



Bluefish Fishery Information Document

August 2019

This Fishery Information Document provides a brief overview of the biology, stock condition, management system, and fishery performance for bluefish with an emphasis on 2018. Data sources for Fishery Information Documents are generally from unpublished National Marine Fisheries Service (NMFS) survey, dealer, vessel trip report (VTR), permit, and Marine Recreational Information Program (MRIP) databases and should be considered preliminary. For more resources, including previous Fishery Information Documents, please visit <http://www.mafmc.org/bluefish/>.

Key Facts

- According to the most recent peer reviewed stock assessment (2015), bluefish is not overfished and overfishing is not occurring, *but an assessment update will be final by the end of August and will change estimated stock biomass, biological reference points, fishing mortality, and our understanding of stock status.*
- In 2018, the recreational harvest limit increased by 1.93 million pounds and the commercial quota decreased by 1.3 million pounds. Cumulatively, the recreational and commercial fishery recorded an underage of 12.98 million pounds.
- Old MRIP (BASE) recreational landings decreased by ~62% from 2017 to 2018 (9.52 million pounds to 3.64 million pounds). New MRIP (FCAL) recreational landings decreased by ~59% from 2017 to 2018 (32.02 million pounds to 13.27 million pounds).
- Commercial landings decreased by ~40% from 2017 to 2018 (3.64 million pounds to 2.20 million pounds).

Basic Biology

Bluefish are found worldwide in tropical and subtropical waters, but in the western North Atlantic range from Nova Scotia and Bermuda to Argentina. Bluefish travel in schools of like-sized individuals and undertake seasonal migrations, moving into the Middle Atlantic Bight (MAB) during spring and then south or farther offshore during fall. Within the MAB they occur in large bays and estuaries as well as across the entire continental shelf. Juvenile stages have been recorded in all estuaries within the MAB, but eggs and larvae occur in oceanic waters (Able and Fahay 1998). Bluefish have fast growth rates and reach lengths of 3.5 ft and can weigh up to 27 pounds (Bigelow and Schroeder 1953). Bluefish live to age 12 and greater (Salerno et al. 2001).

Bluefish eat a wide variety of prey items. The species has been described by Bigelow and Schroeder (1953) as “perhaps the most ferocious and bloodthirsty fish in the sea, leaving in its wake a trail of dead and mangled mackerel, menhaden, herring, alewives, and other species on which it preys.”

Bluefish born in a given year (young of the year) typically fall into two distinct size classes suggesting that there are two spawning events along the east coast. Studies suggest, however, that spawning is a single, continuous event, but that young are lost from the middle portion resulting in the appearance of a split season (Smith et al. 1994). As a result of the bimodal size distribution, young are referred to as spring-spawned or summer-spawned. In the MAB, spring-spawned bluefish appear to be the dominant component of the stock.

Status of the Stock

The bluefish benchmark stock assessment was peer reviewed in June 2015 and approved for use by management at SAW/SARC 60. This benchmark assessment uses a forward-projecting statistical catch-at-age model called ASAP (Age Structured Assessment Program). For the most recent benchmark, the catch-at-age matrices were completely reconstructed to incorporate new age data, including archived historical samples that had not been processed at the time the last benchmark (SAW/SARC 41; 2005) was conducted, and to correct aging errors in the earlier years of the time series (NEFSC 2015).

The biological reference points estimated in the previous benchmark assessment (SAW/SARC 41) were MSY reference points for F and total biomass (F_{MSY} , B_{MSY}). However, MSY reference points require a reliable stock-recruitment relationship. The stock-recruitment relationship for bluefish is poorly defined, due to the lack of information on recruitment at small stock sizes, with steepness estimated to be close to one for most model runs (NEFSC 2015). Therefore, in SAW/SARC 60, SPR-based (spawn per recruit) reference points were used as a proxy for MSY reference points.

Results from the 2015 benchmark stock assessment indicate that the bluefish stock was not overfished and overfishing was not occurring in 2014 relative to the biological reference points (BRPs) from the 2015 SAW/SARC 60. Modeling results indicated that the estimated SSB was 190.77 million pounds (86,534 mt) in 2014 (85 percent of the accepted reference point SSB_{MSY} proxy = $SSB_{35\%SPR}$ = 223.42 million pounds or 101,343 mt). Spawning stock biomass declined since the beginning of the time series, from a high of 340.90 million pounds (154,633 mt) in 1985 to a low of 116.34 million pounds (52,774 mt) in 1997, before increasing again. The stock spawning biomass average for the 1985-2014 time series is 175.15 million pounds (79,449 mt). Fully-selected fishing mortality in 2014 was estimated to be 0.157, below the F threshold (F_{MSY} proxy = $F_{35\%SPR}$ = 0.19). Fully selected F peaked in 1987 at 0.477 and then declined gradually since then, with a time series average of 0.284.

2019 Stock Assessment Update

Bluefish is currently going through an operational assessment for 2020 and beyond and will be final by the end of August 2019. The update will include the new recalibrated MRIP values and

is expected to change the estimated stock biomass, current biological reference points, and fishing mortality.

Management System and Fishery Performance

Management

The Mid-Atlantic Fishery Management Council (Council or MAFMC) and the Atlantic States Marine Fisheries Commission (ASMFC) work cooperatively to develop fishery regulations for bluefish off the east coast of the United States. The Council and Commission work in conjunction with the National Marine Fisheries Service (NMFS), which serves as the federal implementation and enforcement entity. This cooperative management endeavor was developed because a significant portion of the catch is taken from both state waters (0-3 miles offshore) and federal waters (3-200 miles offshore, also known as the Exclusive Economic Zone or EEZ). The management unit for bluefish is the U.S. waters in the western Atlantic Ocean.

The Bluefish Fishery Management Plan (FMP) was implemented in 1990 and established the Mid-Atlantic Fishery Management Council's management authority over the fishery in federal waters. Amendment 1, implemented in 2000, addressed stock rebuilding and created the Bluefish Monitoring Committee which meets annually to make management measure recommendations to the Council. Amendment 3 incorporated the development of annual catch limits (ACLs) and accountability measures (AMs) into the specification process and Amendment 4 modified recreational accountability measures to accommodate uncertainty in recreational management and catch estimation. The original FMP and subsequent amendments and frameworks are available at: <http://www.mafmc.org/fisheries/fmp/bluefish>.

