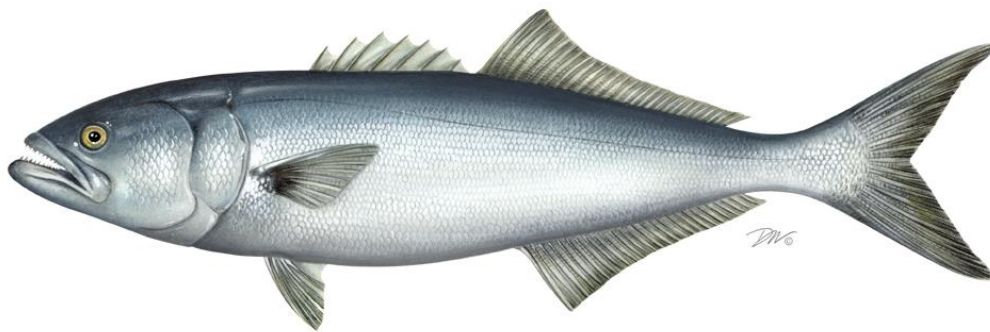


ATLANTIC STATES MARINE FISHERIES COMMISSION

REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR BLUEFISH
(Pomatomus saltatrix)

2020 FISHING YEAR



Prepared by the Plan Review Team

Approved August 9, 2021



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

Executive Summary

Bluefish from Maine through Florida are jointly managed by the Mid-Atlantic Fishery Management Council and the Atlantic States Marine Fisheries Commission under Amendment 1 and Addendum I to the Interstate Fishery Management Plan (ISFMP).

Based on the 2019 operational stock assessment and peer review conducted by the Northeast Regional Stock Assessment Workshop, bluefish are overfished, but are not experiencing overfishing relative to the updated biological reference points. The updated stock assessment incorporated data through 2018 and included calibrated estimates of recreational catch and effort from the Marine Recreational Information Program (MRIP).

2020 recreational bluefish harvest was estimated at 9.34 million fish weighing 13.58 million pounds (Tables 2 and 3). Recreational dead releases were estimated at 3.20 million fish. 2020 recreational landings exceeded the recreational harvest limit (RHL) of 9.48 by 4.10 million lbs. 2020 commercial bluefish landings were recorded at approximately 2.36 million pounds, which falls below the quota of 2.77 million pounds (Table 1). Total harvest of 15.94 million pounds in 2020 remains near the time series low of 15.70 million pounds reached in 2018 (Table 3).

In 2020, all states implemented management programs consistent with the intent of Amendment 1 and Addendum I to the ISFMP. Maine, South Carolina, and Georgia requested *de minimis* status for 2021. Maine, South Carolina, and Georgia all qualify for *de minimis* status because their commercial landings in 2020 were less than 0.1% of the coastwide commercial landings estimate.

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2021 REVIEW OF THE ASMFC FISHERY MANAGEMENT PLAN FOR BLUEFISH (*Pomatomus saltatrix*)

I. Status of the Fishery Management Plan

<u>Date of FMP Approval:</u>	1989
<u>Amendments:</u>	Amendment 1 (1998); Addendum I (2012)
<u>Management Unit:</u>	Migratory stocks of bluefish in U.S. state and federal waters of the western North Atlantic
<u>States with Declared Interest:</u>	Maine through Florida, excluding Pennsylvania and the District of Columbia
<u>Active Committees:</u>	ASMFC: Bluefish Management Board, Technical Committee, Advisory Panel, Plan Review Team, and Stock Assessment Subcommittee MAFMC: Bluefish Committee, Monitoring Committee, Advisory Panel, and Scientific and Statistical Committee

The Fishery Management Plan (FMP) for bluefish was adopted by the Atlantic States Marine Fisheries Commission (ASMFC or Commission) and the Mid-Atlantic Fishery Management Council (MAFMC) in October 1989. It was 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 2000. The goal of the Amendment is to conserve the bluefish resource along the Atlantic coast, specifically to:

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. Promote compatible management regulations between State and Federal jurisdictions
5. Prevent recruitment overfishing
6. Reduce the waste in both the commercial and recreational fisheries.

