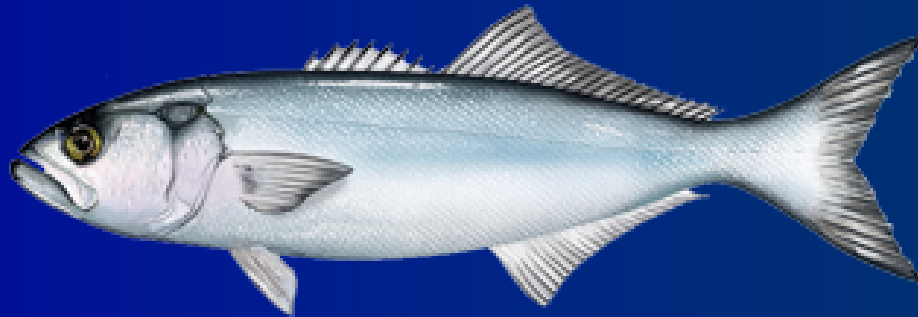


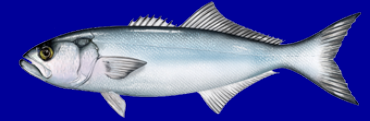


Atlantic Bluefish Recreational Measures



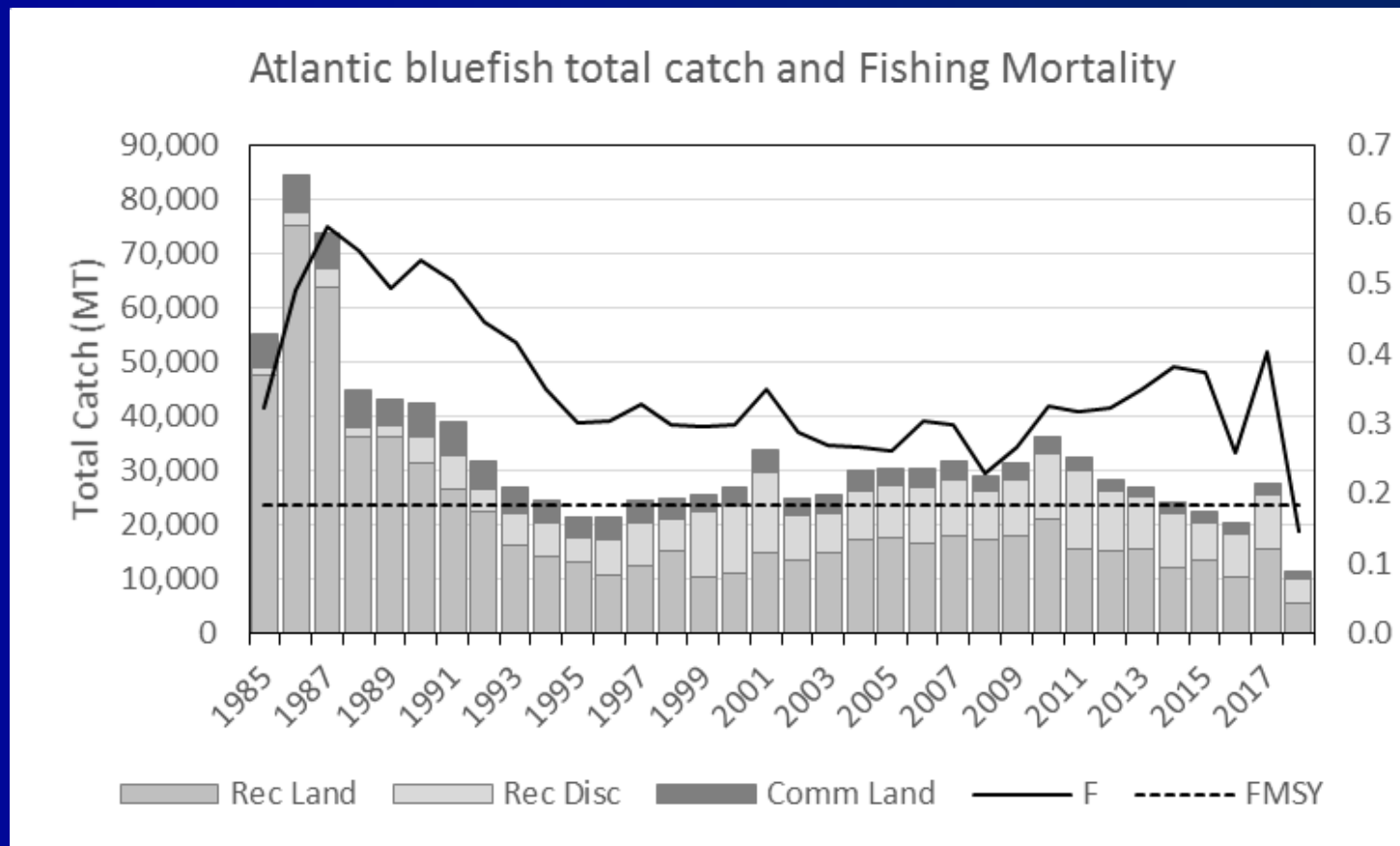
**December Council Meeting
December 10, 2019**

Outline



- Stock Status
- Management Overview
- Review recent recreational fishery performance
- Council approved measures
- Monitoring Committee analyses/recommendations
- Advisory Panel meeting summary
- **Goal:** Approve federal waters recreational management measures

