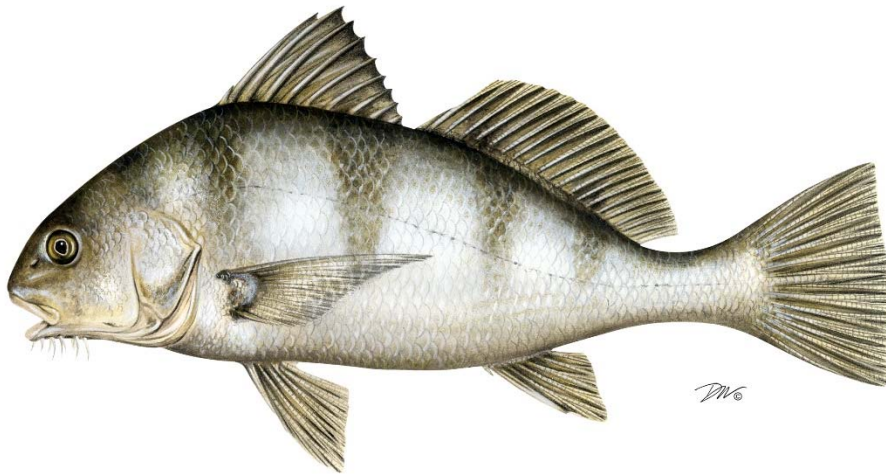


**2016 REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
FISHERY MANAGEMENT PLAN FOR**

**BLACK DRUM
(*Pogonias cromis*)**

2014 and 2015 FISHING YEARS



The Black Drum Plan Review Team

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I. Status of the Fishery Management Plan

Date of FMP Approval: Original FMP – June 2013

Management Areas: The entire Atlantic coast distribution of the resource from New Jersey through the east coast of Florida

Active Boards/Committees: South Atlantic State/Federal Fisheries Management Board; Black Drum Technical Committee, Stock Assessment Subcommittee, Plan Review Team; South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted an interstate Fishery Management Plan (FMP) for Black Drum in 2013. Prior to the FMP, management was state-specific, from no regulations in North Carolina to various combinations of size limits, possession limits, commercial trip limits, and/or annual commercial quotas from New Jersey to Florida. The Maryland portion of the Chesapeake Bay was closed to commercial fishing in 1998.

The FMP requires all states with a declared interest in the species to have established a maximum possession limit and minimum size limit of at least 12 inches by January 1, 2014, and to have increased the minimum size limit to at least 14 inches by January 1, 2016. The FMP also includes a management framework to adaptively respond to future concerns or changes in the fishery or population.

There are four plan objectives:

- Provide a flexible management system to address future changes in resource abundance, scientific information, and fishing patterns among user groups or area.
- Promote cooperative collection of biological, economic, and sociological data required to effectively monitor and assess the status of the black drum resource and evaluate management efforts.
- Manage the black drum fishery to protect both young individuals and established breeding stock.
- Develop research priorities that will further refine the black drum management program to maximize the biological, social, and economic benefits derived from the black drum population.

The management unit for black drum under the FMP is defined as the range of the species within U.S. waters of the northwest Atlantic Ocean, from the estuaries eastward to the offshore boundaries of the Exclusive Economic Zone (EEZ).

II. Status of the Stocks

In the 2015 Black Drum Benchmark Stock Assessment, the Stock Assessment Subcommittee (SAS) selected the Depletion-Based Stock Reduction Analysis (DB-SRA; Dick and McCall 2011) as the preferred method for estimating catch reference points. The SAS considered the Depletion-Corrected Average Catch (DCAC; McCall 2009) analysis, but ultimately rejected this method. DCAC did not incorporate removals into a population dynamics process, and uncertainty existed over how changes in the exploitation rate time series may impact the sustainable yield relative to the current stock condition.

Based on the DB-SRA results, black drum life history, indices of abundance, and history of exploitation, the black drum stock is not overfished and not experiencing overfishing (ASMFC 2015). Median biomass exhibited slow and steady decline from 135.2 million pounds in 1900 to 90.78 million pounds in 2012, though the median biomass estimate in 2012 is still well above the necessary level to produce maximum sustainable yield (B_{MSY} ; 47.26 million pounds). The median maximum sustainable yield (MSY) estimate is 2.12 million pounds and provides an annual catch target that can be used to sustainably manage the fishery. The median overfishing limit (OFL) estimate is 4.12 million pounds and provides a catch threshold that indicates overfishing when exceeded. The OFL is the maximum exploitation rate at the current biomass that does not lead to overfishing.

III. Status of the Fishery

The following discussion utilizes results from direct queries of the Marine Recreational Information Program (MRIP) data through their website. Adjustments needed to make these consistent through time (convert pre-2004 MRFSS data, adjust for changes in for-hire component of survey, and deletion of 1981-1985 headboat data) have not been made here.

Total black drum landings from New Jersey through the east coast of Florida are estimated at 1.42 million pounds in 2014, a 21% decrease from total harvest in 2013, and 1.49 million pounds in 2015, a 5% increase from 2014 total harvest (Tables 2 and 3, Figure 2). 2015 harvest is 32% below the previous ten-year (2005-2014) average. The commercial and recreational fisheries harvested 18.5% and 81.5% of the 2014 total, and 16% and 84% of the 2015 total, respectively.

Commercial landings of black drum span from New Jersey through Florida, excluding the Maryland portion of the Chesapeake Bay (Table 2). Coastwide commercial landings show no particular temporal trends, ranging from approximately 120,000 to 400,000 pounds annually over the last 14 years (Figure 2). Black drum commercial landings in 2014 were estimated at 262,926 pounds, an 8% decrease from those of 2013, and 238,239 pounds in 2015, a 9% decrease from 2014. Virginia led commercial harvest with 39% of the landings, followed by North Carolina and Florida with 21% each (Table 2). Virginia and North Carolina have historically been the major commercial harvesters, with Florida experiencing recent increases.

Recreational harvest of black drum peaked in 2008 at 789,000 fish (or 5.2 million pounds; Tables 3 and 4). Since 2000, the number has fluctuated without trend between 166,000 and 789,000 fish (744,000 to 5.2 million pounds; Figures 2 and 3). However, 2015 recreational landings in number of fish have been lowest on record since 1993. Recreational harvest decreased from 613,590 fish in 2013 to 295,773 fish in 2014, and again to 166,344 fish in 2015.

A different trend is seen in recreational harvest in pounds. After 1.5 million pounds were harvested in 2013, the poundage decreased in 2014, along with harvest in number, to 1.16 million pounds. In 2015, poundage increased to 1.25 million pounds, while number harvested continued to decrease. This indicates that fewer but larger fish are being caught. A few recent events could be responsible for this trend. First, the decreasing number of fish caught can be attributed to the establishment of minimum sizes in every state since the FMP took effect in 2013, requiring many drum which would have been

previously harvested to be released as undersized. The increase seen in poundage between 2014 and 2015 is likely due to more accurate monitoring achieved by increased sampling and the establishment of nighttime intercepts in the Mid-Atlantic region, an area which targets adult spawning aggregations and harvests heavy adult fish during May and June.

The 2015 recreational harvest represents a 62% decrease in numbers and a 35% decrease in pounds from the previous ten year (2005-2014) average. Florida anglers landed the largest share of the coastwide recreational harvest in numbers (60%), followed by North Carolina (21%) and South Carolina (10%). Over the past decade, recreational anglers generally released a little over 50% of their catch, but this has increased drastically in the past two years. In 2014, 71% (720,038 fish) of the recreational catch was released, and in 2015, 90% (1,708,423 fish) of the recreational catch was released (Figure 3, Table 5). Again, it is worth noting that the FMP took effect in 2013, establishing minimum sizes in every state, requiring that undersized drum be released for the first time. High release rates can be attributed to these measures, as well as encouragement of catch and release practices.

It should be noted that depending on the state, percent standard error (PSE) annually ranged widely, from 27.1-100% in 2014 and 16.1-67.2% in 2015. Values in most years were greater than 50%. PSE values above 50% are regarded as uncertain and are typically attributed to a high level of variability in the harvest estimates. Since harvest estimates are expansions of field intercepts and phone surveys, these high PSE levels indicate higher levels of uncertainty in the expansion estimates for harvest as well as B2 (released alive) estimates. However, this is common for many recreational fisheries and the data trends indicated are still reliable for general management advisement.

IV. Status of Assessment Advice

Current stock status information comes from the 2015 benchmark stock assessment (ASMFC 2015) completed by the ASMFC Black Drum Stock Assessment Subcommittee and Technical Committee, peer reviewed by an independent panel of experts, and approved by the South Atlantic State-Federal Fisheries Management Board for use in management decisions.

The stock assessment could be improved by applying a more complex, data-rich assessment method such as a statistical catch-at-age model. Data limitations that need to be addressed to successfully make this transition are biological sampling (length and age) of recreational and commercial fisheries and a fishery-independent survey to track abundance and age structure of the mature stock. Additionally, information about commercial discards and movement of fish along coast and between water depths would improve the assessment.

V. Status of Research and Monitoring

There are no monitoring or research programs required annually of the states except for the submission of a compliance report. The following fishery-dependent (other than catch and effort data) and fishery-independent monitoring programs were reported in the 2014 and 2015 reports.

Fishery Dependent Monitoring

- Delaware DFW- Sampled from commercial and recreational fisheries for the 8th consecutive year. Total length, weight, and sex were recorded, and otoliths collected (2014: commercial n=58, recreational n=23; 2015: commercial n=91, recreational n=26).
- Maryland DNR – Conducted commercial pound net survey from late spring through summer. (2014: 14 fish, mean TL 1080mm; 2015: 4 fish, mean TL 993mm).
- Virginia MRC –
 - Conducted a biological monitoring program to sample commercial and recreational harvest (2014: commercial n=32 with 9 otoliths, recreational n=115 with 115 otoliths; 2015: commercial n=16 with 7 otoliths, recreational n=62 with 62 otoliths).
 - Conducted Virginia Game Fish Tagging Program with volunteer anglers (2014: 131 fish tagged and 6 recaptured; 2015: 115 fish tagged and 7 recaptured).
- North Carolina DMF- Conducted commercial sampling of black drum bycatch, an increasing mean TL is seen (2011: 13 inch low; 2014: 17 inches; 2015: 19 inch high).
- South Carolina DNR – terminated the state finfish survey and took over MRIP intercept sampling in 2013 (information reported through MRIP).
- Georgia CRD – Collected age, length, and sex data through the Marine Sportfish Carcass Recovery Project (2014: 48 black drum out of 3,659 fish, mean length 405.9mm CL; 2015: 17 black drum out of 3,696 fish, mean length 483.1mm CL).
- Florida FWC – Conducted random survey of licensed anglers on the sizes of kept and released fish (conducted through MRIP).
- NMFS – Collected recreational catch, harvest, release, and effort data, as well as length measurements via MRIP.

Fishery Independent Monitoring

- New Jersey DEP -
 - Ocean Trawl Survey: 27-year time series average is 0.15 (2014: 0.15; 2015: 0.28).
 - Delaware Bay Trawl: 25-year time series average is 0.13 (2014 and 2015 indices were both 0.11)
 - Delaware River Seine: 36-year time series average is 0.06 (2014: 0.20; 2015: 0.15).
- Delaware DFW - Conducted two finfish trawl surveys (16ft for juveniles; 30ft for adults). Older than young-of-year (YOY) black drum are rarely captured, and no long term trend is evident.
- Maryland DNR - Conducted the Coastal Bays Fisheries Seine Survey in Maryland's coastal bay and generally catches juvenile fish. Annual mean catch per haul exhibits no trend and high variation.
- North Carolina DMF - Conducted a gill net survey in Pamlico Sound to characterize size and age distribution, and to produce an abundance index (2014: n=309, CPUE of 0.76; 2015: n=306, CPUE of 1.04).
- South Carolina DNR – Conducted an estuarine trammel net survey for subadults in 7 estuarine strata (2014: CPUE of 0.297, plateau from 2013; 2015: CPUE of 0.414, increase from 2014).
- Georgia CRD –
 - Conducted an estuarine trammel net survey for subadult biological data and abundance index (2014: n=17, CPUE of 0.19 Altamaha, 0.05 Wassaw; 2015: n=20, CPUE of 0.16 Altamaha, 0.08 Wassaw).

- Conducted an estuarine gill net survey for YOY biological data and abundance index (2014: n=2, CPUE of 0.02 Altamaha, 0.00 Wassaw; 2015: n=4, CPUE of 0.01 Altamaha, 0.03 Wassaw).
- Florida FWC-FWRI – Conducted two seine surveys monthly in northeast and central southeast Florida to develop annual estimates of adult relative abundance. Declining trend is seen in the northeast, while the southeast exhibits an increasing trend.

VI. Status of Management Measures and Issues

Fishery Management Plan

The Black Drum FMP requires all states with a declared interest in the species to have established a maximum possession limit and minimum size limit of at least 12 inches by January 1, 2014, and to have increased the minimum size limit to no less than 14 inches by January 1, 2016.

De Minimis

The black drum FMP allows states to request *de minimis* status if, for the preceding three years for which data are available, their average combined commercial and recreational landings (by weight) constitute less than 1% of the average coastwide commercial and recreational landings for the same three-year period. A state that qualifies for *de minimis* will qualify for exemption in both their commercial and recreational fisheries.

De Minimis Requests

No state requested *de minimis* status through the annual reporting process.

VII. Implementation of FMP Compliance Requirements for 2014 and 2015

The PRT finds that all states have implemented the requirements of the Fishery Management Plan.

VIII. Recommendations of the Plan Review Team

Management and Regulatory Recommendations (H) =High, (M) =Medium, (L) =Low

- Develop management mechanism (e.g., traffic light analysis) to evaluate annual fishery independent and dependent indices to assess stock status and recommend management action if needed. (H)

Prioritized Research and Monitoring Recommendations (H) =High, (M) =Medium, (L) =Low

Stock Assessment and Population Dynamics

- Age otoliths that have been collected and archived. (H)
- Collect information to characterize the size composition of fish discarded in recreational fisheries. (H)
- Collect information on the magnitude and sizes of commercial discards. Obtain better estimates of black drum bycatch in other fisheries, especially juvenile fish in south Atlantic states. (H)
- Increase biological sampling in commercial fisheries to better characterize the size and age composition of commercial fisheries by state and gear. (H)

- Increase biological sampling in recreational fisheries to better characterize the size and age composition by state and wave. (H)
- Obtain estimates of selectivity-at-age for commercial fisheries by gear, recreational harvest, and recreational discards. (H)
- Continue all current fishery-independent surveys and collect biological samples for black drum on all surveys. (H)
- Develop fishery-independent adult surveys. Consider long line and purse seine surveys. (H)
- Collect age samples, especially in states where maximum size regulations preclude the collection of adequate adult ages. (H)
- Conduct reproductive studies, including: age and size-specific fecundity, spawning frequency, spawning behaviors by region, and movement and site fidelity of spawning adults. (M)
- Conduct a high reward tagging program to obtain improved return rate estimates. Continue and expand current tagging programs to obtain mortality and growth information and movement at size data. (H)
- Conduct tagging studies using implanted radio tracking tags that are compatible with coastal tracking arrays along the Atlantic coast in order to track movement and migration of adults. (H)
- Improve sampling of night time fisheries. (M)
- Conduct studies to estimate catch and release mortality rates in recreational fisheries. (H)
- Collect genetic material (i.e., create “genetic tags”) over a long time span to obtain information on movement and population structure, and potentially estimate population size. (H)
- Obtain better estimates of harvest from the black drum recreational fishery, especially in states with short seasons. (M)

IX. References

ASMFC. 2013. Interstate Fishery Management Plan for Black Drum. Arlington, VA.

ASMFC. 2015. Black Drum Stock Assessment for Peer Review. Atlantic States Marine Fisheries Commission, Stock Assessment Report. 352 p.

Dick, E.J. and MacCall, A.D. 2011. Depletion-Based Stock Reduction Analysis: A catch-based method for determining sustainable yields for data-poor fish stocks. *Fisheries Research*, 110: 331-341

MacCall, A.D. 2009. Depletion-Corrected Average Catch: a simple formula for estimating sustainable yields in data-poor situations. *ICES Journal of Marine Science*, 66: 2267-2271.

