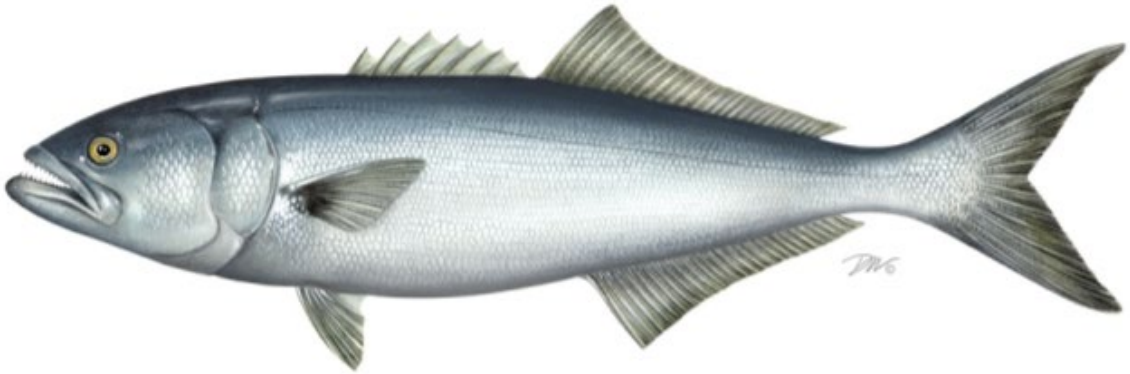
ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR BLUEFISH
(Pomatomus saltatrix)

2012 FISHING YEAR



Prepared by the Plan Review Team

Approved by the Bluefish Management Board

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN FOR BLUEFISH *(Pomatomus saltatrix)*

I. Status of the Fishery Management Plan

Date of FMP Approval:	March 1990
Amendments:	Amendment 1 (October 1998)
Management Unit:	Migratory stocks of bluefish in the U.S. waters of the western Atlantic Ocean and state waters (Maine through Florida)
States with Declared Interest:	Maine through Florida, excluding Pennsylvania and the District of Columbia
Active Committees:	ASMFC Bluefish Management Board, MAFMC Coastal Migratory Species Committee, Technical Committee, Plan Review Team, and Stock Assessment Subcommittee

The bluefish fishery management plan (FMP) was adopted by the Atlantic States Marine Fisheries Commission (ASMFC) and the Mid-Atlantic Fishery Management Council (MAFMC) in October 1989. It is a joint management plan and is the first FMP developed jointly by an interstate commission and a federal fishery management council.

Bluefish is currently managed under Amendment 1 to the FMP approved in October 1998 and implemented in 2001. The goal of the Amendment is to conserve the bluefish resource along the Atlantic coast, specifically:

1. Increase understanding of the stock and fishery
2. Provide highest availability of bluefish to U.S. fishermen while maintaining, within limits, traditional uses of bluefish
3. Provide for cooperation among the coastal states, the various regional marine fishery management councils, and federal agencies involved along the coast to enhance the management of bluefish throughout its range
4. Prevent recruitment overfishing
5. Reduce the waste in both the commercial and recreational fisheries.

States with a declared interest in the bluefish FMP include all member states, with the exception of Pennsylvania and the District of Columbia. Management issues are addressed through the ASMFC Bluefish Management Board and the MAFMC Coastal Migratory Species Committee. The ASMFC Bluefish Technical Committee provides technical advice. A joint ASMFC-MAFMC Technical Monitoring Committee conducts annual plan monitoring, which is reviewed by a joint Advisory Panel, and recommendations are provided to the Board. The ASMFC Stock Assessment Subcommittee addresses stock assessment matters.

In February 2012, the ASMFC Bluefish Management Board approved Addendum I to Amendment 1 to the Bluefish FMP. The Addendum establishes a coastwide sampling program to improve the quantity and quality of information available for use in future bluefish stock assessments. A

summary of these findings from the most recent year are found in Section V. (Status of Research and Monitoring).