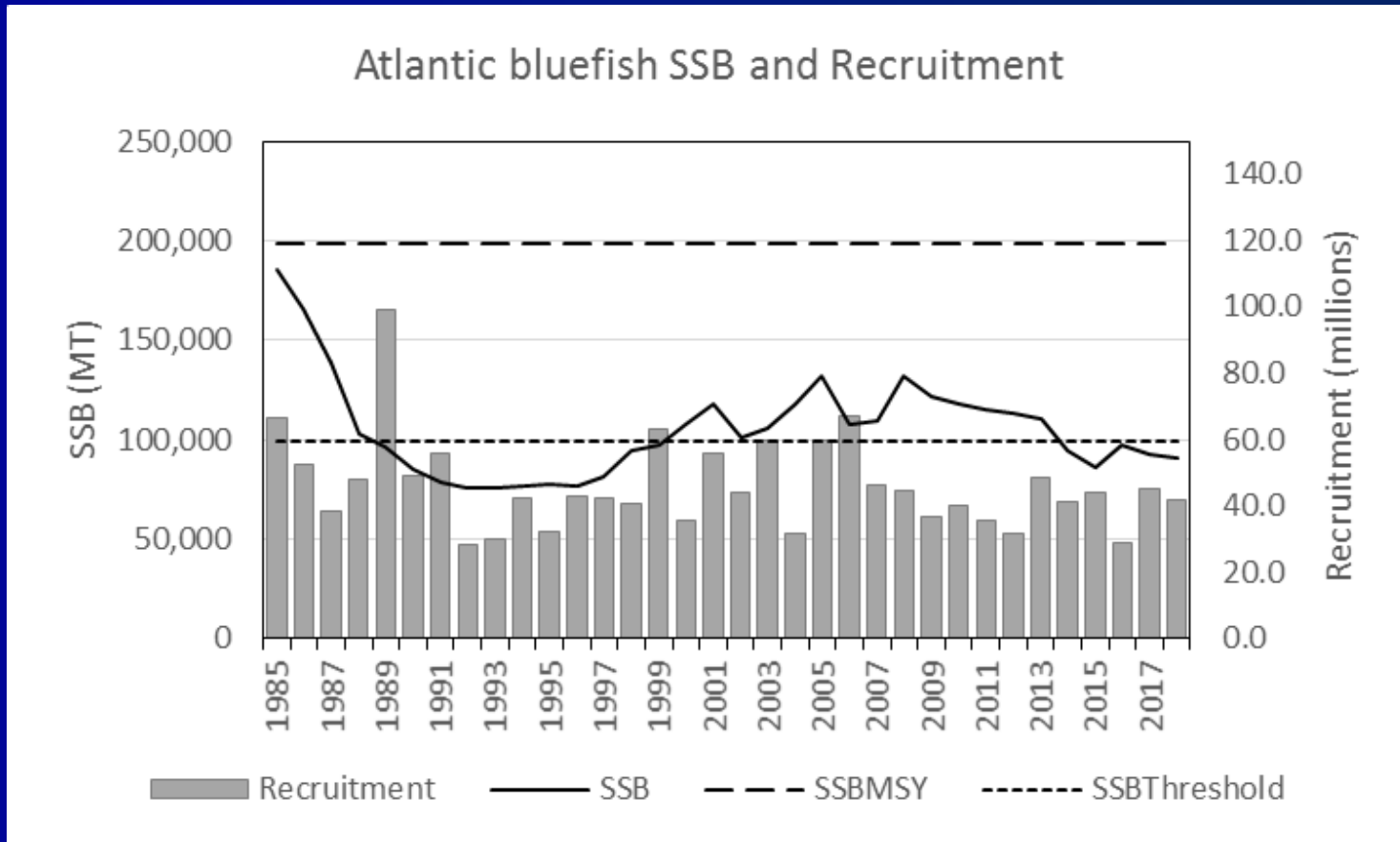
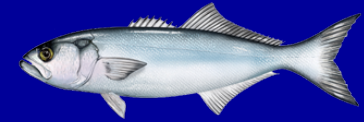
Fishing Mortality - 2019



Overfishing not occurring

(2018 $F = 0.146$; below $F_{MSY \text{ proxy}} = F_{35\%SPR} = 0.183$)

Biomass - 2019



Overfished

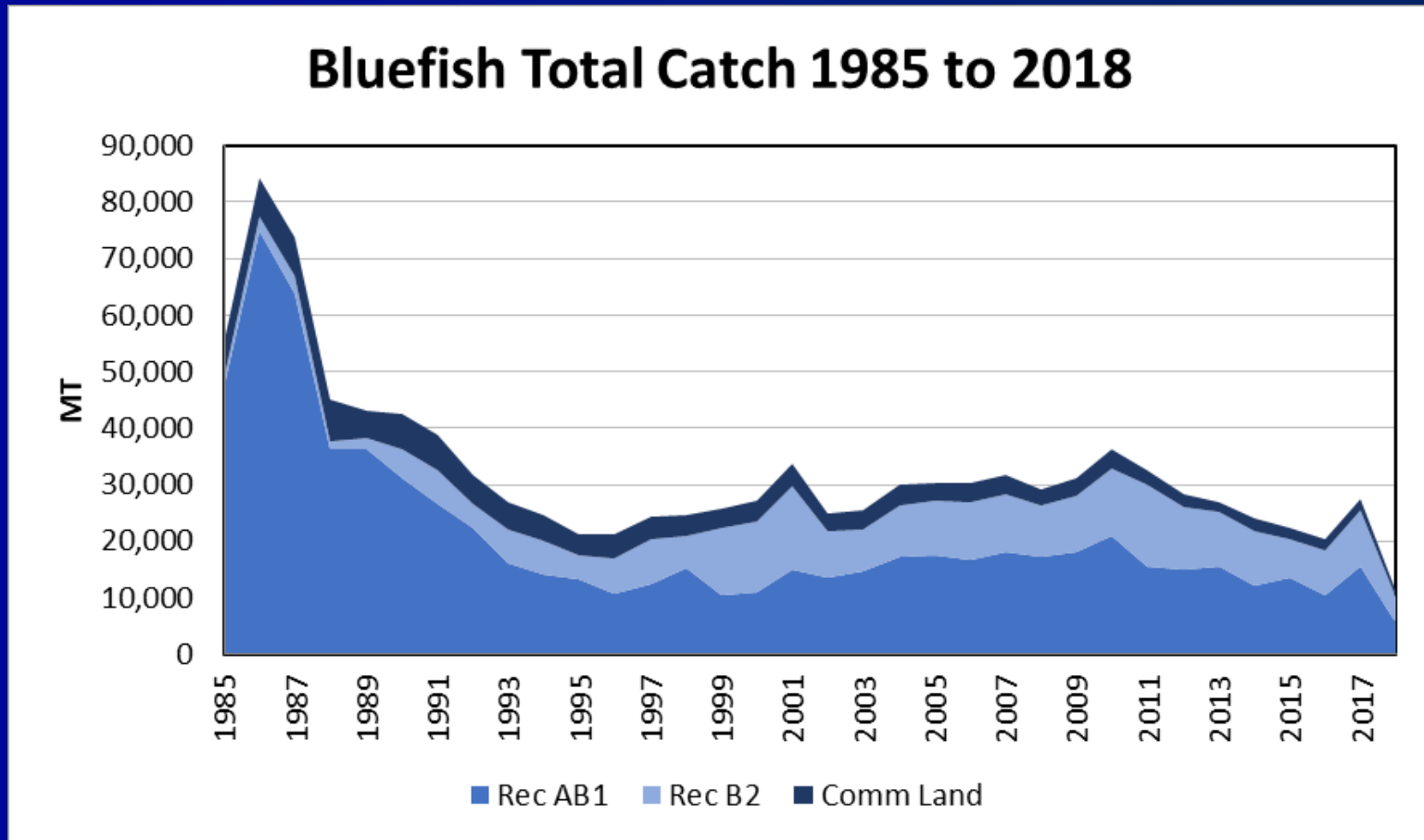
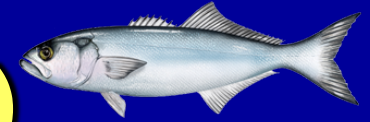
2018 SSB (91,041 mt) \approx 8% below SSB_{Threshold} (99,359 mt)