X. Figures

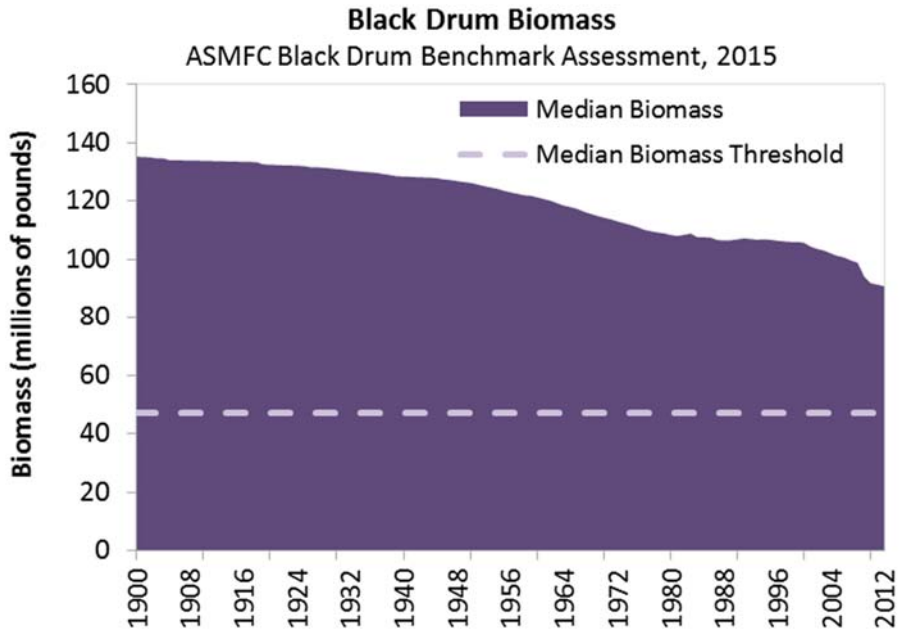


Figure 1. DB-SRA estimates of Median biomass and threshold 1900-2012 (Source: ASMFC 2015).

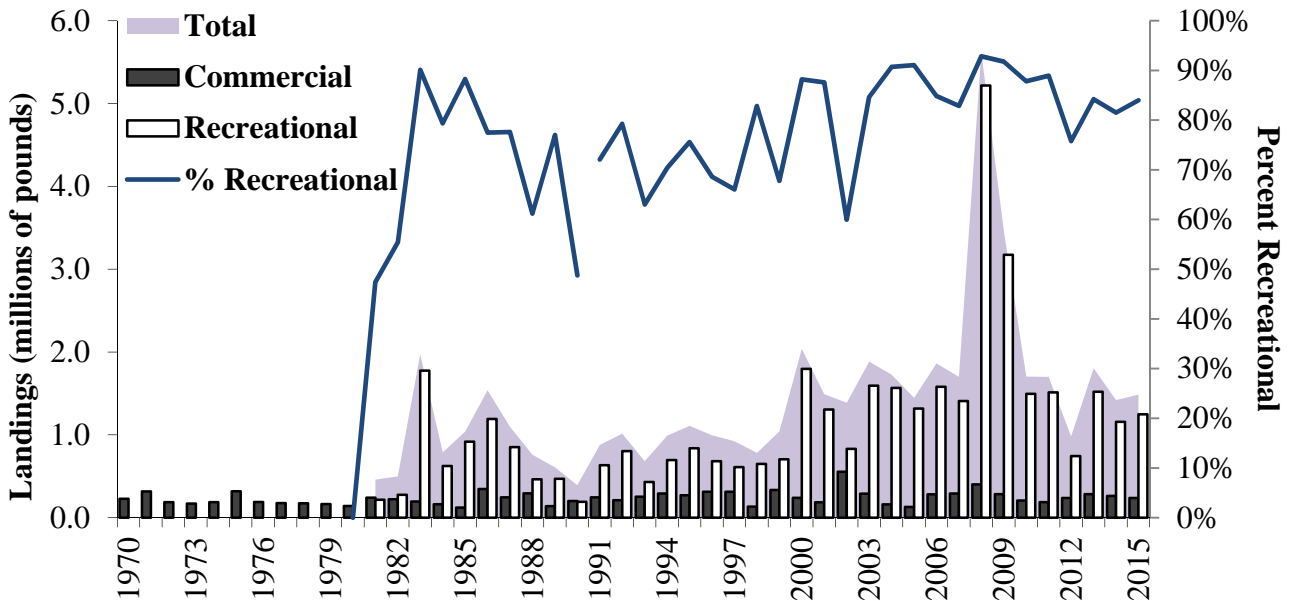


Figure 2. Commercial and recreational landings (pounds) of black drum. Recreational data not available prior to 1981. See Tables 2 and 3 for values and data sources.

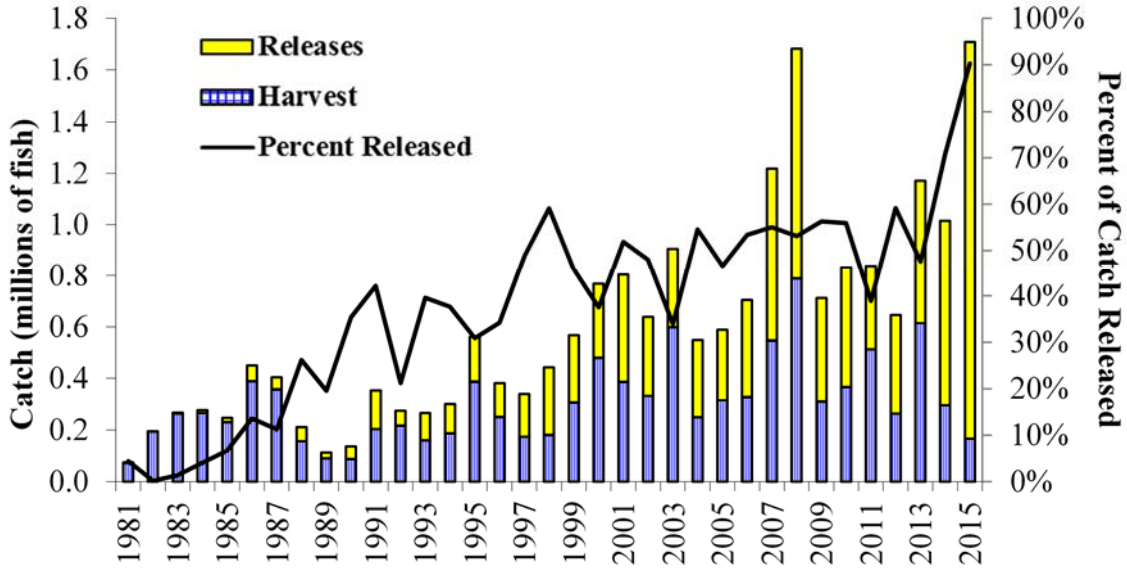


Figure 3. Recreational catch (harvest and alive releases) of black drum (numbers) and the proportion of catch that is released. See Tables 4 and 5 for values and data sources.

XI. Tables

Table 1. Black drum regulations for 2015. The states of New Jersey through Florida are required to meet the requirements in the FMP. All size limits are total length.

State	Recreational		Commercial			Notes
	Size limit	Bag limit	Size limit	Trip Limit	Annual Quota	
ME - NY	-	-	-	-	-	
NJ	16" min	3/person/day	16" min	10,000 lbs	65,000 lbs	
DE	16" min	3/person/day	16" min	10,000 lbs	65,000 lbs	
MD	16" min	1/person/day 6/vessel (Bay)	16" min		1,500 lbs Atlantic Coast	Chesapeake Bay closed to commercial harvest
VA	16" min	1/person/day	16" min	1/person/day*	120,000 lbs	*without Black Drum Harvesting and Selling Permit
NC	14" min - 25" max; 1 fish > 25" may be retained	10/person/day	14" min - 25" max	500 lbs		
SC	14" min - 27" max	5/person/day	14" min - 27" max	5/person/day		Commercial fishery primarily bycatch
GA	14" min	15/person/day	14" min	15/person/day		
FL	14" min - 24" max; 1 fish >24" may be retained	5/person/day	14" min - 24" max	500 lbs/day		

Table 2. Commercial landings (pounds) of black drum by state, 2003-2015. (Source: personal communication with NMFS Fisheries Statistics Division, Silver Spring, MD and ACCSP, Arlington, VA, except where noted below)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
2003			631	111,554	90,525		*	9505	289,312
2004	15,202	4,092	1,039	64,823	62,445		*	12,653	160,254
2005	1,970	10,059	165	66,660	44,989		*	5,249	129,092
2006	16,454	70,097	552	65,973	125,214		*	3,975	282,265
2007	1,218	37,704	172	91,385	148,231		*	12,770	291,480
2008	1,487	9,563	*	69,825	301,998	*	*	19,348	402,221
2009	6,408	30,551	*	82,437	148,995	*	*	15,671	284,062
2010	3,079	49,535	*	69,659	69,195	*	*	15,677	207,145
2011	3,130	49,514	*	56,747	56,084	*	*	22,333	187,808
2012	19,017	10,828	*	98,789	94,353	*	*	14,302	237,847
2013	16,251	24,507	*	87,730	127,170	*	*	28,450	284,632
2014	14,731	18,498	*	86,711	51,216	*	*	91,585	262,741
2015	3,865	39,282	*	93,552	51,089	*	*	50,447	238,235

*indicates confidential landings because less than three dealers reported.

Table 3. Recreational landings (pounds) of black drum by state, 1981-2015. (Source: personal communication with NMFS Fisheries Statistics Division, Silver Spring, MD)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981	0	0	0	95,051	0	3,495	7,614	111,369	217,529
1982	0	0	0	0	2,720	13,222	6,278	253,705	275,925
1983	69,193	0	603,101	706,113	0	61,594	6,765	328,922	1,775,688
1984	0	0	0	38,672	0	5,452	31,848	549,047	625,019
1985	0	50	43,946	301,264	3,838	63,206	37,646	467,715	917,665
1986	103,942	3,220	219,916	395,311	62,146	24,503	52,558	330,239	1,191,835
1987	0	623	0	462,348	51,463	61,011	45,848	230,085	851,378
1988	0	0	0	36,203	79,484	60,861	28,804	258,667	464,019
1989	0	0	192,996	54,086	2,170	44,234	44,715	131,163	469,364
1990	0	2,378	0	8,147	3,767	22,270	51,723	103,101	191,386
1991	0	1,399	0	83,090	10,558	13,878	96,295	428,316	633,536
1992	0	0	0	237,596	20,082	30,276	30,037	485,267	803,258
1993	0	1,153	0	1,087	31,474	43,092	26,842	326,596	430,244
1994	0	0	0	2,807	92,749	15,801	99,814	484,657	695,828
1995	0	0	149,158	20,685	227,582	66,787	53,721	319,812	837,745
1996	0	4,027	0	97,782	172,959	68,865	8,635	330,368	682,636
1997	0	11,372	0	36,130	156,981	190,835	28,366	186,417	610,101
1998	0	15,499	0	91,296	102,534	51,655	19,004	368,574	648,562
1999	0	2,203	8,498	0	170,793	81,777	12,058	430,690	706,019
2000	0	6,381	17,207	12,097	259,623	276,622	188,957	1,036,211	1,797,098
2001	165,041	356	0	331	188,201	16,813	32,496	903,239	1,306,477
2002	9,492	5,930	10,246	14,554	474,619	58,679	24,880	233,136	831,536
2003	214,250	0	12,282	96,730	355,717	243,887	135,127	535,717	1,593,710
2004	809,306	2,592	20,891	11,880	221,925	30,190	57,953	411,968	1,566,705
2005	519,635	25,945	0	83,349	63,161	58,997	46,485	520,948	1,318,520
2006	792,896	23,607	25,212	26,834	162,932	63,057	33,147	452,507	1,580,192
2007	202,375	14,830	0	238,718	220,454	71,471	84,495	576,048	1,408,391
2008	2,998,236	19,795	0	497,913	524,138	115,043	244,350	817,806	5,217,281
2009	1,435,892	43,001	0	1,036,270	121,038	42,903	30,203	464,661	3,173,968
2010	251,577	76,316	48,166	8,203	305,517	120,224	169,331	516,412	1,495,746
2011	126,647	15,844	0	284,264	151,407	46,847	19,504	867,708	1,512,221
2012	13,718	2,869	0	5,508	243,965	103,088	59,278	315,841	744,267
2013	36,406	6,832	0	30,749	713,047	102,429	59,219	571,489	1,520,171
2014	3,567	9,144	20,822	26,213	60,406	79,185	66,955	891,379	1,157,671
2015	184,862	12,169	11,157	17,538	115,609	35,668	15,761	855,328	1,248,092

Table 4. Recreational landings (numbers) of black drum by state, 1981-2015. (Source: personal communication with NMFS Fisheries Statistics Division, Silver Spring, MD)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981	0	1,502	0	2,874	0	8,642	3,665	54,969	71,652
1982	0	0	0	0	1,682	11,028	8,464	172,414	193,588
1983	2360	0	13,308	30,797	0	27,161	9,867	179,691	263,184
1984	0	0	1,915	1,886	0	7,575	14,239	240,470	266,085
1985	0	114	937	5,630	5,196	16,810	38,835	163,720	231,242
1986	2,798	14,605	5,668	11,767	18,697	21,108	55,040	259,168	388,851
1987	0	943	3,019	11,760	41,644	27,347	40,390	233,092	358,195
1988	0	0	0	1,225	10,553	15,568	21,525	107,293	156,164
1989	0	0	4,284	1,188	394	9,125	39,162	36,922	91,075
1990	0	1,704	0	840	2,112	15,048	16,227	52,741	88,672
1991	0	2,240	0	1,153	8,712	5,121	32,697	154,133	204,056
1992	0	0	0	5,330	7,877	13,600	19,021	171,190	217,018
1993	0	3,786	0	1,827	32,184	16,136	20,736	85,739	160,408
1994	0	0	0	1,411	53,345	8,635	18,254	106,267	187,912
1995	0	0	4,064	3,505	272,426	26,774	25,056	56,086	387,911
1996	0	206	0	3,993	134,926	28,033	6,718	77,295	251,171
1997	0	411	0	643	53,107	43,432	9,997	66,691	174,281
1998	0	412	649	3,271	44,822	14,073	5,378	112,404	181,009
1999	0	714	528	10,403	116,407	50,997	5,572	122,718	307,339
2000	0	1,194	964	2,708	113,205	63,284	62,637	235,869	479,861
2001	7,983	1,385	0	1,200	144,088	11,570	13,360	207,575	387,161
2002	5,496	3,314	3,358	4,547	197,211	28,376	23,074	67,024	332,400
2003	15,828	0	2,158	11,431	273,024	114,905	43,902	137,191	598,439
2004	15,152	320	2,351	2,485	97,262	18,384	18,568	94,967	249,489
2005	19,998	1,303	0	9,439	75,924	83,874	20,355	103,462	314,355
2006	42,070	11,462	701	1,556	92,956	93,384	20,080	66,415	328,624
2007	21,095	4,152	0	21,697	209,372	96,494	50,670	144,434	547,914
2008	74,982	6,973		26,097	359,702	54,490	91,777	175,195	789,216
2009	35,782	1,151		21,535	92,058	18,613	15,610	126,384	311,133
2010	8,593	1,450	2,731	730	122,709	34,383	69,547	127,214	367,357
2011	8,590	918	0	30,386	211,396	13,660	10,590	236,625	512,165
2012	526	111	0	1,577	139,363	28,006	19,134	74,596	263,313
2013	4,207	1,111	0	1,944	363,466	35,994	18,290	188,578	613,590
2014	150	506	1,881	3,071	24,058	30,238	15,304	220,565	295,773
2015	4,917	320	733	824	35,529	16,017	8,287	99,717	166,344

Table 5. Recreational alive releases and dead discards (numbers) of black drum by state, 1981-2015.
 (Source: personal communication with NMFS Fisheries Statistics Division, Silver Spring, MD.)