II. Status of the Stock

The most recent ASMFC bluefish stock assessment was completed in 2005. The assessment passed peer review and was approved by the ASMFC Bluefish Management Board and the MAFMC Coastal Migratory Species Committee. The assessment developed biological reference points for both bluefish biomass and fishing mortality ($½B_{MSY}$ = 73,526 mt; F_{MSY} = 0.19). The ASAP model used to calculate population abundance in this assessment has been updated annually since 2005. The output from this model is used to set the annual Total Allowable Catch (TAC).

The most recent stock status information indicates that bluefish are not overfished and overfishing is not occurring. The biomass estimates in 2008 exceeded the B_{MSY} and therefore bluefish were considered rebuilt two years ahead of the 2010 rebuilding deadline. The 2013 stock assessment update suggests that total biomass in 2012 was 85% of its target. For 2012, fishing mortality rates estimated in ASAP using state and federal indices show a low fishing mortality and a stable trend in population biomass (B_{2012} = 125.8 MT; F_{2012} = 0.097). Abundance estimates peaked in 1982 at 166 million fish, but declined to 58 million in the mid-1990s. Since 1997 abundance has generally increased to a high of 99.88 million fish in 2008, although since then, abundance estimates declined to 64.2 million fish in 2012.

III. Status of the Fishery

Recreational catch of bluefish has averaged 10.3 million pounds since 1981. In 2012, recreational anglers along the Atlantic Coast caught 5.5 million bluefish, a 9% increase from 2011. Recreational harvest has been increasing since a low of 3.7 million fish in 1999. Since then, recreational harvest averaged over 7.8 million fish annually. In 2012, 8.6 million bluefish were harvested in the recreational fishery. The majority of recreational activity occurred from May to October, with the peak activity in September and October.

Landings from the commercial bluefish fishery have been consistently lower than the recreational catch. Commercial landings decreased from 16.5 million pounds in 1981 to 7.3 million pounds in 1999. Commercial landings have been regulated by quota since implementation of Amendment 1 in 2000 and since then have averaged 6.9 million pounds annually. The landings estimates for 2012 is 4.5 million pounds, which is a 17% decrease from 2011. The majority of the harvest (~76%) came from New York, New Jersey and North Carolina.

V. Status of Research and Monitoring

Many states, NMFS, and SEAMAP conduct fishery-independent surveys. New Hampshire, Massachusetts, Connecticut, New York, New Jersey, Delaware, Maryland, and Florida monitor juvenile abundance. Rhode Island, Connecticut, New Jersey, Delaware, North Carolina, South Carolina, Georgia, and Florida monitor adult abundance. Year class strength is monitored through the NMFS autumn trawl survey.

Commercial landings information is collected by most states from dealer or fisherman reporting programs. Fishermen in the EEZ are required to report their landings to the NMFS. North Carolina and Virginia are the only states that significantly sample bluefish commercial fisheries for size and age composition of the catch. Recreational harvest is monitored by the Marine Recreational Information Program (MRIP).

Addendum I to Amendment 1 (2012), implemented a biological monitoring program to enhance age and length data used in bluefish stock assessments. As part of Addendum I, states that account for more than 5% of total coastwide bluefish harvest (recreational and commercial combined) for the 1998 – 2008 period are required to collect a minimum of 100 bluefish ages (50 from January through June, 50 from July through December) For the 2012 fishing year, the following states were required to collect age data: Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Virginia, and North Carolina. All but one state (Rhode Island) were able to collect the minimum of 100 age samples. In reviewing the results of the inaugural biological sampling program, the Bluefish Technical Committee determined that the geographic range, distribution of sampling times, and program design are effectively capturing age data that will be used in the 2014 benchmark assessment.

VI. Status of Management Measures and Issues

The ASMFC and MAFMC adjust the quota and harvest limit annually using the specification setting process detailed in Amendment 1. The recreational fishery is allocated 83% of the entire quota. Coastwide, the commercial fishery is limited to 17% of the total allowable landings each year. The commercial quota can be increased (but not to exceed 10.5 million pounds) if it is anticipated that the recreational fishery will not land their entire allocation for the upcoming year. The coastwide commercial quota is divided into individual state-by-state quotas based on landings from 1981-1989.