States and jurisdictions with a declared interest in the bluefish FMP include all ASMFC member states and jurisdictions, with the exception of Pennsylvania and the District of Columbia. Management issues are addressed jointly through the ASMFC Bluefish Management Board (Board) and the MAFMC (Council). The MAFMC's Bluefish Monitoring Committee (MC) conducts annual plan monitoring, which is reviewed jointly by the Council's and Board's

Bluefish Advisory Panels (AP), and all committee recommendations are then provided to the Board and Council for review. A working group, as constituted through the NEFSC and NRCC process, addresses stock assessment matters. The Board may implement changes to the FMP in state waters through the adaptive management process. The TC, Plan Review Team (PRT), Plan Development Team (PDT), and AP provide technical and industry advice to the Board throughout the adaptive management process.

In February 2012, the Board approved Addendum I to Amendment 1 to the Bluefish FMP. The Addendum establishes a coastwide biological monitoring program to improve the quantity and quality of information available for use in bluefish stock assessments. A summary of these findings from the most recent year are found in Section IV.

Annual Fishery Specifications

Commercial and recreational bluefish harvests are managed via sector-specific landings limits (i.e., a coastwide commercial fishery quota and a recreational harvest limit, or RHL). The Council's Scientific and Statistical Committee (SSC) and Bluefish MC annually review the best available information and make fishery specification recommendations to the Council and Board for the subsequent fishing year. Recommendations include commercial quota, RHL, research set-aside (RSA), and other management measures such as minimum size limits and bag limits. The Council and Board meet jointly (typically in August) to consider the SSC's and MC's fishery specification recommendations and formalize commercial and recreational catch limits, and other management measures.

Annual fishery specification recommendations are typically developed as follows: final commercial quota and RHL recommendations are derived from an annual catch limit (ACL), which the FMP defines as equal to the allowable biological catch (ABC), and is in turn equal to or less than an overfishing limit (OFL). The stock's OFL is a catch level that corresponds to the stock's maximum sustainable yield, which is determined through the most recent stock assessment. After accounting for management uncertainty, 17% of the ACL is allocated to the commercial sector and 83% to the recreational sector; these are the commercial and recreational annual catch targets (ACTs). Discard estimates are deducted from ACTs to derive commercial and recreational total allowable landings (TALs). If the recreational fishery is not projected to land its TAL, then at the discretion of the Board and Council, quota may be transferred from the recreational to the commercial sector, not to exceed a commercial quota of 10.5 million pounds (the average commercial landings during the period 1990-1997). The final commercial quota is then allocated to the states of Maine through Florida with the percentage allocations based on average commercial landings during 1981-1989. The state-specific shares are detailed in Table 1.

II. Status of the Stock

The 2019 operational assessment for bluefish was peer reviewed at the Northeast Regional Stock Assessment Workshop and was approved by the Board and Council for management use.

The biological reference points from SARC 41 were based on maximum sustainable yield (MSY). MSY reference points require a reliable stock-recruitment relationship and the 2015 SAW determined that this relationship is poorly defined for bluefish. Therefore, for SAW 60, spawning potential ratio (SPR) reference points were used as a proxy for MSY reference points. $F_{40\%SPR}$ was selected at SAW 60 as the F_{MSY} proxy for the overfishing threshold. This threshold was modified by the SSC to $F_{35\%SPR}$, noting that $F_{40\%SPR}$ might be inappropriate for bluefish, a highly productive species. The biomass target (SSB_{MSY} proxy) was established by projecting the population forward until an equilibrium spawning stock biomass (SSB) was reached (NEFSC 2015). The $F_{35\%SPR}$ and corresponding $SSB_{35\%SPR}$ proxy biological reference points for bluefish were updated for this 2019 operational assessment.

The results of the 2019 operational assessment indicate that bluefish are overfished, but overfishing is not occurring. SSB in 2018 was estimated at 91,041 metric tons which is below the SSB threshold of 99,359 metric tons. The bluefish stock has experienced a decline in SSB over the past decade, coinciding with an increasing trend in fishing mortality (F). Recruitment (age-0 fish) has remained fairly steady, fluctuating just below the time series mean of 46 million fish. As a result of very low catch in 2018, F was estimated to be 0.146 which is below the F threshold ($F_{35\%SPR}=0.183$) for the first time in the time-series.