Year	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981		0		0		0	1,008	2,300	3,308
1982					0	417	0	0	417
1983	0		0	0		0	852	2,832	3,684
1984			646	0		1,360	0	9,296	11,302
1985		0	564	0	0	0	3,250	12,677	16,491
1986	0	0	138	0	7,659	1,091	8,988	43,219	61,095
1987		452	0	0	473	485	6,519	37,558	45,487
1988				0	6,186	892	2,975	45,339	55,392
1989			0	0	213	1,575	8,892	11,455	22,135
1990		752		0	3,291	824	2,002	41,648	48,517
1991	996	273		0	1,931	0	11,664	134,080	148,944
1992				0	731	0	5,998	51,623	58,352
1993		2,270		4,214	6,053	2,375	2,487	87,653	105,052
1994				2,601	4,969	5,655	2,241	98,061	113,527
1995			1,250	19,077	101,866	2,829	1,114	47,413	173,549
1996		0	2,534	14,945	55,227	2,214	363	55,446	130,729
1997		0	1,106	6,671	35,537	6,380	213	115,821	165,728
1998		2,893	0	17,432	50,208	1,548	6,312	182,776	261,169
1999		0	0	1,859	75,409	14,086	2,504	166,416	260,274
2000		0	0	886	56,741	47,605	20,643	162,054	287,929
2001	6,319	21,271	1,173	28,902	139,525	7,219	13,820	198,900	417,129
2002	20,246	3,332	7,998	44,056	82,297	11,697	18,851	117,831	306,308
2003	1,003	3,132	0	20,588	128,873	4,051	27,804	122,288	307,739
2004	0	524	0	16,093	98,385	19,076	42,326	123,266	299,670
2005	21,172	12,960	2,525	19,620	95,255	17,847	10,458	94,682	274,519
2006	29,024	1,031	0	81,509	93,229	27,296	29,285	114,635	376,009
2007	27,550	3,980	470	27,351	226,463	37,763	34,869	311,372	669,818
2008	223,332	5,961	0	9,327	188,680	124,748	65,881	274,681	892,610
2009	105,053	1,111	0	10,594	69,484	35,395	22,622	155,665	399,924
2010	25,592	1,575	1,744	19,637	102,348	25,677	39,981	249,265	465,819
2011	1,775	5	7,971	60,724	104,286	20,483	4,671	126,563	326,478
2012	10,498	356	19,351	7,182	91,895	67,242	19,765	165,569	381,858
2013	0	27,135	6,414	22,192	121,306	78,262	10,066	291,543	556,918
2014	10,669	4,886	0	63,623	361,514	66,209	8,248	204,889	720,038
2015	172,650	2,439	4,969	69,560	559,251	483,046	13,087	237,077	1,542,079

2016 REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
FISHERY MANAGEMENT PLAN FOR

SPANISH MACKEREL
(Scomberomorus maculatus)

2015 FISHING YEAR



Prepared by the

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I. Status of the Plan

<u>Date of FMP Approval:</u>	Original FMP – November 1990
<u>Amendments:</u>	Omnibus Amendment to Spanish Mackerel, Spot, and Spotted Seatrout (Amendment 2)- August 2011 Addendum I- August 2013
<u>Management Area:</u>	The Atlantic coast distribution of the resource from New York through the east coast of Florida
<u>Active Boards/Committees:</u>	South Atlantic State/Federal Fisheries Management Board; Spanish Mackerel Plan Review Team; South Atlantic Species Advisory Panel

The Fishery Management Plan (FMP) for Coastal Migratory Pelagic Resources (1983 and subsequent amendments) and the Interstate Fishery Management Plan for Spanish Mackerel (1990) manage Atlantic migratory group Spanish mackerel (Atlantic Spanish mackerel) in federal and state Atlantic waters from New York through the east coast of Florida. All states in that range, excluding Pennsylvania, have a declared interest in the Interstate FMP for Spanish mackerel. The South Atlantic State/Federal Fisheries Management Board serves to manage Spanish mackerel for the Commission. The Interstate FMP for Spanish mackerel is a flexible document intended to track the federal FMP; thus, the South Atlantic Fishery Management Council (SAFMC) has the lead on Atlantic group Spanish mackerel management.

The SAFMC manages Atlantic Spanish mackerel based on guidance from its Scientific and Statistical Committee (SSC). The SAFMC determines needed adjustments to regulatory measures, including allowable catch, bag limits, size limits, and trip limits. The SAFMC deliberations are assisted by a Mackerel Cobia Committee that includes representatives from the Mid-Atlantic Fishery Management Council, and an Advisory Panel with South Atlantic and Mid-Atlantic industry representation. Since the Coastal Migratory Pelagic Resources FMP is a joint plan with the Gulf of Mexico Fishery Management Council (GMFMC), any amendments to this FMP must be approved by both Councils. The FMP also includes a framework procedure that allows each Council to make some changes to the management of stocks in that Council's jurisdiction without the other Council's approval through a framework amendment.

The SAFMC and GMFMC approved Amendment 18 to the Coastal Migratory Pelagic Resources FMP in December 2011 which established a new Allowable Biological Catch (ABC) based on the SSC recommendation of using median landings of the last 10 years (2001-2011). With this change, the ABC was set equal to the Annual Catch Limit (ACL) and Optimum Yield (OY) [ABC=ACL=OY] at approximately 5.29 million lbs. With this the commercial ACL was 3.13 million lbs and the recreational ACL was 2.56 million lbs.

Under the federal FMP, the 2013-2014 fishing year ran from March 1, 2013 to February 28, 2014. The 2014-2015 fishing year began on March 1st, 2014. The federal FMP divides the commercial

fishery into a quota system between the Atlantic and Gulf migratory groups. Within the Atlantic migratory group, there are two zones- the Northern (consisting of the states from New York through North Carolina) and the Southern (South Carolina to Florida). For the Atlantic migratory group, the 2013/2014 year, the full quota was 3.13 million pounds and the adjusted quota was 2.88 million pounds. The adjusted quota is used to determine trip limit reductions. For the 2014/2015 fishing season, the full quota was increased to 3.33 million pounds following CMP Framework Amendment 1 (See *Section VI*).

The federal commercial trip limit was a year-round 3,500 pound daily possession/landings limit for the states from New York through Georgia, with Florida's commercial trip limit varying depending on the percent of quota remaining. Following the implementation of Amendment 20B and CMP Framework Amendment 2, the federal trip limit for the Southern zone (SC through FL) decreases as quota is caught. When 75% of the "adjusted" Southern Zone quota¹ (1,812,998 lbs ww) is caught, the trip limit is reduced from 3,500 lbs to 1,500 lbs. When 100% of the adjusted Southern Zone quota (2,417, 330 lbs ww) is caught, the commercial trip limit is further reduced to 500 lbs. When 100% of the Southern Zone quota is met, harvest is prohibited for the remainder of the fishing year. In both the Northern and Southern zones, the recreational bag limit is set at 15 fish. The minimum size limit for both fisheries is 12" fork length or 14" total length.

The goals of the interstate FMP are to complement federal management in state waters, to conserve the Atlantic group Spanish mackerel resource throughout its range, and to achieve compatible management among the states that harvest Spanish mackerel. In accordance with the 2011 Omnibus Amendment, the updated FMP's objectives are to: (1.) Manage the Spanish mackerel fishery by restricting fishing mortality to rates below the threshold fishing mortality rates to provide adequate spawning potential to sustain long-term abundance of the Spanish mackerel populations. (2.) Manage the Spanish mackerel stock to maintain the spawning stock biomass above the target biomass levels. (3.) Minimize endangered species bycatch in the Spanish mackerel fishery. (4.) Provide a flexible management system that coordinates management activities between state and federal waters to promote complementary regulations throughout Spanish mackerel's range which minimizes regulatory delay while retaining substantial ASMFC, Council, and public input into management decisions; and which can adapt to changes in resource abundance, new scientific information and changes in fishing patterns among user groups or by area. (5.) Develop research priorities that will further refine the Spanish mackerel management program to maximize the biological, social, and economic benefits derived from the Spanish mackerel population. See Table 1 for state Spanish mackerel regulations in 2014.

II. Status of the Stocks

The resource is not overfished, nor experiencing overfishing (SEDAR 2012). The SEDAR 28 Stock Assessment Report estimates current stock biomass at $SSB_{2011}/MSST=2.29$, and current fishing level (exploitation rate) at $F_{2009-2011}/F_{MSY}=0.526$, with $F_{2011}/F_{MSY}=0.521$. The overfished ratio (B/B_{MSY}) shows that high fishing mortality caused a decline in biomass, though biomass has increased in recent years and remains above B_{MSY} (Figure 1). The overfishing ratio (F/F_{MSY}) shows that fishing mortality increased from the late 1970s through 1994 but has since declined (Figure 2).

¹ The adjusted quota is the Southern Zone quota minus 250,000 lbs.

Fishery-dependent data also indicate increasing biomass, excepting the decline seen over the last four years. The current fishing mortality rate does not seem to be inhibiting stock growth.

III. Status of the Fishery

Spanish mackerel are an important recreational and commercial fishery in South Atlantic waters, with recreational landings north of Maryland limited and sporadic (Tables 2 and 4). Trip limits implemented in state and federal waters continue to prevent premature closure of the commercial fishery. Total landings of Spanish mackerel in 2015 are estimated at 3 million pounds (compared to the 6.063 million pound ACL). The commercial fishery harvested approximately 70.5% of the total, and the recreational fishery about 29.5%.

From 1960 to 2015, commercial landings of Atlantic coast Spanish mackerel have ranged between 1.9 and 11.1 million pounds, although that range is limited to between 1.9 and 6.0 million pounds if the unusually large harvests in 1976-77 and 1980 are excluded. Since 1981, total landings have averaged 5.09 million pounds. Coastwide commercial landings have generally been below 4 million pounds since 1995 (exception of 2010; landings of 4.53 million pounds); this coincided with the entanglement net ban in Florida. Gill nets were the dominant commercial gear in Florida prior to the ban. After the ban was instituted, the use of cast nets increased. The 2015 commercial landings were 2.32 million pounds (Figure 3), of which 1.74 million pounds were landed in Florida (75% of the harvest). North Carolina harvested approximately 24% of the total 2014 landings (Table 2).

Recreational anglers harvested 628,379 Spanish mackerel (695,208 pounds) in 2015, a decrease from the 886,235 fish caught in 2014 (Tables 3 and 4). The number of recreationally harvested fish appears to show a cyclical trend, with low harvests in the early to mid-80s and mid to late 90s, interspersed with higher harvests (Figure 4). Florida and North Carolina have historically accounted for the majority of recreational landings in both number and weight. In 2015, South Carolina harvested an increased proportion of recreational landings in both number (21.2%) and weight (15.6%), relative to their average annual proportions since 1981 (7.5% of numbers and 7.9% of weight). Florida harvested 13.2% and North Carolina harvested 61.8% of recreational fish. The number of recreational releases of Spanish mackerel has generally increased over time, reaching a peak of over one million fish in 2008 (Table 5, Figure 4). Recreational releases in 2015 were 406,535 fish, decreasing from 490,261 fish in 2014.

IV. Status of Assessment Advice

The most recent stock assessment was completed in 2012 through the Southeast Data, Assessment, and Review (SEDAR) process (SEDAR, 2012). The input data (through 2011) were applied to two assessment models, with the primary model being a statistical catch at age model called the Beaufort Assessment Model (BAM); while a secondary surplus-production model (ASPIC) provided a comparison of model results. The Review Panel concluded that the statistical catch at age model was the most appropriate model to characterize the stock status for management purposes.

The SSC reviewed the assessment during its December 2012 meeting and accepted the SEDAR 28 Spanish mackerel stock assessment as best available science. The SSC concurred with the Review Panel's conclusion that the stock is not experiencing overfishing and the stock is not overfished.

V. Status of Research and Monitoring

The National Marine Fisheries Service (NMFS) Southeast Fisheries Science Center (SEFSC) continues to monitor length and weight at age and size frequencies, fishing mortality, and migration; collect age data and catch per unit effort by area, season, fishery, and gear; monitor shrimp trawl bycatch; investigate methods to predict year class strength; calculate estimates of recruitment, and develop conservation gear to reduce bycatch. The NMFS is also collecting discard data through a bycatch logbook in the mackerel and snapper-grouper fisheries. The Gulf and South Atlantic Fisheries Development Foundation and several states (North Carolina, South Carolina, Georgia, and Florida) have evaluated finfish bycatch in the southeastern shrimp trawl fishery, including bycatch of Spanish mackerel. The South Atlantic component of the Southeast Area Monitoring and Assessment Program (SEAMAP) collects Spanish mackerel data in its coastal trawl survey from Cape Hatteras to Cape Canaveral. Additionally, the Northeast Area Monitoring and Assessment Program (NEAMAP) began regular spring and fall surveys between Martha's Vineyard and Cape Hatteras in the fall of 2007.

Abundance trends continue to be monitored primarily through fishery-dependent sources. The states and the SEFSC monitor catch data through the cooperative commercial statistics collection program and the recreational fisheries survey. Commercial trip reports are tallied more frequently in the winter and early spring by the state of Florida and NMFS as the commercial quota is approached.

North Carolina also conducts fishery independent monitoring. Three fishery independent gill net surveys were initiated by the North Carolina Division of Marine Fisheries in May of 2001, 2003 and 2008, respectively. These surveys utilize a stratified random sampling scheme designed to characterize the size and age distribution for key estuarine species in Atlantic Ocean and Pamlico Sound as well as the Pamlico, Pungo, Neuse, Cape Fear and New rivers. The overall Spanish mackerel CPUE was very low for all areas except the Atlantic Ocean where the 2015 CPUE was 0.36 (n=4).

VI. Status of Management Measures

2008 Framework Adjustment (Federal)

In February 2008, NOAA Fisheries finalized a framework adjustment to change the beginning date for trip limits in the Atlantic Spanish mackerel fishery off the east coast of Florida. The 3,500 pound trip limit begins March 1 each year to correspond with the beginning of the fishing year (as changed in Amendment 15).

Omnibus Amendment (Interstate)

In August 2011, the Management Board approved an amendment to the Spanish Mackerel FMP to address three issues: compliance measures, consistency with federal management in the exclusive economic zone, and alignment with Commission standards. Through the Omnibus

Amendment, the following fisheries management measures are required for states within the management unit range;

Recreational Fishery

- 12" Fork Length (FL) or 14" Total Length (TL) minimum size limit
- 15 fish creel limit
- Must be landed with head and fins intact
- Calendar year season
- Prohibited gear: Drift gill nets prohibited south of Cape Lookout, NC
- Decrease in the recreational quota the following year via reduced bag limits if the Total Annual Catch Limit (ACL) is exceeded and stock is overfished.

Commercial Fishery

- Prohibited: purse seines; drift gill nets south of Cape Lookout, NC
- 12" FL or 14" TL minimum size limit
- March 1 – end of February season
- Trip limits (per vessel, per day)
NY-GA: 3500 lbs
FL: 3500 lbs, 3/1-11/30;
3500 lbs Mon-Fri & 1500 lbs Sat-Sun, 12/1 until 75% adjusted quota taken;
1500 lbs, when 75% adjusted quota taken until 100% adjusted quotas taken;
500 lbs after 100% of adjusted quotas taken (the adjusted quota compensates for estimated catches of 500 lbs per vessel per day to the end of the season)
- Commercial quotas decreased the following year if Total ACL is exceeded and stock is overfished

Amendment 18 (Federal)

In August 2011, the Gulf of Mexico and South Atlantic Fishery Management Councils approved Amendment 18 to the joint FMP for Coastal Migratory Pelagics. The primary action under consideration established Annual Catch Limits (ACLs) and Accountability Measures (AMs) for Gulf and Atlantic stocks of cobia, king mackerel, and Spanish mackerel. The amendment designates ACLs and Annual Catch Targets (ACTs) for each of the two migratory groups of Spanish mackerel (Atlantic and Gulf). For the Atlantic migratory group, the commercial sector ACL is set equivalent to the commercial sector quota of 3.13 million pounds. The AM for the commercial sector is that the commercial sector will close when the commercial quota is reached or projected to be reached. In addition, current trip limit adjustments will remain in place. When the commercial sector closes, harvest and possession of Spanish mackerel would be prohibited for persons aboard a vessel for which a commercial permit for Spanish mackerel has been issued. If stock ACL is exceeded and the stock is designated as overfished, the following year's commercial ACL will be reduced by the amount over the commercial ACL.

For the recreational sector, the ACT is set to 2.32 million pounds, while the ACL is set at 2.56 million pounds. Regarding the AM, if the stock ACL is exceeded in any year, the bag limit will be reduced the next fishing year by the amount necessary to ensure recreational landings achieve the recreational ACT, but do not exceed the recreational ACL in the following fishing year. A

payback will be assessed if the Atlantic migratory group Spanish mackerel is determined to be overfished and the stock ACL is exceeded. The payback will include a reduction in the sector ACL for the following year by the amount of the overage by that sector in the prior fishing year.

Addendum I

In August 2013, the Commission's South Atlantic State-Federal Fisheries Management Board approved Addendum I to the Omnibus Amendment to for Spanish mackerel, Spot, and Spotted Seatrout.

