

ATLANTIC STATES MARINE FISHERIES COMMISSION
REVIEW OF THE INTERSTATE FISHERY MANAGEMENT PLAN

FOR TAUTOG
(Tautoga onitis)

2021 FISHING YEAR



Prepared by the Plan Review Team

Approved by the Tautog Management Board
June 27, 2023



Sustainable and Cooperative Management of Atlantic Coastal Fisheries

**REVIEW OF THE ASMFC FISHERY MANAGEMENT PLAN AND STATE COMPLIANCE FOR
TAUTOG (*Tautoga onitis*) FOR THE 2021 FISHERY**

Management Summary

Date of FMP:

March 1996

Addenda/Amendments:

- Addendum I to FMP (May 1997)
- Addendum II to FMP (November 1999)
- Addendum III to FMP (February 2002)
- Technical Addendum I (February 2003)
- Addendum IV to FMP (January 2007)
- Addendum V to FMP (August 2007)
- Addendum VI to FMP (March 2011, revised March 2012)
- Amendment 1 to FMP (October 2017)

Management Unit: US state waters from Massachusetts through Virginia¹.

States With Declared Interest: Massachusetts-Virginia, excluding Pennsylvania

Additional Jurisdictions: National Marine Fisheries Service

Active Boards/Committees: Tautog Management Board (Board)

- Tautog Plan Development Team (PDT)
- Tautog Plan Review Team (PRT)
- Tautog Technical Committee (TC)
- Tautog Stock Assessment Subcommittee (SAS)
- Tautog Advisory Panel (AP)

Stock Assessments:

- Benchmark: 1999, 2005, 2015
- Update: 2011 (revised in 2012), 2016, 2021

¹ North Carolina was originally included in the management unit, but as of 2017 was removed due to insignificant landings. North Carolina's landings will continue to be monitored.

I. Status of Fishery Management Plan

[Fishery Management Plan for Tautog](#)

The original FMP responded to concerns about the vulnerability of tautog to overfishing and increasing fishing pressure in the early 1990s. It established goals and objectives for tautog management, and adopted a fishing mortality rate (F) target of 0.15 to rebuild the stocks and prevent overfishing; however, an interim target of 0.24 was applied for two years (1997–1998). States were required to implement state-specific, Board-approved plans to reduce F from the coastwide average of 0.58 (i.e., a 55% reduction), or an alternative state-specific F, if it could be demonstrated as equivalent. Recreational and commercial minimum size limits of 13" in 1997 and 14" beginning in 1998 were required. Tautog pots and traps were also required to have degradable fasteners on one panel or door.

[Addendum I](#)

Addendum I modified the FMP's compliance schedule to allow all states until April 1, 1998 to implement management measures to reach the interim F target. Several states were having difficulty determining a state-specific F to meet the original compliance schedule due to data deficiencies. In addition, the compliance schedule implemented the interim F target one year earlier in the area north of Delaware Bay (April 1, 1997) than further to the south (April 1, 1998). The addendum also delayed the implementation of management measures to achieve the permanent F target from April 1, 1999 to April 1, 2000. Finally, the Addendum included *de minimis* requirements and corrected several typographical errors in the FMP.

[Addendum II](#)

Addendum II further extended the compliance schedule to achieve the permanent F target until April 1, 2002 because the effects of the regulations to achieve the interim F target were uncertain. It also listed four issues to be considered in subsequent revisions of the FMP: (1) development of alternative F targets that will allow states to quantify harvest reductions associated with a variety of management approaches, (2) clarification of the F targets to be met by sector or overall state program, (3) monitoring requirements to improve fisheries and biological data collection, and (4) data requirements to analyze management options by fishing modes within commercial and recreational fisheries.

[Addendum III and Technical Addendum I](#)

Addendum III addressed the four issues listed in Addendum II. It adopted a new F target based on achieving 40% of the spawning stock biomass ($F_{40\%SSB}$), which was estimated at 0.29 (compared to the coastwide average F estimate of 0.41). The addendum required states to maintain current or more restrictive measures for 2002 and implement measures to achieve the new F target—a 48% reduction through restrictions in the recreational fishery only—by April 1, 2003. It also updated information on tautog habitat and established monitoring requirements to support stock assessments, including the collection of 200 age and length samples per state, within the range of lengths commonly caught by the fisheries. Technical Addendum 1 corrected a typographical error in Addendum III.

Addendum IV

Addendum IV established SSB target and threshold reference points based on a benchmark stock assessment completed in 2005. The target was set as the average SSB over 1982–1991, and the threshold at 75% of this value. It also set a new F target of 0.20 to initiate rebuilding. States were required to implement recreational management programs to achieve a 28.6% reduction in F relative to 2005 (and maintain existing commercial management programs) by January 1, 2008.

Addendum V

As individual states developed management proposals to comply with Addendum IV's mandated reduction in fishing mortality, it became apparent that commercial harvest of tautog had grown in proportion to the recreational fishery in some states. The Board approved Addendum V to give states flexibility for implementing reductions in their recreational *and/or* commercial fisheries to reach the fishing mortality target rate of $F = 0.20$ established in Addendum IV by January 1, 2008.

Addendum VI

Based on the 2011 stock assessment update indicating that tautog were still overfished and experiencing overfishing, Addendum VI reduced the F target to 0.15 to rebuild the stock. States were required to implement Board-approved regulations in their commercial and/or recreational fisheries to reduce harvest by 39%. The addendum also allowed for regional considerations if a state or group of states could demonstrate that the local F is below the rates indicated in the stock assessment update.

Amendment 1

Amendment 1 replaced the original FMP, with an implementation date of April 1, 2018 for most measures. Major revisions to the FMP include: new goals and objectives, establishment of four tautog stocks for regional recreational and commercial management, and creation of a commercial harvest tagging program (implementation in 2020).

Goals:

- To sustainably manage tautog over the long-term using regional differences in biology and fishery characteristics as the basis for management.
- To promote the conservation and enhancement of structured habitat to meet the needs of all stages of tautog's life cycle.

Objectives:

- To develop and implement management strategies to rebuild tautog stocks to sustainable levels (reduce fishing mortality to the target and restore spawning stock biomass to the target), while considering ecological and socio-economic impacts.
- To adopt compatible management measures among states within a regional management unit.

- To encourage compatible regulations between the states and the EEZ, which includes enacting management recommendations that apply to fish landed in each state (i.e., regulations apply to fish caught both inside and outside of state waters).
- To identify important habitat and environmental quality factors that support the long-term maintenance and productivity of sustainable tautog populations throughout their range.
- To promote cooperative interstate biological, social, and economic research, monitoring and law enforcement.
- To encourage sufficient monitoring of the resource and collection of additional data, particularly in the southern portion of the species range, that are necessary for development of effective long-term management strategies and evaluation of the management program.
- To work with law enforcement to minimize factors contributing to illegal harvest.

Regional Management: Based on the 2016 regional stock assessment, Amendment 1 delineates the stock into four regions due to differences in biology and fishery characteristics: Massachusetts - Rhode Island (MARI); Long Island Sound (LIS); New Jersey - New York Bight (NJ-NYB); and Delaware - Maryland - Virginia (DelMarVa). The four regions are required to implement measures to achieve the regional fishing mortality target with at least a 50% probability.

The 2016 assessment found that all regions except MARI were overfished, and overfishing was occurring in the LIS and NJ-NYB regions in 2015. As such, Amendment 1 requires the LIS region to reduce harvest by at least 20.3%, and the NJ-NYB region to reduce harvest by at least 2%. The MARI and DelMarVa regions were not required to reduce harvest, but established regional measures.

Commercial Harvest Tagging Program: Amendment 1 also establishes a commercial harvest tagging program to address an illegal, unreported, and undocumented fishery. Coastwide implementation of the program began in 2020; more information on the current implementation can be found in Section VI. Status of Management Measures and Issues.

II. Status of the Stocks

Current stock status is based on the 2021 stock assessment update, which uses the methodology that was approved for management use as part of the 2016 benchmark stock assessment. The assessment evaluates each of the four regions—MARI, LIS, NJ–NYB, and DelMarVa—separately using the ASAP statistical catch-at-age model with landings and index data through 2020. This is the first stock assessment for tautog to use recreational catch estimates from the Marine Recreational Information Program (MRIP) since major revisions to its methodology. The new MRIP estimates resulted in higher estimates of spawning stock biomass (SSB) and recruitment in all regions, but had less of an impact on fishing mortality.

The 2021 stock assessment update found improvements in most regions since the last assessment (2017). Overfishing was no longer occurring in any region in 2020 (a change for LIS and NJ-NYB), while only the NJ-NYB region remained overfished in 2020 (with LIS and DelMarVa moving out of this category). F was below the target in the DelMarVa and MARI regions, and between the target and threshold in the LIS and NJ-NYB regions. Strong year classes in MARI and LIS in recent years appear to have contributed to increasing trends in spawning stock biomass, while a significant decline in F in DelMarVa since 2012 has resulted in an increase in SSB there. While the NJ-NYB region remains overfished, the SSB has been trending upward since the last assessment. The current overfishing and overfished definitions for management use are shown in Table 1, and spawning stock biomass (SSB) for each region relative to the respective targets and thresholds are shown in Figures 1-4.