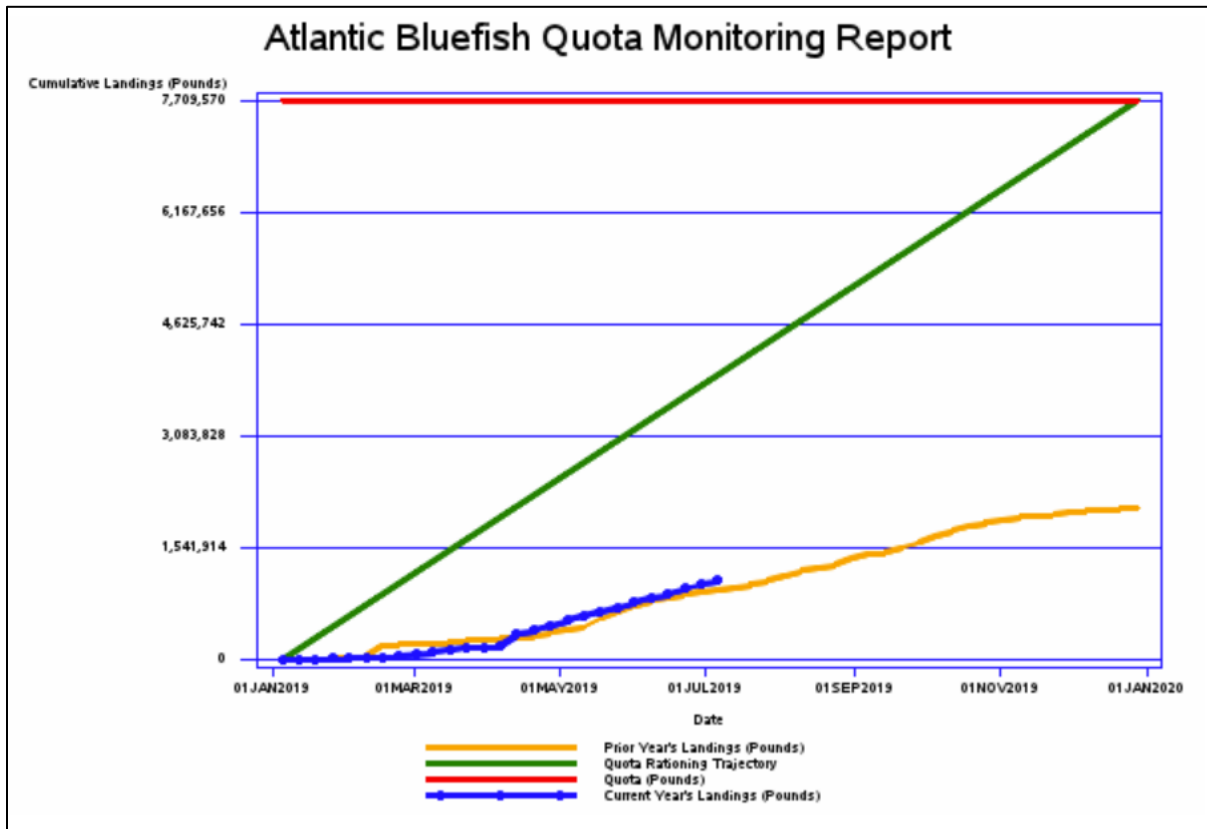
For bluefish, the annual catch target (ACT) is split 83 percent and 17 percent into recreational and commercial ACTs, respectively, and the discarded component of that catch is deducted to arrive at recreational and commercial total allowable landings (TAL). Additionally, landings above the expected recreational harvest can be "transferred" from the recreational to the commercial fishery as long as the final commercial quota does not exceed 10.5 million pounds.

The Council's Scientific and Statistical Committee (SSC) reviews assessment results and the Advisory Panel's fishery performance report and determines the allowable biological catch (ABC) for the upcoming year. The Council's Bluefish Monitoring Committee develops and recommends specific coastwide management measures (commercial quota, recreational harvest limit) that will achieve the catch target and makes further adjustments to total catch as needed based on management uncertainty. Finally, the Council and Board meet jointly to develop recommendations to be submitted to the NMFS.

Fishery Performance Relative to Management Measures

The current commercial landings and fishery performance is slightly ahead of the 2018 landings (Figure 1; as of July 8, 2019). The recreational and commercial landings relative to specified management measures are provided in Table 1. Except for 2007, the bluefish fishery has never exceeded the TAL. In 2007, the recreational fishery exceeded the recreational harvest limit by

about 2.69 million pounds, and although the commercial fishery underperformed by 1.18 million pounds, the combined landings (29.27 million pounds) were above the specified TAL (27.76 million pounds). In 2018, the recreational fishery landed 3.64 million pounds compared to the 11.58 million pounds RHL (a 7.94-million-pound underage), and the commercial fishery landed 2.20 million pounds compared to the quota of 7.24 million pounds (a 5.04 million pounds underage). Combined landings for the recreational and commercial fisheries in 2018 (5.84 million pounds) resulted in an underage of 12.98 million pounds when compared to the TAL



(18.82 million pounds). As of July 10, 2019, 1.05 million pounds of bluefish had been landed by the commercial fishery; this represents ~14 percent of the 2019 commercial quota (7.71 million pounds).

Figure 1. Atlantic bluefish commercial landings for 2019 fishing year to date (through July 17, 2019). http://www.nero.noaa.gov/ro/fso/reports/reports_frame.htm.

Table 1. Summary of bluefish management measures, 2000 – 2019 (Values are in million pounds).