III. Status of the Fishery

From 2011-2020, recreational catch (harvest plus fish caught and released) of bluefish in U.S. waters of the Atlantic coast averaged 44.46 million fish annually (Table 2). In 2020, recreational catch was estimated at 30.68 million fish which is a 21% decrease relative to 2019. In 2020, recreational anglers harvested an estimated 9.34 million fish weighing 13.58 million pounds (6,160 metric tons). Harvest during 2018-2020 was exceptionally low compared to the ten year average of 25.69 million lbs (Table 3). The 2020 average weight of landed fish is 1.45 pounds, which is also lower than the ten year average of 1.65 pounds. This is likely partially due to reduced availability of mature fish, a direct result from the stock's overfished status. The majority of the recreational harvest (pounds) came from Florida (42%), North Carolina (16%), New Jersey (13%), and New York (11%). In 2020, recreational dead releases (15% of released alive fish) were estimated at 3.20 million fish (Table 2). Figure 1 displays trends in recreational harvest, catch, and releases over the 1985-2020 time series.

From 1985-1999, annual commercial landings of bluefish in U.S. waters of the Atlantic coast averaged 11.31 million pounds (5,129 metric tons). After the implementation of the Amendment 1 quota system, from 2000-2020 commercial landings of bluefish have averaged 5.78 million pounds (2,621 metric tons) annually (Figure 2). In 2020, commercial landings were 2.36 million pounds (1,068 metric tons), a decrease of 21% relative to 2019 landings and a 15% underage of the 2020 commercial quota (2.77 million pounds). The majority of commercial

landings came from North Carolina (46%), Rhode Island (14%), and New York (12%). Commercial dead discards are considered negligible.

IV. Status of Research and Monitoring

Many states, Northeast Fisheries Science Center (NEFSC) National Marine Fisheries Service (NMFS), the Northeast Area Monitoring and Assessment Program (NEAMAP), and the Southeast Area Monitoring and Assessment Program (SEAMAP) conduct fishery-independent surveys. New Hampshire, Rhode Island, Connecticut, New York, New Jersey, Maryland, Virginia, and South Carolina (SEAMAP) provide indices of juvenile bluefish abundance for stock assessments, and Connecticut, New Jersey, Virginia (NEAMAP), and North Carolina provide indices of adult abundance. Year class strength is monitored through a number of fishery-independent surveys (NEFSC 2015). Although not included in the 2019 operational assessment, Massachusetts, Delaware, Georgia, and Florida also maintain indices of abundance from surveys that encounter bluefish.

Due to challenges brought on by the COVID-19 pandemic, several research surveys were cancelled in 2020. Cancelled surveys include: 1) Connecticut's Long Island Sound fall trawl survey, 2) New Jersey's Delaware River Seine Survey and Ocean Trawl Survey, 3) Virginia's NEAMAP spring survey (fall sampling did occur), 4) North Carolina's fishery independent gill net survey, 5) South Carolina's SEAMAP-SA Coastal Trawl Survey. Refer to Table 4 for status of monitoring efforts by state in 2020.

Commercial landings information is collected by most states from dealer or fisherman reporting programs, which is provided to the Atlantic Coastal Cooperative Statistics Program's (ACCSP) Standard Atlantic Fisheries Information System (SAFIS). Fishermen fishing in federal waters are required to report their landings to NOAA Fisheries. Recreational catch and harvest is monitored by MRIP.

Addendum I to Amendment 1 (2012) implemented a biological monitoring program to enhance age and length data used in bluefish stock assessments. Under Addendum I, states that accounted 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). Those states are Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Virginia, and North Carolina. In February 2021, the Board revised the sampling requirement threshold to any state with greater than 4% of the coastwide removals (defined as the sum of recreational and commercial landings and dead discards) for the period 2010-2019. This added Florida to the states required to collect samples. In addition, the 50 fish sample seasonal requirement was changed to a target, while maintaining the 100 fish annual sampling requirement. The [TC report from September 2020](#) outlines more details regarding state by state sampling targets for reference.