Management Measures



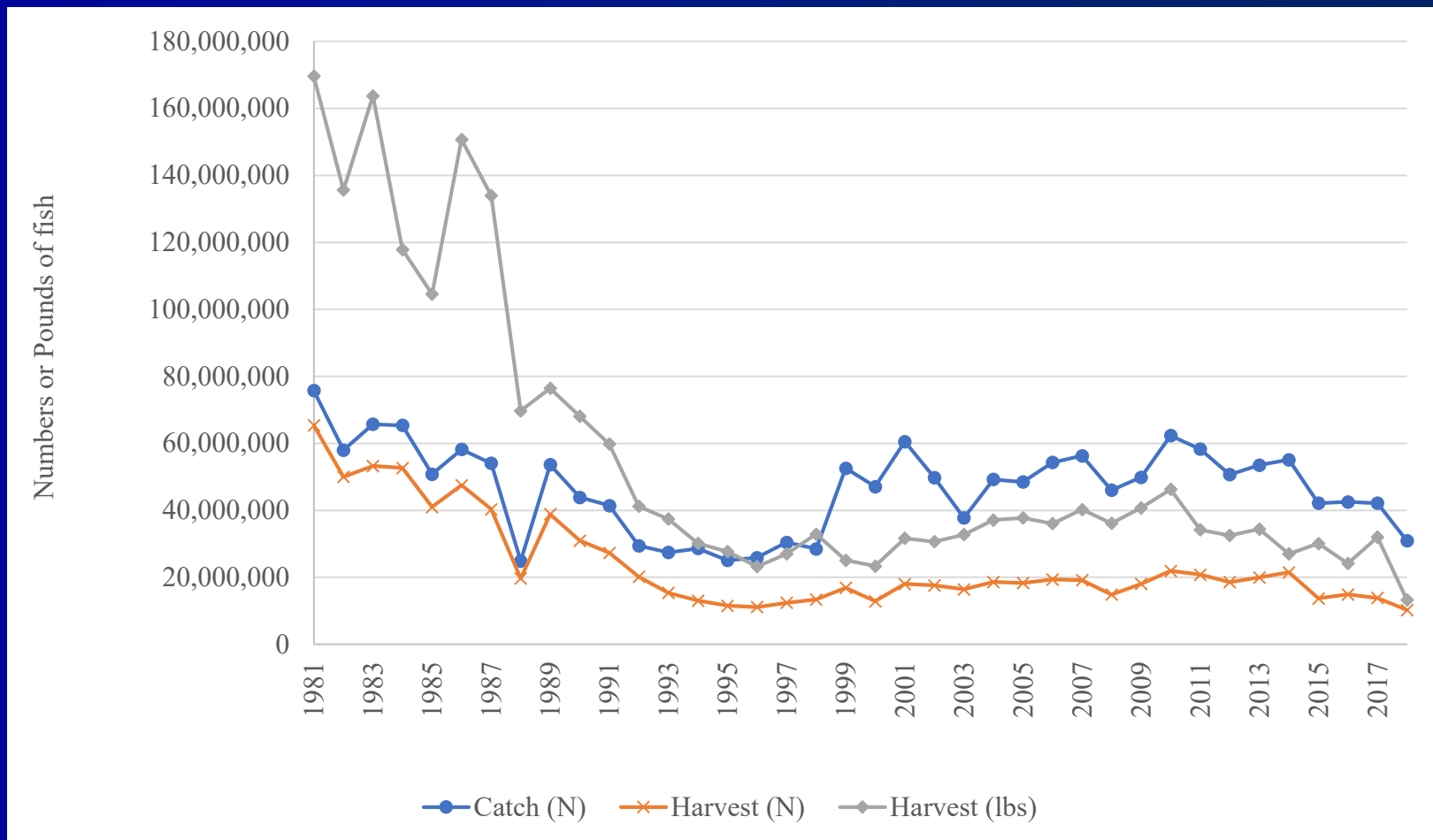
Management Measures	2014	2015	2016	2017	2018	2019
ABC	24.43	21.54	19.45	20.64	21.81	21.81
TAL	21.08	18.19	16.46	18.19	18.82	19.33
Comm. Quota	7.46	5.24	4.88	8.54	7.24	7.71
Comm. Landings	4.77	4.02	4.1	3.64	2.20	-
Rec. Harvest Limit	13.62	12.95	11.58	9.65	11.58/NA	11.62
Rec. Landings	10.46	11.67	9.54	9.52	3.64/13.27	-
Rec. Possession Limit (# fish)	15	15	15	15	15	15
Total Landings	15.23	15.69	13.64	13.16	5.84/15.57	-
Overage/Underage	-5.85	-2.5	-2.82	-5.03	-12.98	-
Total Catch	17.96	18.65	16.09	15.65	6.96	-
Overage/Underage	-6.47	-2.89	-3.36	-4.99	-14.85	-

Catch (landings and discards)