Management Measures	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019⁸
TAC ¹ / ABC ²	34.22	29.15	32.03	31.89	34.08	34.38	31.74	32.04	27.47	24.43	21.54	19.45	20.64	21.81	21.81
TAL ³	30.85	24.8	27.76	28.16	29.36	29.26	27.29	28.27	23.86	21.08	18.19	16.46	18.19	18.82	19.33
Comm. Quota ⁴	10.5	8.08	8.69	7.71	9.83	10.21	9.38	10.32	9.08	7.46	5.24	4.88	8.54	7.24	7.71
Comm. Landings ⁵	7.04	6.98	7.51	6.12	7.1	7.55	5.61	4.66	4.12	4.77	4.02	4.1	3.64	2.20	
Rec. Harvest Limit ⁴	20.35	16.72	19.07	20.45	19.53	18.63	17.81	17.46	14.07	13.62	12.95	11.58	9.65	11.58	11.62
Rec. Landings ⁶	19.86	16.65	21.76	19.79	14.47	16.34	11.5	11.84	16.46	10.46	11.67	9.54	9.52	3.64	
Rec. Possession Limit (# fish)	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Total Landings	26.9	23.63	29.27	25.91	21.57	23.89	17.11	16.5	20.58	15.23	15.69	13.64	13.16	5.84	
Overage/Underage	-3.95	-1.17	1.51	-2.25	-7.79	-5.37	-10.18	-11.77	-3.28	-5.85	-2.5	-2.82	-5.03	-12.98	
Total Catch ⁷	31.55	28.08	35.12	31.83	25.10	27.93	20.39	19.26	24.06	17.96	18.65	16.09	15.65	6.96	
Overage/Underage	-2.67	-1.07	3.09	-0.06	-8.98	-6.45	-11.35	-12.78	-3.41	-6.47	-2.89	-3.36	-4.99	-14.85	

¹ Through 2011. ² 2012 fwd. ³ Not adjusted for RSA. ⁴ Adjusted downward for RSA. ⁵ Dealer and South Atlantic Canvas data used to generate values from 2000-2011; Dealer data used to generate values from 2012-2018. ⁶ MRIP. ⁷ Recreational discards were calculated assuming MRIP mean weight of fish landed or harvested. ⁸ Values for 2020 and 2021 will be presented using the FCAL (new re-calibrated) MRIP numbers. Years 2005-2015 are presented with the BASE (old) MRIP numbers.

Landings History

Bluefish catches were estimated via the Marine Recreational Fisheries Statistic Survey (MRFSS) starting in 1981 through 2003. Recreational data for years 2004 and later are available from the Marine Recreational Information Program (MRIP), the data collection that followed MRFSS.

From the early 1980s to the early 1990s, recreational landings declined about 70% (avg. 1981-1983 = 89.14 million pounds; avg. 1991-1993 = 25.85 million pounds). Recreational landings continued to decline at a somewhat slower rate until reaching a low level of 8.25 million pounds in 1999, but since have grown to a peak of 21.70 million pounds in 2007. Now, recreational landings are at an all-time low of 3.6 million pounds for 2018.

Commercial landings have been relatively stable throughout recent history, yet a notable decrease occurred from 2017-2018 (Figure 2). Commercial discards are insignificant and are not estimated in the current assessment.

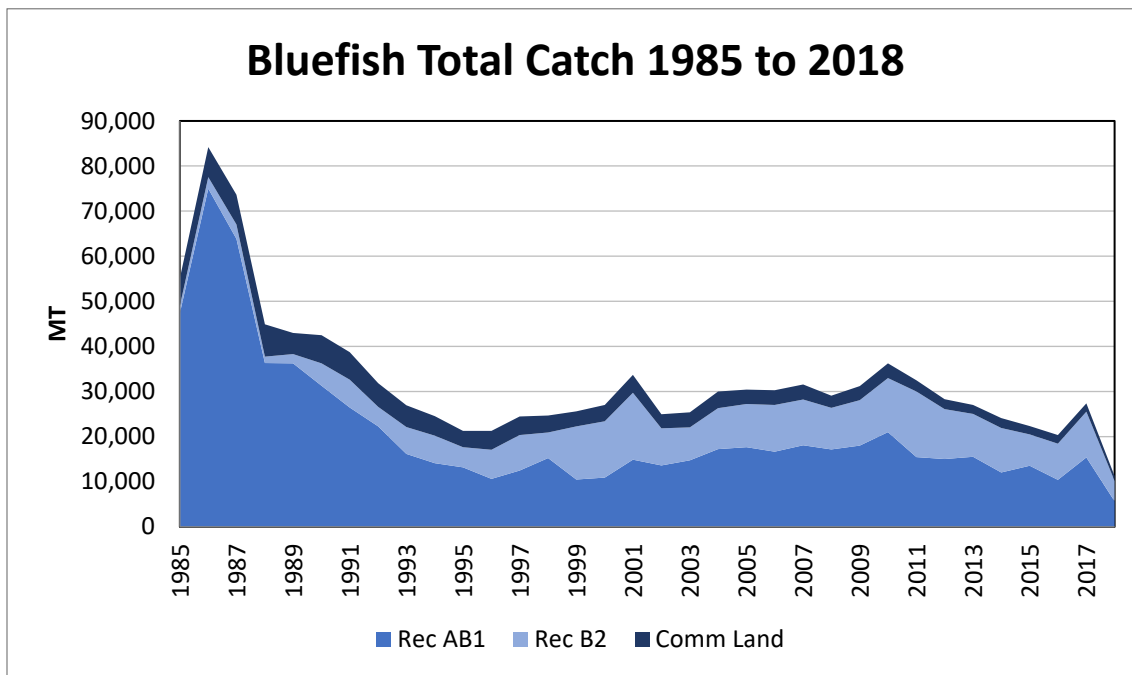


Figure 2. Bluefish catch (landings [AB1] and discards [B2]), 1985-2018. (Source: Anthony Wood, Personal Communication 2019)

Recreational Fishery

Recreational fishery data is presented as estimated from MRIP using both the new re-calibrated (BASE or new) and old (FCAL or old) data. Trends in recreational trips associated with targeting or harvesting bluefish from 1991 to 2018 are provided in Table 2. The lowest annual estimate of bluefish trips was 1.64 million and 5.75 million trips in 2017 and 2018, respectively using BASE and FCAL estimates. The highest annual estimate of bluefish trips in this timeframe was 5.95 million and 13.90 million trips in 1991 respectively using BASE and FCAL estimates. For the last 5 years (2014-2018), the number of bluefish trips have ranged from 1.64 million trips in

2017 to 2.17 million trips in 2017 using only the BASE MRIP data. Base estimates for number of trips for 2018 was unavailable. For the last 5 years (2014-2018), the number of bluefish trips have ranged from 5.75 million trips in 2018 to 9.62 million trips in 2014 using only the FCAL MRIP data.