Addendum I to the Omnibus Amendment establishes a pilot program that would allow states to reduce the Spanish mackerel minimum size limit for the commercial pound net fishery to 11 ½ inches during the summer months of July through September for the 2013 and 2014 fishing years only. The measure is intended to reduce waste of these shorter fish, which are discarded dead in the summer months, by converting them to landed fish that will be counted against the quota.

The Addendum responds to reports about the increased incidence of Spanish mackerel ¼ to ½ inch short of the 12 inch fork length minimum size limit in pound nets during the summer months. While the fish are alive in the pound, once the net is bunted and bailing commences, they die before being released. This may be due to a combination of temperature, stress and crowding. While individual fishermen have experimented with different wall or panel mesh sizes depending on the target species, there is no consistent use of cull panels. Those who have used cull panels have noted the difficulty and lack of success in being able to release the undersized fish quickly enough to prevent dead discards during this time of year.

The measures in Addendum I only applied for the 2013 and 2014 fishing seasons. In August 2015, the South Atlantic Board formally extended the provisions of Addendum I for the 2015 and 2016 fishing seasons. Reports by North Carolina, the only state to reduce their minimum size, will be reviewed annually.

Amendment 20A (Federal)

Effective July 2014, this Amendment addresses the sale of bag limit caught Spanish mackerel. The amendment rose from concerns that the recreational sales of bag limit caught fish, which are counted toward commercial quotas, are contributing to early closures of the commercial sector. In addition potential double counting of these fish could be causing erroneous landings estimates. In response, the Amendment prohibits bag limit sales with the exception of recreationally caught fish from state permitted tournaments in the South Atlantic region. This amendment also included an action to remove income requirements for federal CMP permits.

South Atlantic CMP Framework Action 2013 (Federal)

Effective December 2014, this action allows Spanish mackerel, harvested with gillnet gear in the South Atlantic in excess of the trip limit, to be transferred to another federally permitted vessel that has not yet harvested the trip limit. The Framework Action stipulates that the transfer can only occur if: 1) allowable gillnet gear was used to harvest Spanish mackerel; 2) the transfer takes place in federal waters between vessels with valid commercial permits; 3) the receiving vessel does not have more than 3 gillnets aboard after the transfer; 4) all fish remain entangled in the

meshes of the net until the transfer; 5) the quantity of the fish transferred does not exceed the daily trip limit; and 6) there is only one transfer per vessel per day.

CMP Framework Amendment 1 (Federal)

This Framework Amendment, effective December 2014, increases the Atlantic Spanish mackerel ACL to 6.063 million pounds. The modification to the ACL followed the 2013 stock assessment which concluded that the stock is not overfished and overfishing is not occurring. The Amendment divides the ACL between the commercial sector (3.33 million pounds) and the recreational sector (2.727 million pounds).

Amendment 20B (Federal)

Effective March 2015, this Amendment separates commercial quotas of Atlantic Spanish mackerel between a Northern zone (north of NC/SC line) and a Southern zone (South of NC/SC line). The Amendment rose from concerns that the commercial quota could be filled by fishermen in one state before fish are available to fishermen in another state. In order to prevent this from happening, a zone is closed when its respective quota is met. Quota for each zones was based on landings from 2002/2003-2011/2012.

CMP Framework Amendment 2 (Federal)

Implemented July 2015, this Amendment modifies the commercial trip limit system in the Southern zone. The rule establishes a trip limit of 3,500 lbs for Spanish mackerel in Federal waters offshore of South Carolina, Georgia, and Florida. When 75% of the adjusted southern zone commercial quota is caught, the commercial trip limit is reduced to 1,500 lbs. When 100% of the adjusted southern zone commercial quota is met, the commercial trip limit is further reduced to 500 lbs. This limit remains until the end of the year or the quota is met.

VII. Implementation of FMP Compliance Requirements for 2015

All states must implement the requirements specified in section 5 (5.1 Mandatory Compliance Elements for States; 5.1.1 Mandatory Elements of State Programs; 5.1.1.1 Regulatory Requirements). The PRT finds all states in compliance.

De Minimis Requests

A state qualifies for *de minimis* status if its previous three-year average combined commercial and recreational catch is less than 1% of the previous three-year average coastwide combined commercial and recreational catch. Those states that qualify for *de minimis* are not required to implement any monitoring requirements, as none are included in the plan.

The states of New Jersey, Delaware, and Georgia request *de minimis* status. The PRT notes that all three states meet the requirements of *de minimis*.

Regulation Changes

North Carolina

One proclamation was issued under rule 15A NCAC 03M .0512 to remain in compliance with the Atlantic States Marine Fishery Commission. Addendum I to the Omnibus Amendment establishes a pilot program that would allow states to reduce the Spanish mackerel minimum size limit for

the commercial pound net fishery to 11 ½ inches during the summer months of July through September. The measure is intended to reduce waste of these shorter fish, which are discarded dead in the summer months, by converting them to landed fish that will be counted against the quota. The Division issued a proclamation suspending the 12-inch fork length size limit and adopting the 11 ½ inch fork length size limit in the commercial pound net fishery from July 4, 2016 to September 30, 2016.

Florida

Effective October 12, 2015:

68B-23.006 Other Prohibitions.

(1) It is unlawful for any person to possess, transport, buy, sell, exchange or attempt to buy, sell or exchange any Spanish mackerel harvested in violation of this chapter.

(2) The Commission shall issue a permit pursuant to Rule 68B-2.010, F.A.C., to authorize Spanish mackerel caught in an organized tournament to be donated to a licensed wholesale dealer.

(3) The prohibitions of this chapter apply as well to any and all persons operating a vessel in state waters, who shall be deemed to have violated any prohibition which has been violated by another person aboard such vessel.

VIII. Recommendations of the Plan Review Team

Research and Monitoring Recommendations

High Priority

- Length, sex, age, and CPUE data are needed for improved stock assessment accuracy. Simulations on CPUE trends should be explored and impacts on VPA and assessment results determined. Data collection is needed for all states, particularly from Virginia north.
- Evaluation of weight and especially length at age of Spanish mackerel.
- Development of fishery-independent methods to monitor stock size of Atlantic Spanish mackerel (consider aerial surveys used in south Florida waters).
- More timely reporting of mid-Atlantic catches for quota monitoring.
- Provide better estimates of recruitment, natural mortality rates, fishing mortality rates, and standing stock. Specific information should include an estimate of total amount caught and distribution of catch by area, season, and type of gear.
- Develop methodology for predicting year class strength and determination of the relationship between larval abundance and subsequent year class strength.
- Commission and member states should support and provide the identified data & input needed to improve the SAFMC's SEDAR process.
- The full implementation of ecosystem-based management and the implementation of monitoring/research efforts needed to support ecosystem-based management needs should be conducted.

Medium Priority

- Yield per recruit analyses should be conducted relative to alternative selective fishing patterns.

- Determine the bycatch of Spanish mackerel in the directed shrimp fishery in Atlantic Coastal waters (partially met: Branstetter, 1997; Ottley et al., 1998; Gaddis et al., 2001; Page et al., 2004).
- Evaluate potential bias of the lack of appropriate stratification of the data used to generate age-length keys for Atlantic and Gulf Spanish mackerel.
- Evaluate CPUE indices related to standardization methods and management history, with emphasis on greater temporal and spatial resolution in estimates of CPUE.
- Consideration of MRFSS add-ons or other mechanisms for collection of socioeconomic data for recreational and commercial fisheries.
- Determine normal Spanish mackerel migration routes and changes therein, as well as the climatic or other factors responsible for changes in the environmental and habitat conditions which may affect the habitat and availability of stocks.
- Determine the relationship, if any, between migration of prey species (i.e., engraulids, clupeids, carangids), and migration patterns of the Spanish mackerel stock.

Low Priority

- Final identification of Spanish mackerel stocks through multiple research techniques.
- Complete research on the application of assessment and management models relative to dynamic species such as Spanish mackerel.
- Delineation of spawning areas and areas of larval abundance through temporal and spatial sampling.

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X. Figures

Figure 1. Estimated total biomass (metric tons) at start of year. Horizontal dashed line indicates B_{MSY} (SEDAR, 2012).

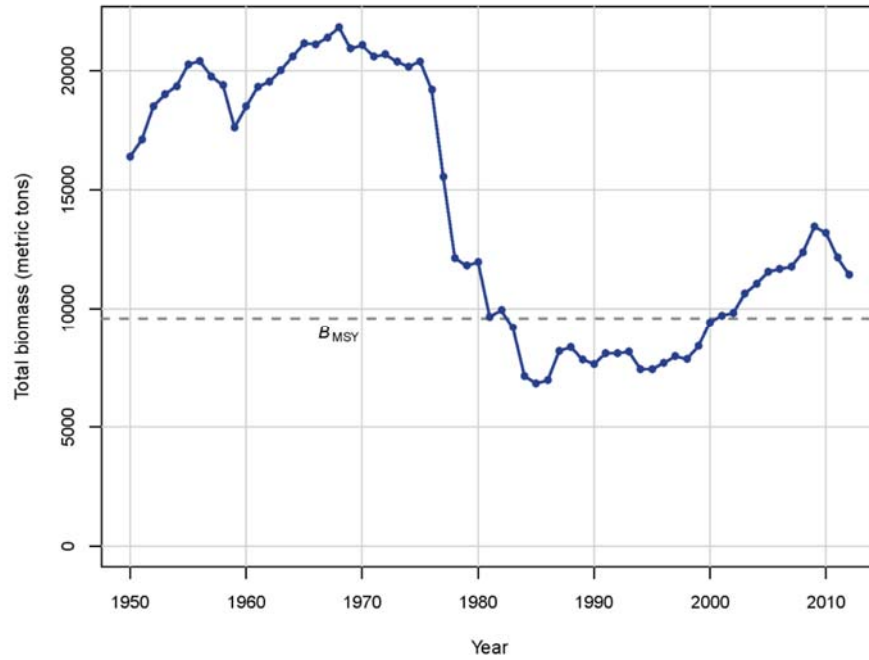


Figure 2. Estimated time series of Atlantic group Spanish mackerel fishing mortality rate (F) relative to F_{MSY} benchmark. Solid line indicates estimates from base run of the Beaufort Assessment Model; gray error bands indicate 5th and 95th percentiles of the Monte Carlo Bootstrap analysis trials (SEDAR, 2012).

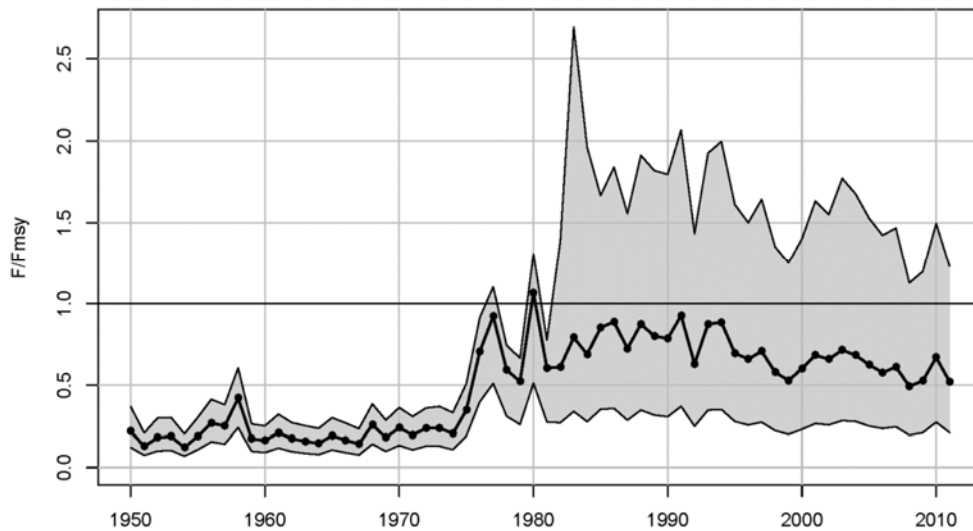


Figure 3. Commercial and recreational harvest (pounds) of Spanish mackerel, 1960-2015
 (Recreational data available from 1981-present only; see Tables 2 and 4 for values and sources)

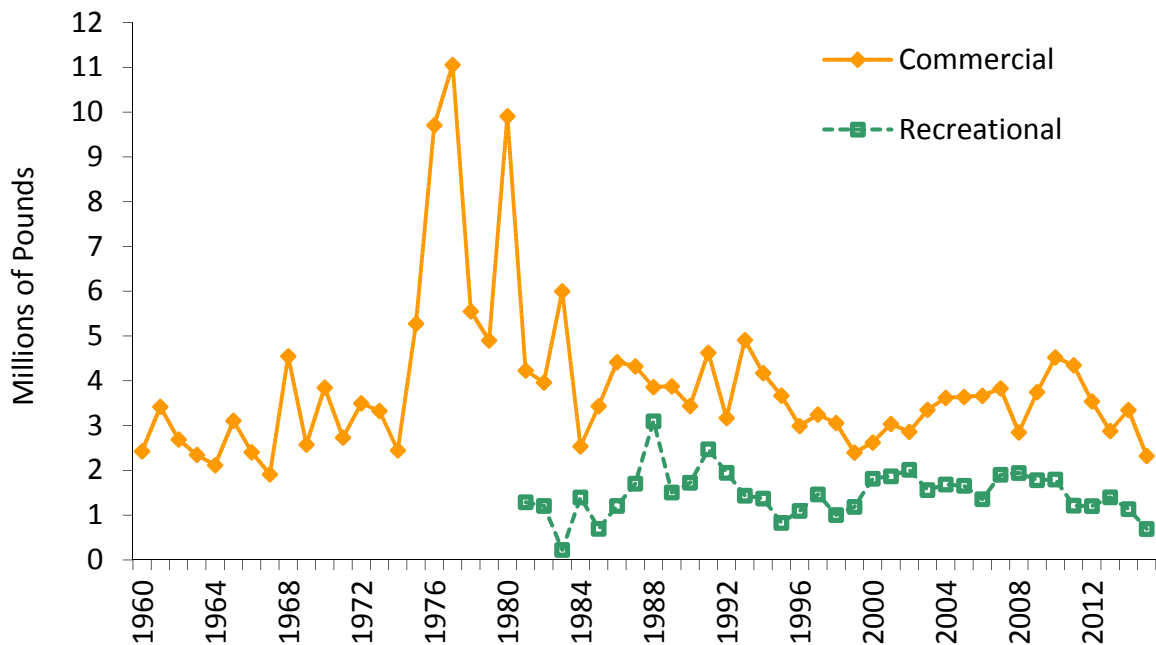
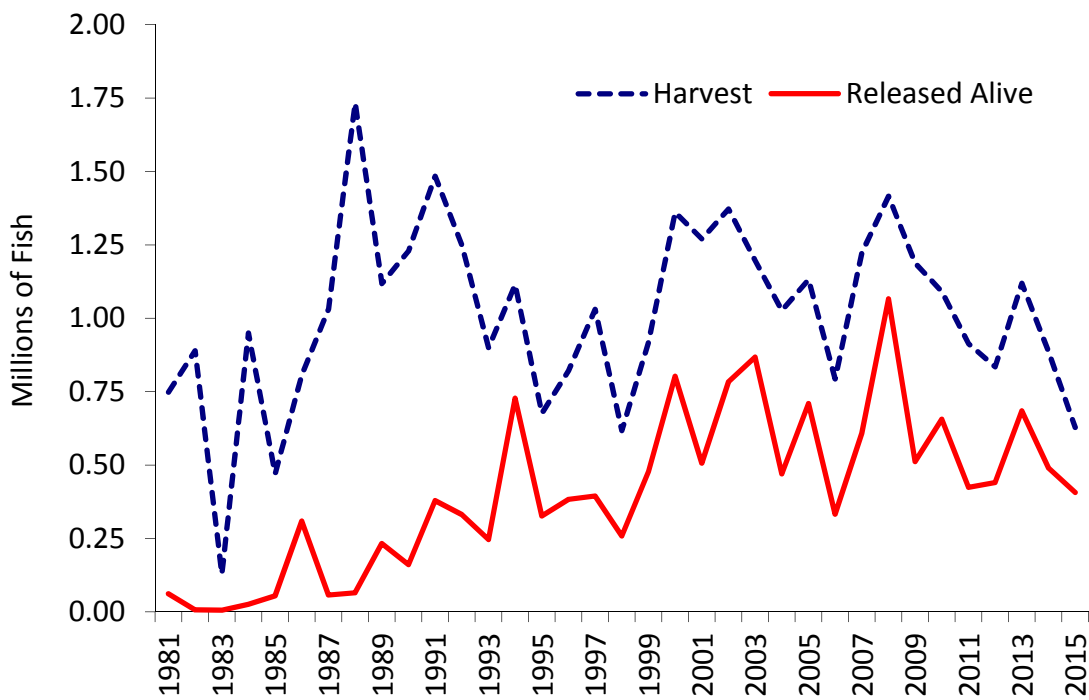


Figure 4. Recreational harvest and releases (numbers of fish) of Spanish mackerel, 1981-2015
 (See Tables 3 and 5 for values and sources)



XI. Tables

Table 1. Summary of state regulations for Spanish mackerel in 2015

Notes: A commercial license is required to sell Spanish mackerel in all states; other general gear restrictions apply to the harvest of Spanish mackerel. Purse seines and drift gill nets are prohibited south of Cape Lookout, NC.