Anthony Wood 2019, Personal communication

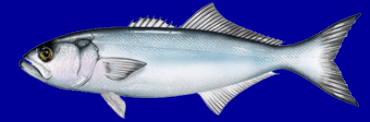
Total Bluefish Removals, 1981-2018



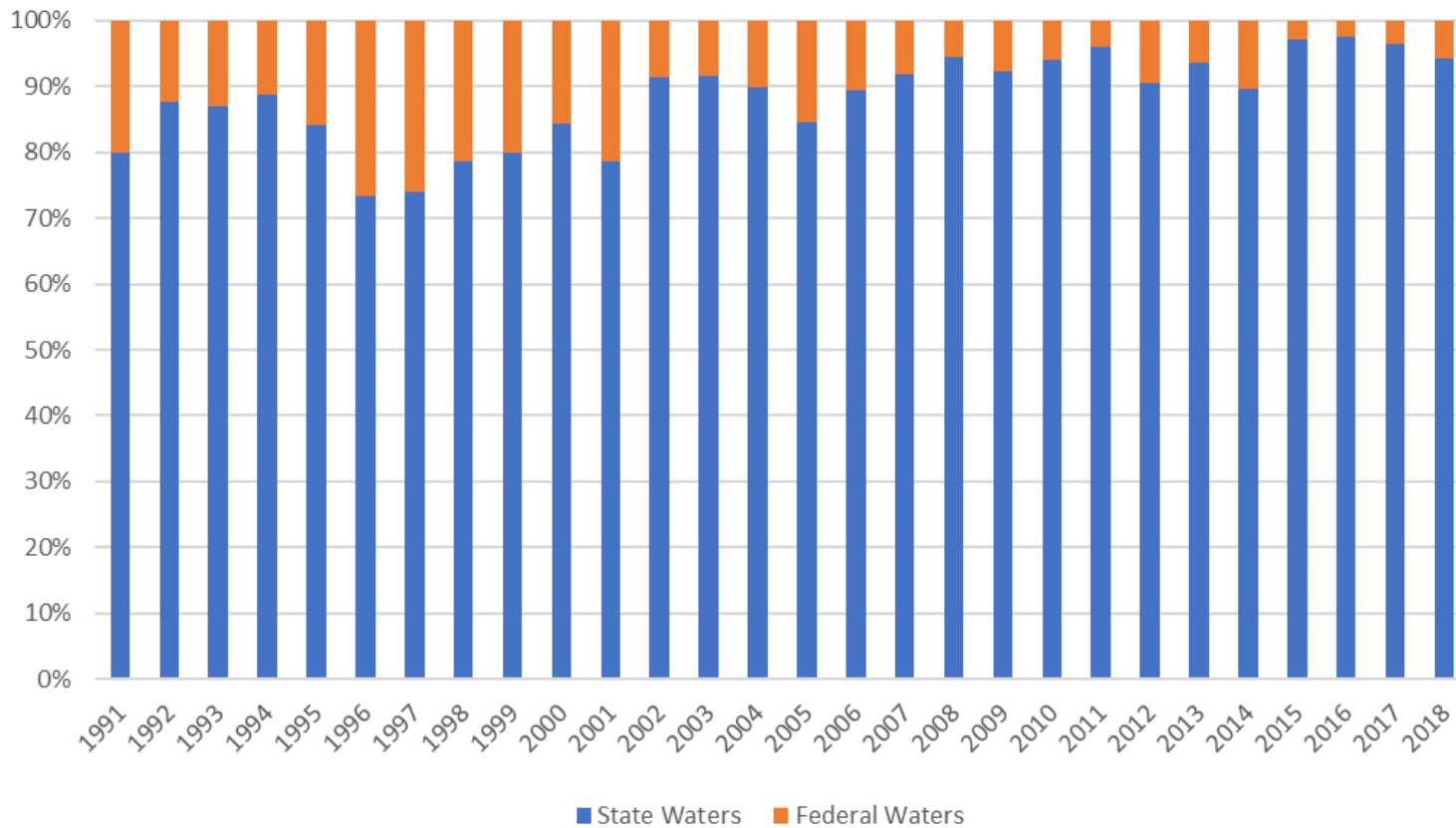
2018 Rec Landings by State

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

