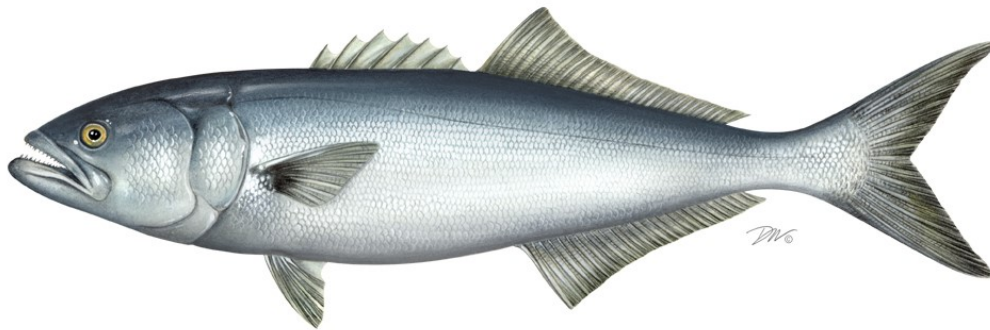


**ATLANTIC STATES MARINE FISHERIES COMMISSION**

**REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN**

**FOR BLUEFISH**  
***(Pomatomus saltatrix)***

**2019 FISHING YEAR**



Prepared by the Plan Review Team

Approved by the Bluefish Management Board August 2020



*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).

2019 recreational bluefish harvest was estimated at 12.1 million fish weighing 15.6 million pounds (Tables 2 and 3). Recreational dead discards were estimated at 4.0 million fish. 2019 recreational landings cannot be compared against the recreational harvest limit (RHL), because the RHL was set using uncalibrated MRIP estimates and the landings estimate uses calibrated MRIP estimates. 2019 commercial bluefish landings were recorded at approximately 3.0 million pounds, which falls below the quota of 7.7 million pounds (Table 1). Total removals of 16.1 million fish in 2019 remains near the time series low of 13.3 million fish reached in 2018 (Figure 2).

In 2019, 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 2020. Maine, South Carolina, and Georgia all qualify for *de minimis* status because their commercial landings in 2019 were less than 0.1% of the coastwide commercial landings estimate.

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## **2019 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<br>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 Technical 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 comprised of members from the Commission's Bluefish Stock Assessment Subcommittee (SAS), the Commission's Bluefish Technical Committee (TC), and the MC 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 V.

### 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 (by comparison of the recreational landings estimate from the previous year), 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 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 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. Spawning stock biomass (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 2010-2019, recreational catch (harvest plus fish caught and released) of bluefish in U.S. waters of the Atlantic coast averaged 47.6 million fish annually (Table 2). In 2019, recreational catch was estimated at 38.6 million fish which is a 25% increase relative to 2018. In 2019, recreational anglers harvested an estimated 12.1 million fish weighing 15.6 million pounds (7,056 metric tons). Both 2018 and 2019 represent years of low harvest relative to the time series average in both pounds and numbers of fish. Additionally the average weight of landed fish for both years is approximately 1.3 pounds, which is significantly lower than the time series average of 2.6 pounds. This is likely 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 New York (23%), North Carolina (19%), Florida (18%) and New Jersey (11%) (Table 3). In 2019, recreational dead discards (15% of B2) were estimated at 4.0 million fish (Table 2).

From 1985-1999, annual commercial landings of bluefish in U.S. waters of the Atlantic coast averaged 11.3 million pounds (5,129 metric tons). After the implementation of the Amendment 1 quota system, from 2000-2019 commercial landings of bluefish have averaged 5.9 million pounds (2,698 metric tons) annually (Figure 2). In 2019, commercial landings were estimated at 3.0 million pounds (1,357 metric tons), an increase of 23% relative to 2018 landings and a 61% underage of the 2019 commercial quota (7.7 million pounds). The majority of commercial

landings came from North Carolina (37%), New York (20%), and Rhode Island (14%). 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 assessment, 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. Refer to Table 4 for status of monitoring efforts by state in 2019.