Age samples are primarily collected from fishery-dependent sources (e.g., party/charter boats, fishing tournaments, and volunteer anglers), although samples collected from fishery-

independent sources are sometimes utilized as needed to fulfill this requirement. In 2020, most states were able to collect the minimum of 100 age samples (Table 4), and all states made a good effort to collect 50 age samples from both spring and fall. Connecticut did not collect biological samples due to the pandemic and concerns about safely conducting collections. Due to COVID-19, fishery-dependent sampling did not begin until the end of June for New York. Soon after, the commercial fishery closed on June 19 and did not reopen until August 7, which made it challenging to meet the 100 sample requirement. New York was only able to collect 2 samples in the spring and 43 in the fall. New Jersey also struggled to collect age samples with only 17 samples collected in the spring. This was due to COVID-19 disruptions (safety considerations, lack of fishery independent sampling, Governor orders, etc).

V. Status of Management Measures and Issues

The Board and Council recommend adjustments to the commercial quota and RHL annually using the specification setting process detailed in Amendment 1 (Section 3.1.1.6) and in Section I of this report. In 2020, the recreational fishery was allocated 83% of the ACL, and 17% was allocated to the commercial fishery. In 2020, the coastwide commercial quota was allocated to the states via state-specific percentage shares based on landings from 1981-1989 (Table 1).

The 2020 ACL was 16.28 million pounds (7,385 metric tons), the commercial quota was 2.77 million pounds (1,255 metric tons) and the RHL was 9.48 million pounds (4,301 metric tons). 2020 commercial bluefish landings were recorded at approximately 2.36 million pounds, which falls below the quota. 2020 recreational landings were 13.58 million pounds, which exceeds the RHL by 4.10 million pounds. While NOAA Fisheries has not yet released their final catch accounting data for 2020, a preliminary analysis indicates the sum of 2020 recreational and commercial landings and dead discards exceeds the fishery-level ACL by 22.7%. Therefore, federal accountability measures may be triggered for 2020. According to the federal regulations, the ACL overage must be deducted from the following year's ACT, or as soon as possible thereafter. Considering the timing of setting specifications, this will likely be taken up at the Board and Council's August 2021 meeting for possible implementation in 2022. 2020 state-specific commercial shares and landings, and initial 2021 state-specific shares are listed in Table 1.

In June 2021, the Board and the Council jointly recommended approval of the Bluefish Allocation and Rebuilding Amendment. The Amendment updates the FMP goals and objectives, initiates a rebuilding plan, establishes new allocations between the commercial and recreational sectors, implements new commercial allocations to the states, revises the process for quota transfers between sectors, and revises how the management plan accounts for management uncertainty. As next steps, the Council will forward its recommended approval of the Amendment to NOAA Fisheries for final consideration and implementation. The Commission will consider final approval of the Amendment at its August meeting. More detailed information on the recommended changes to the FMP can be found in [the press release](#).

Law Enforcement Reporting:

States are asked to report and summarize law enforcement cases that occurred the previous season in annual compliance reports. In 2020, reported law enforcement cases (e.g., the number of warnings and citations) remain low and were similar to those reported in previous years. The most common violation was recreationally harvested fish in excess of the bag limit. There were only two citations reported for the commercial fishery, which occurred in North Carolina for exceeding the commercial possession limit.

Developing Issues:

Developing specifications for the 2022 fishing year will be a significant challenge. According to MRIP estimates for 2020, there was a 4.1 million pound RHL overage. However, data imputation was utilized to account for months when states suspended in-person angler intercepts due to COVID-19 lockdowns. Further complicating the situation, the stock will be entering a rebuilding plan with new sector allocations as determined by the Board and Council at their joint June meeting. Lastly, new stock status information will be made available in June when the management track stock assessment is scheduled to be submitted to the SSC.