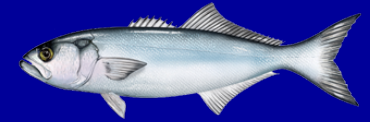
Recreational Fishery



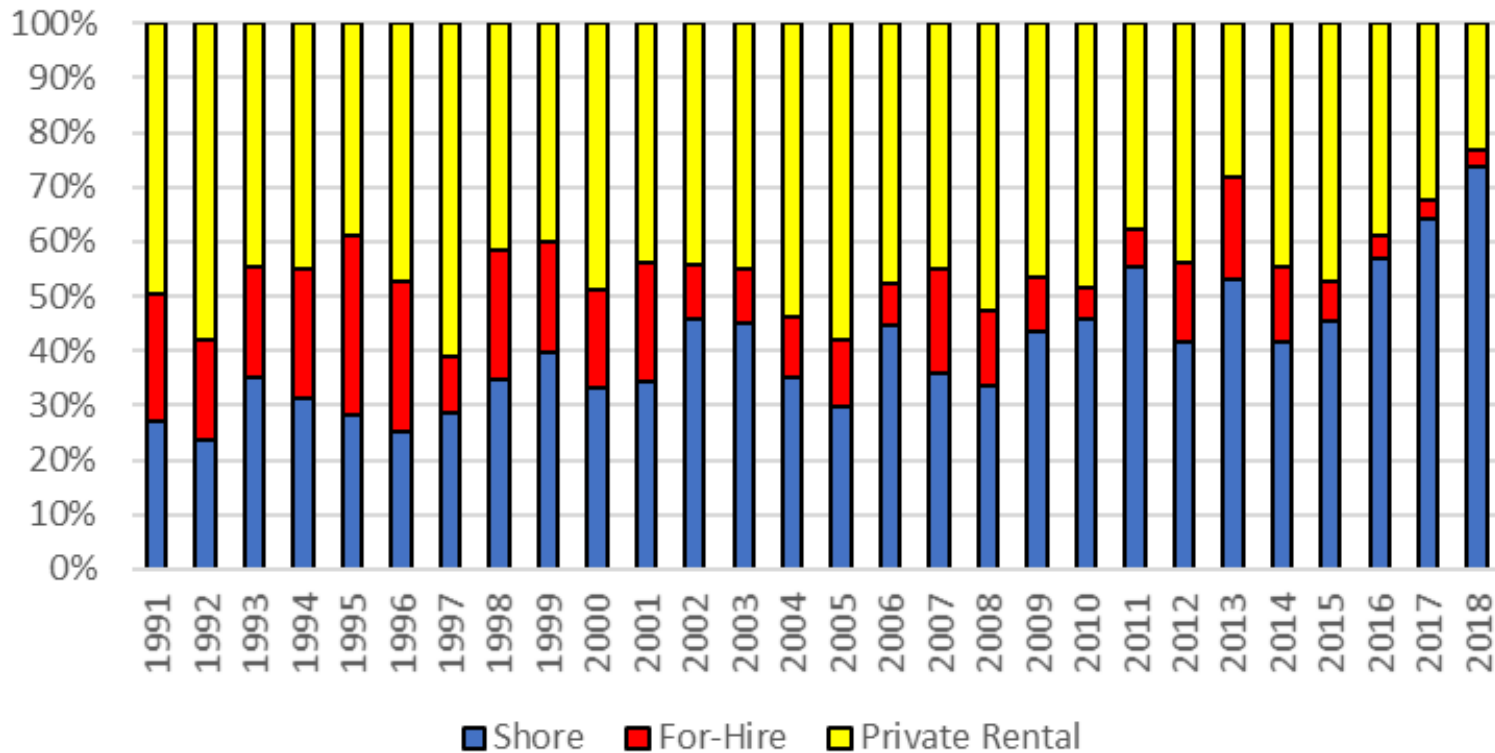
Stat vs Federal Landings, 1991-2018



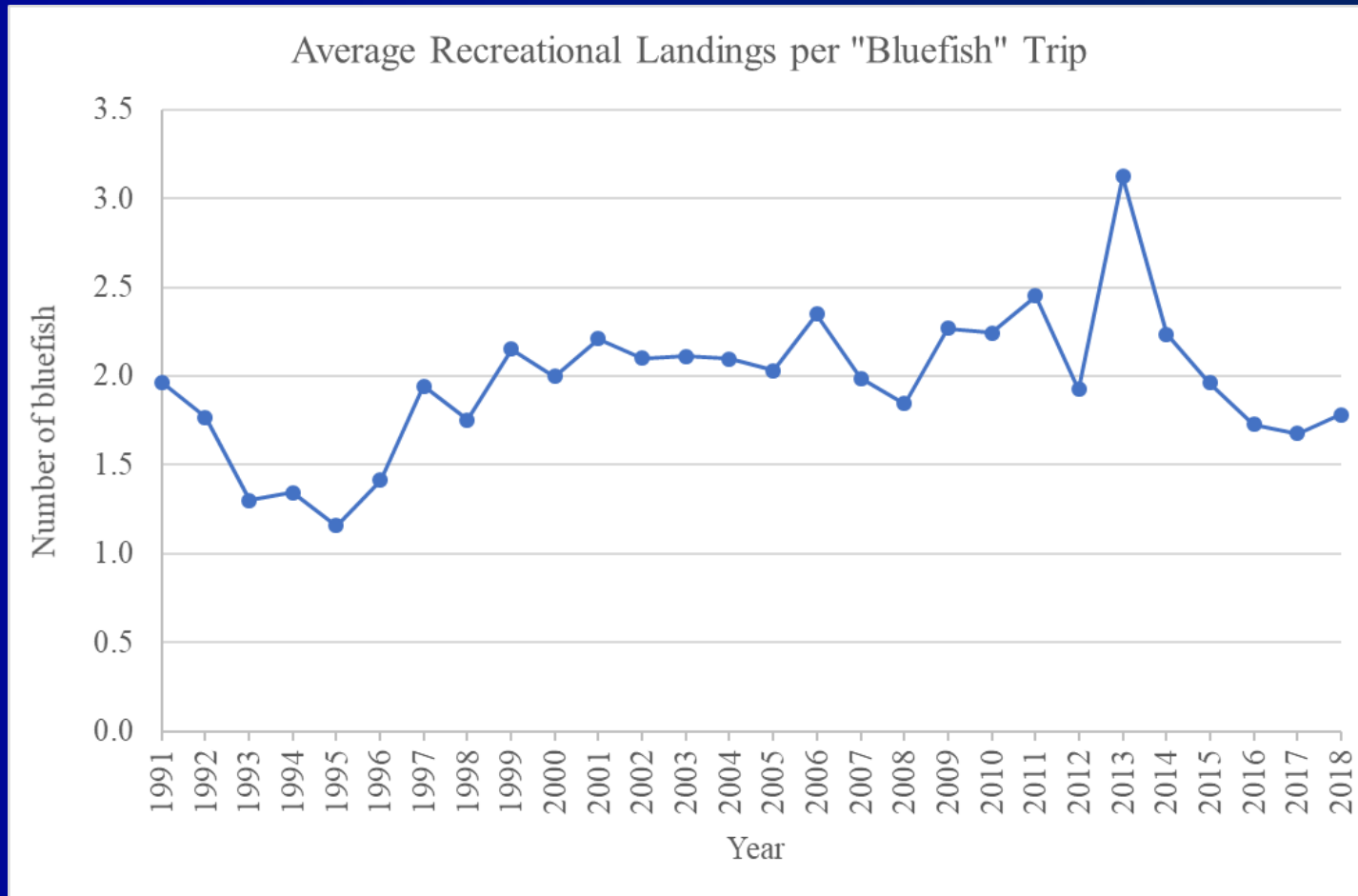
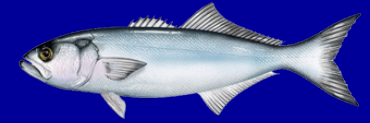
Recreational Fishery