Table 2. Number of bluefish recreational fishing trips, recreational harvest, and recreational landings per trip from 1991 to 2018.

Year	# of bluefish trips ^a	Base Recreational Harvest (N)	Base Recreational Harvest (lbs)	Recreational landings per “bluefish” trip	# of bluefish trips ^a	FCAL Recreational Harvest (N)	FCAL Recreational Harvest (lbs)	Recreational landings per “bluefish” trip
	Base MRIP Estimates				Re-Calibrated MRIP Estimates			
1991	5,948,808	11,942,608	32,997,411	2.0	13,896,933	27,317,926	59,792,834	2.0
1992	4,549,536	7,157,754	24,275,171	1.6	11,409,027	20,180,578	41,217,703	1.8
1993	4,269,162	5,725,355	20,292,072	1.3	11,826,365	15,369,463	37,415,750	1.3
1994	3,587,131	5,767,953	15,540,854	1.6	9,721,530	13,063,628	30,145,680	1.3
1995	3,608,325	5,167,979	14,306,582	1.4	9,968,256	11,532,807	27,710,092	1.2
1996	2,820,059	4,205,103	11,745,938	1.5	7,876,695	11,126,333	23,207,235	1.4
1997	2,384,133	5,413,036	14,301,761	2.3	6,383,072	12,400,982	27,039,375	1.9
1998	2,180,471	4,202,111	12,334,000	1.9	7,638,343	13,397,302	32,880,412	1.8
1999	1,727,175	3,681,841	8,253,113	2.1	7,840,089	16,878,789	25,106,100	2.2
2000	2,041,450	4,897,008	10,605,827	2.4	6,449,833	12,879,485	23,357,120	2.0
2001	2,661,032	6,663,237	13,229,770	2.5	8,161,746	18,048,645	31,654,978	2.2
2002	2,324,253	5,300,189	11,371,485	2.3	8,381,422	17,607,380	30,654,388	2.1
2003	2,647,840	6,045,062	13,135,895	2.3	7,769,721	16,411,932	32,758,670	2.1
2004	2,901,956	7,250,407	17,316,476	2.5	8,894,616	18,631,904	37,133,463	2.1
2005	3,240,410	7,949,179	19,862,847	2.5	9,024,550	18,341,452	37,742,807	2.0
2006	2,800,204	7,035,179	16,653,456	2.5	8,255,002	19,397,272	36,081,958	2.3
2007	3,620,374	8,373,899	21,760,882	2.3	9,655,930	19,189,747	40,239,101	2.0
2008	3,024,787	6,664,150	19,793,321	2.2	8,044,324	14,845,435	36,166,834	1.8
2009	2,088,857	5,194,242	14,472,305	2.5	7,972,341	18,085,386	40,731,438	2.3
2010	2,468,273	6,090,830	16,339,283	2.5	9,773,363	21,929,517	46,302,792	2.2
2011	2,128,166	5,061,391	11,497,371	2.4	8,492,874	20,814,884	34,218,748	2.5
2012	2,394,988	5,523,282	11,842,303	2.3	9,655,507	18,578,838	32,530,917	1.9
2013	1,811,087	5,743,970	16,464,369	3.2	6,394,975	19,975,051	34,398,327	3.1
2014	2,401,822	5,875,773	10,455,687	2.4	9,615,976	21,510,651	27,044,276	2.2
2015	1,710,020	3,996,803	11,673,242	2.3	7,001,696	13,725,106	30,098,649	2.0
2016	2,166,975	4,301,220	9,537,923	2.0	8,625,069	14,899,723	24,155,304	1.7
2017	1,638,890	3,013,668	9,519,745	1.8	8,264,782	13,842,164	32,023,497	1.7
2018	N/A	2,777,026	3,639,697	N/A	5,749,291	10,245,710	13,270,862	1.8

^a Estimated number of recreational fishing trips where the primary target was bluefish or bluefish were harvested regardless of target, Maine – Florida’s East Coast. Source: MRFSS (1991-2003)/MRIP (2004 forward).

Recreational Landings by State

Recreational catch and harvest by state for 2018 are provided in Table 3. The greatest overall catches (includes discards) presented as BASE MRIP and FCAL, respectively occurred in North Carolina with 11.22 and 3.00 million fish, Florida with 1.27 and 5.21 million fish, and New Jersey with 1.10 and 3.93 million fish.

The greatest harvest of bluefish by weight in 2018 presented as BASE MRIP and FCAL, respectively occurred in North Carolina with 767,364 and 2.63 million pounds, followed by Florida with 741,516 and 4.53 million pounds, and New Jersey with 613,605 and 2.01 million pounds. According to MRIP, 0 bluefish were caught in Maine and New Hampshire. Average weights, based on dividing MRIP landings in weight by landings in number for each state, suggest that bluefish size tends to increase toward the north along the Atlantic coast (outside of Florida).

Table 3. MRIP estimates of 2018 recreational harvest and total catch for bluefish.

State	Harvest			Catch	Harvest			Catch
	Pounds	Number	Average wt (lbs)	Number	Pounds	Number	Average wt (lbs)	Number
	Base MRIP (Old) Estimates				FCAL MRIP (New) Estimates			
ME	0	0	0.00	0	0	0	0.00	0
NH	0	0	0.00	0	0	0	0.00	0
MA	328,240	82,982	3.96	288,293	611,557	182,424	3.35	714,225
RI	119,961	38,158	3.14	105,594	210,033	119,801	1.75	271,594
CT	238,815	132,813	0.58	413,022	340,666	312,022	1.09	817,150
NY	425,036	413,365	1.03	1,123,132	1,399,517	1,203,567	1.16	3,905,614
NJ	613,605	424,754	1.44	1,106,422	2,007,110	1,421,477	1.41	3,933,439
DE	238,815	132,813	0.58	413,022	315,105	75,703	4.16	611,903
MD	152,459	102,984	1.48	253,625	493,192	274,834	1.79	692,643
VA	70,549	109,142	0.65	234,656	264,534	443,112	0.60	870,958
NC	767,364	943,297	0.81	2,995,238	2,630,685	3,304,587	0.80	11,216,797
SC	93,814	146,362	0.64	415,794	403,141	765,113	0.53	2,295,592
GA	10,551	13,198	0.80	55,769	70,284	90,991	0.77	386,195
FL	741,516	345,036	2.15	1,270,688	4,525,038	2,052,080	2.21	5,212,593
Total	3,639,697	2,777,026	1.31	8,465,496	13,270,862	10,245,711	1.30	30,928,703

Recreational Landings by Mode

Figure 3 reflects re-calibrated MRIP-based estimates of landings by mode (1991 through 2018) and indicates that the recent primary landing modes for bluefish are private boats and shore mode. In 2018, 11% (BASE) and 74% (FCAL) of the landings of bluefish on a coastwide basis came from shore, followed by 36% (BASE) and 23% (FCAL) private/rental and 53% (BASE) and 3% (FCAL) for-hire. Over the last five years (2014-2018), 32% (BASE) and 54% (FCAL) of the total bluefish landings came from shore, 46% (BASE) and 39% (FCAL) from private/rental boats, and 22% (BASE) and 7% (FCAL) from for-hire boats.