VI. Implementation of FMP Compliance Requirements for 2020

These states and 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 for 2020:

- Each state must restrict the possession of bluefish to no more than three fish per day for recreational anglers and five fish per day for those fishing with for-hire operators, 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.
- These states are required to collect a minimum of 100 age samples per Addendum I to Amendment 1: Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Virginia, and North Carolina.
- Each state is required to implement and maintain a permit system for commercial fishermen, commercial dealers and for-hire operators who land, sell, and catch fish in state waters.
- States must submit annual compliance reports verifying that the above listed FMP requirements have been implemented. Compliance reports should also include an overview of permitting requirements for commercial and party/charter vessels and commercial dealers.

Based on the annual state compliance reports, the PRT determined all states and jurisdictions implemented a management program in 2020 consistent with the intent of the ISFMP for

Bluefish (Amendment 1 and Addendum I). With the exception of Georgia, all states implemented the recreational measures of 3 fish for private anglers and 5 fish for for-hire operators. In February 2020, the Board determined that Georgia's proposal to enact a closure during wave 2 (March-April) was conservationally equivalent to the coastwide measures. While not all states were able to meet the 100 fish biological sampling requirement and complete all fishery independent monitoring, every state made a good faith effort to do so despite the challenges faced during the pandemic. Refer to Table 4 for state monitoring and reporting requirements, Table 5 for fishery regulations by state in 2020, and Table 1 for commercial quota monitoring and harvest.

Maine, South Carolina, and Georgia requested *de minimis* status for 2021. Maine, South Carolina, and 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 estimate (Table 1).

VII. Plan Review Team Comments and Recommendations

- North Carolina's compliance report indicates an overage of their commercial quota in 2020. GARFO has indicated that they are using SAFIS data to inform catch accounting, which had a lower landings value for North Carolina and does not display a quota overage for the year. As such GARFO has determined that an overage payback will not be needed moving forward.
- Setting aside the bullet above, the PRT found that all states implemented regulations consistent with the intent of Amendment 1 and Addendum I of the Bluefish Interstate FMP. However, the PRT was unclear as to whether the quota overage was consistent with the FMP.
- While SAFIS and ACCSP Data Warehouse landings align for most states, there are some discrepancies between the two databases. For example, SAFIS does not include all North Carolina data due to legal limitations in processing North Carolina's Trip Ticket data. Also, conversion factors differ between SAFIS and the ACCSP Data Warehouse (unit conversion, e.g. gutted fish converted to whole fish in weight). Lastly, SAFIS data is not reviewed by state personnel, whereas the ACCSP Data Warehouse is a more refined database with comprehensive data validation. As such, the PRT supports a review of GARFO's decision to utilize SAFIS data for end-of-year commercial quota accounting instead of data from the ACCSP Data Warehouse.
- Maine, South Carolina and Georgia requested and meet the requirements for *de minimis* status for 2020.

VIII. Research Recommendations

Research recommendations were identified during the [2015 Bluefish Benchmark Stock Assessment at the 60th SAW/SARC](#) (pg. 409).

IX. References

- Atlantic States Marine Fisheries Commission (ASMFC). 2011. Proceedings of the Atlantic States Marine Fisheries Commission Bluefish Ageing Workshop. ASMFC, Alexandria, VA. 26p
- Fisheries of the Northeastern United States. Atlantic Bluefish Fishery; Revised 2020 and Projected 2021 Specifications and Recreational Management Measures. 50 CFR Part 648. Vol 85, No. 91. Monday, May 11, 2020.
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- Northeast Fisheries Science Center. 2015. 60th Northeast Regional Stock Assessment Workshop (60th SAW) Assessment Summary Report. US Dept Commer, Northeast Fish Sci Cent Ref Doc. 15-07; 36 p. doi: 10.7289/V5D21VKV
- Northeast Fisheries Science Center. 2019. Operational Assessment of the Black Sea Bass, Scup, Bluefish, and Monkfish Stocks, Updated Through 2018. Report to the MidAtlantic Scientific and Statistical Committee. 164 p. Available at: http://www.mafmc.org//Operational-Assessments-for-Black-SeaBass_Scup_Bluefish.pdf.

X. Tables

Table 1. 2020 and 2021 state-specific shares of commercial bluefish quota and 2020 harvest by weight (lb.). Landings data source: state compliance reports. C = landings values are confidential.