The Technical Monitoring Committee is responsible for reviewing the best available data and recommending an annual commercial quota and recreational possession limit. Based on the 2011 stock assessment update the Commission and the Council approved the Monitoring Committee recommendation of a total allowable landings (TAL) of 28.266 million pounds for 2012. Additionally, the Commission and the Council recommended a transfer of 5.052 million lbs from the recreational sector to the commercial sector to achieve a commercial quota of 10,317,362 pounds and a recreational harvest limit of 17,457,538 pounds.

VII. Current State-by-State Implementation of FMP Compliance Requirements

These states or jurisdictions are required to comply with the provisions of the Bluefish FMP: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Potomac River Fisheries Commission, Virginia, North Carolina, South Carolina, Georgia, and Florida. The following are specific FMP compliance requirements:

- Each state must restrict the possession of bluefish by anglers to not more than fifteen fish per day, or have an ASMFC-approved equivalent conservation program.

- Each state must restrict its commercial fishery to the quota adopted under procedures specified in the FMP.

The final compliance criteria include:

- Monitoring requirements for the commercial fishery
- Commercial and party/charter vessel permitting requirements
- Dealer permitting requirements
- Annual compliance reporting

The Chair of the Plan Review Team has reviewed the compliance reports of all states and recommends that each state be found in compliance with respect to implementing the recreational bag limit and limiting their commercial fishery to their state quota.

South Carolina and Georgia have requested *de minimis* status for 2013. The Chair of the Plan Review Team finds that the State of South Carolina and the State of Georgia qualify for *de minimis* status because their commercial landings from the most recent year were less than 0.1% of the coastwide commercial landings.

VIII. Prioritized Research Needs

1. Collect size, otoliths and age composition of the fisheries by gear type and statistical area. Focus age sampling on as wide a range of sizes as possible.**
2. Target commercial and recreational landings for biological data collection when possible
3. Initiate fisheries-dependent and independent sampling of offshore populations of bluefish during the winter months
4. Age any archived age data for bluefish and use the data to supplement age keys**
5. Test the sensitivity of the bluefish assessment to assumptions concerning age-varying M, level of age-0 discard, and selection patterns
6. Evaluate amount and length frequency of discards from the commercial and recreational fisheries
7. Continue work on catch and release mortality
8. Increase intensity of biological sampling of the NER commercial and coastwide recreational fisheries
9. Conduct research to determine the timing of sexual maturity and fecundity of bluefish
10. Study tag mortality and retention rates for ALS dorsal loop and other tags used for bluefish
11. Initiate research on species interactions and predator-prey relationships
12. Initiate a coastal surf-zone seine study to provide more complete indices of juvenile abundance
13. Investigate the long term, synergistic effects of combinations of environmental variables on various biological and sociological parameters such as reproductive capability, genetic changes, and suitability for human consumption
14. Conduct studies on the interactive effects of pH, contaminants, and other environmental variables on survival of bluefish.

**Initiated through 2012 Biological Sampling Program, but data collection remains a high research priority

Table 1. Estimated number of bluefish caught (A + B1 + B2, by count) and the estimated number of bluefish harvested (A + B1, by count) by marine recreational fishermen each year, 1981 to 2012. Source: MRIP

Year	Catch	Harvest
1981	31,261,015	23,888,204
1982	27,220,488	23,723,669
1983	30,137,390	24,883,543
1984	26,508,251	20,797,922
1985	22,473,864	19,245,722
1986	30,410,510	24,440,850
1987	27,603,372	21,076,292
1988	13,364,985	9,905,011
1989	18,637,256	13,599,939
1990	16,446,180	11,365,358
1991	18,291,823	11,942,608
1992	11,400,060	7,157,754
1993	9,925,254	5,725,355
1994	11,920,226	5,767,953
1995	10,493,882	5,167,979
1996	9,520,909	4,205,103
1997	12,573,548	5,413,036
1998	9,204,267	4,202,111
1999	11,487,687	3,681,841
2000	16,260,385	4,897,008
2001	20,412,006	6,663,237
2002	15,217,195	5,300,189
2003	15,049,303	6,045,062
2004	19,344,309	7,250,407
2005	20,353,080	7,949,179
2006	19,571,624	7,035,179
2007	23,380,319	8,373,899
2008	19,954,717	6,664,150
2009	13,644,474	5,194,242
2010	16,142,140	6,090,830
2011	14,691,648	5,061,391
2012	14,110,594	5,523,282
total	**577,012,761**	**328,238,305**
average	**18,031,649**	**10,257,447**

Table 2. Bluefish Commercial Landings and Recreational Catch (thousands of pounds), 1981-2012.