IV. Status of the Fishery

Total Harvest

Between 1981 and 2021², total coastwide tautog harvest (recreational + commercial) peaked at 22.5 million pounds in 1986. Harvest has since declined significantly, starting before state restrictions were implemented. Total harvest during the ASMFC managed period (1996–2021) has averaged approximately 7.7 million pounds per year (Figure 9, Table 2).

Recreational Harvest

Tautog is predominantly taken by the recreational fishery: 96% on average, by weight (Table 2). Coastwide, anglers harvested historic highs of over 20 million pounds of tautog in 1986 and 1992 (Figure 9). Since then, harvest has declined, fluctuating between 3.4 million pounds (in 2018) and 13.2 million pounds (in 2021). Most recreational harvest occurs in September–December (Figure 10). At the state level, New York, New Jersey, and Rhode Island anglers harvested the most tautog in 2021 (Tables 4 and 5), though high harvesting states have varied significantly in recent years (Figure 11).

Recreational releases have generally increased relative to harvest over the time series. Prior to the FMP's implementation in 1996, the number of fish released alive annually was less than harvest, but since then releases have been several times greater than the harvest (Table 4). In 2021, the live releases of 21.99 million fish were more than six times the estimated harvest of 3.3 million fish. A discard mortality rate of 2.5% is assumed for the recreational tautog fishery, resulting in an estimated 549,728 recreational dead discards in 2021. This equates to approximately 14% of recreational removals.

Commercial Landings

Historically, tautog was considered a “trash fish” until the late 1970s, when demand increased, and a directed commercial fishery developed. Landings quickly rose, peaking in 1987 at nearly 1.2 million pounds, then rapidly began to decline. In 1992, states began to implement commercial regulations, which contributed to a decline in landings (Figure 12, Table 2).

² Systematic recreational data collection for tautog began in 1981, while commercial data exists back to 1950.

Landings in 2021 were approximately 423,820 pounds. The ex-vessel price (dollars per pound) for tautog steadily increased from the late 1970s until 2020. In 2021, the coastwide average price was \$3.54 per pound (Figure 12).

Commercial landings accounted for approximately 3% of total coastwide harvest in 2021. On a state level, commercial landings comprised no more than 8.5% of a state's total landings (Table 3). New York had the most commercial landings of tautog in 2021 (67% of the coastwide total), with Massachusetts landing the second greatest amount (approximately 16% of the coastwide total) (Table 6). Data on commercial discards are not available.

V. Status of Research and Monitoring

All states are required to collect the following data to continue support of a coast-wide stock assessment: commercial and recreational catch estimates, and 200 age and length samples per state, within the range of lengths commonly caught by the fisheries. Table 9 lists the number and source of samples collected by states in 2021.

Ongoing fishery-independent and fishery-dependent monitoring programs performed by each state are summarized in Tables 10 and 11, respectively. Details of monitoring results are found in the state compliance reports.

VI. Status of Management Measures and Issues

Amendment 1 to the Tautog Fishery Management Plan was approved by the Board in October 2017, with an implementation deadline of April 2018 for all mandatory measures except the commercial tagging program having a January 2019 deadline. All states adopted regulations compliant with the FMP in time for the April 2018 deadline. The Board subsequently delayed the tagging program implementation deadline to January 2020, which all states met with an exception of Connecticut and New York; these states requested an extension until 2021 due to challenges presented by the COVID-19 pandemic. For 2021, all states have implemented the tagging program.

VII. Implementation of FMP Compliance Requirements

A. Submission of Compliance Report

All states in the tautog management unit submitted state compliance reports for the 2021 fishing year.

B. *De Minimis* Status Requests

A state may apply for *de minimis* status with regards to its commercial fishery. To qualify for *de minimis* status a state must prove that its commercial landings in the most recent year for

which data are available did not exceed 10,000 pounds or 1% of the regional commercial landings, whichever is greater. States must request *de minimis* status each year, and requests for *de minimis* status will be reviewed by the PRT as part of the annual FMP review process.

If *de minimis* status is granted, the *de minimis* state is still required to implement the commercial minimum size provision, the pot and trap degradable fastener provision, the commercial tagging program, and regulations consistent with those in the recreational fishery (including possession limits and seasonal closures). The state must monitor its landings on at least an annual basis. If granted *de minimis* status, a state must continue to collect the required 200 age/length samples. *De minimis* status does not impact a state's compliance requirements in the recreational fishery.

The commercial landings threshold for *de minimis* status for 2021 in each region is 10,000 pounds. The states of Delaware and Maryland have requested and qualify for continued *de minimis status* for the commercial sector. The PRT recommends that the Board approve the states of Delaware and Maryland's requests.

C. Regulatory Requirements: 14" minimum size limit for recreational and commercial fisheries; degradable fasteners on one panel or door in fish pots and traps; and regional management programs to achieve the required regional target F.

State regulations are summarized in Tables 7 and 8. Nearly every state needed to adjust their commercial and recreational measures to comply with the provisions of Amendment 1. In 2021, Massachusetts' commercial landings exceeded the state quota by 7.36%. Massachusetts adjusted their 2022 quotas to account for the overage.

For the 2022 fishing year, Rhode Island implemented a change to their recreational possession limits. While the possession limit and minimum size remains unchanged, there is now a maximum size such that only one fish of the bag limit may be greater than 21-inches.

The PRT finds that each state has met the regulatory requirements and recommends the Board find all states in compliance with the regulatory requirements.

D. Biological Sampling Requirements: commercial and recreational catch estimates; and 200 age/length samples

Virginia did not collect 200 age/length samples in 2021 as required (Table 9). The state indicated that staffing challenges posed by the COVID-19 pandemic prevented them from collecting 200 samples.

The PRT finds that all states met the intent of the sampling requirements and recommends the Board find all states in compliance with the sampling requirements of the FMP. In 2019, the Technical Committee reconfirmed that 200 was the minimum number of biological samples needed for adequate catch characterization.

Commercial Tagging Program

All states participated in the commercial tagging program in 2021. State tagging information is summarized in Table 12. The percentage of issued tags that were returned varied between 27% and 73%, and the coastwide return rate was 30%.

The PRT noted that there were 18,417 tags (7.2% of tags issued) unaccounted for coastwide, primarily in Rhode Island and New York. Therefore, the PRT is recommending that states work to reduce the number of tags unaccounted for.

VIII. Prioritized Research Needs

The following research recommendations are from the [2016 Tautog Regional Stock Assessment and Desk Review Report](#). The Technical Committee identified the research recommendations to improve the stock assessment and our understanding of tautog population and fishery dynamics. Research recommendations are organized by topic and level of priority. Research recommendations that should be completed before the next benchmark assessment are underlined. The Technical Committee will update these recommendations as part of the next benchmark stock assessment.

8.1 Fishery-Dependent Priorities

High

- Expand biological sampling of the commercial catch for each gear type over the entire range of the stock (including weight, lengths, age, sex, and discards).
- Continue collecting opercula from the tautog catch as the standard for biological sampling in addition to collecting paired sub-samples of otoliths and opercula.
- Increase catch and discard length sampling from the commercial and recreational fishery for all states from Massachusetts through Virginia.
- Increase collection of effort data for determining commercial and recreational CPUE.
- Increase MRIP sampling levels to improve recreational catch estimates by state and mode. Current sampling levels are high during times of the year when more abundant and popular species are abundant in catches, but much lower in early spring and late fall when tautog catches are more likely.

8.2 Fishery-Independent Priorities

High

- Conduct workshop and pilot studies to design a standardized, multi-state fishery independent survey for tautog along the lines of MARMAP and the lobster ventless trap survey.

- Establish standardized multi-state long-term fisheries-independent surveys to monitor tautog abundance and length-frequency distributions, and to develop YOY indices.
- Enhance collection of age information for smaller fish (<20 cm) to better fill in age-length keys

8.3 Life History, Biological, and Habitat Priorities

Moderate

- Define local and regional movement patterns and site fidelity in the southern part of the species range. This information may provide insight into questions of aggregation versus recruitment to artificial reef locations, and to clarify the need for local and regional assessment.
- Assemble regional reference collections of paired operculum and otolith samples and schedule regular exchanges to maintain and improve the precision of age readings between states that will be pooled in the regional age-length keys.
- Calibrate age readings every year by re-reading a subset of samples from previous years before ageing new samples. States that do not currently assess the precision of their age readings over time should do so by re-ageing a subset of their historical samples.

Low

- Evaluate the potential impacts of climate change on tautog range, life history, and productivity.
- Conduct a tag retention study to improve return rates, particularly in the northern region.
- Define the status (condition and extent) of optimum or suitable juvenile habitats and trends in specific areas important to the species. It is critical to protect these habitats or to stimulate restoration or enhancement, if required.
- Define the specific spawning and pre-spawning aggregating areas and wintering areas of juveniles and adults used by all major local populations, as well as the migration routes used by tautog to get to and from spawning and wintering areas and the criteria or times of use. This information is required to protect these areas from damage and overuse or excessive exploitation.
- Define larval diets and prey availability requirements. This information can be used as determinants of recruitment success and habitat function status. Information can also be used to support aquaculture ventures with this species.
- Define the role of prey type and availability in local juvenile/adult population dynamics over the species range. This information can explain differences in local abundance, movements, growth, fecundity, etc. Conduct studies in areas where the availability of primary prey, such as blue mussels or crabs, is dependent on annual recruitment, the effect of prey recruitment variability as a factor in tautog movements (to find better

prey fields), mortality (greater predation exposure when leaving shelter to forage open bottom), and relationship between reef prey availability/quality on tautog condition/fecundity.