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 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. 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. 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 2019, most of these 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. Massachusetts collected just 96 samples, just under the 100 sample requirement. South Carolina also reported -- age samples collected by personnel of the SEAMAP-SA Coastal Trawl Survey, and from the South Carolina Inshore Finfish Monitoring program.

As prescribed in the addendum, following the end of the first year of the sampling program, the TC reviewed the sampling design and evaluated the optimal geographic range and sample size for bluefish age data. The TC found the sampling program design to be satisfactory. However, additional TC reviews may be warranted as the program continues, especially in light of the difficulties expressed by some states to collect samples before July.

## **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. The recreational fishery is allocated 83% of the ACL, and 17% is allocated to the commercial fishery. The coastwide commercial quota is allocated to the states via state-specific percentage shares based on landings from 1981-1989 (Table 1).

The 2019 ACL was 21.8 million pounds (9,895 metric tons); after a transfer of 4.0 million pounds from the recreational to commercial sector, the commercial quota was 7.7 million pounds (3,497 metric tons) and the RHL was 11.6 million pounds (5,271 metric tons). 2019 commercial bluefish landings were recorded at approximately 3.0 million pounds, which falls below the quota. 2019 recreational landings cannot be compared against the RHL, because the RHL was set using uncalibrated MRIP estimates and the landings estimate uses the calibrated MRIP estimates. Therefore, no federal accountability measures have been triggered for 2020. 2019 state-specific shares and landings, and initial 2020 state-specific shares are listed in Table 1.

The MAFMC and ASMFC are continuing to work on the development of a rebuilding plan as part of the Bluefish Allocation and Rebuilding Amendment, which will involve a comprehensive review of the Bluefish FMP's sector-based allocations, commercial allocations to the states, transfer processes, as well as the FMP goals and objectives.

## **VI. State-by-State Implementation of 2019 FMP Compliance Requirements**

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 2019:

- Each state must restrict the possession of bluefish by recreational anglers to no 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.
- 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.
- 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 2019 consistent with the intent of the ISFMP for Bluefish (Amendment 1 and Addendum I). All states implemented a recreational possession limit not exceeding 15 fish per person and were able to collect all or nearly all of the 100 required biological samples. Refer to Table 4 for state monitoring and reporting requirements, Table 5 for fishery regulations by state in 2019, and Table 1 for commercial quota monitoring and harvest.

Maine, South Carolina, and Georgia requested *de minimis* status for 2020. 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).

### **Developing Issues:**

When developing the 2020 specifications in 2019, the MC's analysis indicated that landings were projected to exceed the RHL. As such, the Board and Council approved recreational fishery measures that would prevent a landings limit overage. The measures include a coastwide bag limit of 3-fish for private anglers and shore-based anglers, and a 5-fish limit for for-hire anglers. The one exception is Georgia, which has a bag limit of 15 fish, a minimum size of 12 inches, and a seasonal closure which begins March 1 and ends on April 30, 2020. Georgia's measures were approved by the Board through the Commission's Conservation Equivalency Policy.

## **VII. Prioritized Research Needs**

The following research recommendations were identified at the 60<sup>th</sup> SAW/SARC:

### *High Priority*

1. Determine whether NC scale data from 1985-1995 are available for age determination; if available, re-age based on protocols outlined in ASMFC (2001); if re-aging results in changes to age assignments, quantify the effects of scale data on the assessment.
2. Develop additional adult bluefish indices of abundance (e.g., broad spatial scale longline survey or gillnet survey).
3. Expand age structure of SEAMAP index.

### *Moderate Priority*

4. Investigate species associations with recreational angler trips targeting bluefish (on a regional and seasonal basis) to potentially modify the MRIP index used in the assessment model.
5. Explore age- and time-varying natural mortality from, for example, predator-prey relationships; quantify effects of age- and time-varying mortality on the assessment model.
6. Continue to evaluate the spatial, temporal, and sector-specific trends in bluefish growth and quantify their effects in the assessment model.