State	Recreational	Commercial
NY	14" TL, 15 fish	14" TL. 3,500 lb trip limit.
NJ	14" TL, 10 fish	14" TL. 3,500 lb trip limit.
DE	14" TL, 15 fish	14" TL. 3,500 lb trip limit.
MD	14" TL, 15 fish	14" TL. 3,500 lb trip limit. March-Feb.
PRFC	14" TL, 15 fish	14" TL. Closure if/when MD and VA fisheries close.
VA	14" TL, 15 fish	14" TL. 3,500 lb trip limit. Closure if/when federal waters close.
NC	12" FL, 15 fish	12" FL; 11.5" FL in pound net fishery July 4 th – Sept 30 th , 2016. 3,500 lb trip limit for combined Spanish and king mackerel landings.
SC	12" FL, 15 fish	12" FL. 15 fish. 3,500 lb trip limit. March-Feb. Closure if/when federal waters close.
GA	12" FL, 15 fish	12" FL. 3,500 lb trip limit.
FL	12" FL or 14" TL, 15 fish. Cast nets less than 14' and beach or haul seines within 2" stretched mesh allowed	12" FL or 14" TL. Trip limits: April 1 until Nov. 30 - 3500 lb; Dec. 1 until 75% of adjusted quota reached – 3500 lb Mon-Fri. & 1500 lb Sat-Sun; >75% adjusted quota until quota filled -1500 lb; > 100% of adjusted quota - 500 lb. Restricted Species Endorsement Required Allowed gear: beach or haul seine, cast net, hook and line, or spearing.

Table 2. Commercial landings (pounds, calendar year) of Spanish mackerel by state, 1981-2015
 (Source: NMFS Fisheries Statistics Division)

Year	NY	NJ	MD	VA	NC	SC	GA	FL	Total
1981	500	500		3,500	51,639		518	4,174,432	4,231,089
1982	1,000	200		12,700	189,217	1,081	745	3,758,603	3,963,546
1983	600	100		3,500	41,336	706		5,947,102	5,993,344
1984	300	100		10,000	127,467	1,321		2,397,373	2,536,561
1985	100			15,300	173,186	847		3,244,980	3,434,413
1986	3,200	1,500		168,400	232,197	6,375	1,335	4,003,738	4,416,745
1987	16,600	24,000	4,800	251,200	504,063	961	255	3,497,135	4,299,014
1988	19,200	16,900	4,300	291,600	438,222	1,029	726	3,071,687	3,843,664
1989	17,700	24,100	10,400	354,400	589,383	1,605		2,853,177	3,850,765
1990	24,329	28,336	43,411	491,651	838,914	384	491	1,979,081	3,406,597
1991	149,321	77,151	62,688	447,127	858,808	444	197	2,986,871	4,582,607
1992	31,873	51,751	37,930	271,313	738,362	1,952	71	2,022,961	3,156,213
1993	42,063	23,036	9,445	335,688	589,868	480	95	3,902,240	4,902,915
1994	124,733	19,915	3,363	376,818	531,355	362		3,099,780	4,156,326
1995	9,136	2,153	3,089	168,732	402,305			3,064,926	3,650,341
1996	17,980	40,821		283,750	401,546			2,244,667	2,988,764
1997	31,107	12,122	3,033	164,639	766,901			2,269,289	3,247,091
1998	37,238	13,242	13,204	121,109	372,440			2,498,461	3,055,694
1999	47,831	17,144	21,604	251,626	459,120			1,566,706	2,364,031
2000	35,825	11,757	26,607	168,679	659,431			1,675,473	2,577,772
2001	13,851	9,401	18,899	178,849	653,491			2,115,782	2,990,273
2002	18,741	11,196	20,725	102,454	698,463			1,995,212	2,846,791
2003	18,339	5,432	5,239	103,409	456,794			2,740,632	3,329,845
2004	16,921	3,060	4,881	66,482	456,243			3,066,186	3,613,773
2005	5,197	2,074	7,750	43,126	446,013			3,133,772	3,637,932
2006	5,720	1,456	290	43,192	470,669			3,142,721	3,664,048
2007	7,244	2,075	3,734	58,064	487,891	0	0	3,264,452	3,823,460
2008	2,513	1,210	7,136	156,011	415,416	0	0	2,262,661	2,844,947
2009	3,462	3,324	11,570	138,292	961,836	0	0	2,629,343	3,747,827
2010	3,713	829	4,939	47,562	911,878	0	0	3,553,155	4,522,076
2011	1,149	305	5,054	36,314	871,217			3,432,932	4,346,971
2012	2,294	2,806	3,630	18,317	916,439			2,596,981	3,540,467
2013	4,468	265	2,397	7,746	620,752	0	0	2,247,993	2,879,153
2014	3,081	74859	1,644	7,859	673,974	17	0	2,585,473	3,346,907
2015	*	2746	2,219	14,493	561,423	*	*	1,741,726	2,322,637

2016 REVIEW OF THE ASMFC SPANISH MACKEREL FMP

Table 3. Recreational harvest (numbers) of Spanish mackerel by state, 1981-2015
(NMFS Fisheries Statistics Division)

Year	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981						231,744	25,058	1,786	485,395	743,983
1982						694,420	21,092	408	173,649	889,569
1983						6,156	3,279	2,109	117,532	129,076
1984						618,313	79,855	3,718	248,048	949,934
1985						344,965	36,606	4,809	84,226	470,606
1986		1,479		457	6,942	431,021	147,358	25,257	195,385	807,899
1987	1,417			8,036	1,520	815,920	65,846	20,925	118,184	1,031,848
1988					101,691	1,312,070	82,136	4,403	233,582	1,733,882
1989	1,010	22,067			73,236	679,360	121,115	7,444	213,665	1,117,897
1990	1,726	2,495	319	1,355	63,821	821,334	81,375	31,567	225,263	1,229,255
1991	7,608	25,071	2,054	41,250	68,102	676,717	132,198	2,391	517,290	1,472,681
1992	1,325	10,549	210	4,847	71,265	701,974	62,546	25,736	370,809	1,249,261
1993	2,681	3,457		43,050	73,832	451,523	92,621	12,979	219,458	899,601
1994		7,910		43,710	145,872	535,949	113,991	15,235	252,668	1,115,335
1995				26,216	86,899	285,882	34,355	16,726	226,334	676,412
1996		1,172			69,399	355,036	134,282	16,948	245,085	821,922
1997					68,517	585,765	101,067	28,396	246,885	1,030,630
1998		4,046	186	3,633	33,140	239,052	65,584	28,002	244,235	617,878
1999		1,335	226	1,220	75,972	476,019	27,477	9,007	327,621	918,877
2000	4,453	923		15,219	71,249	671,353	28,283	20,545	547,315	1,359,340
2001	802			8,025	29,590	400,706	43,501	11,013	774,065	1,267,702
2002					17,433	401,982	24,235	1,927	926,600	1,372,177
2003				6,975	17,063	349,170	24,879	11,235	784,385	1,193,707
2004		1,531		8,800	21,012	308,996	144,394	7,906	532,956	1,025,595
2005				20,792	20,525	331,601	70,273	12,140	676,973	1,132,304
2006		465		3,118	40	305,343	42,867	2,441	439,324	793,598
2007				12,360	16	491,357	104,741	13,795	601,335	1,223,604
2008		470		5,777	83,903	686,501	58,465	14,519	566,397	1,416,032
2009		655		24,725	16,451	703,393	60,925	6,306	375,512	1,187,967
2010				7,526	20,524	470,212	93,574	4,723	494,586	1,091,145
2011				10,554	35,054	367,086	87,109	7,486	406,068	913,357
2012				2,962	11,874	491,238	80,204	2,119	246,866	835,263
2013			31	2,905	61,237	497,329	22,414	1,299	534,042	1,119,257
2014		0	0	5,494	17,521	398,398	80,935	1,903	381,839	886,090
2015	0	0	0	11,366	12,072	388,157	133,445	527	82,811	628,379

2016 REVIEW OF THE ASMFC SPANISH MACKEREL FMP

Table 4. Recreational harvest (pounds) of Spanish mackerel by state, 1981-2015
(NMFS Fisheries Statistics Division)

Year	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981						423,801	53,292	4,306	808,808	1,290,207
1982						928,201	29,546	483	251,115	1,209,345
1983						14,725	8,274	4,198	199,331	226,528
1984						848,537	116,083	5,540	427,501	1,397,661
1985						507,545	34,445	3,547	152,113	697,650
1986		2,500		1,008	9,709	639,105	256,157	47,941	251,673	1,208,093
1987	2,890			14,345	2,011	1,296,732	117,053	40,681	230,725	1,704,437
1988					160,407	2,136,806	140,896	5,141	656,047	3,099,297
1989	3,560	35,415			81,107	877,911	197,982	6,162	303,485	1,505,622
1990	2,332	3,320	470	1,790	86,932	1,084,167	153,932	45,748	346,585	1,725,276
1991	19,612	36,096	3,062	57,249	72,708	1,056,524	291,717	3,717	887,777	2,428,462
1992	3,880	16,526	302	9,634	76,411	947,065	145,451	79,818	669,160	1,948,247
1993	7,590	5,280		68,757	93,272	664,815	135,287	22,209	439,555	1,436,765
1994		8,614		44,969	160,610	588,035	152,836	66,949	350,679	1,372,692
1995		0		34,705	110,433	329,466	40,995	12,072	302,632	830,303
1996		0			80,505	385,922	184,655	31,856	413,687	1,096,625
1997		0			22,233	862,497	143,297	37,877	400,148	1,466,052
1998		9,189	379	5,725	57,467	305,630	106,209	112,562	408,872	1,006,033
1999		2,207	240	1,715	79,602	469,258	44,917	10,031	578,123	1,186,093
2000	10,798	1,119		20,642	83,297	671,616	30,543	47,137	946,395	1,811,547
2001	1,168	0		14,526	42,047	499,829	46,945	23,056	1,232,506	1,860,077
2002		0			12,163	475,742	47,057	4,795	1,475,232	2,014,989
2003		0		9,762	22,030	446,052	29,107	34,855	1,021,204	1,563,010
2004		2,150		14,434	36,497	558,968	147,609	11,799	915,099	1,686,556
2005		0		38,946	14,459	359,927	138,517	16,296	1,088,720	1,656,865
2006		2,914		6,400	70	454,749	83,069	2,487	807,327	1,357,016
2007	0	0	0	25,276	29	729,687	119,207	26,513	1,003,340	1,904,052
2008	0	513	0	11,550	112,619	783,330	75,583	31,041	930,923	1,945,559
2009	0	302	0	42,300	24,663	892,632	101,614	13,272	708,270	1,783,053
2010		0		13,995	26,338	582,550	136,648	5,168	1,034,480	1,799,179
2011		0		22,630	41,325	194,521	72,631	9,439	873,604	1,214,150
2012		0		5,223	17,806	665,168	98,316	4,536	412,001	1,203,050
2013	0	0	43	6,949	68,146	625,035	50,856	2,158	646,996	1,400,183
2014	0	0	0	12,440	19,522	441,511	126,345	2,356	534,575	1,136,749
2015	0	0	0	16,820	10,746	431,082	108,423	1,879	126,258	695,208

2016 REVIEW OF THE ASMFC SPANISH MACKEREL FMP

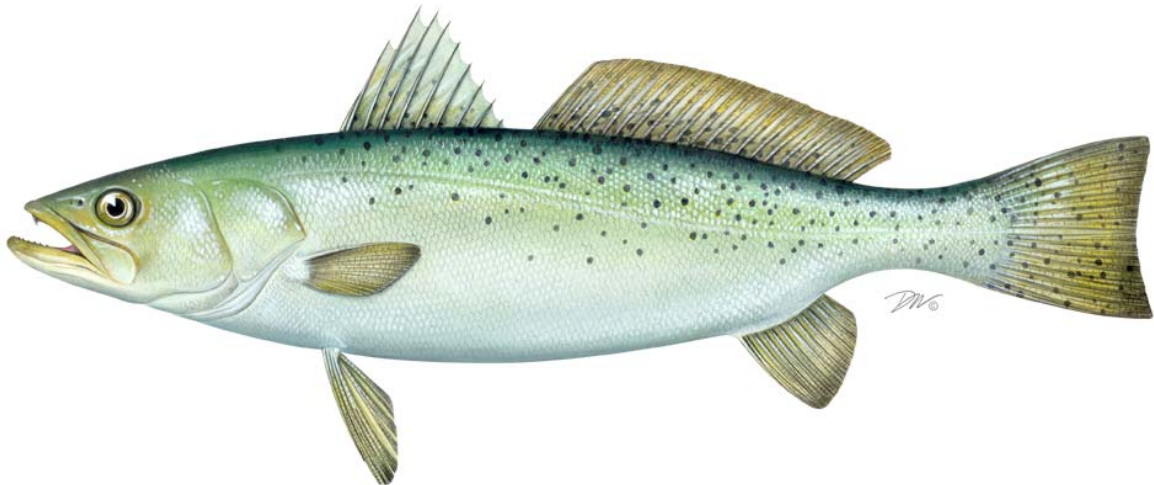
Table 5. Recreational releases (numbers) of Spanish mackerel by state, 1981-2015
(NMFS Fisheries Statistics Division)

Year	NY	NJ	DE	MD	VA	NC	SC	GA	FL	Total
1981						5,616			56,374	61,990
1982									6,613	6,613
1983								515	4,929	5,444
1984						2,931	1,300		21,797	26,028
1985						27,753	3,862		23,316	54,931
1986					74	280,252	7,879	605	20,469	309,279
1987					13,947	28,136	5,506	2,916	7,197	57,702
1988						17,413	27,019	2,456	18,334	65,222
1989					10,286	64,749	73,983	391	83,682	233,091
1990	257				21,094	76,940	26,929		35,520	160,740
1991		2,674	1,092	1,747	28,777	133,601	19,331	57	190,602	377,881
1992					18,072	180,235	15,515	3,859	113,062	330,743
1993		1,160		2,684	70,081	81,927	15,966		74,052	245,870
1994	1,059	50,743			91,832	241,082	207,055		136,041	727,812
1995	7,297	1,269		1,562	24,467	145,845	14,159	2,594	129,469	326,662
1996					28,951	103,067	83,543	139	167,411	383,111
1997			338		22,658	140,704	62,356		168,815	394,871
1998				1,075	49,429	80,700	32,087	7,351	87,804	258,446
1999	1,415	2,670			36,276	205,870	46,400	495	185,106	478,232
2000			608	1,656	82,227	300,384	47,273	16,479	353,042	801,669
2001	1,657	4,907	825	7,265	30,158	160,591	9,711	3,188	285,738	504,040
2002				4,449	9,923	196,967	9,206	8,641	554,743	783,929
2003				6,994	20,539	164,787	223,116	6,501	445,965	867,902
2004				753	13,738	121,531	114,157	3,527	213,577	467,283
2005				4,937		174,140	153,584	8,983	367,862	709,506
2006				1,620	8,973	89,912	33,328	6,609	192,010	332,452
2007				13,657	7,837	277,710	83,513	27,643	197,856	608,216
2008				4,672	66,593	541,764	93,009	6,823	353,098	1,065,959
2009		13,363		6,906	24,848	241,540	49,472	627	175,042	511,798
2010				0	29,586	268,356	54,297	128	303,829	656,196
2011				0	28,526	170,926	67,144	10,131	147,399	424,126
2012				0	17,150	234,905	98,371	1,724	88,592	440,742
2013			94		5,583	289,216	24,862		365,107	684,862
2014				881	3,450	240,731	36,082	851	208,266	490,261
2015	0	0	0	357	4,224	216,011	99,530	466	85,947	406,535

2016 REVIEW OF THE
ATLANTIC STATES MARINE FISHERIES COMMISSION
FISHERY MANAGEMENT PLAN FOR

SPOTTED SEATROUT
(Cynoscion nebulosus)

2015 FISHING YEAR



The Spotted Seatrout Plan Review Team

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2016 Spotted Seatrout FMP Review

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2016 Spotted Seatrout FMP Review

I. Status of the Fishery Management Plan

<u>Date of FMP Approval:</u>	Original FMP – October 1984
<u>Amendments:</u>	Amendment 1 – November 1991 Omnibus Amendment to Spanish Mackerel, Spot, and Spotted Seatrout -- August 2011
<u>Management Area:</u>	The Atlantic coast distribution of the resource from Maryland through the east coast of Florida
<u>Active Boards/Committees:</u>	South Atlantic State/Federal Fisheries Management Board; Spotted Seatrout Plan Review Team; South Atlantic Species Advisory Panel

The Atlantic States Marine Fisheries Commission (ASMFC) adopted the Fishery Management Plan (FMP) for spotted seatrout in 1984. The ISFMP Policy Board approved Amendment 1 to the FMP in November 1991. In August 2011, the South Atlantic State/Federal Management Board approved the Omnibus Amendment to the Spanish Mackerel, Spot, and Spotted Seatrout FMPs, bringing the Spotted Seatrout FMP under the authority of the Atlantic Coastal Fisheries Cooperative Management Act (Act, 1993) and the ASMFC Interstate Fishery Management Plan Charter (1995). The states of Maryland through Florida have a declared interest in the species.