- Define the susceptibility of juveniles to coastal/anthropogenic contamination and resulting effects. This information can explain differences in local abundance, movements, growth, fecundity, and serve to support continued or increased regulation of the inputs of these contaminants and to assess potential damage. Since oil spills seem to be a too frequent coastal impact problem where juvenile tautog live, it may be helpful to conduct specific studies on effects of various fuel oils and typical exposure concentrations, at various seasonal temperatures and salinities. Studies should also be conducted to evaluate the effect of common piling treatment leachates and common antifouling paints on YOY tautog. The synergistic effects of leaked fuel, bilge water, treated pilings, and antifouling paints on tautog health should also be studied.
- Define the source of offshore eggs and larvae (in situ or washed out coastal spawning).
- Confirm that tautog, like cunner, hibernate in the winter, and in what areas and temperature thresholds, for how long, and if there are special habitat requirements during these times that should be protected or conserved from damage or disturbance. This information will aid in understanding behavior variability and harvest availability.

8.4 Management, Law Enforcement, and Socioeconomic Priorities

Moderate

- Collect data to assess the magnitude of illegal harvest of tautog and the efficacy of the tagging program.

Low

- Collect basic sociocultural data on tautog user groups including demographics, location, and aspects of fishing practices such as seasonality.

Figures & Tables

Figure 1. Estimated spawning stock biomass, with target and threshold levels, for MARI region.

Source: 2021 ASMFC Tautog Regional Stock Assessment Update.

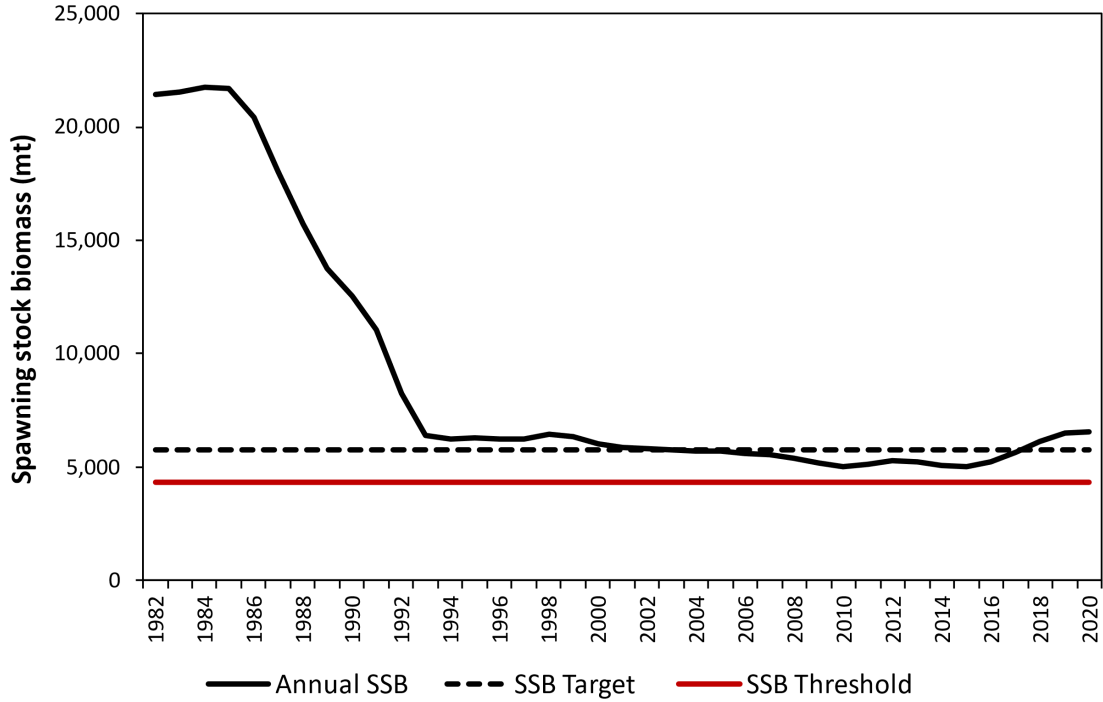


Figure 2. Estimated spawning stock biomass, with target and threshold levels, for LIS region.

Source: 2021 ASMFC Tautog Regional Stock Assessment Update.

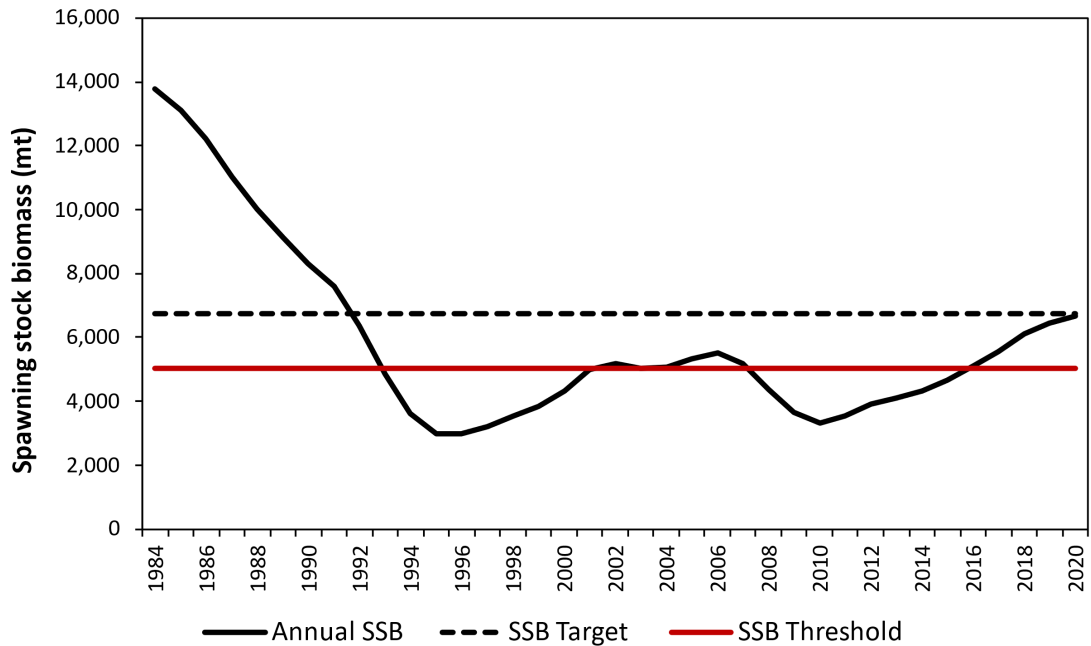


Figure 3. Estimated spawning stock biomass, with target and threshold levels, for NJ-NYB region.
 Source: 2021 ASMFC Tautog Regional Stock Assessment Update.

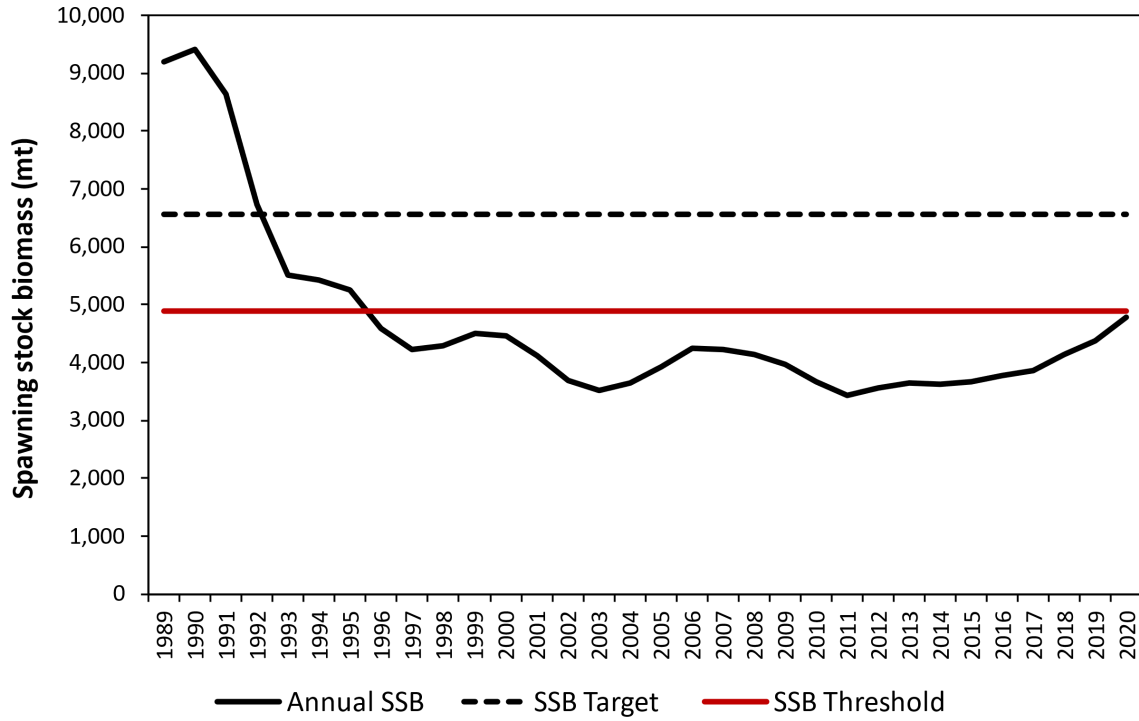


Figure 4. Estimated spawning stock biomass, with target and threshold levels, for DelMarVa region.
 Source: 2021 ASMFC Tautog Regional Stock Assessment Update.