7. Continue to examine alternative models that take advantage of length-based assessment frameworks. Evaluate the source of bimodal length frequency in the catch (e.g., migration, differential growth rates – also multiple cohorts as noted by the PRT).
8. Modify thermal niche model to incorporate water temperature data more appropriate for bluefish in a timelier manner [e.g., sea surface temperature data & temperature data that cover the full range of bluefish habitat (including South Atlantic Bight and estuaries)].

### **VIII. Plan Review Team Comments and Recommendations**

- The PRT found that all states implemented regulations consistent with the intent of Amendment 1 and Addendum I of the Bluefish Interstate FMP.
- Maine, South Carolina and Georgia requested and meet the requirements for *de minimis* status for 2020.
- Results from an August 2019 operational assessment of bluefish (with data through 2018, including calibrated MRIP estimates) suggest the bluefish stock was overfished and overfishing was not occurring in 2018 relative to updated biological reference points.
- The TC should review the effectiveness of the Addendum I sampling design and reevaluate the optimal geographic range and sample size for bluefish age data.
- The PRT recommends that the TC look into the increased importance of recreational discards in stock assessments. Generating reliable discard length data from recreational anglers could improve the robustness of stock assessments moving forward.

### **IX. References**

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## X. Tables

Table 1. 2019 and 2020 state-specific shares of commercial bluefish quota and 2019 estimated harvest by weight (lbs). Landings data source: SAFIS (query date: June 6, 2019). C = landings values are confidential.

| State                    | % of Federal Quota | 2019 Initial Quota* | 2019 Transfers | 2019 Final Quota | 2019 Landings    | Overages | % Quota Used | % Coastwide Total | 2020 Initial Quota |
|--------------------------|--------------------|---------------------|----------------|------------------|------------------|----------|--------------|-------------------|--------------------|
| ME                       | 0.6685             | 51,538              |                | 51,538           | 0                | 0        | 0.0%         | 0.0%              | 18,496             |
| NH                       | 0.4145             | 31,956              |                | 31,956           | C                | C        | C            | C                 | 11,468             |
| MA                       | 6.7167             | 517,828             |                | 517,828          | 184,171          | 0        | 37.9%        | 6.2%              | 185,838            |
| RI                       | 6.8081             | 524,875             | +150,000       | 674,873          | 415,809          | 0        | 61.6%        | 13.9%             | 188,367            |
| CT                       | 1.2663             | 97,626              |                | 97,626           | 35,550.7         | 0        | 38.8%        | 1.2%              | 35,036             |
| NY                       | 10.3851            | 800,646             |                | 800,646          | 594,841          | 0        | 79.1%        | 19.9%             | 287,335            |
| NJ                       | 14.8162            | 1,142,265           |                | 1,142,263        | 203,271          | 0        | 18.9%        | 6.8%              | 409,935            |
| DE                       | 1.8782             | 144,801             |                | 144,801          | 17,165           | 0        | 12.6%        | 0.6%              | 51,966             |
| MD                       | 3.0018             | 231,426             |                | 231,426          | 22,775           | 0        | 10.5%        | 0.8%              | 83,054             |
| VA                       | 11.8795            | 915,858             |                | 915,858          | 12,4681          | 0        | 14.5%        | 4.2%              | 328,682            |
| NC                       | 32.0608            | 2,471,748           | -150,000       | 2,321,747        | 1,107,902        | 0        | 47.7%        | 37.0%             | 887,059            |
| SC                       | 0.0352             | 2,714               |                | 2,714            | C                | C        | C            | C                 | 974                |
| GA                       | 0.0095             | 732                 |                | 732              | C                | C        | C            | C                 | 263                |
| FL                       | 10.0597            | 775,559             |                | 775,559          | 284696           | 0        | 39.1%        | 9.5%              | 278,332            |
| <b>TOTAL<sup>^</sup></b> | <b>100.00</b>      | <b>7,709,565</b>    | <b>0</b>       | <b>7,709,565</b> | <b>2,990,866</b> | <b>0</b> | <b>39%</b>   |                   | <b>2,766,801</b>   |