The goal of the management plan is "to perpetuate the spotted seatrout resource in fishable abundance throughout its range and generate the greatest possible economic and social benefits from its harvest and utilization over time." Plan objectives include:

1. Attain optimum yield over time.
2. Maintain a spawning potential ratio of at least 20% to minimize the possibility of recruitment failure.
3. Promote conservation of the stocks to reduce inter-annual variation in availability and to increase yield per recruit.
4. Promote collection of economic, social, and biological data required to effectively monitor and assess management efforts relative to the overall goal.
5. Promote research that improves understanding of the biology and fisheries of spotted seatrout.
6. Promote harmonious use of the resource among various components of the fishery through coordination of management efforts among the various political entities having jurisdiction over the spotted seatrout resource.
7. Promote determination and adoption of standards of environmental quality and provide habitat protection necessary for the maximum natural protection of spotted seatrout.

The Omnibus Amendment added the following objectives to support compliance under the Act:

1. Manage the spotted seatrout fishery by restricting catch to mature individuals.
2. Manage the spotted seatrout stock to maintain sufficiently high spawning stock biomass.

3. Develop research priorities that will further refine the spotted seatrout management program to maximize the biological, social, and economic benefits derived from the population.

Management measures include a minimum size limit of 12 inches in total length (TL), with comparable mesh size regulations in directed fisheries, and data collection for stock assessments and monitoring of the fishery. All states with a declared interest in spotted seatrout (MD-FL) have implemented, at a minimum, the recommended minimum size limit. In addition, each state has either initiated spotted seatrout data collection programs or modified other programs to collect improved catch and effort data. Table 1 provides the states' recreational and commercial regulations for spotted seatrout through 2015.

II. Status of the Stock

A coastwide stock assessment of spotted seatrout has not been conducted, given the largely non-migratory nature of the species and the lack of data on migration where it does occur. Instead, state-specific age-structured analyses of local stocks have been performed by several states. These stock assessments provide estimates of static spawning potential ratio (SPR), a measure of the effect of fishing pressure on the relative spawning power of the female stock. The FMP recommends a goal of 20% SPR. North Carolina, South Carolina, and Georgia have adopted this goal while Florida has established a 35% SPR goal.

Spotted seatrout stock assessments have been conducted in individual states. Assessments in North Carolina, which included data from 1981-1997, and Georgia, which included data from 1986-1995, both indicated that female SPR was below the 20% goal in the terminal year (Zhao and Burns 2001, Zhao *et al.* 2001). A more recent assessment was performed in Georgia in 2002; however, it remains unpublished due to questionable results attributed to data deficiencies and changing methodologies.

North Carolina completed a peer reviewed stock assessment, which included data from 1991-2008 and included all spotted seatrout caught in North Carolina and Virginia (Jensen 2009). The assessment indicated that SPR has been below 20% in recent years. Jensen (2009) recommended management measures be implemented to account for recent increases of recreational fishing and discard mortality and to maintain a sufficiently large spotted seatrout population to buffer against future cold stun events. Based on this assessment, North Carolina approved a state FMP for spotted seatrout in April 2012.

A peer-reviewed stock assessment of spotted seatrout in Virginia and North Carolina waters was completed in 2014, incorporating data from 1991-2013 (NCDMF 2014). Results suggest that the age structure of this stock expanded during the last decade; however, there was a sharp decline in recruitment after 2010. Similarly, spawning stock biomass (SSB) declined after a peak in 2007. These declines may be attributed to cold stun events. In 2012, SSB exceeded the currently defined threshold, suggesting the stock is not overfished. Additionally, fishing mortality is below the threshold, suggesting the stock is not experiencing overfishing. The 2014 assessment will be updated with data through 2016 in anticipation of the North Carolina Spotted Seatrout FMP Review slated to start in 2017.

2016 Spotted Seatrout FMP Review

The South Carolina Department of Natural Resources packaged several state-specific assessments into a report in 2001, though these were not peer reviewed. The initial assessment covering 1986-1992 indicated that female SPR was just above the 20% goal in the terminal year (Zhao and Wenner 2001), leading to a minimum size limit increase and a creel limit reduction. A more recent assessment was conducted for the period 1981-2004 (de Silva, Draft 2005). Two modeling approaches were used, and both models indicated that the current SSB is below the requirement to maintain 20% SPR.

Florida conducted separate stock assessments for the northern and southern populations on their Atlantic coast. Average transitional SPR estimates during 2007-2009 were 0.67 in the northern region and 0.45 in the southern region (Murphy et al. 2011), leading to some relaxation in Florida's management of the resource (Table 1). A new statewide assessment is currently underway; completion is scheduled for March. This assessment includes stock synthesis models constructed for each of Florida's four management regions (NW, SW, NE, and SE).

III. Status of the Fishery

Spotted seatrout is regularly caught both commercially and recreationally from Maryland through the east coast of Florida. In South Carolina, spotted seatrout has been declared a gamefish and can only be taken by recreational means. Landings from states north of Maryland are minimal and/or inconsistent from year to year. All catch estimates in this section include those in the management area only (MD-FL). Total recreational landings have surpassed total commercial landings every year since recreational landings were first recorded in 1981 (Figure 1). In 2009, recreational landings totaled more than five times commercial landings. A coastwide (VA, NC, and SC) winter mortality event in 2000/2001 likely contributed to the sudden decline in commercial and recreational landings in 2001 and 2002.

Commercial Fishery

The National Marine Fisheries Service (NMFS) compiles commercial spotted seatrout landings. The data are cooperatively collected by the NMFS and state fishery agencies from state mandated trip-tickets, landing weigh-out reports from seafood dealers, federal logbooks, shipboard and portside interviews, and biological sampling of catches (Table 2).

Atlantic coast commercial landings of spotted seatrout (1960-2015) have ranged from 154,000 pounds to 1.38 million pounds (Figure 1). Historically, commercial landings primarily came from North Carolina and Florida, with Virginia and Georgia accounting for a small portion of the total. From 1960 to 1976, annual commercial landings of spotted seatrout averaged 1.07 million pounds, followed by a decline due to increased regulation and possible declines in abundance. Significant changes to regulations include the 1987 designation of spotted seatrout as a gamefish in South Carolina, and the 1995 prohibition on the use of entangling nets in Florida's coastal waters. From 2006 to 2015, commercial landings averaged approximately 339 thousand pounds. North of Florida, variability in annual harvest was typical and paralleled the climatic conditions of the preceding winter and spring. In 2015, commercial landings totaled 175,844 pounds, representing an approximate 50% decrease from 2014. North Carolina and Florida accounted for 73% and 22% of the total commercial landings, respectively.

Recreational Fishery

Recreational catch statistics are collected by the NMFS recreational fisheries survey. Effort data are collected via telephone and mail surveys. Catch and effort data are collected through access-point angler intercept surveys, which produce catch per trip estimates for each species encountered, either observed or reported. These estimates are combined with effort estimates by sampling stratum to produce the catch and harvest estimates (Tables 3, 4, and 5).

Over the last 33 years, recreational catch of spotted seatrout (kept and released) has shown an upward trend, increasing from 1.1 million fish in 1981 to a peak of 8.8 million fish in 2012. In 2015, recreational catch declined to 5.7 million fish (Figure 2). Recreational harvest has remained relatively stable throughout the time series until 2015 with an average of 1.3 million fish. Recreational harvest in 2015 dropped sharply to 534 thousand fish, with Georgia (30%) and Florida (31%) responsible for the largest shares. Due in part to recreational size and creel limits and closed seasons, as well as the encouragement of catch and release practices, the percentage of caught fish being released increased to a 10-year average of 79.6% since 2005. In 2015, the release percentage reached its highest point at 90.6%. Rod and reel is the primary recreational gear, but some spotted seatrout are taken by recreational nets and by gigging, where these methods are permitted. Most recreational fishing is conducted from private boats and the majority of the catch is taken from nearshore waters.

IV. Status of Assessment Advice

A coastwide stock assessment of spotted seatrout has not been conducted and the Plan Review Team (PRT) does not recommend that one be completed due to the life history of the fish and the availability of data. Several states have performed age-structured analyses on local stocks, and recent stock assessments provide divergent trends on the status of the species. The 2005 stock assessment in South Carolina indicated an increasing population trend but a status level that is still below target spawning stock biomass levels (de Silva 2005). The 2014 North Carolina and Virginia stock assessment showed declines in recruitment since 2010. The PRT supports the continuation of state-specific assessments, yet recognizes the difficulty most states face to attain sufficient data of assessment quality and personnel who can perform the necessary modeling exercises.

The lack of biological and fisheries data for effective assessment and management of the resource was recognized in the 1984 FMP and continues to be a hindrance. Some states are increasing their collection of biological and fisheries data, which will provide insight on stock status over time.

V. Status of Research and Monitoring

In addition to the commercial and recreational fishery-dependent data collected and/or compiled through the NMFS Fisheries Statistics Division, some states have implemented fishery-independent or additional fishery-dependent monitoring programs.

Maryland

MD DNR samples commercial pound nets weekly in the Potomac River and Chesapeake Bay from May through September (2015 n=1, 487mm TL).

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A few juvenile spotted seatrout are encountered in the coastal bays seine survey and the Chesapeake Bay blue crab trawl survey, indicating seatrout utilize these areas as nursery habitat (2015 seine n=0, trawl n=25).

Virginia

The VMRC Biological Sampling Program collects commercial and recreational fishery-dependent biological data. In 2015, the VMRC collected 958 commercial lengths and weights, determined the sex of 393 individuals, and aged 308 individuals (2015 average length: 24-25 in; average age: 1 and 4). Many of these samples were taken from illegally harvested seatrout which were confiscated.

In 2015, The VMRC collected lengths and sex of 6 recreationally caught seatrout. Virginia does not have independent monitoring for spotted seatrout.

North Carolina

Commercial fish houses are sampled monthly for fishery-dependent length, weight, and age data. Very little variation is seen throughout sampling years. Gill nets are responsible for 93% of the catch, with gigs accounting for 5.5%.

A fishery-independent Estuarine Trawl Survey is conducted to measure annual juvenile recruitment for many species (2015 CPUE= 0.62 ± 0.15 age-0 spotted seatrout per tow). Juvenile abundance index has very little annual variance. A fishery-independent gill net survey is conducted to measure age composition and develop indices of age 1+ abundance for many species. Seatrout age 1+ abundance index varies very little annually, averaging 0.075 ± 0.01 seatrout per set, but low CPUEs in 2011 and 2015 (0.05 ± 0.01 seatrout per set) correspond to known cold stun mortality events. The NCDMF Age Lab ages otoliths collected in part from the North Carolina Carcass Collection Program (2015 n=401).

South Carolina

The State Finfish Survey collects fishery-dependent catch, effort, and length data from private boat anglers in January and February. In 2015, 11% of 46 interviewed parties primarily targeted spotted seatrout (2015 n=6, mean catch rate of 1.2 fish per targeted fishing hour). A mandatory trip reporting system for the charter boat fishery has been in place since 1993. In 2015, 894 (6%) interviewed trips targeted seatrout, making it the second most targeted species (2015 mean catch rate of 1.22 fish per targeted fishing hour). Lastly, the Freezer Drop-Off and the Fishing Tournament programs gather biological information (2015 n=76).

South Carolina conducts two fishery-independent data collection programs. The Trammel Net Survey covers 7 monthly and 2 quarterly strata. Spotted seatrout is consistently one of the top three most abundance species encountered (2015 observed a 58% positive catch rate per net deployment). The Electrofishing survey covers 5 monthly strata, and catches relatively low numbers of mostly YOY seatrout.

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It should be noted that SCDNR stocks spotted seatrout in the Charleston Harbor system. A total of 1.49 million fish have been stocked since the program began in 2012, of which 0.32 million were stocked in 2015.

Georgia

A Marine Sportfish Carcass Recovery Program collects recreational fishery-dependent size and age data (2015 n=3,006 comprising 81%, average length of 360.4mm, 244-510mm range).

The Marine Sportfish Population Health Study trammel net survey samples monthly from September to November since 2003 in the Wassaw and Altamaha Sounds to collect fishery-independent age- and sex-specific estimates of relative abundance (2015: Wassaw average length 339.5mm; Altamaha 339.3mm). Gillnet sampling also occurs through this study, often encountering seatrout (2015 Wassaw average length 324.4mm; Altamaha 313.1mm).

Florida

Fishery-dependent sampling includes commercial trip-ticket information and biostatistical sampling of commercial and recreational catch. A voluntary angler logbook program was implemented in 2002 to record lengths of spotted seatrout released alive by anglers. In 2011, this program changed to a 'postcard' program, enlisting anglers encountered during MRIP angler intercept interviews.

A juvenile finfish monitoring program is conducted in the northern Indian River Lagoon (since 1990) and in the estuarine St. Johns, St. Marys, and Nassau Rivers (since 2001). Florida also conducts a 183-m haul seine survey in the Indian River (since 1997) and northeast Florida (since 2001). YOY abundance declined after a strong recruitment year in 2011, though recent increases are seen. Recent relative adult abundance (>200 mm SL) has declined in the central and northern regions since 2011 and 2012, respectively (2015 lengths=357, adult otolith pairs= 222).

VI. Status of Management Measures and Issues

Changes to State Regulations

In 2015, Georgia implemented a minimum size increase from 13 inches TL to 14 inches TL, effective January 1, 2016.

De Minimis Requests

A state qualifies for *de minimis* status if its previous three-year average combined commercial and recreational catch is less than 1% of the previous three-year average coastwide combined commercial and recreational catch. Those states that qualify for *de minimis* are not required to implement any monitoring requirements, as none are included in the plan.

The states of New Jersey and Delaware request continuation of *de minimis* status. The PRT notes these states meet the requirements of *de minimis*.

VII. Implementation of FMP Compliance Requirements for 2015

The PRT notes that all states have met the compliance requirements.

VIII. Recommendations of Plan Review Team

Management and Regulatory Recommendations

- Increase observer coverage in states that have a commercial fishery for spotted seatrout.

Prioritized Research Recommendations

High Priority

- Conduct state-specific stock assessments to determine stock status relative to the plan objective of maintaining a spawning potential of at least 20%.
- Collect data on the size or age of spotted seatrout released alive by anglers and the size and age of commercial discards.
- Research release mortality and how this changes with season and depth.
- Continue work to examine the stock structure of spotted seatrout on a regional basis, with particular emphasis on advanced tagging techniques.
- Research effects of winter on the population.
- Utilize telemetry technology to better understand life history characteristics.
- Conduct additional research on the significance of age-specific fecundity changes (ie: environmental impacts on spawning output of population)
- Develop state-specific juvenile abundance indices.

Medium Priority

- Identify essential habitat requirements.
- Initiate collection of social and economic aspects of the spotted seatrout fishery.