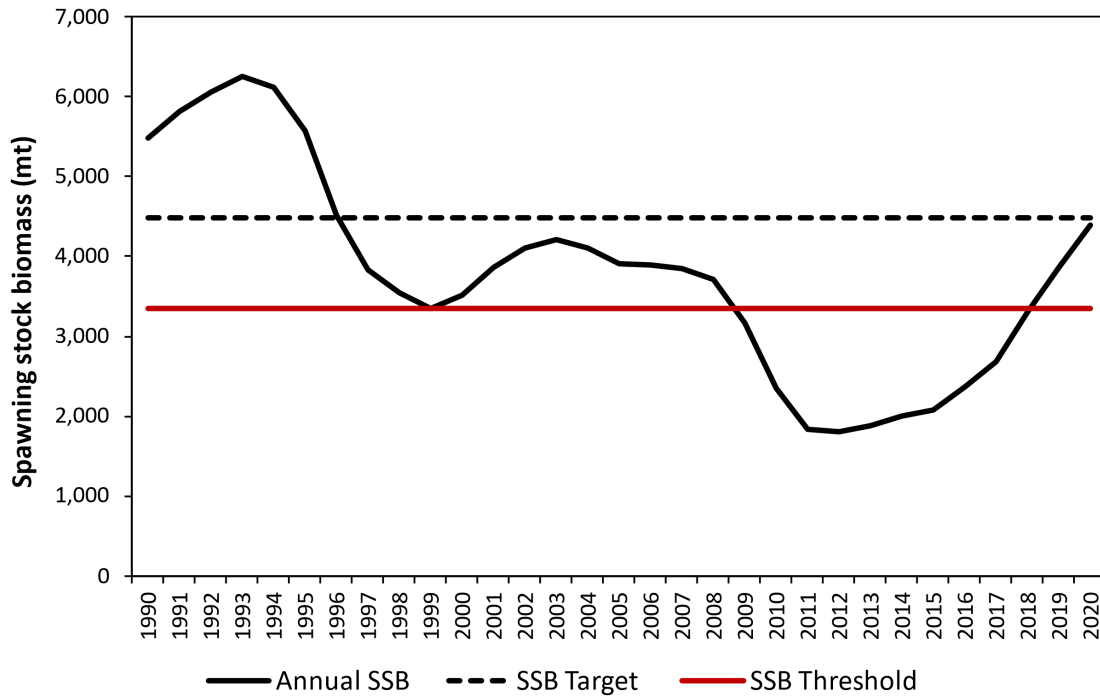


Figure 5. Three-year average fishing mortality rate plotted with the F target and threshold, for MARI region. Source: 2021 ASMFC Tautog Regional Stock Assessment Update.

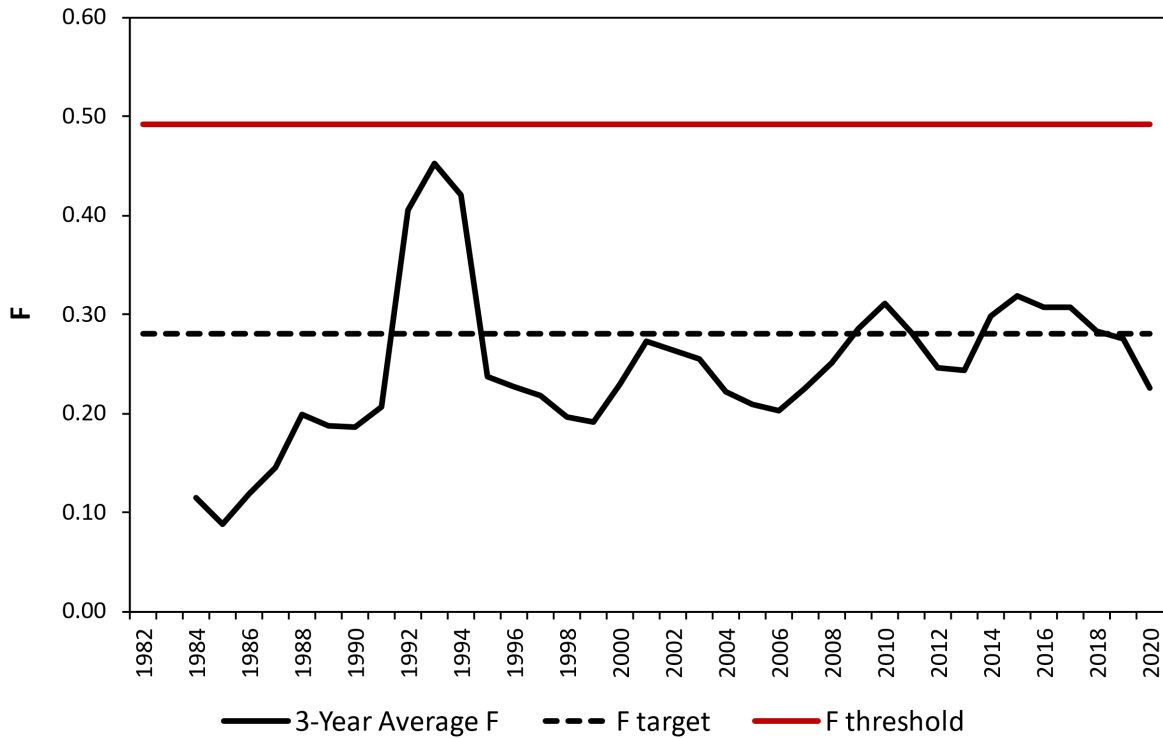


Figure 6. Three-year average fishing mortality rate plotted with the F target and threshold, for LIS region. Source: 2021 ASMFC Tautog Regional Stock Assessment Update.

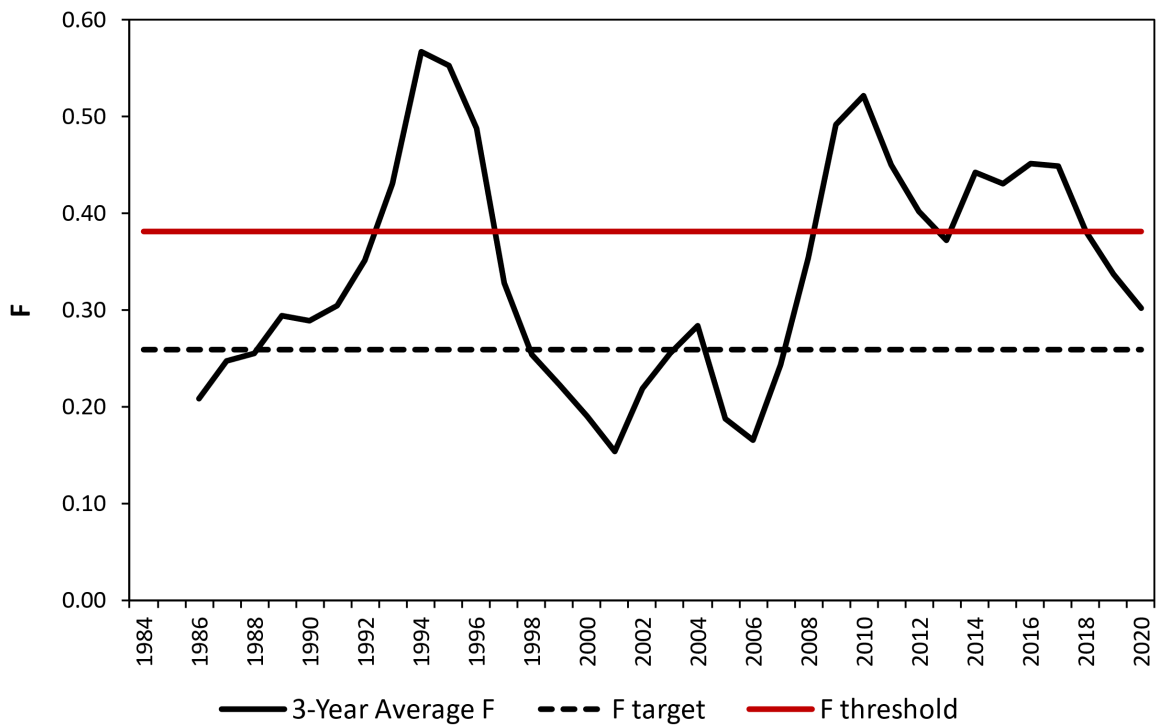


Figure 7. Three-year average fishing mortality rate plotted with the F target and threshold, for NJ-NYB region. Source: 2021 ASMFC Tautog Regional Stock Assessment Update.