<sup>^</sup> totals in table may not match listed quotas due to rounding

Table 2. Estimated bluefish recreational harvest (A + B1), releases (B2), dead discards (DD; 15% of B2), total catch (A+B1+B2), and total removals (Harvest + DDs) in numbers of fish by marine recreational anglers, 2010 to 2019. Source: MRIP. These estimates may differ from MRIP estimates depending on query date (Data queried June 5, 2020).

| <b>Year</b>    | <b>Total Catch<br/>(A+B1+B2)</b> | <b>Harvest<br/>(A+B1)</b> | <b>Released<br/>(B2)</b> | <b>DDs<br/>(15% of B2)</b> | <b>Total Removals<br/>(Harvest + DD)</b> |
|----------------|----------------------------------|---------------------------|--------------------------|----------------------------|------------------------------------------|
| 2010           | 62,350,110                       | 21,929,519                | 40,420,591               | 6,063,089                  | 27,992,608                               |
| 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           | 38,631,935                       | 12,137,289                | 26,494,646               | 3,974,197                  | 16,111,486                               |
| <b>Average</b> | <b>47,628,903</b>                | <b>16,766,257</b>         | <b>30,862,646</b>        | <b>4,629,397</b>           | <b>21,395,654</b>                        |

Table 3. Bluefish Commercial Landings and Recreational Harvest (A + B1) by weight (metric tons, pounds), 2010-2019. Source: ACCSP Data Warehouse (personal correspondence with Joseph Myers) and MRIP. Estimates may differ from source websites depending on query date (2019 commercial data queried April 2020; recreational data queried June 6, 2020).

| Year           | Commercial   |                  | Recreational (A + B1) |                   | Total         |                   |
|----------------|--------------|------------------|-----------------------|-------------------|---------------|-------------------|
|                | MT           | Pounds           | MT                    | Pounds            | MT            | Pounds            |
| 2010           | 3,304        | 7,284,462        | 21,003                | 46,302,792        | 24,307        | 53,587,254        |
| 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        |
| <b>Average</b> | <b>2,040</b> | <b>4,496,423</b> | <b>13,138</b>         | <b>28,964,720</b> | <b>15,178</b> | <b>33,461,143</b> |

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

| State/<br>Jurisdiction | Fishery-independent monitoring |        | Fishery-dependent monitoring     |                                 | Annual<br>Reporting<br>Status |
|------------------------|--------------------------------|--------|----------------------------------|---------------------------------|-------------------------------|
|                        | Survey(s)                      | Status | Type(s)                          | Status<br>(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 (96)                          | Y                             |
| RI                     | Juvenile, Adult                | Y      | Rec and Com harvest, Age Samples | Y (123)                         | Y                             |
| CT                     | Juvenile, Adult                | Y      | Rec and Com harvest, Age Samples | Y (140)                         | Y                             |
| NY                     | Juvenile                       | Y      | Rec and Com harvest, Age Samples | Y (205)                         | Y                             |
| NJ                     | Juvenile, Adult                | Y      | Rec and Com harvest, Age Samples | Y (201)                         | 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 (399)                         | Y                             |
| NC                     | Adult                          | Y      | Rec and Com harvest, Age Samples | Y (965)                         | 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 2019 fishing season

Table 5. Fishery regulations by state, 2019. Minimum size are in total length (TL) except for GA and FL are in fork length (FL).