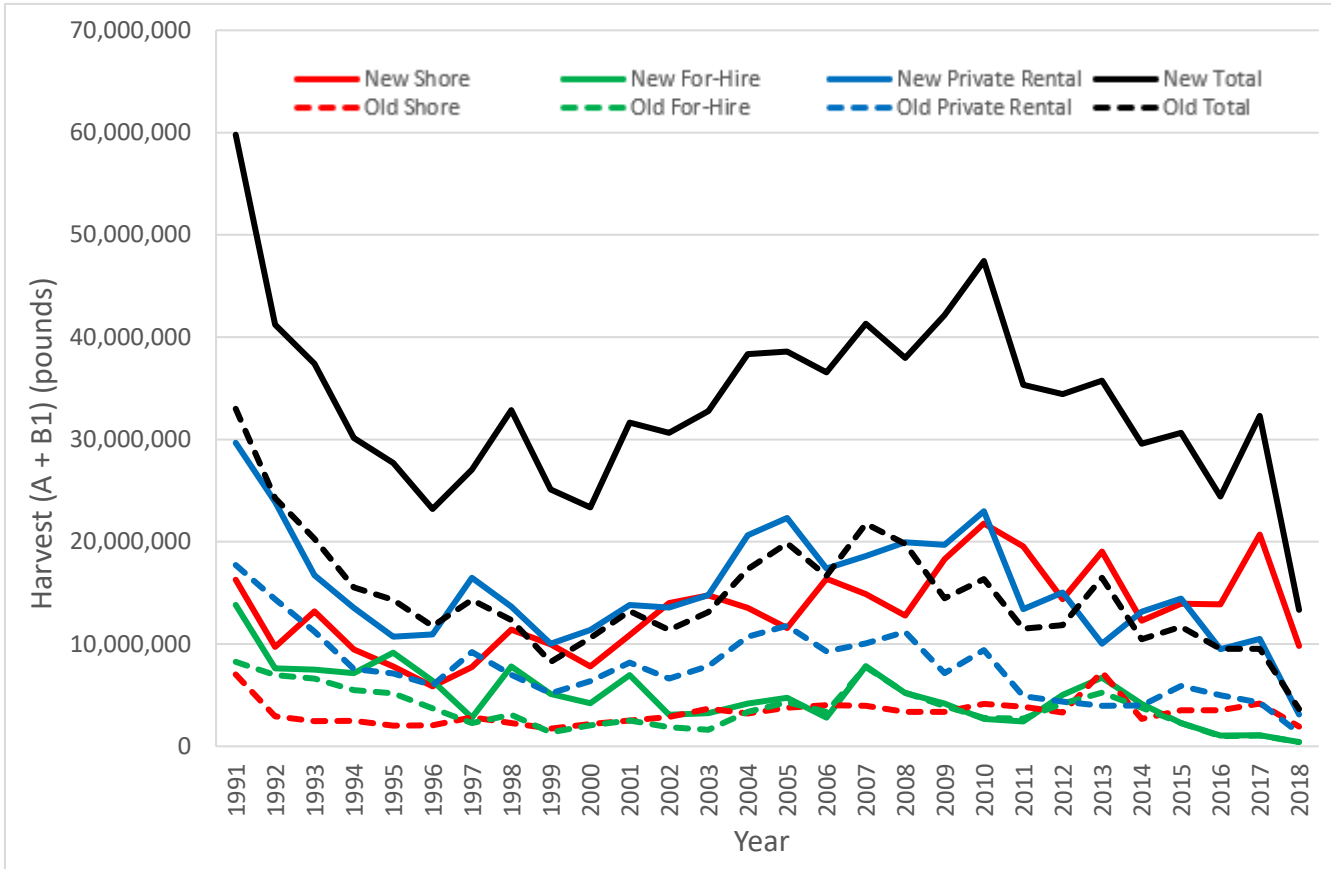


Figure 3. Bluefish harvest (pounds) by recreational fishermen by mode, Atlantic Coast, 1991-2018. Old MRIP data is back calculated.

Recreational Landings by Area

MRIP classifies catch into three fishing areas, inland, nearshore ocean (< 3 mi), and offshore ocean (> 3 mi). In 2018, about 37% (BASE) and 27% (FCAL) of the landings of bluefish on a coastwide basis came from inland waters, followed by nearshore ocean at 56% (BASE) and 67% (FCAL) (Figure 4), and offshore waters at 8% (BASE) and 6% (FCAL). Over the last five years (2014-2018), 52% (BASE) 45% (FCAL) and of the total bluefish landings came from inland waters, 38% (BASE) and 50% (FCAL) from nearshore ocean, and 10% (BASE) and 5% (FCAL) from offshore ocean.