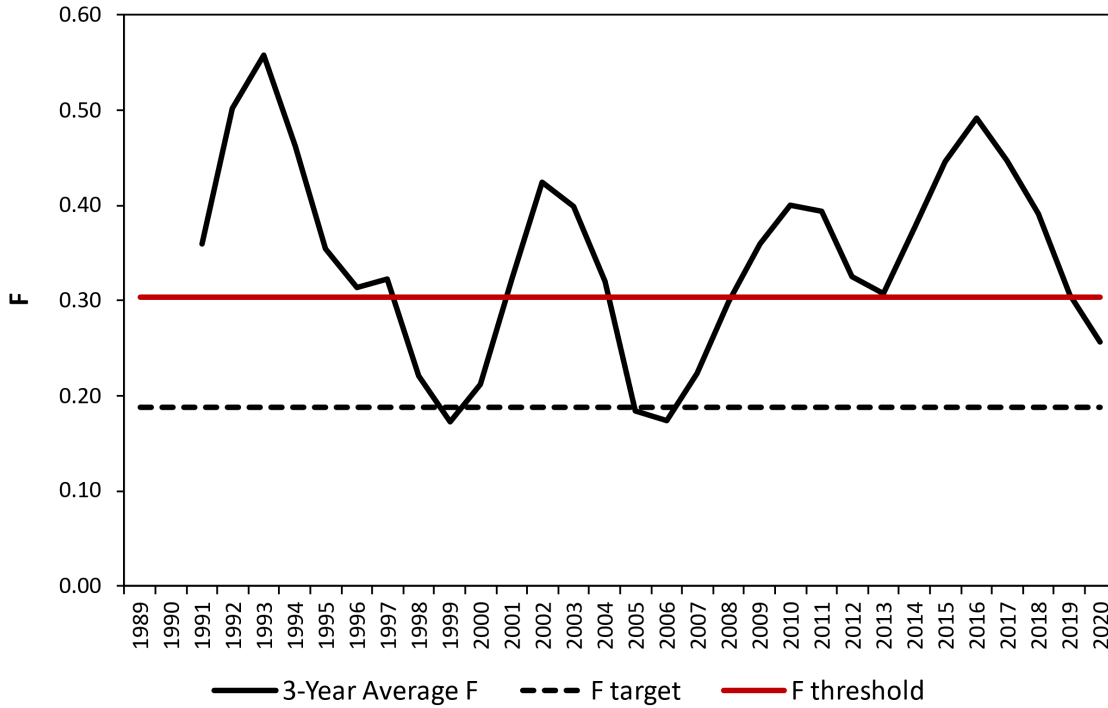


Figure 8. Three-year average fishing mortality rate plotted with the F target and threshold, for DelMarVa region. Source: 2021 ASMFC Tautog Regional Stock Assessment Update.

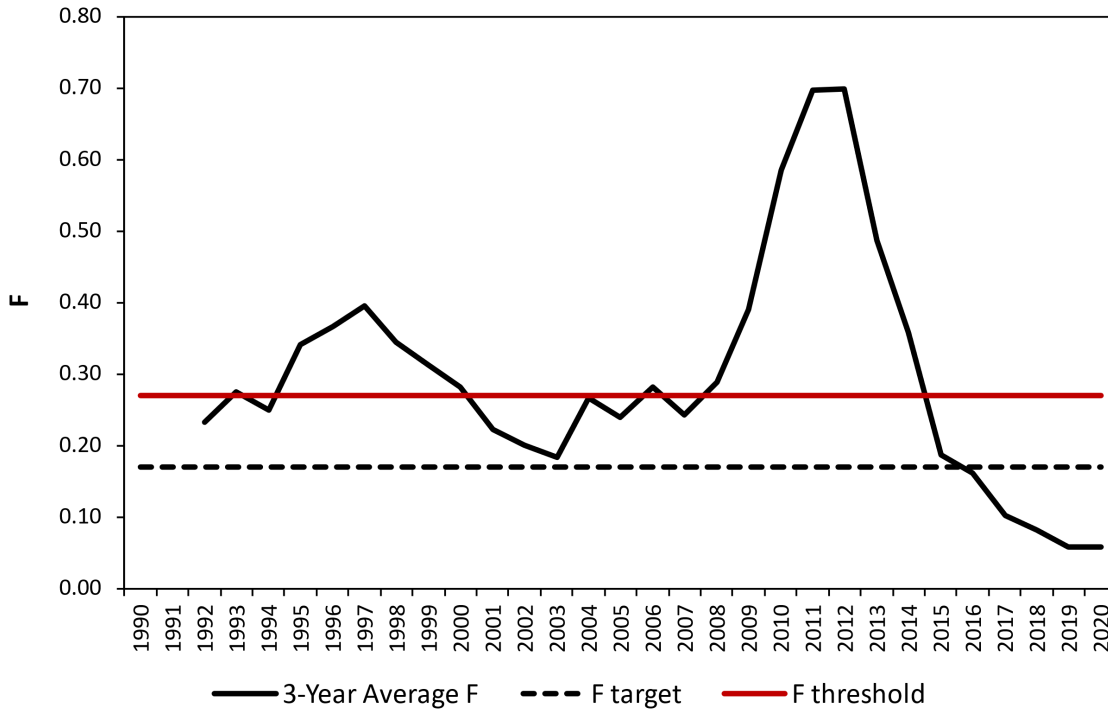


Figure 9. Total tautog harvest (recreational and commercial) in weight, 1981–2020. Source: State compliance reports, MRIP.

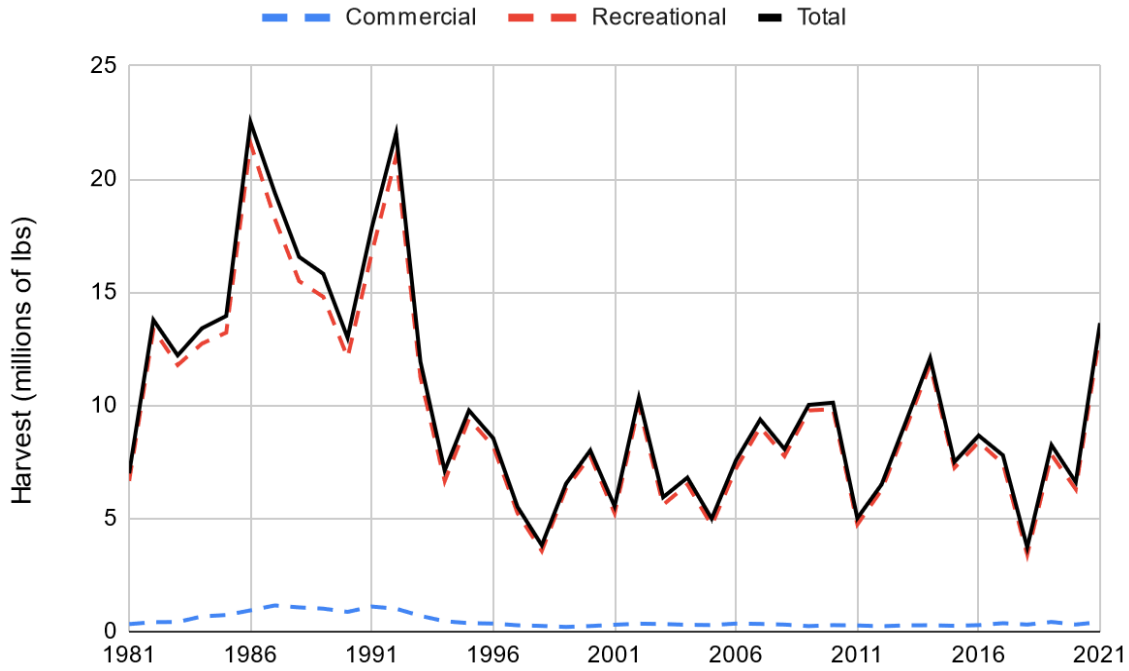


Figure 10. Percent of annual recreational tautog harvest by wave in numbers of fish (2019-2021). Source: MRIP.