IX. References

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X. Figures

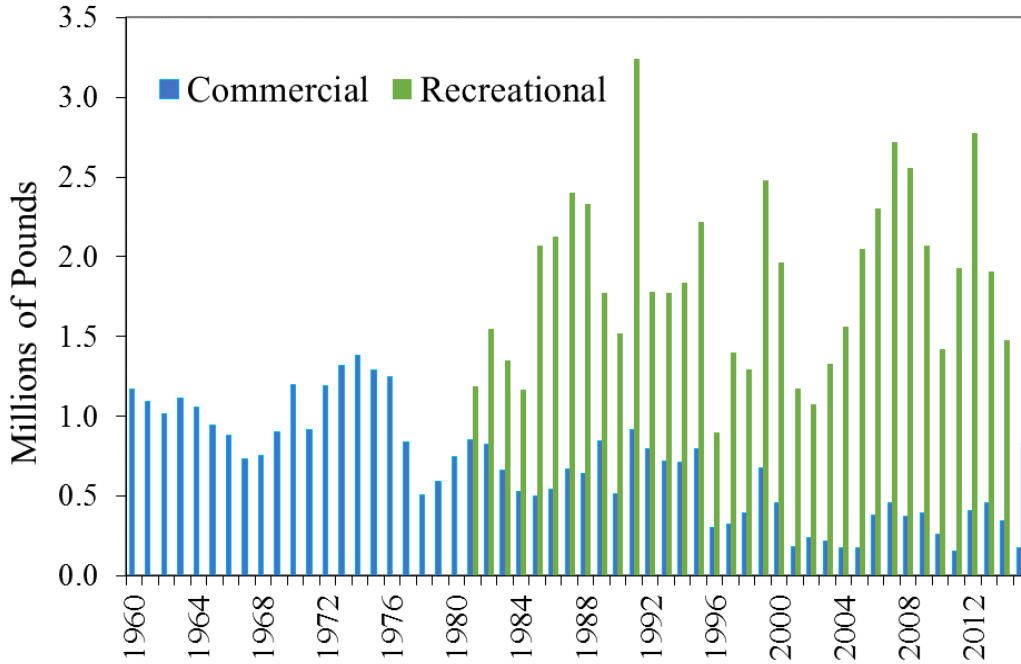


Figure 1. Commercial landings (1960-2015) and recreational landings (1981-2015), in pounds, from Maryland to Florida (See Tables 2 and 4 for values and sources).

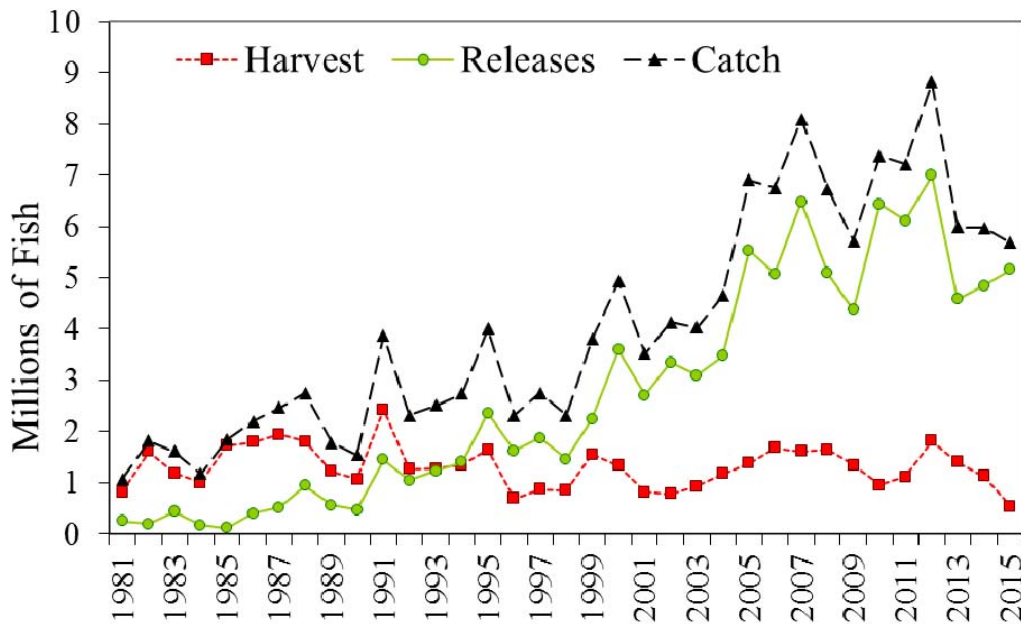


Figure 2. Recreational catch, harvest, and releases (numbers), 1981-2015, from Maryland to Florida (See Tables 3 and 5 for values and sources).

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XI. Tables

Table 1. Summary of state regulations for spotted seatrout in 2015.

State	Recreational	Commercial
New Jersey	13" TL; 1 fish	Gill net, trawl, and pound net: 13"; 100 lb/vessel/day possession and bycatch limit; seasonal closures; monthly reporting. Trawl and gill net mesh size restrictions. Hook & line fishermen must follow rec limits.
Delaware	12" TL	12" TL
Maryland	14" TL; 4 fish	14" TL. 150 lb limit per day or trip (whichever is longer). Trawl and gill net mesh size restrictions.
PRFC	14" TL; 10 fish	14" TL
Virginia	14-24" TL; 1 fish >24" allowed; 5 fish; closed season March-July.	14" TL; pound nets/seines allowed 5% by weight less than 14". Hook & line fishermen must follow rec limits. Quota: 51,104 lbs (Sept-Aug). After 80% reached, 100 lb/vessel/day possession and bycatch limit.
North Carolina	14" TL; 4 fish	14" TL; 75 fish limit. Unlawful to possess or sell Friday 12:00am-Sunday 12:00am.
South Carolina	14" TL; 10 fish. Gig March-Nov.	Gamefish status since 1987; native caught fish may not be sold.
Georgia	13" TL; 15 fish	13" TL; 15 fish. BRD requirement for trawl; gear mesh regulations.
Florida	15-20" TL slot; 1 fish >20" allowed; northeast 6 fish; northwest 5 fish; south 4 fish; hook & line/cast net only.	15-24" TL; Season varies by region; 75 fish limit or 150 fish limit with two or more licensed fishermen on board; hook & line/cast net only.

Note: A commercial fishing license is required to possess spotted seatrout for sale in all states with a fishery.

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Table 2. Commercial landings (pounds) of spotted seatrout by state, 1981-2015
(Source: State Compliance Reports, 2015). Starred boxes represent confidential data.

Year	MD	VA	NC	SC	GA	FL	Total
1981	0	4,000	113,304		629	736,026	853,959
1982	0	3,400	83,847	1,944	4,994	732,278	826,463
1983	0	4,400	165,360	4,479	5,795	481,535	661,569
1984	0	3,000	152,934	2,374	4,348	367,541	530,197
1985	0	8,302	109,048	1,770	7,149	369,756	496,025
1986	0	18,500	191,514	12,214	8,691	307,261	538,180
1987	0	13,300	315,380	11,941	10,739	317,044	668,404
1988	0	15,500	296,538	486	9,110	315,947	637,581
1989	0	18,500	451,909	33	10,565	361,973	842,980
1990	0	21,435	250,634	1,095	5,942	236,453	515,559
1991	98	21,200	660,662	0	7,380	225,812	915,152
1992	0	10,395	526,271	0	11,310	247,189	795,165
1993	868	38,033	449,886	0	8,550	223,931	721,268
1994	690	44,636	412,458	0	5,112	247,666	710,562
1995	668	28,722	574,410	0	8,482	184,269	796,551
1996	12,742	3,897	226,668	0	7,501	48,254	299,062
1997	15,199	11,639	232,583	0	7,621	57,316	324,358
1998	16,993	21,235	307,777	0	2,845	41,556	390,346
1999	29,419	35,055	546,775	0	3,244	61,802	676,295
2000	18,419	15,463	376,657	0	1,997	45,392	457,928
2001	25,161	19,039	105,797	0		30,234	180,231
2002	*	8,792	175,643	*	*	44,640	240,357
2003	*	5,299	181,529	*	*	27,075	214,719
2004	*	10,705	130,961	*	*	29,605	172,487
2005	*	7,341	129,601	*	*	36,762	176,043
2006	*	30,218	312,620	*	*	36,687	379,820
2007	*	34,166	374,722	*	*	46,838	455,740
2008	*	44,275	304,430	*	*	20,887	369,861
2009	*	23,880	320,247	*	*	46,297	390,600
2010	*	17,271	200,822	*	*	39,374	258,492
2011	*	14,728	75,239	*	*	63,592	154,144
2012	*	76,963	265,017	*	*	61,664	405,534
2013	*	28,223	367,412	*	*	58,221	456,284
2014	*	66,504	241,995	*	*	37,710	346,587
2015	*	7,815	128,761	*	*	39,231	175,844

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Table 3. Recreational harvest (numbers of fish) of spotted seatrout by state, 1981-2015 (Source: NMFS Fisheries Statistics Division).

Year	MD	VA	NC	SC	GA	FL	Total
1981			30,037	20,934	189,080	576,847	816,898
1982			112,023	849,634	226,758	426,378	1,614,793
1983			91,956	121,940	325,655	645,120	1,184,671
1984			90,262	95,281	114,403	700,876	1,000,822
1985			263,878	347,851	251,764	866,162	1,729,655
1986	7,507	82,671	270,867	477,136	401,490	550,591	1,790,262
1987	29,295	17,415	320,977	392,329	439,782	744,330	1,944,128
1988	20,769	288,705	420,115	355,547	389,276	331,709	1,806,121
1989	151,986	66,033	181,149	174,011	448,767	198,617	1,220,563
1990	20,416	67,939	251,088	113,160	368,787	249,824	1,071,214
1991	17,995	69,032	316,895	438,502	1,204,116	385,817	2,432,357
1992	3,235	30,091	333,990	200,030	338,175	363,238	1,268,759
1993	7,038	103,131	206,523	222,144	463,702	274,118	1,276,656
1994	33,511	115,025	457,636	139,551	337,965	255,216	1,338,904
1995	19,198	90,838	325,927	223,751	607,095	381,884	1,648,693
1996	35,765	46,098	151,380	137,530	171,676	148,571	691,020
1997	19,951	92,725	256,719	111,576	167,287	228,096	876,354
1998	13,620	34,623	294,501	125,038	197,293	189,621	854,696
1999	2,112	138,492	410,321	101,260	655,407	241,096	1,548,688
2000	1,634	90,135	250,450	219,740	486,673	288,443	1,337,075
2001	0	13,447	182,124	63,452	309,487	250,987	819,497
2002	0	16,303	197,484	84,777	271,357	206,310	776,231
2003	2,091	102,484	106,415	123,027	425,993	169,587	929,597
2004	0	68,409	316,894	247,156	336,254	199,523	1,168,236
2005	1,954	22,062	512,262	268,467	231,429	337,744	1,373,918
2006	4,860	43,530	577,537	294,096	453,394	299,337	1,672,754
2007	0	159,244	525,156	122,419	499,709	302,625	1,609,153
2008		103,880	584,024	175,975	623,619	160,455	1,647,953
2009	7,933	22,635	509,416	147,266	478,895	182,752	1,348,897
2010	3,146	17,417	195,065	101,053	384,077	251,455	952,213
2011	3,058	247,736	215,922	66,207	289,950	286,501	1,109,374
2012	6,032	125,627	500,522	234,921	526,604	427,469	1,821,175
2013	0	55,151	649,158	126,351	237,551	335,547	1,403,758
2014	4,755	46,524	433,978	77,669	256,068	308,133	1,127,127
2015	4,870	8,697	87,396	106,216	162,772	164,248	534,199

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Table 4. Recreational harvest (pounds of fish) of spotted seatrout by state, 1981-2015
(Source: NMFS Fisheries Statistics Division).

Year	MD	VA	NC	SC	GA	FL	Total
1981			63,036	14,808	138,720	967,921	1,184,485
1982			120,045	588,999	177,847	660,295	1,547,186
1983			96,359	138,442	323,889	784,531	1,343,221
1984			39,861	116,118	141,306	866,077	1,163,362
1985			288,088	509,551	234,704	1,032,344	2,064,687
1986	4,960	64,394	328,439	587,570	440,774	695,168	2,121,305
1987	22,511	38,495	366,442	592,612	491,317	883,707	2,395,084
1988	36,629	460,378	390,836	448,473	536,959	453,063	2,326,338
1989	184,318	112,344	259,726	277,489	608,009	328,338	1,770,224
1990	39,059	121,136	282,872	174,845	423,815	475,045	1,516,772
1991	34,753	121,604	472,397	628,011	1,449,853	534,371	3,240,989
1992	7,802	56,685	508,760	227,210	430,946	543,491	1,774,894
1993	12,800	201,562	307,151	268,055	586,426	392,827	1,768,821
1994	26,764	175,184	679,996	183,343	412,392	357,441	1,835,120
1995	31,464	148,544	478,674	247,987	667,379	642,670	2,216,718
1996		77,269	197,261	171,727	196,487	249,898	892,642
1997	32,963	261,911	311,891	163,771	242,506	380,276	1,393,318
1998	37,189	61,888	444,441	151,718	262,896	329,793	1,287,925
1999		290,694	690,606	146,277	916,860	428,061	2,472,498
2000	2,972	195,544	385,190	267,297	565,903	545,202	1,962,108
2001		26,733	213,438	58,885	369,083	502,254	1,170,393
2002		28,882	274,100	111,954	302,559	353,693	1,071,188
2003	3,494	218,061	145,936	140,276	502,278	316,279	1,326,324
2004		138,841	386,918	168,468	383,237	482,853	1,560,317
2005	5,491	55,901	721,914	326,501	273,204	665,467	2,048,478
2006	10,674	107,770	794,372	369,165	444,228	574,081	2,300,290
2007	0	380,281	927,942	278,529	615,694	512,885	2,715,331
2008	0	239,743	936,652	242,405	777,690	354,409	2,550,899
2009	9,006	44,761	940,769	172,848	596,182	303,281	2,066,847
2010	6,724	30,176	404,438	138,514	425,854	411,495	1,417,201
2011	4,664	550,157	435,954	116,979	353,472	464,863	1,926,089
2012	10,257	226,556	810,589	388,105	518,189	819,009	2,772,705
2013		126,291	626,628	228,014	282,362	637,881	1,901,176
2014	10,633	84,838	433,978	111,194	283,282	546,335	1,470,260
2015	10,972	13,924	148,926	161,394	179,911	314,993	830,120

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Table 5. Recreational releases (number of fish) of spotted seatrout by state, 1981-2015
(Source: NMFS Fisheries Statistics Division).

Year	MD	VA	NC	SC	GA	FL	Total
1981				5,522	36,853	209,059	251,434
1982				8,007	17,645	171,093	196,745
1983			16,579	32,860	12,038	367,881	429,358
1984			30,173	44,436	16,174	76,346	167,129
1985			16,578	6,409	22,917	66,960	112,864
1986	13,639	28,606	19,792	115,315	189,798	35,646	402,796
1987		30,070	136,104	130,253	176,415	41,391	514,233
1988	26,999	148,934	74,818	78,568	182,628	431,665	943,612
1989	52,859	11,977	82,909	54,279	167,025	187,406	556,455
1990	4,874	23,435	84,235	35,223	114,624	203,439	465,830
1991	21,811	40,550	169,921	51,415	369,972	789,779	1,443,448
1992	701	19,855	139,616	97,813	192,261	597,254	1,047,500
1993		65,605	149,744	92,101	146,665	780,573	1,234,688
1994	32,466	243,463	207,262	220,941	125,421	574,629	1,404,182
1995	157,530	327,643	277,896	194,996	327,835	1,074,703	2,360,603
1996	51,594	165,169	153,051	107,691	63,585	1,081,893	1,622,983
1997	4,826	168,964	98,377	89,147	61,148	1,449,278	1,871,740
1998	49,460	74,569	73,024	151,935	100,059	1,005,443	1,454,490
1999	7,082	152,120	253,442	92,792	160,801	1,577,378	2,243,615
2000	4,805	264,550	90,070	368,332	547,765	2,310,491	3,586,013
2001		110,308	194,982	38,709	365,140	1,995,635	2,704,774
2002		136,265	385,162	147,962	357,953	2,326,420	3,353,762
2003		207,270	131,619	314,642	737,730	1,707,957	3,099,218
2004	9,430	257,996	300,025	333,537	608,193	1,969,884	3,479,065
2005	4,612	192,091	817,036	395,483	678,057	3,446,336	5,533,615
2006	9,721	82,935	559,786	666,865	872,395	2,889,495	5,081,197
2007	2,231	362,809	973,516	560,272	957,682	3,623,247	6,479,757
2008		366,566	1,005,298	850,006	719,622	2,140,752	5,082,244
2009	30,381	171,028	1,213,526	398,971	915,301	1,641,702	4,370,909
2010	107,017	550,118	1,684,872	407,228	742,215	2,937,411	6,428,861
2011	7,685	1,214,620	1,916,249	279,969	552,123	2,141,212	6,111,858
2012	55,183	428,540	1,646,512	817,017	1,029,479	3,025,556	7,002,287
2013	0	291,070	1,427,410	600,607	321,461	1,939,475	4,580,023
2014	26,438	291,070	960,570	389,153	773,940	2,399,792	4,840,963
2015	73,379	478,687	1,813,052	392,765	398,418	1,997,168	5,153,469



Atlantic States Marine Fisheries Commission

1050 N. Highland Street • Suite 200A-N • Arlington, VA 22201
703.842.0740 • 703.842.0741 (fax) • www.asmfc.org

MEMORANDUM

October 18, 2016

To: South Atlantic State/Federal Fisheries Management Board

From: Tina Berger, Director of Communications

RE: Advisory Panel Nominations

Please find attached nominations to the South Atlantic Species Advisory Panel – Aaron Kelly, a for-hire captain from North Carolina; Bill Parker, a recreational fishing guide from South Carolina; Glenn Ulrich, a recreational angler from South Carolina; and Lee Southward, a recreational fishing guide from Georgia. All four nominees have cobia experience. Please consider approval of these nominations at the next Board meeting.