| State/<br>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                     | 10 fish      | All year | None                 | No Restrictions                                                                                                         | July 1 - Sept 30                                |
| MA                     | 10 fish      | All year | None                 | 5,000 lbs/day or trip<br>(whichever is longer)                                                                          | All year                                        |
| RI                     | 15 fish      | All year | None                 | 12" min size;<br>1,000 lbs/bi-wk (1.1-4.30)<br>8,000 lbs/wk (5.1-11.09)<br>500 lbs/wk (11.10-12.31)                     | All year                                        |
| CT                     | 10 fish      | All year | None                 | 9" min size;<br>1,200 lbs/trip                                                                                          | All year                                        |
| NY                     | 15 fish      | All year | Only 10 fish<br><12" | 9" min size;<br>Trip Limit: 5,000 lbs (Jan-<br>April); 750 lbs (May-Aug);<br>500 lbs (Sept-Oct); 1,000<br>lbs (Nov-Dec) | All year                                        |
| NJ                     | 15 fish      | All year | None                 | 9" min size                                                                                                             | Closed to H&L<br>from 1.1-6.15<br>and 8.8-12.31 |
| DE                     | 10 fish      | All year | None                 | No Restrictions                                                                                                         | All year                                        |
| MD                     | 10 fish      | All year | 8" min size          | 8" min size                                                                                                             | All year                                        |
| PRFC                   | 10 fish      | All year | 8" min size          | Trip limits after 80% of VA-<br>MD quota is landed                                                                      | All year                                        |
| VA                     | 10 fish      | All year | None                 | No Restrictions                                                                                                         | All year                                        |
| NC                     | 15 fish      | All year | Only 5 fish<br>> 24" | No Restrictions                                                                                                         | All year                                        |
| SC                     | 15 fish      | All year | None                 | No directed fishery                                                                                                     | All year                                        |
| GA                     | 15 fish      | All year | 12" min<br>size      | 12" min size;<br>15 fish                                                                                                | All Year                                        |
| FL                     | 10 fish      | All year | 12" min<br>size      | 12" min size;<br>7,500 lbs/day                                                                                          | All year                                        |

## XI. Figures

Figure 1. Estimated recreational bluefish harvest (A + B1), releases (B2) and dead discards by recreational anglers in numbers of fish, 1985-2019. Note: Harvest and dead discards are additive. Source: MRIP. Estimates may differ from source websites depending on query date (data queried June 5, 2020).

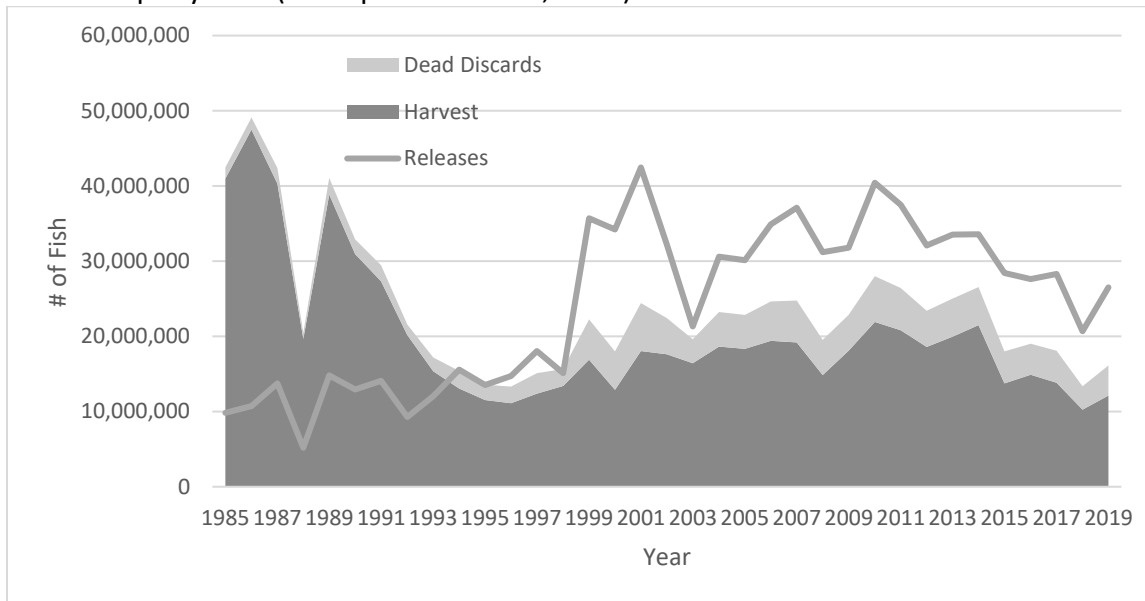


Figure 2. Bluefish recreational harvest and commercial landings by weight, 1985-2019. Source: ACCSP Data Warehouse (personal correspondence with Joseph Myers) and MRIP. Estimates may differ from source websites depending on query date (Commercial data queried April 2020).