Year	Commercial	Recreational	Total	% Commercial
1981	16,457	23,888	40,345	15
1982	15,426	23,723	39,149	16
1983	15,798	24,883	40,681	15
1984	11,861	20,797	32,658	15
1985	13,497	19,245	32,742	20
1986	14,663	24,440	39,103	14
1987	14,502	21,076	35,578	16
1988	15,787	9,905	25,692	25
1989	10,450	13,599	24,049	21
1990	13,779	11,365	25,144	31
1991	13,580	11,942	25,522	29
1992	11,475	7,157	18,632	32
1993	10,600	5,725	16,325	33
1994	9,489	5,767	15,256	38
1995	7,998	5,167	13,165	36
1996	9,068	4,205	13,273	44
1997	8,960	5,413	14,373	39
1998	8,246	4,202	12,448	40
1999	7,351	3,681	11,032	46
2000	8,066	4,897	12,963	43
2001	8,698	6,663	15,361	40
2002	6,876	5,300	12,176	38
2003	7,406	6,045	13,451	34
2004	7,200	7,250	14,450	28
2005	5,919	7,949	13,868	27
2006	7,210	7,035	14,245	51
2007	7,507	8,373	15,880	47
2008	5,976	6,664	12,640	47
2009	6,990	5,194	12,184	57
2010	7,069	6,090	13,159	54
2011	5,467	5,061	10,528	52
2012	4,533	5,523	10,056	45
Total	**317,904**	**328,224**	**646,128**	
Average	**9,935**	**10,257**	**20,192**	

Source: NMFS General Canvass and MRIP data.

Table 3. 2012 State Commercial bluefish quotas (Federal and ASMFC) based on a coastwide quota of 10.5 million pounds and 1981-1989 NMFS General Canvass Data.

State	% of Federal Quota	2012 Federal Quota (lbs)*	2012 Transfers	Final Quota	2011 Landings**	2012 Landings**	% Quota Used	% Change from '11	% Coastwide Total
ME^^	0.6685	68,972		68,972	C	C	C	C	C
NH^^	0.4145	42,765	100,000	142,765	C	C	C	C	C
MA	6.7167	692,986		692,986	579,504	686,121	99.0%	18.40	9.65
RI	6.8081	702,416		702,416	409,000	628,298	89.4%	53.62	8.84
CT	1.2663	130,649		130,649	46,263	50,808	38.9%	9.82	0.71
NY	10.3851	1,071,466	50,000	1,121,466	1,171,701	1,102,316	98.3%	-5.92	15.51
NJ	14.8162	1,528,639		1,528,639	705,324	689,471	45.1%	-2.25	9.70
DE	1.8782	193,781		193,781	11,559	16,150	8.3%	39.72	0.23
MD	3.0018	309,707		309,707	94,551	87,587	28.3%	-7.37	1.23
PRFC					36,205	54,085			0.76
VA	11.8795	1,225,649		1,225,649	266,759	235,287	19.2%	-11.80	3.31
NC	32.0608	3,307,827	-100,000	3,207,827	1,897,408	758,839	23.7%	-60.01	10.68
SC	0.0352	3,632		3,632	389	92	2.5%	-76.35	0.00
GA^^	0.0095	5402		980	C	C	C	C	C
FL	10.0597	1,037,894	-50,000	987,894	244,232	178,173	18.0%	-27.05	2.51
TOTAL^^^	**100**			**10,317,363**	**5,467,279**	**4,533,860**	**44%**	**-17.07**	**64**

***Landings as reported in state compliance reports.*
^^landings values are confidential data.
'C' denotes confidential data
^^^Totals in table may not match listed quotas due to rounding.

Table 4. Status of Bluefish Fishery Management Plan Implementation by States in 2012.