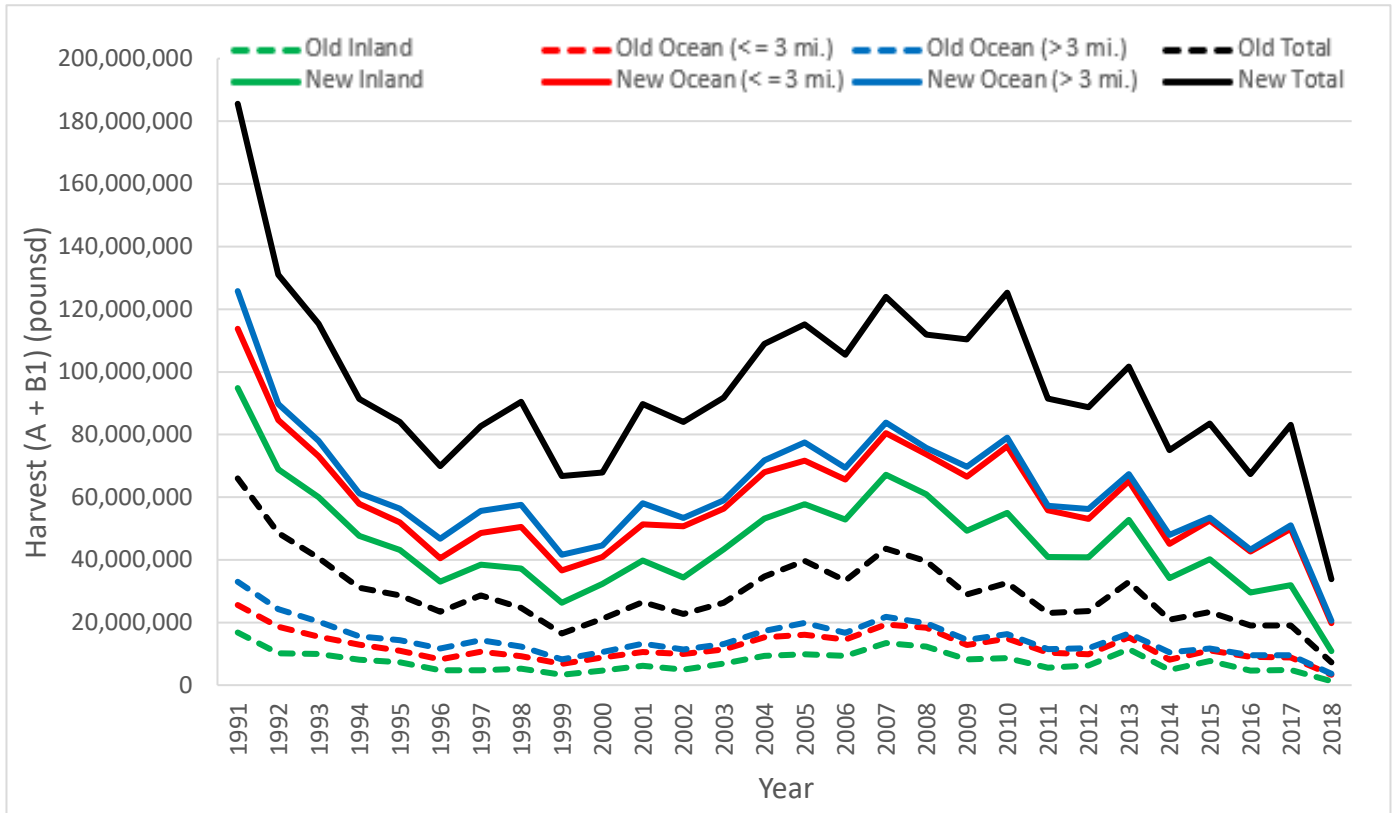


Figure 4. Bluefish harvest (pounds) by recreational catch by area, Atlantic Coast, 1991-2018. Old MRIP data is back calculated.

Recreational Discards

In the recreational fishery, bluefish released alive (B2) are estimated by MRIP. To calculate discards, a 15% mortality rate is applied to the B2 value and then multiplies by the MRIP estimated average weight. In 2017, discards were 1.03 million lbs and 5.52 million lbs for BASE and FCAL, respectively. In 2018, FCAL discards were 4.03 million lbs (Figure 5).

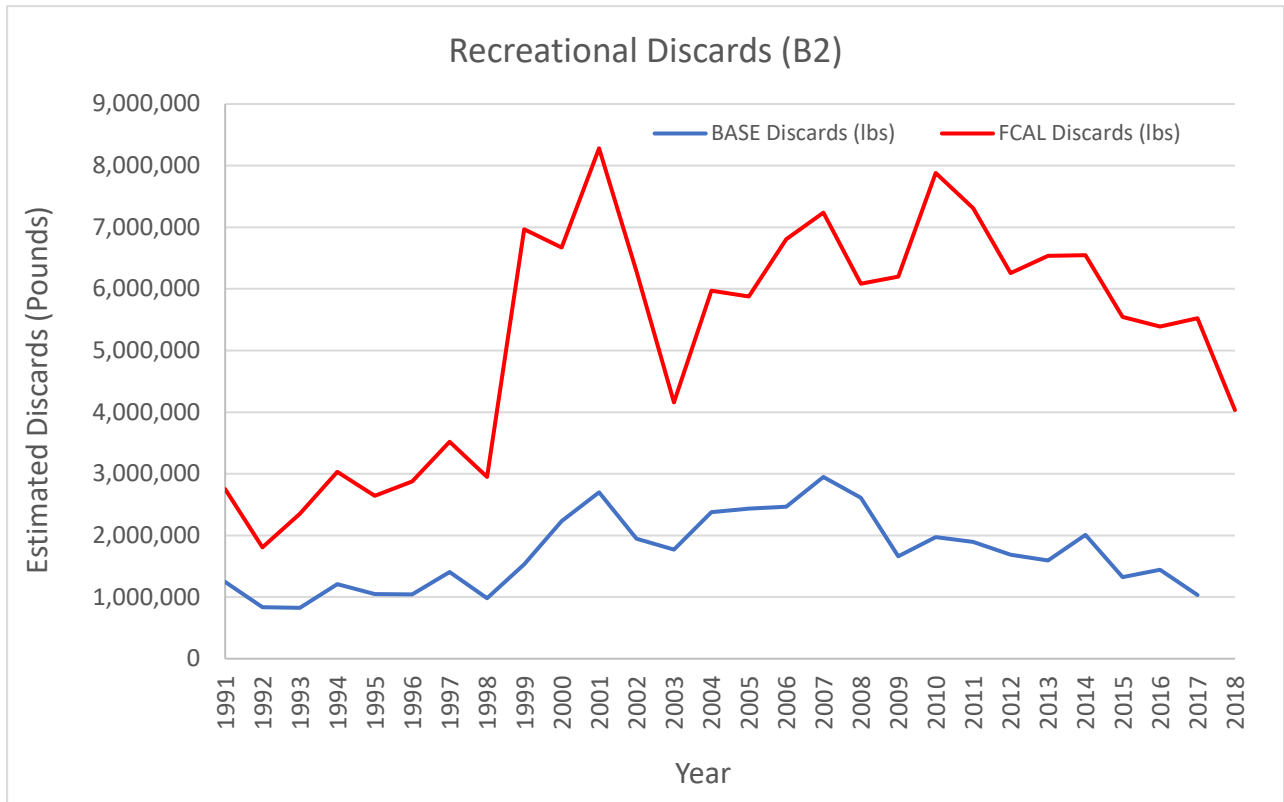


Figure 5. Bluefish MRIP estimated BASE and FCAL discards for 1991-2018. Released alive fish are assumed to have 15% chance of mortality, which is applied to the B2 values.