Recreational Landings by Mode



Recreational Fishery



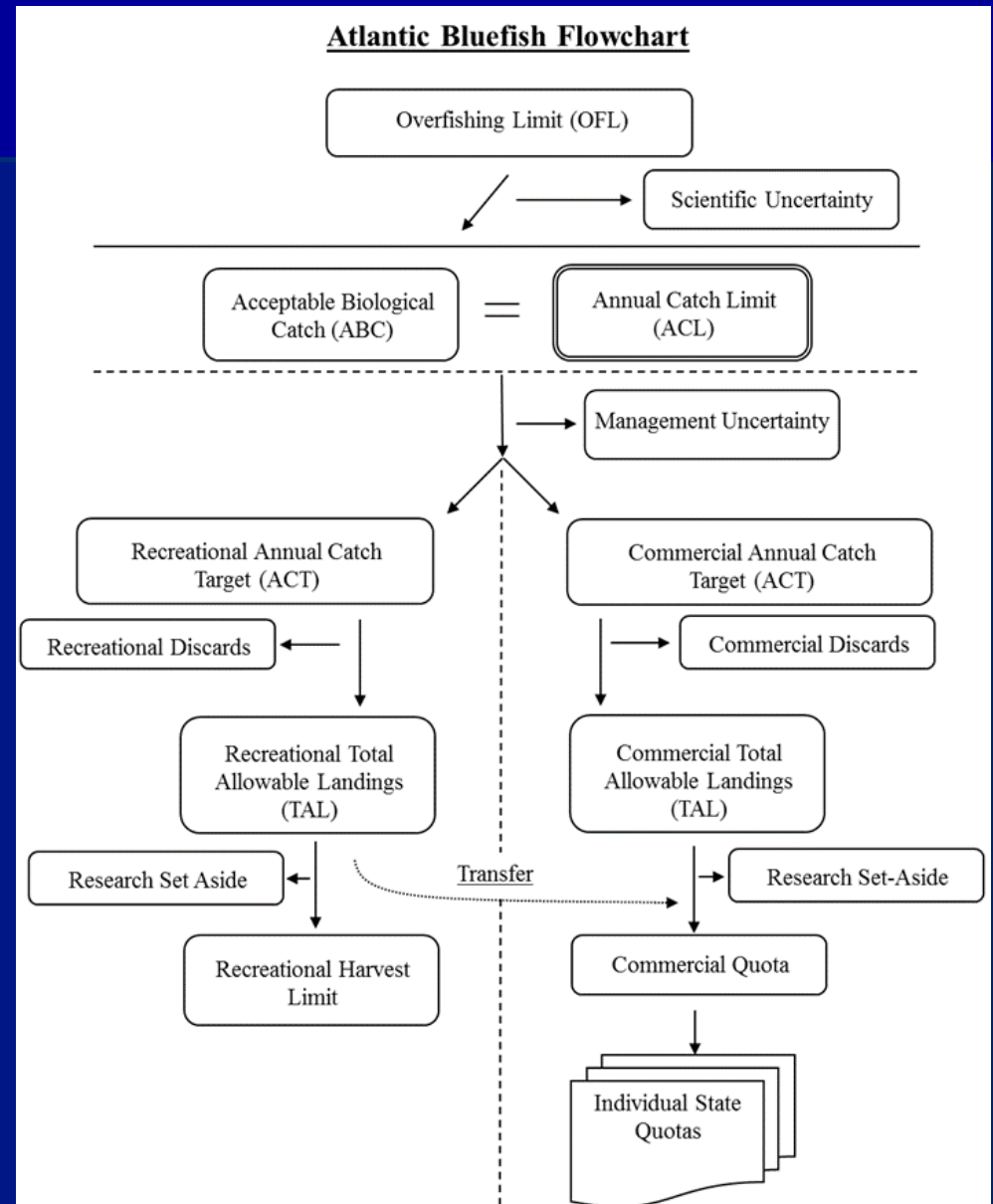
Council Approved Measures



Management Measure	MC Rec.		Council Approved	
	2020-2021		2020-2021	
	M lb	mt	M lb	mt
ABC (Average)	16.28	7,385	16.28	7,385
ACL	16.28	7,385	16.28	7,385
Management Uncertainty	0	0	0	0
Commercial ACT	2.77	1,255	2.77	1,255
Recreational ACT	13.51	6,130	13.51	6,130
Commercial Discards	0	0	0	0
Recreational Discards	9.90	4,489	4.03	1,829
Commercial TAL	2.77	1,255	2.77	1,255
Recreational TAL	3.62	1,641	9.48	1,641
TAL Combined	6.39	2,896	12.25	2,896
Expected Rec Landings	23.15	10,500	13.27	6,020
Transfer	0	0	0	0
Commercial Quota	2.77	1,255	2.77	1,255
RHL	3.62	1,641	9.48	4,301

MC Role

- **Goal:** Recommend recreational measures to constrain 2020 harvest to the 2020 RHL
 - Council approved expected recreational landings
 - 13,270,862 pounds (-28.56%)



Bag Limit



Shore and Private Rental				
Bag Limit	2018	2017	2016	Average
1	-62.38%	-56.87%	-62.01%	-60.42%
2	-43.42%	-38.87%	-43.65%	-41.98%
3	-29.91%	-27.22%	-30.28%	-29.14%
4	-20.56%	-19.66%	-21.32%	-20.51%
5	-15.27%	-14.10%	-14.63%	-14.67%
6	-11.15%	-10.36%	-10.07%	-10.53%
7	-8.19%	-7.55%	-7.52%	-7.75%
8	-5.67%	-5.77%	-5.73%	-5.72%
9	-3.98%	-4.27%	-4.34%	-4.20%
10	-2.46%	-3.12%	-3.04%	-2.87%

For-Hire				
Bag Limit	2018	2017	2016	Average
1	-50.86%	-44.65%	-54.88%	-50.13%
2	-39.81%	-28.66%	-37.95%	-35.47%
3	-28.75%	-19.89%	-27.17%	-25.27%
4	-21.56%	-13.67%	-19.36%	-18.20%
5	-16.62%	-10.08%	-14.64%	-13.78%
6	-12.91%	-7.13%	-11.40%	-10.48%
7	-9.87%	-4.69%	-8.70%	-7.76%
8	-7.14%	-2.81%	-6.60%	-5.51%
9	-5.48%	-1.60%	-4.79%	-3.96%
10	-4.20%	-0.72%	-3.17%	-2.70%

All Modes				
Bag Limit	2018	2017	2016	Average
1	-62.27%	-56.19%	-61.80%	-60.09%
2	-43.36%	-38.02%	-43.47%	-41.61%
3	-29.89%	-26.30%	-30.15%	-28.78%
4	-20.58%	-18.69%	-21.20%	-20.16%
5	-15.29%	-13.11%	-14.56%	-14.32%
6	-11.18%	-9.34%	-10.02%	-10.18%
7	-8.23%	-6.50%	-7.47%	-7.40%
8	-5.69%	-4.71%	-5.67%	-5.36%
9	-4.01%	-3.19%	-4.27%	-3.82%
10	-2.50%	-2.03%	-2.96%	-2.50%

All Modes

3-fish bag limit = -28.78%

Necessary reduction = -28.56%

Seasonal Closure (Wave)