State	% of Federal Quota	2020 Initial Quota	2020 Transfers	2020 Final Quota	2020 Landings	Overages	% Quota Used	% Coastwide Total	2021 Initial Quota
ME	0.6685	18,496	-15,000	3,496	C	0	C	C	18,496
NH	0.4145	11,468	-9,000	2,468	C	0	C	C	11,468
MA	6.7167	185,838	-70,000	115,838	112,667	0	97.3%	4.8%	185,838
RI	6.8081	188,366	155,000	343,366	334,730	0	97.5%	14.2%	188,367
CT	1.2663	35,036		35,036	20,707	0	59.1%	0.9%	35,036
NY	10.3851	287,335	100,000	387,335	287,852	0	74.3%	12.2%	287,335
NJ	14.8162	409,934	-145,000	264,934	152,685	0	57.6%	6.5%	409,935
DE	1.8782	51,966	-30,000	21,966	4,303	0	19.6%	0.2%	51,966
MD	3.0018	83,054	-30,000	53,054	20,786	0	39.2%	0.9%	83,054
VA	11.8795	328,682	-125,000	203,682	142,506	0	70.0%	6.1%	328,682
NC	32.0608	887,058	169,000	1,056,058	1,112,960*	56,902	105.4%	47.3%	887,059
SC	0.0352	974		974	C	0	C	C	974
GA	0.0095	263		263	0	0	0.0%	0.0%	263
FL	10.0597	278,332		278,332	165,312	0	59.4%	7.0%	278,332
TOTAL[^]	100.00	2,766,801		2,766,801	2,355,081		85%		2,766,801

[^] totals in table may not match listed quotas due to rounding

* North Carolina's trip ticket program and the ACCSP Data Warehouse list a landings value that is higher than what is recorded in the SAFIS database. NOAA Fisheries currently utilizes the SAFIS database, which does not reflect an overage.

Table 2. Estimated bluefish recreational harvest (A + B1), releases (B2), dead releases (15% of B2), total catch (A+B1+B2), and total removals (Harvest + Dead Releases) in numbers of fish by marine recreational anglers, 2011 to 2020. Source: MRIP. These estimates may differ from MRIP estimates depending on query date (Data queried May 2021).

Year	Total Catch (A+B1+B2)	Harvest (A+B1)	Released (B2)	Dead Releases (15% of B2)	Total Removals (Harvest + Dead Releases)
2011	58,290,651	20,814,884	37,475,767	5,621,365	26,436,249
2012	50,658,364	18,578,836	32,079,528	4,811,929	23,390,765
2013	53,494,663	19,975,050	33,519,613	5,027,942	25,002,992
2014	55,093,764	21,510,650	33,583,114	5,037,467	26,548,117
2015	42,148,963	13,725,107	28,423,856	4,263,578	17,988,685
2016	42,528,744	14,899,721	27,629,023	4,144,353	19,044,074
2017	42,163,134	13,845,808	28,317,326	4,247,599	18,093,407
2018	30,928,700	10,245,708	20,682,992	3,102,449	13,348,157
2019	38,631,936	12,137,290	26,494,646	3,974,197	16,111,487
2020	30,681,826	9,336,222	21,345,604	3,201,841	12,538,063
Average	44,462,075	15,506,928	28,955,147	4,343,272	19,850,200

Table 3. Bluefish Commercial Landings and Recreational Harvest (A + B1) by weight (metric tons, pounds), 2011-2020. Source: ACCSP Data Warehouse (personal correspondence with Joseph Myers), 2021 state compliance reports and MRIP. Estimates may differ from source websites depending on query date (commercial data queried April 2021; recreational data queried May 2021).