Vessel and Dealer Activity

Federal permit data indicate that 2439 commercial bluefish permits were issued in 2018.¹ A subset of federally permitted vessels was active in 2018 with dealer reports identifying 476 vessels with commercial bluefish permits that actually landed bluefish. Of the 407 federally permitted bluefish dealers in 2018, there were 149 dealers who actually bought bluefish.

Landings by Gear

Dealer data for 2018 indicate that the majority of the bluefish landings were taken by gillnet (50%), followed by unknown gear (26%), otter trawl/bottom fish (9%), other (9%) and handline (6%).

Landings by Area

VTR data were used to identify all NMFS statistical areas that accounted for 5 percent or more of the Atlantic bluefish catch or areas which individually accounted for 5 percent or greater of the trips which caught bluefish in 2018 (Table 4). Seven statistical areas accounted for approximately 82% of the VTR-reported catch in 2018. Statistical area 539 was responsible for the highest percentage of the catch, with statistical area 611 having the majority of trips that caught bluefish (Table 4). A map of the statistical areas that accounted for a percentage of the Atlantic bluefish catch is shown in Figure 6.

Table 4. Statistical areas that accounted for at least 5 percent of the total Atlantic bluefish catch or 5 percent or greater of the trips which caught bluefish in 2018, with associated number of trips.

Statistical area	Pounds of bluefish caught	Percent of 2018 commercial bluefish catch	Number of trips	Percent of 2018 commercial bluefish trips that caught bluefish
539	142,122	24%	812	20%
632	95,034	16%	18	<1%
611	71,981	12%	1307	32%
613	68,397	12%	548	13%
636	34,838	6%	37	1%
616	33,657	6%	152	4%
612	32,521	6%	281	7%

¹In addition, there were 834 party/charter bluefish permit issued in 2018. A subset of federally permitted party/charter vessels was active in 2018 with VTR reports identifying 270 vessels with party/charter bluefish permits that actually landed bluefish.

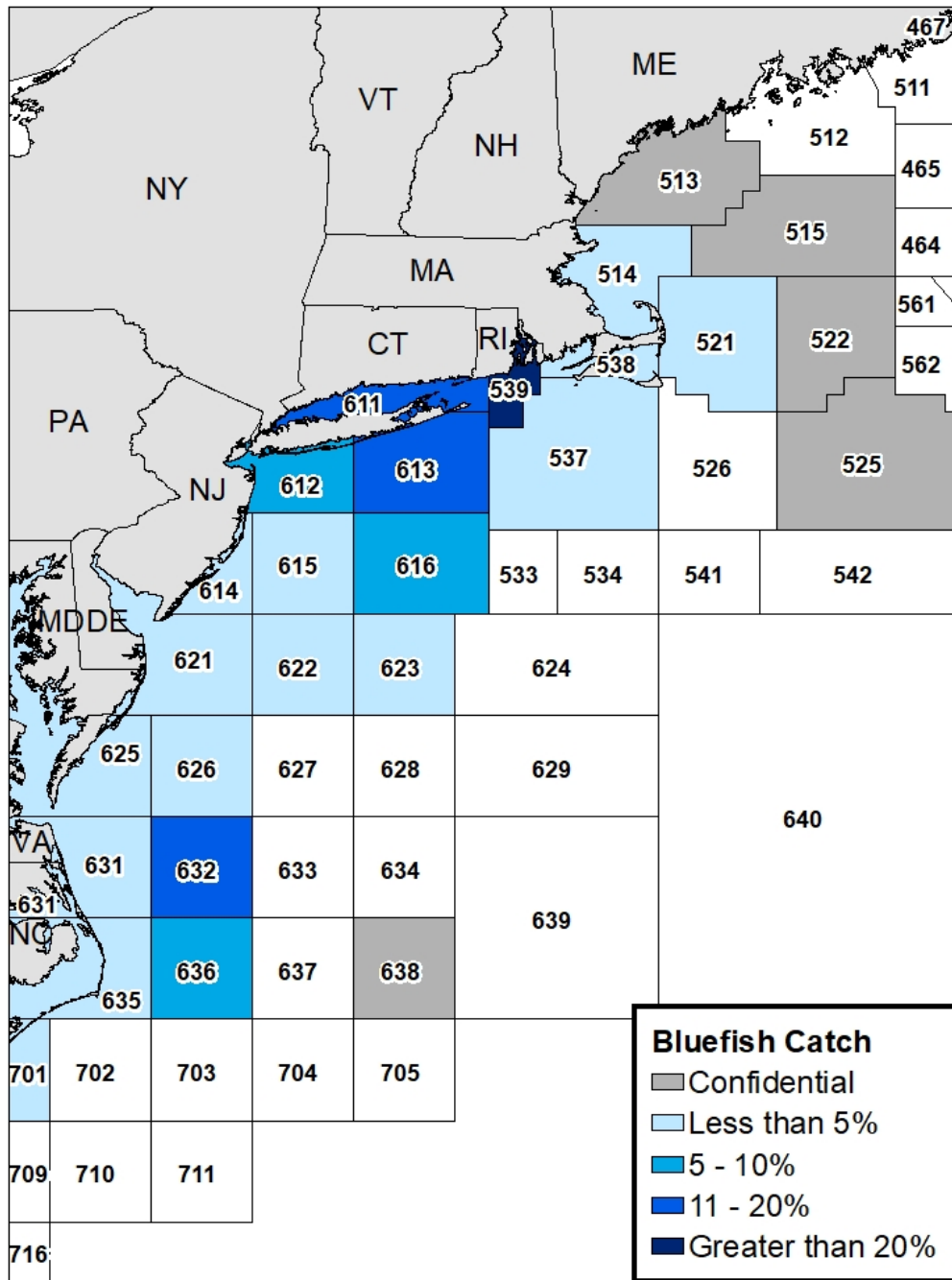


Figure 6. NMFS Statistical Areas, highlighting those that each accounted for a percentage of the commercial bluefish catch in 2018.