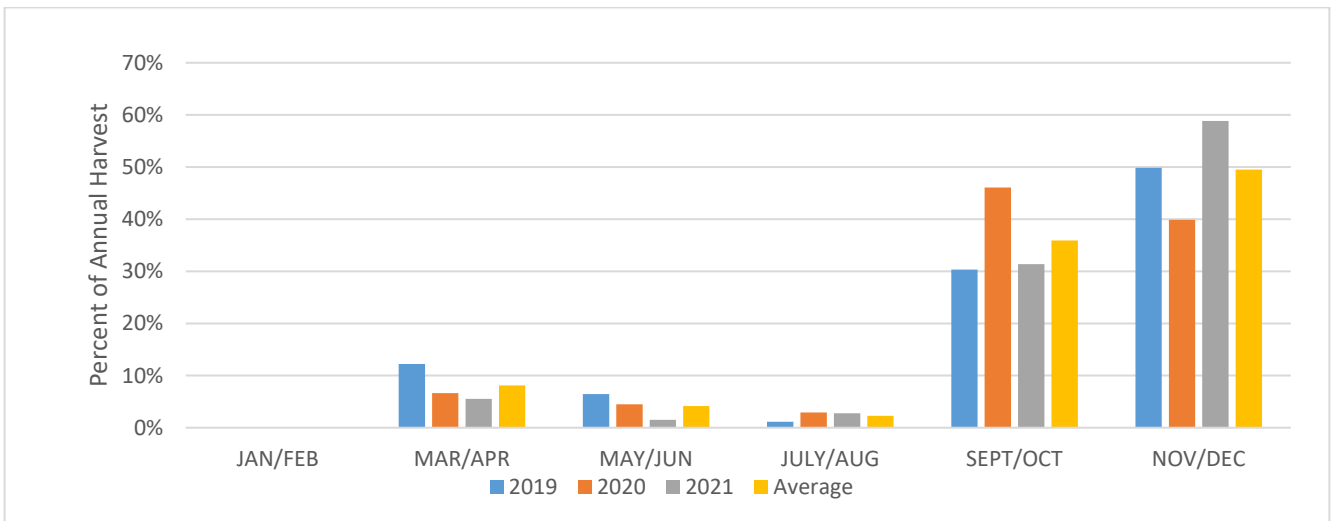


Figure 11. Percent of annual recreational tautog harvest by state in numbers of fish (2019–2021).
 Source: MRIP

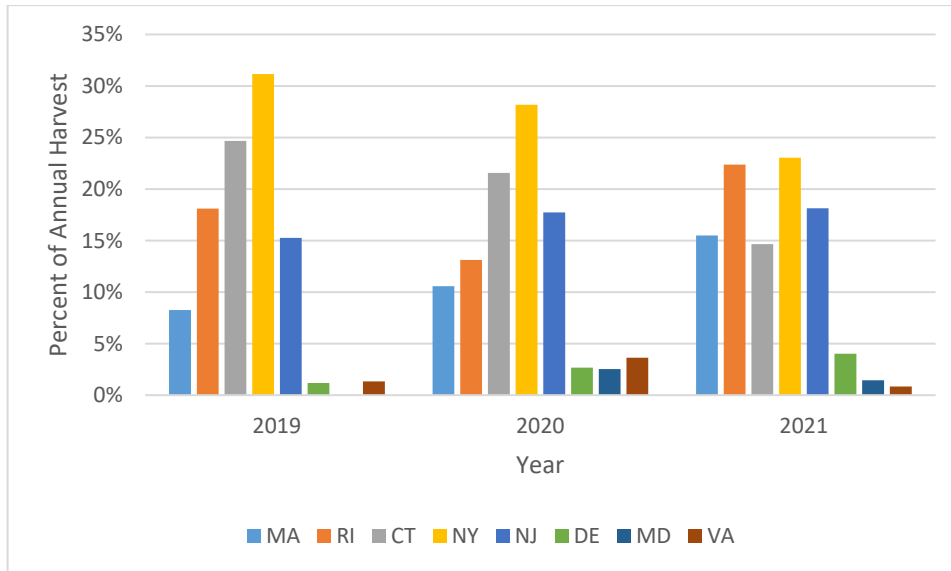


Figure 12. Changes in tautog commercial landings (mt) and price (\$/lb) over time, 1950–2021.
 Source: ACCSP. Price unadjusted for inflation.

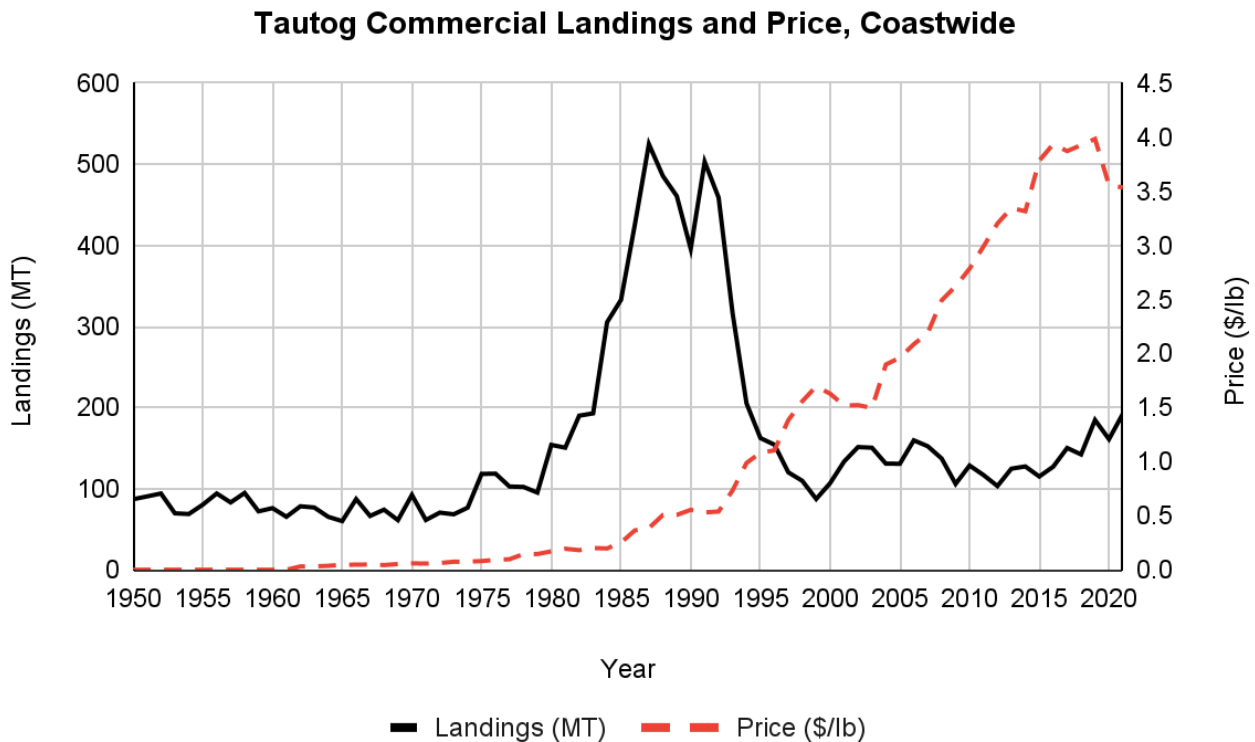


Table 1. Tautog stock status and reference points by region, 2020. Source: ASMFC 2021 Tautog Regional Stock Assessment Update.

Stock Region	Spawning Stock Biomass (in millions of pounds)			Fishing Mortality			Stock Status
	Target	Threshold	2020 Estimate	Target	Threshold	3-year Average	3-year Average
MARI	10.09	7.57	14.90	0.28	0.49	0.23	Not overfished; overfishing not occurring
LIS	14.83	11.12	14.70	0.26	0.38	0.30	Not overfished; overfishing not occurring
NJ-NYB	14.45	10.78	10.54	0.19	0.30	0.26	Overfished; overfishing not occurring
DelMarVa	9.90	7.40	9.66	0.17	0.27	0.06	Not overfished; overfishing not occurring

Table 2. Tautog recreational and commercial landings, 1996–2021, in pounds.

Source: State Compliance Reports, MRIP, and ACCSP Data Warehouse.

Year	Commercial Landings (lb)	Recreational Harvest (lb)	Total Harvest (lb)	% Recreational
1996	357,434	8,218,590	8,576,024	95.8
1997	280,912	5,314,384	5,595,296	95.0
1998	254,186	3,611,576	3,865,762	93.4
1999	207,981	6,350,388	6,558,369	96.8
2000	247,177	7,795,564	8,042,741	96.9
2001	305,193	5,249,781	5,554,974	94.5
2002	350,820	9,998,665	10,349,485	96.6
2003	336,685	5,630,853	5,967,538	94.4
2004	300,749	6,546,309	6,847,058	95.6
2005	289,984	4,755,445	5,045,429	94.3
2006	355,504	7,219,077	7,574,581	95.3
2007	340,925	9,189,558	9,530,483	96.4
2008	310,940	7,758,609	8,069,549	96.1
2009	243,644	9,801,365	10,045,009	97.6
2010	286,081	9,863,150	10,149,231	97.2
2011	263,241	4,740,790	5,004,031	94.7
2012	236,974	6,315,699	6,552,673	96.4
2013	275,839	9,017,101	9,292,940	97.0
2014	282,624	11,831,114	12,113,738	97.7
2015	255,915	7,246,071	7,501,986	96.6
2016	283,906	8,392,901	8,676,807	96.7
2017	364,736	7,546,839	7,911,575	95.4
2018	309,568	3,413,926	3,723,494	91.7
2019	427,078	7,815,557	8,242,635	94.8
2020	313,467	6,290,648	6,604,115	95.3
2021	423,280	13,211,743	13,635,563	96.9
Average	304,364	7,395,327	7,699,691	96

Table 3. 2021 tautog landings by sector: percent recreational and commercial by weight.

State	Commercial Landings (%)	Recreational Harvest (%)
MA	3.5	96.5
RI	1.9	98.1
CT	0.8	99.2
NY	8.5	91.5
NJ	0.1	99.9
DE	0.1	99.9
MD	0.0	100.0
VA	2.4	97.6
Coastwide	3.1	96.9

Table 4. Tautog recreational harvest by state and coastwide discards, in number of fish, 1996-2021. Source: MRIP (calibrated estimates), queried March 29, 2023. *indicates PSE above 50. Dead discards are calculated by applying a 2.5% release mortality rate to live releases.