Row Labels	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Total
2018	15.84%	11.84%	21.88%	12.42%	26.87%	11.15%	100.00%
MASSACHUSETTS	0.00%	0.00%	13.89%	53.26%	32.85%	0.00%	100.00%
RHODE ISLAND	0.00%	0.00%	8.35%	14.70%	76.95%	0.00%	100.00%
CONNECTICUT	0.00%	0.00%	3.05%	51.73%	45.22%	0.00%	100.00%
NEW YORK	0.00%	0.00%	55.65%	16.88%	26.30%	1.17%	100.00%
NEW JERSEY	0.00%	0.00%	46.42%	13.10%	40.32%	0.15%	100.00%
DELAWARE	0.00%	0.00%	80.38%	7.07%	11.80%	0.75%	100.00%
MARYLAND	0.00%	0.00%	0.70%	44.08%	55.20%	0.02%	100.00%
VIRGINIA	0.00%	0.58%	3.74%	28.93%	43.37%	23.38%	100.00%
NORTH CAROLINA	0.00%	13.32%	21.84%	8.65%	43.34%	12.85%	100.00%
SOUTH CAROLINA	0.00%	4.22%	36.47%	1.20%	56.38%	1.72%	100.00%
GEORGIA	0.00%	13.66%	36.52%	0.32%	4.06%	45.43%	100.00%
FLORIDA	46.45%	26.37%	1.45%	1.50%	1.70%	22.52%	100.00%

Size Limit



2016-2018, Maine to Florida

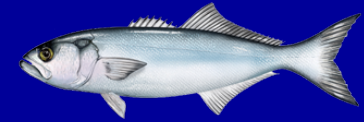
Expanded length frequencies of landed bluefish, 2016-2018, from Maine through Florida, as a percent of total recreational landings of bluefish.

Amd. 1: Length-weight relationship

$$W = (7.323 \times 10^{-4}) \times FL^{2.855}$$

All Modes - Size Limits						
TL (in)	Pounds	Numbers	Landings (pounds)	% of total landings	Cumulative %	Reduction %
4	0.02	97,787.65	2,439.93	0.00%	0.00%	0.00%
5	0.05	933,965.08	44,858.47	0.06%	0.07%	0.00%
6	0.08	2,686,589.34	219,741.41	0.31%	0.38%	0.07%
7	0.13	2,121,954.25	271,790.40	0.39%	0.77%	0.38%
8	0.19	2,322,351.52	438,254.93	0.62%	1.39%	0.77%
9	0.27	2,440,059.22	647,681.90	0.92%	2.31%	1.39%
10	0.36	2,514,130.53	905,069.47	1.29%	3.60%	2.31%
11	0.47	2,979,932.58	1,412,738.54	2.01%	5.61%	3.60%
12	0.61	3,833,331.12	2,335,990.85	3.32%	8.93%	5.61%
13	0.77	2,914,732.84	2,237,248.57	3.18%	12.12%	8.93%
14	0.95	2,713,088.35	2,578,111.44	3.67%	15.79%	12.12%
15	1.16	1,738,230.79	2,014,713.96	2.87%	18.65%	15.79%
16	1.40	1,176,896.79	1,642,475.13	2.34%	20.99%	18.65%
17	1.66	972,376.28	1,615,554.76	2.30%	23.29%	20.99%
18	1.96	1,383,233.81	2,708,631.05	3.85%	27.14%	23.29%
19	2.29	1,912,636.64	4,374,903.92	6.23%	33.37%	27.14%
20	2.65	802,359.81	2,126,684.79	3.03%	36.40%	33.37%

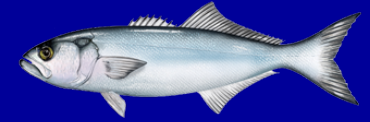
MC Recommendation



- The Council approved expected recreational landings of 13,270,862 pounds is 28.56% higher than the 2020 RHL of 9,480,162 pounds. Thus, the MC recommends a coastwide 3-fish bag limit to constrain harvest by 28.78% (no discards) so that the 2020 recreational harvest does not exceed the RHL.

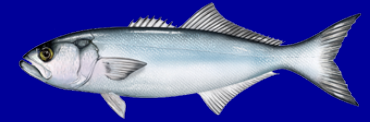
Alternative	Mode	Bag Limit	Size (inches)	Reduction by Mode
1	All Modes	3	0	28.78%
2	For-Hire	4	17	28.61%
	Shore and Private Angler	3	0	29.14%
3	For-Hire	5	19	28.75%
	Shore and Private Angler	3	0	29.14%
4	For-Hire	6	21	30.02%
	Shore and Private Angler	3	0	29.14%

Advisory Panel Meeting Comments



- Most input was provided by the for-hire sector
- Understand that a reduction is necessary, but can not work with a 3-fish bag limit
 - Will put many captains in a very difficult situation
- Bluefish is a fallback species that AP members rely heavily on when other species are unavailable or restricted by the regulations
- A minimum size limit would get rid of the snapper and bait fisheries and is not reasonable
- 15 fish bag limit is great incentive for clients, but not necessary
- Some AP members indicated they can work with a 5-7 fish bag limit

Staff Recommendation



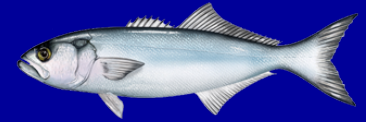
Average coastwide landings percentage from 2016-2018 by mode:

For-Hire: 3.6%

Private/Shore: 96.4%

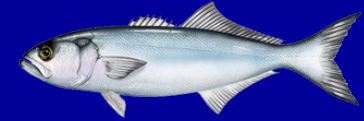
Due to the vast majority of landings coming from the private/shore modes, staff recommend a 3-fish bag limit for the private/shore mode and a 5-fish bag limit for the for-hire mode to achieve the necessary 28.56% reduction in harvest. This includes no size limit.

Extra: Conservation Equivalency Example



Summer Flounder-like CE	ASMFC CE (Bluefish)
<ul style="list-style-type: none">• Federal waters measures are waived, and state measures are extended into federal waters• Combination of state measures is conservationally equivalent to a set of non-preferred coastwide measures• Board and Council adopt either coastwide measures or CE - individual states cannot deviate from the joint decision	<ul style="list-style-type: none">• Pertains only to state waters, meaning federal waters measures remain in place• Board only decision and process• Allows states to propose alternative regulations that still achieve the same quantified level of conservation, i.e. still achieves at minimum a 28.56% reduction in the state's recreational harvest• State proposals must adhere to the ASMFC CE guidelines in addition to any guidelines set by the Board and TC.