The top commercial landings ports for bluefish in 2018 are shown in Table 5. Six ports qualified as "top bluefish ports," i.e., those ports where 100,000 pounds or more of bluefish were landed. Wanchese, NC was the most active commercial bluefish port with almost 300,000 pounds landed. The ports and communities that are dependent on bluefish are described in Amendment 1 to the FMP (available at <http://www.mafmc.org/fisheries/fmp/bluefish>). Additional information on "Community Profiles for the Northeast US Fisheries" can be found at http://www.nefsc.noaa.gov/read/socialsci/community_profiles/.

Table 5. Top ports of bluefish landings (in pounds), based on NMFS 2018 dealer data.

Port ^a	Pounds	% of total commercial bluefish landings	# vessels
Wanchese, NC	293,089	13%	28
Hatteras, NC	243,543	11%	12
Point Judith, RI	189,249	9%	102
Montauk, NY	188,152	9%	87
Brevard, FL (other)	128,674	6%	3

^a Since this table includes only the "top ports" (ports where landings of bluefish were > 100,000 pounds), it does not include all landings for the year.

Revenue

According to dealer data, commercial vessels landed about 2.20 million pounds of bluefish valued at approximately \$2.08 million in 2018. Average coastwide ex-vessel price of bluefish was \$0.94 per pound in 2018, a ~3% increase from the previous year (2017 price = \$0.73 per pound). The relative value of bluefish is very low among commercially landed species, less than 1% of the total value, respectively of all finfish and shellfish landed along the U.S. Atlantic coast in 2018. A time series of bluefish revenue and price is provided in Figure 7.

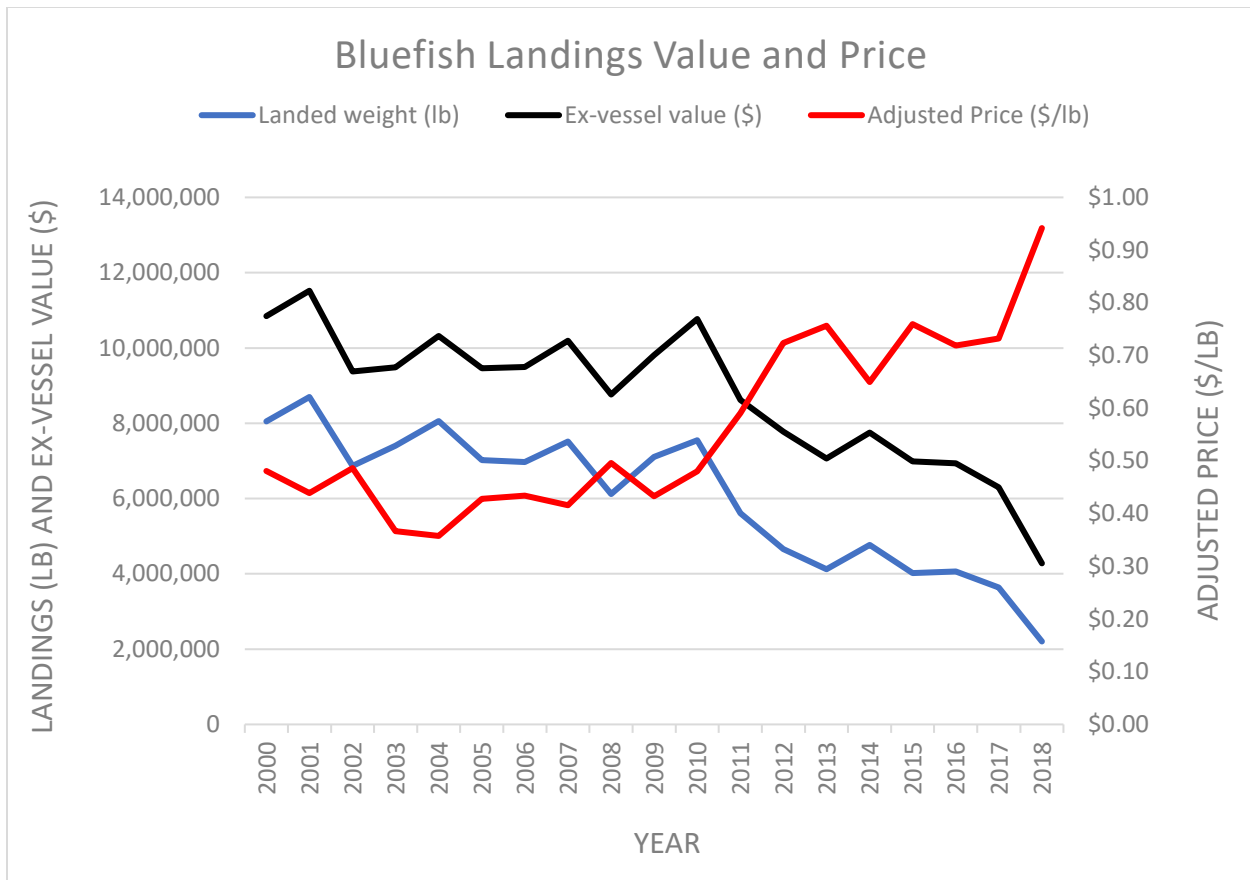


Figure 7. Landings, ex-vessel value, and price (adjusted to 2018 real dollars) for bluefish, 2000-2018.

Bycatch

The commercial fishery for bluefish is primarily prosecuted with gillnets and handlines, although there are other small localized fisheries, such as the beach seine fishery that operates along the Outer Banks of North Carolina that also catch bluefish. Many of these fisheries do not fish exclusively for bluefish, but target a combination of species including croaker, mullet, Spanish mackerel, spot, striped bass, and weakfish. Given the mixed-species nature of the bluefish fishery, incidental catch of non-target species is not directly attributable to the bluefish fishery.

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