Year	MA	RI	CT	NY	NJ	DE	MD	VA	Coastwide Harvest	Live Releases	Dead Discards
1996	216,697	143,610	150,523	122,153	1,186,204	116,011	72,805*	636,163	2,644,166	3,196,689	79,917
1997	78,669	174,516	83,153	156,488	573,479	117,773	193,521	161,549	1,539,148	2,443,651	61,091
1998	81,038	122,830	110,246	149,595	24,693*	149,391	16,252*	183,082	837,127	3,030,403	75,760
1999	302,889	191,287	44,581*	407,886	279,727	267,875	23,467*	77,898	1,595,610	5,413,108	135,328
2000	347,448	152,459	68,080*	203,145*	986,484	188,453	63,232*	40,543	2,049,844	3,531,332	88,283
2001	246,811*	86,818	51,941	118,266	819,587	69,987	57,984*	39,132	1,490,526	4,264,960	106,624
2002	232,803	177,095	180,753	1,239,615	501,980	274,966	55,340	69,300	2,731,852	6,330,432	158,261
2003	95,969	328,392	337,867	245,763	215,920	100,802	18,222*	126,406	1,469,341	4,033,018	100,825
2004	39,974*	281,619*	30,930	471,302	238,123	163,916	18,287*	455,060	1,699,211	3,854,918	96,373
2005	155,755	311,966	75,848	153,333	110,309	98,542	63,321	165,205	1,134,279	3,618,496	90,462
2006	102,739	234,042	361,978	265,746	406,800	169,411	34,483*	207,061	1,782,260	5,027,286	125,682
2007	67,432*	234,151	544,712	509,815	624,916	203,846	118,459	155,011	2,458,342	6,694,583	167,365
2008	72,171*	288,488	244,689	577,628	440,588	162,604	45,165	208,062	2,039,395	5,771,441	144,286
2009	66,280	396,834	356,881	690,544	420,013	324,157	107,289	196,142	2,558,140	7,232,074	180,802
2010	153,978	369,830	274,246	540,667	716,531	182,091	289,633	323,725	2,850,701	8,169,876	204,247
2011	173,101	79,060*	42,289	322,704	313,746	117,937	64,296	153,066	1,266,199	6,386,822	159,671
2012	96,356	341,478	411,072	302,811	92,341	95,299	20,018*	66,343*	1,425,718	8,150,037	203,751
2013	239,700	539,787	307,410	472,561	442,787	96,732	22,954	19,720*	2,141,651	10,173,419	254,335
2014	444,331	238,595	515,824	913,413*	533,298	131,857	1,154*	87,315	2,865,787	10,958,634	273,966
2015	188,145*	295,674	389,139	581,203	339,357	29,199	12,442*	24,494	1,859,653	10,664,826	266,621
2016	73,517	343,780	312,312	1,068,978	190,164	46,330	3,774*	39,759*	2,078,614	13,456,496	336,412
2017	635,828	141,132	218,410	405,433	569,177	32,231	18,751*	22,259*	2,043,221	13,642,279	341,057
2018	77,950	330,372*	74,531	163,132	385,283	8,927	18,372*	8,186	1,066,753	9,570,074	239,252
2019	168,766	369,450	503,529	635,866	311,363	24,065	779*	27,214*	2,041,032	13,357,454	333,936
2020	184,653	228,996	376,272	491,868	309,379	46,617	44,088	63,372	1,745,245	14,627,029	365,676
2021	518,470	748,308	490,330	770,796	606,685	134,448	48,258*	27,948	3,345,243	21,989,104	549,728

Table 5. Tautog recreational harvest by state in pounds, 1996-2021.

Source: MRIP (calibrated estimates), queried March 29, 2023. *indicates PSE above 50

Year	MA	RI	CT	NY	NJ	DE	MD	VA	Coastwide Harvest
1996	1,039,911	659,785	490,239	291,482	2,681,849	350,297	98,323*	2,579,380	8,191,266
1997	308,098	666,066	215,724	749,252*	1,712,208	440,518	497,160	644,872	5,233,898
1998	310,600	605,908	391,933	485,810	70,731*	659,867	69,541*	972,294	3,566,684
1999	1,489,331	788,278	153,339*	1,509,977	895,555	1,049,562	42,003*	402,028	6,330,073
2000	1,301,437	689,697	256,201*	662,491*	3,756,593	692,466	161,426*	241,230	7,761,541
2001	1,052,175*	392,503	205,109	506,301	2,502,115	240,771	168,596*	168,102	5,235,672
2002	994,467	743,409	811,658	4,428,843	1,530,757	948,850	140,672	385,679	9,984,335
2003	527,044	1,388,657	1,180,217	875,272	639,110	359,000	59,071	573,624	5,601,995
2004	213,380*	1,590,436*	144,278	1,687,077	639,685	563,332	41,258*	1,624,091	6,503,537
2005	744,036	1,575,453	290,848	566,375	333,100	357,682	167,632	663,938	4,699,064
2006	484,094	1,130,146	1,589,614	1,002,050	1,443,679	599,178	106,149*	858,131	7,213,041
2007	260,548*	1,173,787	2,109,801	1,923,067	2,073,632	598,291	270,530	622,936	9,032,592
2008	230,549*	1,385,061	1,077,399	2,238,160	1,261,010	575,320	119,209	870,249	7,756,957
2009	236,974	1,648,614	1,353,957	3,057,550	1,273,529	1,034,485	277,124	892,873	9,775,106
2010	506,621	1,933,773	1,073,576	1,818,921	1,864,816	464,859	920,773	1,246,453	9,829,792
2011	803,546	328,959*	137,565*	1,284,037	1,008,756	380,758	189,361*	604,361	4,737,343
2012	403,108	1,512,426	2,093,847	1,285,933	312,531	341,014	62,097*	252,111*	6,263,067
2013	860,594	2,602,963	1,290,726	2,207,749	1,530,775	341,896	81,662	75,449*	8,991,814
2014	1,623,718	1,017,780	2,274,293	4,188,165*	1,849,044	485,332	3,544*	365,657*	11,807,533
2015	1,041,059*	1,105,258	1,594,233	2,153,150	1,100,117	100,301	45,067*	100,143*	7,239,328
2016	317,006	1,290,428	1,368,363	4,514,164	582,199	164,887	15,059*	126,136*	8,378,242
2017	2,883,015	600,869	908,162	1,393,812	1,381,992	103,000	59,918*	88,230*	7,418,998
2018	300,066	1,075,131*	295,758	536,332	1,091,046	30,240	54,332*	25,766	3,408,671
2019	646,031	1,483,124	2,133,656	2,455,837	908,872	87,348	2,680*	98,011*	7,815,559
2020	692,588	853,470	1,462,227	1,733,996	1,010,011	154,065	148,760	235,532	6,290,649
2021	1,895,686	2,623,172	2,153,889	3,058,499	2,772,463	479,069	138,985*	89,980	13,211,743

Table 6. Commercial landings for tautog in pounds, by state, 1996-2021.

Source: ACCSP Data Warehouse and State Compliance Reports. 2021 Landings are preliminary.

Year	MA	RI	CT	NY	NJ	DE	MD	VA
1996	32,579	64,817	33,327	105,466	89,435	1,599	3,622	26,137
1997	64,240	39,601	14,519	78,228	49,726	841	7,663	25,471
1998	91,319	20,304	6,905	68,892	42,426	1,715	5,682	14,770
1999	75,619	26,090	12,961	37,886	27,307	confid	6,489	20,901
2000	96,001	43,719	8,504	39,953	39,636	confid	3,896	14,794
2001	84,330	56,065	22,259	62,795	60,152	confid	4,591	14,587
2002	148,073	50,007	26,781	60,805	36,605	confid	5,010	22,834
2003	86,205	54,650	40,784	72,264	66,766	confid	5,213	10,705
2004	88,192	36,581	26,037	76,606	51,057	3,064	6,049	13,079
2005	99,344	42,838	24,053	52,525	61,163	confid	4,338	5,667
2006	147,609	47,261	16,841	71,683	58,119	confid	5,411	8,533
2007	95,820	63,441	30,002	73,797	62,979	2,814	3,297	8,588
2008	73,867	48,027	20,160	88,571	63,958	2,253	2,964	10,946
2009	54,703	50,920	21,194	87,289	14,591	2,116	1,638	11,132
2010	75,317	44,054	16,948	93,153	49,213	confid	1,285	6,077
2011	57,787	47,426	14,784	82,761	45,865	confid	confid	14,590
2012	67,870	50,126	6,233	76,373	20,831	1,444	confid	13,870
2013	70,157	53,428	5,887	110,849	22,079	confid	1,458	11,776
2014	63,191	53,384	5,164	121,538	31,665	confid	confid	7,545
2015	61,752	47,140	7,249	111,925	17,538	2,108	1,173	6,937
2016	58,095	50,680	7,651	144,650	13,367	2,083	1,098	6,252
2017	66,481	52,844	8,485	231,644	6,551	1,372	confid	5,165
2018	61,055	51,451	7,341	186,108	1,559	654	273	1,349
2019	67,021	46,562	18,651	289,746	2,512	646	confid	1,982
2020	63,405	52,651	11,644	181,639	1,941	585	confid	2,210
2021	68,865	50,164	16,504	283,872	2,219	confid	confid	2,196

Table 7. State recreational regulations implemented for tautog in the 2021 fishing year.

