red drum along the Atlantic coast, 1981-2002 (source: pers. comm. NMFS, Fish. Stats. & Econ. Div.).

Year	DE	MD	VA	NC	SC	GA	FLEC	Total
1981		4,370	347,939	31,519	50,230	9,442	317,963	761,463
1982				37,511	340,686	52,150	480,676	911,023
1983		3,018	51,299	109,540	222,691	67,298	675,924	1,129,770
1984			1,285	1,160,539	183,282	294,583	976,971	2,616,660
1985			0	70,677	1,532,316	185,887	414,176	2,203,056
1986		754,161	145,517	31,594	498,586	173,837	360,725	1,964,420
1987			44,332	200,729	913,639	250,795	227,222	1,636,717
1988			9,030	451,974	1,050,049	385,860	12,507	1,909,420
1989		2,348	27,236	214,849	396,771	127,245	146,064	914,513
1990		2,679	0	302,994	631,819	161,712	258,569	1,357,773
1991		5,635	30,582	108,268	284,290	337,207	516,999	1,282,981
1992			55,324	109,134	411,484	198,751	396,555	1,171,248
1993			45,505	266,459	282,614	328,245	290,930	1,213,753
1994			3,684	192,060	314,632	353,616	578,412	1,442,404
1995			66,270	405,620	417,595	300,337	525,231	1,715,053
1996			1,512	204,556	396,394	164,756	596,483	1,363,701
1997	0		1,810	39,077	296,155	129,836	345,390	812,268
1998		0	34,861	591,428	129,619	84,348	487,091	1,327,347
1999		0	92,794	326,303	103,777	166,630	540,310	1,229,814
2000		0	95,596	316,029	93,043	228,965	885,447	1,619,080
2001	0		51,890	132,578	188,198	155,854	853,714	1,382,234
2002	860	15,154	155,213	182,226	103,830	170,572	551,128	1,178,983
Total	860	787,365	1,261,679	5,485,664	8,841,700	4,327,926	10,438,487	31,143,681

Table 4. Recreational releases (numbers of B2 fish) of red drum by state, 1981-2001 (source: pers comm. NMFS Fish. Stats. and Econ. Div.).

Year	NH	NJ	DE	MD	VA	NC	SC	GA	FLEC	Total
1981	1,334			0	0	2,230	417	0	9,042	13,023
1982						0	2,496	3,377	10,172	16,045
1983				0	0	1,866	6,751	1,417	54,723	64,757
1984					0	2,931	0	4,232	47,196	54,359
1985					1,115	0	16,688	6,315	193,399	217,517
1986				0	7,595	0	24,018	56,045	100,095	187,753
1987					0	18,499	82,595	234,676	377,959	713,729
1988					3,958	24,874	269,176	177,319	233,988	709,315
1989				2,918	7,038	7,566	42,824	71,162	172,303	303,811
1990				0	934	12,452	102,611	156,263	68,667	340,927
1991				4,432	14,461	121,178	99,968	92,803	645,773	978,615
1992		301			15,383	60,230	46,269	128,066	284,893	535,142
1993					50,434	182,301	146,324	140,386	465,656	985,101
1994					10,684	107,662	324,706	146,039	691,261	1,280,352
1995					33,560	164,520	362,844	356,618	683,706	1,601,248
1996					2,424	35,752	176,517	71,983	500,374	787,050
1997			2,571		109,754	259,570	175,772	22,736	560,559	1,130,962
1998				2,768	93,660	199,701	84,274	33,882	481,009	895,294
1999				2,148	232,893	247,146	87,776	18,586	565,981	1,154,530
2000				1,458	196,541	203,967	94,050	129,190	693,152	1,318,358
2001			0		30,365	238,552	221,045	249,892	850,044	1,589,898
2002			1,388	18,412	801,239	640,857	142,931	168,902	663,879	2,437,608
Grand Tot	1,334	301	3,959	32,136	1,612,038	2,531,854	2,510,052	2,269,889	8,353,831	17,315,394

Table 5. Summary of Atlantic coast red drum regulations by state/jurisdiction, as of October 1, 2003 (N/A = Not Applicable).

State	Size Limit (TL inches)	Possession Limit	Other	Meets FMP requirement?
ME	None	None	None	N/A
NH	14" - 27"	5 fish	None	N/A
MA	14"	None	None	N/A
CT	27”	None	None	N/A
RI	None	None	None	N/A
NY	27”	None	No limit for fish less than 27” TL, Fish greater than 27” shall not be possessed.	N/A
PA	None	None	None	N/A
NJ	18" - 27"	1 fish		Yes
DE	20" - 27"	5 fish		Yes
MD	18" - 27"	1 fish		Yes
PRFC	18" - 25"	5 fish		Yes
VA	18" - 26"	3 fish		Yes
NC	18" - 27"	1 fish	0 fish > 27" TL; Annual commercial cap = 250,000 lbs.; daily trip limit of 7 fish, must be less than 50% of catch (pounds); gill nets < 5" stretch mesh must be tended from 5/1-10/31	Yes
SC	15" - 24"	2 fish	Gamefish - no sale; 0 fish > 24"	Yes
GA	14" - 23"	5 fish	0 fish > 23" TL	Yes
FL	18" - 27"	1 fish	Gamefish - no sale	Yes