State	Recreational Bag Limit	Recreational Season	Recreational Size Limit	Commercial Trip Limit	Commercial Open Season
ME	3 fish	All year	None		
NH	10 fish	All year	None		JUL 1 – SEP 30
MA	10 fish	All year	None	5,000 lbs/day	
RI	15 fish	All year	None		
CT	10 fish	All year	None	750 lbs/day until 30% of CT is met, then 100lbs/day	
NY	15 fish	All year	No more than 10 under 12” TL	Varies based on available quota	
NJ	15 fish	All year	None		Gear-specific
DE	10 fish	All year	None		
MD	10 fish	All year	8” minimum		
PRFC	10 fish	All year	None	Daily limits when 80% of VA and MD quotas are met	
VA	10 fish	All year	None		
NC	15 fish	All year	Only 5 greater than 24” TL		
SC	15 fish	All year	None		
GA	15 fish	MAR 16 – NOV 30	12” minimum FL	15 fish	MAR 16 – NOV 30
FL	10 fish	All year	12” minimum FL	7,500 lbs/day	

Figure 1. Estimate number of bluefish caught and the estimated number of bluefish landed by marine recreational fishermen each year, 1981-2012.

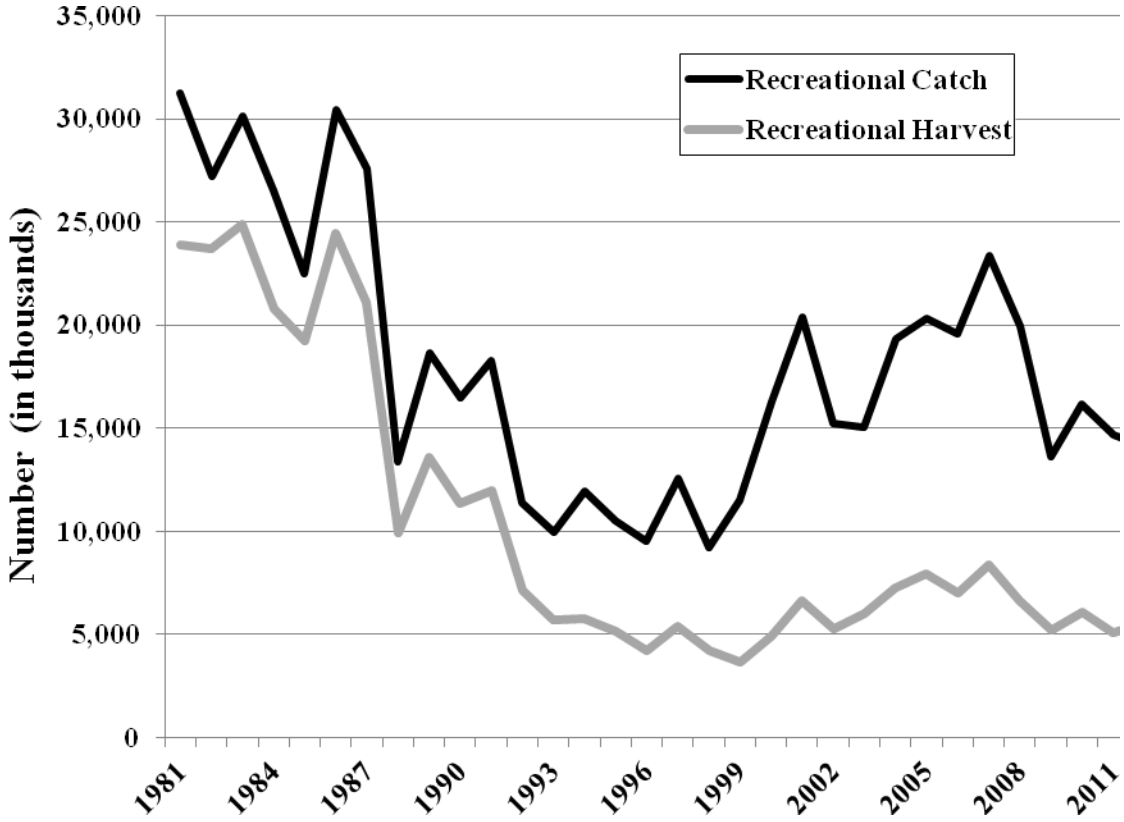


Figure 2. Bluefish commercial landings and recreational harvest (thousands of pounds), 1981-2012.