SOUTH ATLANTIC SPECIES ADVISORY PANEL

Bolded names await approval by the South Atlantic Management Board

October 18, 2016

Delaware

Daniel T. Dugan (rec)
20 South Woodward Avenue
Wilmington, DE 19805
Phone: (302)636-9300
dtdugan@verizon.net
Appt. Confirmed 11/1/07
Appt Reconfirmed 10/18/16

New Jersey

Jeffrey Reichle (comm.)
PO Box 830
Cape May, NJ 08204
Phone: (day): (609)884-7600
Phone (eve): (609)884-0661
FAX: (609)884-0664
jreichle@lundsfish.com
Appt. Confirmed 11/1/07

Chris McCurdy (for-hire)
10 Birch Drive
Swainton, NJ 08210
Phone (day): (609)463-6760
Phone (cell): (609)374-4604
capt.curd@verizon.net
Appt. Confirmed 11/1/07
Expertise: Red drum, black drum, Atlantic croaker

Maryland

Vacancy (rec & comm)

Virginia

Vice-Chair, Thomas J. Powers (rec)
311 Hunts Neck Road
Poquoson, VA 23662
Phone: 757-269-7660
powers@jlab.org
Appt. Confirmed 11/1/07
Expertise: Atlantic croaker

Vacancy (comm.)

North Carolina

Captain James Ruhle (comm. dragger)
P.O. Box 302
Wanchese, NC 27981-0302

Phone: (252)473-3210
fvdaranar@aol.com
Appt. Confirmed 11/1/07
Expertise: Mixed species

Charles Bernard (Bernie) McCants, Jr (rec)
2325 Windy Woods Dr
Raleigh, NC 27607
Phone (day): 919.602.4516
Phone (evening): 919.602.4516
FAX: 919.668.7064
bernie.mccants@duke.edu
Appt Confirmed 8/9/12
Expertise: Red drum, black drum

Aaron Kelly (for-hire)
112 Jimmy Court
Kill Devil Hills, NC 27948
Phone (day): 252.202.6046
Phone (eve): 252.441.6575
info@rocksolidfishing.com
Expertise: Cobia

South Carolina

Captain Bill Parker (rec fishing guide)
28 Eagle Claw Dr.
Hilton Head, SC 29926
Phone: 843.384.6511
runfish1@roadrunner.com
Expertise: Cobia

Glenn Ulrich (rec)
843.793.8712
ulrichg@bellsouth.net
Expertise: Mixed species

Georgia

Lee Southard (rec fishing guide)
222 Crosswind Drive
Richmond Hill, GA 31324
Phone: 912.727.3402; 912.312.1210
leesouthard1801@comcast.net
Expertise: Mixed species

SOUTH ATLANTIC SPECIES ADVISORY PANEL

Bolded names await approval by the South Atlantic Management Board

October 18, 2016

Florida

James R. Stockton, Jr. (guideboat)
P.O. Box 1069
Ponte Vedra Beach, FL 32004
Phone: (904)285-4884
Appt. Confirmed 11/1/07
Expertise: Red drum

William R. Bird, Jr. (rec)
P.O. Box 2809
Orlando, FL 32802
Phone (day): 407-418-6237
Phone (eve): (407) 257-7480
Fax: 407-843-4444
bill.bird@lddkr.com and wbird2@cfl.rr.com
Appt. Confirmed 11/1/07
Expertise: Red drum and black drum

Tim Adams (Sp. Mackerel comm.)
426 S.W. Maple St.
Sebastian, FL 32958
Phone (eve): (772) 589-9846
Phone (cell): (772)473-6580
Appt. Confirmed 11/1/07
Expertise: Spanish Mackerel



ATLANTIC STATES MARINE FISHERIES COMMISSION

Advisory Panel Nomination Form

This form is designed to help nominate Advisors to the Commission's Species Advisory Panels. The information on the returned form will be provided to the Commission's relevant species management board or section. Please answer the questions in the categories (All Nominees, Commercial Fisherman, Charter/Headboat Captain, Recreational Fisherman, Dealer/Processor, or Other Interested Parties) that pertain to the nominee's experience. If the nominee fits into more than one category, answer the questions for all categories that fit the situation. **Also, please fill in the sections which pertain to All Nominees (pages 1 and 2). In addition, nominee signatures are required to verify the provided information (page 4), and Commissioner signatures are requested to verify Commissioner consensus (page 4). Please print and use a black pen.**

Form submitted by: Aaron Kelly State: NC
(your name)

Name of Nominee: Aaron Kelly

Address: 112 jimmy court

City, State, Zip: kill devil hills , NC,27948

Please provide the appropriate numbers where the nominee can be reached:

Phone (day): 252-202-6046 Phone (evening): 252-441-6575

FAX: _____ Email: info@rocksolidfishing.com

.....
FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.

- 1. Cobia
- 2. _____
- 3. _____
- 4. _____

2. Has the nominee been found in violation of criminal or civil federal fishery law or regulation or convicted of any felony or crime over the last three years?

yes _____ no x

3. Is the nominee a member of any fishermen's organizations or clubs?

yes _____ no x

If "yes," please list them below by name.

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?
all inshore and nearshore species

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? 20 years
2. Is the nominee employed only in commercial fishing? yes _____ no x _____
3. What is the predominant gear type used by the nominee? _____
4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? inshore

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? 18 years
 2. Is the nominee employed only in the charter/headboat industry? yes _____ no x _____
If "no," please list other type(s)of business(es) and/occupation(s): fishing tackle company
 3. How many years has the nominee lived in the home port community? 42 years
If less than five years, please indicate the nominee's previous home port community.
-

FOR RECREATIONAL FISHERMEN:

1. How long has the nominee engaged in recreational fishing? 40 years
2. Is the nominee working, or has the nominee ever worked in any area related to the fishing industry? yes x no _____

If "yes," please explain.
charter captain full time

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing? _____ years
2. Is the nominee employed only in the business of seafood processing/dealing?
yes _____ no _____ If "no," please list other type(s) of business(es) and/or occupation(s):

3. How many years has the nominee lived in the home port community? _____ years
If less than five years, please indicate the nominee's previous home port community.

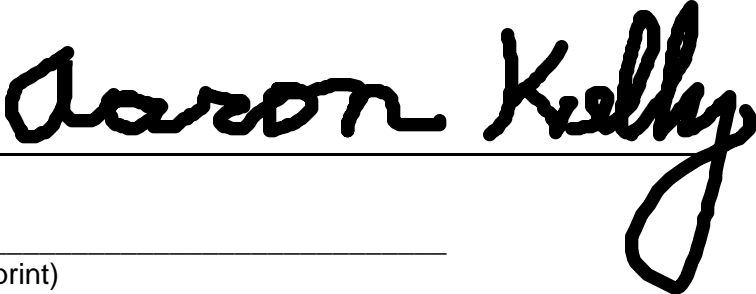
FOR OTHER INTERESTED PARTIES:

1. How long has the nominee been interested in fishing and/or fisheries management? 40 years
2. Is the nominee employed in the fishing business or the field of fisheries management?
yes x no _____

If "no," please list other type(s) of business(es) and/or occupation(s):

FOR ALL NOMINEES:

In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

Nominee Signature:  Date: 10-4-2016
Name: Aaron Kelly
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)

State Director

State Legislator

Governor's Appointee



ATLANTIC STATES MARINE FISHERIES COMMISSION

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Form submitted by: William Parker State: SC (your name)

Name of Nominee: William Parker

Address: 28 Eagle Claw Dr.

City, State, Zip: Hilton Head Island, SC 29926

Please provide the appropriate numbers where the nominee can be reached:

Phone (day): 843 384-6511

Phone (evening): 843 384-6511

FAX:

Email: runfish1@roadrunner.com

FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.

- 1. Mackerel/Cobia
2.
3.
4.

2. Has the nominee been found in violation of criminal or civil federal fishery law or regulation or convicted of any felony or crime over the last three years?

yes no X

3. Is the nominee a member of any fishermen's organizations or clubs?

yes X no

If "yes," please list them below by name.

Hilton Head Island Sportfishing Club

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?

cobia
snapper/grouper complex
shark

tarpon
spanish mackeral
king mackeral

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?

same as above

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? _____ years
2. Is the nominee employed only in commercial fishing? yes _____ no ~~_____~~
3. What is the predominant gear type used by the nominee? _____
4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? _____

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? 31 years
2. Is the nominee employed only in the charter/headboat industry? yes X no ~~_____~~
If "no," please list other type(s)of business(es) and/occupation(s): _____

3. How many years has the nominee lived in the home port community? 46 years
If less than five years, please indicate the nominee's previous home port community.

FOR RECREATIONAL FISHERMEN:

1. How long has the nominee engaged in recreational fishing? _____ years
2. Is the nominee working, or has the nominee ever worked in any area related to the fishing industry? yes _____ no ~~no~~ _____

If "yes," please explain.

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing? _____ years
2. Is the nominee employed only in the business of seafood processing/dealing?
yes _____ no x _____ If "no," please list other type(s) of business(es) and/or occupation(s):

3. How many years has the nominee lived in the home port community? _____ years
If less than five years, please indicate the nominee's previous home port community.

FOR OTHER INTERESTED PARTIES:

1. How long has the nominee been interested in fishing and/or fisheries management? _____ years
2. Is the nominee employed in the fishing business or the field of fisheries management?
yes _____ no _____
If "no," please list other type(s) of business(es) and/or occupation(s):

FOR ALL NOMINEES:

In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

Presently serving on South Atlantic Habitat and Ecosystem-based Management AP (5 years)

Served on SEDAR 28 (CORIA ASSESSMENT) DATA Workshop

Nominee Signature: William Parker

Date: Oct. 4, 2016

Name: William J. Parker
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)

State Director

State Legislator

Governor's Appointee



ATLANTIC STATES MARINE FISHERIES COMMISSION

Advisory Panel Nomination Form

This form is designed to help nominate Advisors to the Commission's Species Advisory Panels. The information on the returned form will be provided to the Commission's relevant species management board or section. Please answer the questions in the categories (All Nominees, Commercial Fisherman, Charter/Headboat Captain, Recreational Fisherman, Dealer/Processor, or Other Interested Parties) that pertain to the nominee's experience. If the nominee fits into more than one category, answer the questions for all categories that fit the situation. **Also, please fill in the sections which pertain to All Nominees (pages 1 and 2). In addition, nominee signatures are required to verify the provided information (page 4), and Commissioner signatures are requested to verify Commissioner consensus (page 4). Please print and use a black pen.**

Form submitted by: Lee Southard State: Georgia
(your name)

Name of Nominee: Lee Southard

Address: 222 Crosswinds Dr

City, State, Zip: Richmond Hill, Georgia 31324

Please provide the appropriate numbers where the nominee can be reached:

Phone (day): 912-727-3402

Phone (evening): 912-312-1210

FAX: _____

Email: leesouthard1801@comcast.net

FOR ALL NOMINEES:

1. Please list, in order of preference, the Advisory Panel for which you are nominating the above person.

1. Cobia Fishery
2. _____
3. _____
4. _____

2. Has the nominee been found in violation of criminal or civil federal fishery law or regulation or convicted of any felony or crime over the last three years?

yes _____ no X

3. Is the nominee a member of any fishermen's organizations or clubs?

yes X no _____

If "yes," please list them below by name.

Southern Kingfish Association

Fort McAllister Sport Fishing Club

Kilkenny Fishing Club

4. What kinds (species) of fish and/or shellfish has the nominee fished for during the past year?

Kingfish

Sailfish

Cobia

Dolphin

Spanish Mackerel

Black Sea Bass

5. What kinds (species) of fish and/or shellfish has the nominee fished for in the past?

Trout

Trigger fish

Redfish

Flounder

FOR COMMERCIAL FISHERMEN:

1. How many years has the nominee been the commercial fishing business? _____ years

2. Is the nominee employed only in commercial fishing? yes _____ no X

3. What is the predominant gear type used by the nominee? _____

4. What is the predominant geographic area fished by the nominee (i.e., inshore, offshore)? _____

FOR CHARTER/HEADBOAT CAPTAINS:

1. How long has the nominee been employed in the charter/headboat business? 2 years

2. Is the nominee employed only in the charter/headboat industry? yes _____ no X

If "no," please list other type(s) of business(es) and/occupation(s): _____

Professor Strayer University, Retired Professor University system of Georgia

3. How many years has the nominee lived in the home port community? 26 years

If less than five years, please indicate the nominee's previous home port community.

FOR RECREATIONAL FISHERMEN:

1. How long has the nominee engaged in recreational fishing? 60 years
2. Is the nominee working, or has the nominee ever worked in any area related to the fishing industry? yes no

If "yes," please explain.

Charter Captain

FOR SEAFOOD PROCESSORS & DEALERS:

1. How long has the nominee been employed in the business of seafood processing/dealing?
_____ years
2. Is the nominee employed only in the business of seafood processing/dealing?
yes _____ no If "no," please list other type(s) of business(es) and/or occupation(s):

3. How many years has the nominee lived in the home port community? _____ years
If less than five years, please indicate the nominee's previous home port community.

FOR OTHER INTERESTED PARTIES:

1. How long has the nominee been interested in fishing and/or fisheries management? 60 years
2. Is the nominee employed in the fishing business or the field of fisheries management?
yes _____ no

If "no," please list other type(s) of business(es) and/or occupation(s):

FOR ALL NOMINEES:

In the space provided below, please provide the Commission with any additional information which you feel would assist us in making choosing new Advisors. You may use as many pages as needed.

Nominee Signature: Lee D. Southard

Date: 10/5/2016

Name: Lee D. Southard
(please print)

COMMISSIONERS SIGN-OFF (not required for non-traditional stakeholders)

[Signature]
State Director

State Legislator

Governor's Appointee

Lee Southard

Atlantic States Marine Fisheries Commission

Additional information being provided. I am retired from the military and the University System of Georgia where I taught Computer Science for over 25 years. I currently hold a Master's Degree from Boston university in Information Systems. I currently teach part time for Strayer University and part time Charter fish but fish two to three times per week when the weather permits thus have time to concentrate on the tasks at hand.

I grew up in Miami where I fished from about 8 years old to the present and have fished from Georgia/South Carolina to Mississippi for many species over the years. I currently serve as president of the Fort McAllister Fishing club where I have assisted in fishing tournaments both inshore and offshore.

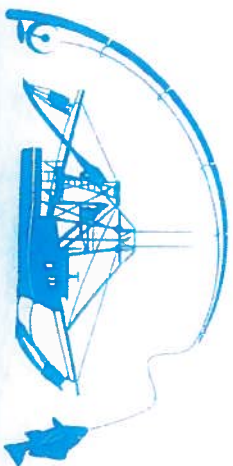
I have attached my Certificate of Participation for the successful completion Marine Resource Education Program Southeast (MREP) completed in April 2016.

Certificate of Participation

Awarded to:

Lee Southard

for the successful completion of



Marine Resource
Education Program
S O U T H E A S T

Fisheries Science and Management Program

April 2016


Gulf of Maine
Research Institute
Science Education Community

Anneth Cole
Program Manager

Lee Southard
Program Moderator