STATE	SIZE LIMIT (inches)	POSSESSION LIMITS (fish/person/day)	OPEN SEASONS (dates inclusive)
Massachusetts	16"	3	Apr 1-May 31
		1	Jun 1-Jul 31
		3	Aug 1-Oct 14
		5	Oct 15-Dec 31
		(10 fish/day/vessel max for private/rental mode)	
Rhode Island	16"	3	Apr 1 – May 31
		3	Aug 1 – Oct 14
		5	Oct 15 – Dec 31
Connecticut	16"	2	Apr 1 – Apr 30
		2	July 1 – Aug 31
		3	Oct 10 – Nov 23
New York	16"	LIS: 2	Apr 1- Apr 30
		LIS: 3	Oct 11-Dec 9
		NY Bight: 2	Apr 1- Apr 30
		NY Bight: 4	Oct 15-Dec 22
New Jersey	15"	4	Jan 1 – Feb 28
		4	Apr 1 – Apr 30
		1	Aug 1 – Nov 15
		5	Nov 16 – Dec 31
Delaware	16"	4	Jan 1 – May 15
			Jul 1 – Dec 31
Maryland	16"	4	Jan 1- May 15
		2	Jul 1 – Oct 31
		4	Nov 1 – Dec 31
Virginia	16"	4	Jan 1 – May 15
			July 1 – Dec 31

Table 8. State commercial regulations implemented for tautog in the 2021 fishing year.

STATE	SIZE LIMIT	POSSESSION LIMITS	OPEN SEASONS	QUOTA	GEAR RESTRICTIONS
		(number of fish)		(pounds)	
Massachusetts	16"	40	Sept 1 – 100% of Quota	64,145*	Mandatory pot requirements. Limited entry permit. Area/time closures for specific gear types.
Rhode Island	16"	10	Apr 1 – May 31 (42.5%) Aug 1 – Sep 15 (15%) Oct 15 – Dec 31 (42.5%)	50,213**	Mandatory pot requirements.
Connecticut	16"	3 (restricted licenses) 10 (all other)	Apr 1 – Apr 30 Jul 1 – Aug 31 Oct 8 – Dec 24	-	Mandatory pot requirements.
New York	15"	25 (10 fish w/ lobster gear and when 6 lobsters are in possession)	LIS: May 7 – July 31; Sept 1- Nov 23 NY Bight: Apr 16 –Jan 25	-	Mandatory pot requirements. Gill or trammel net is prohibited.
New Jersey	15"	> 100 lb requires directed fishery permit; <= 100 lb requires either directed or non-directed fishery permit	Jan 1 – May 1 Sept 19-Dec 31	103,000	Mandatory pot requirements.
Delaware	16"	4	Jan 1 – May 15 July 1 – Dec 31	-	Mandatory pot requirements.
Maryland	16"	4 2 4	Jan 1-May 15 July 1 – Oct 31 Nov 1- Dec 31	-	Mandatory pot requirements.
Virginia	15"	-	Jan 1 – Jan 21 Mar 1 – May 15 Nov 1 – Dec 31	-	Mandatory pot requirements. Pots prohibited in tidal waters.

*Massachusetts' quota adjusted for overage in 2020 from a base quota of 64,753 lbs.

**Rhode Island's quota adjusted for overage in 2020 from a base quota of 51,348 lbs.

Table 9. Number of age/length samples by state in 2021. Amendment 1 requires all states to collect 200 samples per year. Source: State compliance reports

State	2021 Samples	Sample Sources
MA	420 lengths; 210 ages	Commercial Fishery Market sampling; Pot sampling; Rod and Reel sampling; F-I trawl survey; Lobster ventless trap survey
RI	282 lengths; 277 ages	Recreational fishery sampling, RIDMF Trawl Survey, and Ventless Trap Survey
CT	220 lengths and ages	Long Island Sound Trawl Survey
NY	892 lengths; 308 ages	Commercial markets and recreational sampling; fishery independent surveys
NJ	288 lengths; 285 ages	Recreational fishery; NJ Ocean Trawl Survey and Artificial Reef Ventless Trap Survey
DE	200 lengths and ages	Recreational sampling
MD	374 lengths; 196 ages	Recreational sampling; Resource Assessment Trawl, Coastal Bays Beach Seine, and Submerged Aquatic Vegetation Habitat surveys
VA	121 lengths; 119 ages	Commercial markets and recreational sampling

Table 10. Ongoing fishery-independent surveys, as of 2021. Shaded cells indicate survey data used in the 2021 stock assessment update.

State	Areas Surveyed	Survey Type	# of Survey Stations	Dates of Survey	Initial Year
MA	MA territorial waters	Trawl	1 station per 19 square nautical miles	May and September	1978
	Buzzards Bay, south of the Elizabeth Islands, and portions of Rhode Island Sound	Trap	42 stations twice per month	June through September	2015
	Buzzards Bay and Vineyard Sound	Rod & Reel	48 stations per month	Spring (Apr-May) Fall (Sep-Nov)	2016 (fall)
RI	Narragansett Bay	Trawl	13 stations per month	June through October	1990
	Narragansett Bay, Rhode Island Sound and Block Island Sound	Trawl	44 stations	Spring (April-May) Fall (Sept/October)	1979
	Narragansett Bay Beach	Seine	18 stations per month	June through October	1988
	Coastal Ponds	Seine	24 stations in 8 coastal ponds per month	May through October	1994
	Narragansett Bay	Trap	10 5-pot trawls set per month	April through October	2013
CT	Long Island Sound (CT and NY waters)	Trawl	40 stations per month	Spring (April-June) Fall (Sept-Oct)	1984
NY	Peconic Bay	Trawl	16 stations per week	May through October	1987
	Western Long Island (Little Neck, Manhasset Bay, Jamaica Bay)	Seine	5-10 sites, semi-monthly	May through October	1984
	Long Island Sound	Trap	35 stations per week	May through October	2007
	East End Seine	Seine	30 stations per month	June through October	2021
NJ	Nearshore ocean waters between Cape May and Sandy Hook*	Trawl	30 tows in Jan; 39 tows per month in Apr, Jun, Aug & Oct	Jan, Apr, June, Aug & Oct	Aug-88
	Nearshore ocean waters within Sea Girt, Manasquan Inlet and Little Egg Artificial Reefs	Trap	48-54 traps set each Spring, Summer, Fall sampling periods	Spring (March-April); Summer (June-August); Fall (October-November)	2016
DE	Adult Finfish Abundance Trawl Survey	Trawl	9 stations per month	March through December	1990
	Inland Bays Juvenile Trawl Survey	Trawl	49 sites per month	April through October	1980
	Ventless Trap Survey	Trap	13 stations per two weeks	May through December	2018
MD	Maryland Coastal Bays	Trawl	20 stations per month	April through October	1989
		Seine	19 stations per month	June, September	1989
	Submerged Aquatic Habitat in Sinepuxent Bay	Seine	5 zones	September only	2015
VA	Fisheries independent surveys do not collect tautog in quantities needed for monitoring purposes				NA

*Survey did not run in 2021 due to the COVID-19 pandemic

Table 11. Ongoing fishery-dependent monitoring in each state, as of 2021

State	Fishery Sector	Data Collected	Data Source
MA	Commercial	Length, Weight	Market sampling
RI	Recreational	Age, Length	Recreational harvest sampling
	Commercial	Age	Fish Pot Survey
NY	Commercial	Age, Length	Markets and dockside sampling
NJ	Commercial	Age, Length, Weight, Sex	Commercial vessel sampling
	Recreational	Age, Length, Sex	Party/charter boat sampling (retained fish)
DE	Recreational	Age, Length	Recreational harvest sampling
MD	Recreational	Age, Length, Weight, Sex	Charter boat hook and line sampling
VA	Commercial	Age, Length, Weights	Samples from commercial hook-and-line gear, haul seines, pots/traps, pound nets
	Recreational	Age, Length, Weights	VMRC Marine Sport Fish Collection Project
		Tagging data	Game Fish Tagging Program

*Surveys as part of MRIP occur in all states and are not included in the table. All commercial landings monitoring systems are also excluded.

Table 12. Tagging Data collected in 2021. Amendment 1 requires all states to implement a commercial harvest tagging program. Source: state Compliance reports.

State	Number of Participants Receiving Tags	Number of Tags Issued	Number of Tags Returned	Number of Tags Used	Tags Reported Lost	Tags Reported Damaged	Number of Tags Unaccounted for
MA	154	34,575	12,270	20,952*	N/A	N/A	1,353
RI	306	28,698	9,959	8,811	431	18	9,479
CT	64	6,737	2,336	3,922	N/A	N/A	479
NY	491	178,580	52,020	116,469	2,663	74	7,079
NJ	16	3,800	2,065	1,187	548	0	N/A
DE	4	200	66	134	N/A	N/A	N/A
MD	1	C	C	C	N/A	N/A	N/A
VA	27	2,625	1,904	694	N/A	N/A	27

*Estimate (based in part on average weight of reported landings).