Year	Commercial		Recreational (A + B1)		Total	
	MT	Pounds	MT	Pounds	MT	Pounds
2011	2,454	5,409,957	15,522	34,218,747	17,975	39,628,704
2012	2,212	4,876,858	14,756	32,530,917	16,968	37,407,775
2013	1,977	4,359,274	15,603	34,398,329	17,580	38,757,603
2014	2,251	4,962,903	12,267	27,044,276	14,518	32,007,179
2015	1,917	4,225,547	13,653	30,098,649	15,569	34,324,196
2016	1,946	4,289,427	10,957	24,155,304	12,902	28,444,731
2017	1,876	4,135,726	14,548	32,071,433	16,423	36,207,159
2018	1,102	2,429,190	6,020	13,270,862	7,121	15,700,052
2019	1,357	2,990,889	7,056	15,555,889	8,413	18,546,778
2020	1,068	2,355,081	6,160	13,581,218	7,229	15,936,299
Average	1,816	4,003,485	11,654	25,692,562	13,470	29,696,048

Table 4. Status of compliance with monitoring and reporting requirements, 2019 (Y = compliance standards met, N = compliance standards not met, NA = not applicable).

State/ Jurisdiction	Fishery-independent monitoring		Fishery-dependent monitoring		Annual Reporting Status
	Survey(s)	Status	Type(s)	Status (num. of age samples)	
ME*	NA	NA	Rec and Com harvest	NA	Y
NH	Juvenile	Y	Rec and Com harvest	NA	Y
MA	Juvenile	Y	Rec and Com harvest, Age Samples	Y (Spring 24, Fall 75, 100 Total)	Y
RI	Juvenile, Adult	Y	Rec and Com harvest, Age Samples	Y (Spring 104, Fall 55, 159 Total)	Y
CT	Juvenile, Adult	N**	Rec and Com harvest, Age Samples	N**	Y
NY	Juvenile	Y	Rec and Com harvest, Age Samples	N** (Spring 2, Fall 43, 45 Total)	Y
NJ	Juvenile, Adult	N**	Rec and Com harvest, Age Samples	Y (Spring 17, Fall 93, 110 Total)	Y
DE	Juvenile, Adult	Y	Rec and Com harvest	NA	Y
MD	Juvenile	Y	Rec and Com harvest	NA	Y
PRFC	Juvenile	Y	Rec and Com harvest	NA	Y
VA	Juvenile, Adult	Y	Rec and Com harvest, Age Samples	Y (Spring 55, Fall 165, 220 Total)	Y
NC	Adult	N**	Rec and Com harvest, Age Samples	Y (Spring 60, Fall 184, 244 Total)	Y
SC*	NA	NA	Rec and Com harvest	NA	Y
GA*	NA	NA	Rec and Com harvest	NA	Y
FL	Juvenile, Adult	Y	Rec and Com harvest	NA	Y

*granted *de minimis* for 2020 fishing season

**Survey/sampling impacted by COVID-19 challenges

Table 5. Fishery regulations by state, 2020. Minimum size are in total length (TL) except for GA and FL are in fork length (FL).

State/ Jurisdiction	Recreational			Commercial	
	Bag Limit	Season	Size Limit	Trip and Size Limit	Open Season
ME	3 fish	All year	None	No Restrictions	All year
NH	3 fish private angler; 5 fish for-hire	All year	None	No Restrictions	July 1 - Sept 30
MA	3 fish private angler; 5 fish for-hire	All year	None	5,000 lbs/day or trip (whichever is longer)	All year
RI	3 fish private angler; 5 fish for-hire	All year	None	18" min size; 1,000 lbs/bi-wk (1.1-4.30) 6,000 lbs/wk (5.1-11.15) 500 lbs/wk (11.16-12.31)	All year
CT	3 fish private angler; 5 fish for-hire	All year	None	9" min size; 500 lbs/trip	All year
NY	3 fish private angler; 5 fish for-hire	All year	None	9" min size; Trip Limits: 5,000 lbs (1.1-4.30); 750 lbs (5.1-6.19); 140 lbs (8.7-8.31) 210 lbs (Oct-Dec)	Closure 6.19-8.7
NJ	3 fish private angler; 5 fish for-hire	All year	None	9" min size	Closed to H&L from 1.1-6.15 and 8.8-12.31
DE	3 fish private angler; 5 fish for-hire	All year	None	No Restrictions	All year
MD	3 fish private angler; 5 fish for-hire	All year	8" min size	8" min size	All year
PRFC	3 fish private angler; 5 fish for-hire	All year	8" min size	Trip limits after 80% of VA-MD quota is landed	All year
VA	3 fish private angler; 5 fish for-hire	All year	None	No Restrictions	All year