Extra: Weighted by Mode



96.4% (2016-2018)

Shore and P/R Only No Discards Bag Limit

Bag Limit	2018	2017	2016	Average	% Reduction if Only S/PR
1	-62.38%	-56.87%	-62.01%	-60.42%	-58.24
2	-43.42%	-38.87%	-43.65%	-41.98%	-40.47
3	-29.91%	-27.22%	-30.28%	-29.14%	-28.09
4	-20.56%	-19.66%	-21.32%	-20.51%	-19.78
5	-15.27%	-14.10%	-14.63%	-14.67%	-14.14
6	-11.15%	-10.36%	-10.07%	-10.53%	-10.15
7	-8.19%	-7.55%	-7.52%	-7.75%	-7.47
8	-5.67%	-5.77%	-5.73%	-5.72%	-5.52
9	-3.98%	-4.27%	-4.34%	-4.20%	-4.05
10	-2.46%	-3.12%	-3.04%	-2.87%	-2.77

3.6% (2016-2018)

For-Hire Only No Discards Bag Limit

Bag Limit	2018	2017	2016	Average	% Reduction if Only FH
1	-50.86%	-44.65%	-54.88%	-50.13%	-1.80
2	-39.81%	-28.66%	-37.95%	-35.47%	-1.28
3	-28.75%	-19.89%	-27.17%	-25.27%	-0.91
4	-21.56%	-13.67%	-19.36%	-18.20%	-0.66
5	-16.62%	-10.08%	-14.64%	-13.78%	-0.50
6	-12.91%	-7.13%	-11.40%	-10.48%	-0.38
7	-9.87%	-4.69%	-8.70%	-7.76%	-0.28
8	-7.14%	-2.81%	-6.60%	-5.51%	-0.20
9	-5.48%	-1.60%	-4.79%	-3.96%	-0.14
10	-4.20%	-0.72%	-3.17%	-2.70%	-0.10

Extra: 2020 Harvest Projections



State	2016-2018 wave 1-4 harvest as % of annual harvest	2019 wave 1-4 harvest	Average annual harvest 2016-2018	2019 projected annual harvest	% of projected 2019 total harvest
ME	100%	0	27	0	0.00%
NH	100%	0	7	0	0.00%
MA	64%	277,568	985,870	435,128	2.54%
RI	44%	1,099,034	369,586	2,473,273	14.44%
CT	55%	310,130	723,794	564,494	3.30%
NY	63%	3,332,449	4,201,467	5,274,758	30.81%
NJ	71%	1,422,351	5,780,646	1,993,690	11.64%
DE	94%	322,360	903,313	344,695	2.01%
MD	53%	98,268	376,809	186,960	1.09%
VA	52%	588,754	340,062	1,143,155	6.68%
NC	67%	2,120,394	3,207,078	3,175,257	18.54%
SC	45%	463,252	533,079	1,033,297	6.03%
GA	53%	10,435	26,489	19,599	0.11%
FL	88%	2,213,233	5,701,659	2,528,308	14.77%
Total	72%	12,258,228	23,149,887	17,122,744	100%

Extra: Bag Limit/Mean wt



State	Bag Limit	Mean Weight (2016)	Mean Weight (2017)	Mean Weight (2018)	Mean Weight (Average)
ME	3	1.9	4.4	-	3.2
NH	10	4.6	-	-	4.6
MA	10	1.0	2.2	3.4	2.2
RI	15	2.6	1.2	1.8	1.9
CT	10	2.0	1.3	1.1	1.5
NY	15	2.4	2.0	1.2	1.9
NJ	15	2.6	2.3	1.4	2.1
DE	10	5.4	6.9	4.2	5.5
MD	10	1.4	1.9	1.8	1.7
VA	10	1.0	1.9	0.6	1.2
NC	15	0.7	1.1	0.8	0.9
SC	15	0.6	0.7	0.5	0.6
GA	15	0.4	0.5	0.8	0.6
FL	10	1.9	6.1	2.2	3.4
Coastwide	-	1.6	2.3	1.3	1.73

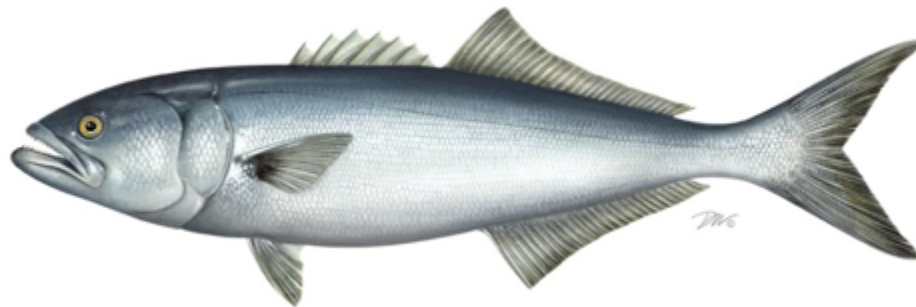
Extra: All Modes Bag & Size



All Modes		
Bag	Size	Reduction
4	13"	-29.83%
5	15"	-30.30%
6	16"	-29.03%
7	17"	-28.96%



Bluefish Conservation Equivalency Considerations



Presented to ASMFC Bluefish Board
December 10, 2019



MRIP Recreational Harvest PSE by State, 2018

<i>STATE</i>	<i>Annual PSE</i>	<i>Wave PSE</i>
<i>MASSACHUSETTS</i>	19.2	>28.1
<i>RHODE ISLAND</i>	36.5	>24.7
<i>CONNECTICUT</i>	29	>37.3
<i>NEW YORK</i>	22	>25.3
<i>NEW JERSEY</i>	22.3	>31.5
<i>DELAWARE</i>	51.9	>44.9
<i>MARYLAND</i>	46	>50.9
<i>VIRGINIA</i>	19.9	>25.2
<i>NORTH CAROLINA</i>	12.3	>20.1
<i>SOUTH CAROLINA</i>	30.6	>37.2
<i>GEORGIA</i>	50.9	>68.2
<i>FLORIDA</i>	40	>44.9

Potential Timeline



Date	Activity/Action
December 18, 2019	Technical Committee call setting conservation equivalency (CE) guidelines
January 13-17, 2019	Technical Committee call to review state CE proposals
February, 2019	Board considers state proposals for final approval



CE Considerations

- What data should be used in performing CE analyses?
- What management measures should be considered?
- What types of analysis methodologies should states use?