NC	3 fish private angler; 5 fish for-hire	All year	None	Trip Limits: 1,000 lbs (5.1-7.14); 300 lbs (7.15-12.31);	All year
SC	3 fish private angler; 5 fish for-hire	All year	None	No directed fishery	All year
GA	15 fish	Closure 3/1-4/30	12" min size	12" min size; 15 fish	All Year
FL	3 fish	All year	12" min size	12" min size; 7,500 lbs/day	All year

XI. Figures

Figure 1. Estimated recreational bluefish harvest (A + B1), releases (B2) and dead releases by recreational anglers in numbers of fish, 1985-2020. Note: Harvest and dead releases are additive. Source: MRIP. Estimates may differ from source websites depending on query date (data queried May 2021).

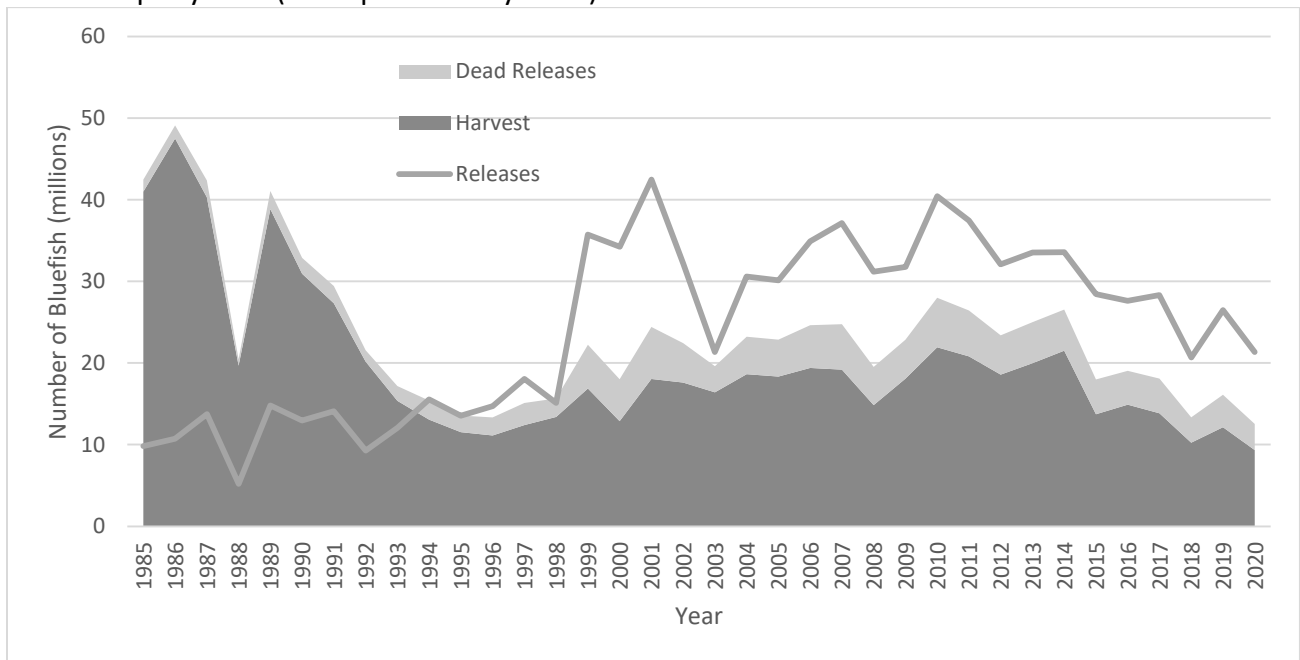


Figure 2. Bluefish recreational harvest and commercial landings by weight, 1985-2020. Source: ACCSP Data Warehouse (personal correspondence with Joseph Myers) and MRIP. Estimates may differ from source websites depending on query date (Commercial data queried May 2021).

