

# 2014 Bluefish Specifications





#### Review

- Existing Mgmt Measures
- Stock Condition
- ABC Update
- Options



#### Review

■ 2014 is Year 2/2

■ ACL: 27.057 M lb

Recreational Harvest Limit: 14.069 M lb

Commercial Quota: 8.673 M lb

Bag Limit: 15 fish



#### **Stock Status**

Overfishing not occurring, Not overfished

■ F<sub>2012</sub>: 0.097

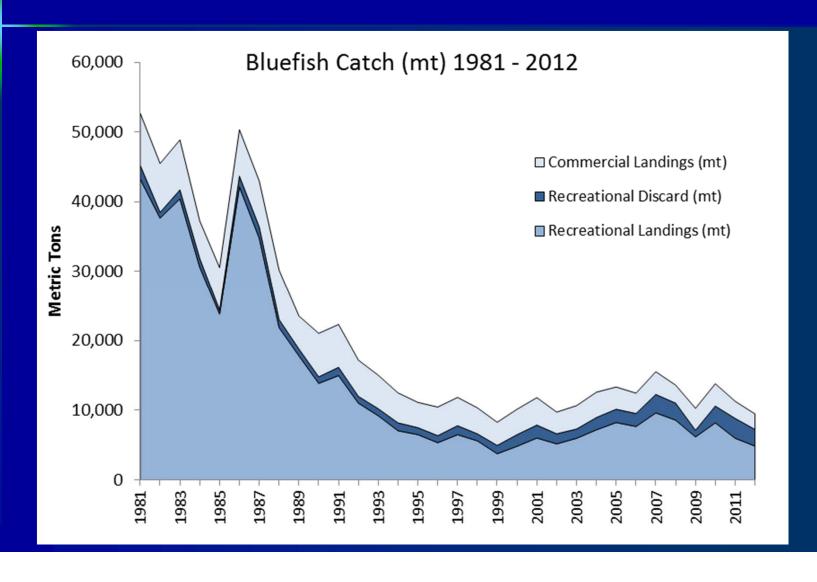
 $(F_{MSY}: 0.19)$ 

■ B<sub>2012</sub>: 125,808 mt

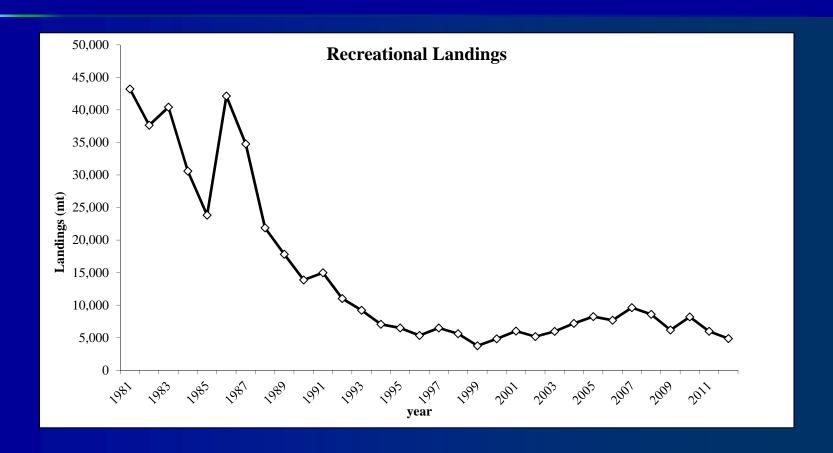
 $(B_{MSY}: 147,052 \text{ mt})$ 

- Weak 2012 year class
- Retrospective

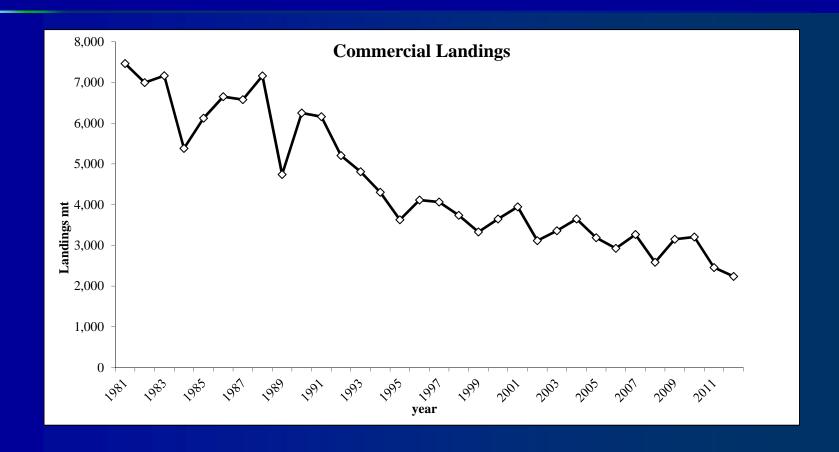




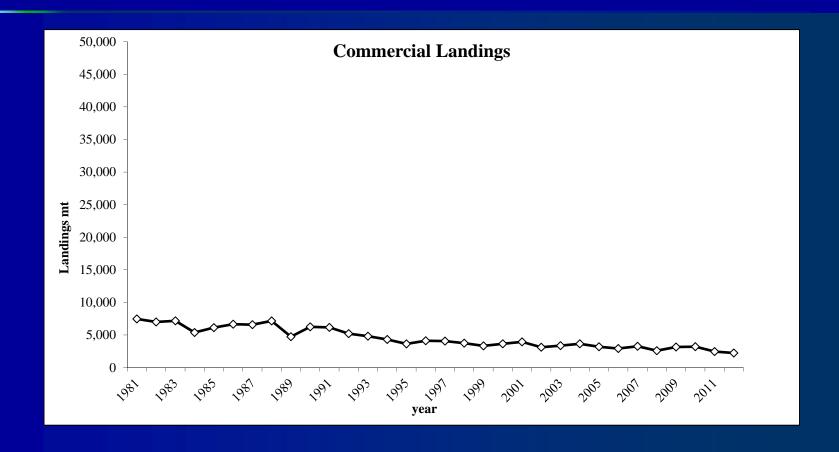






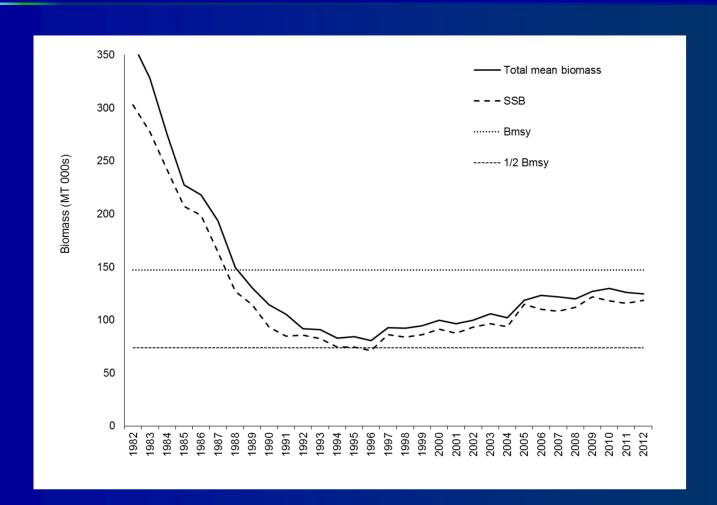






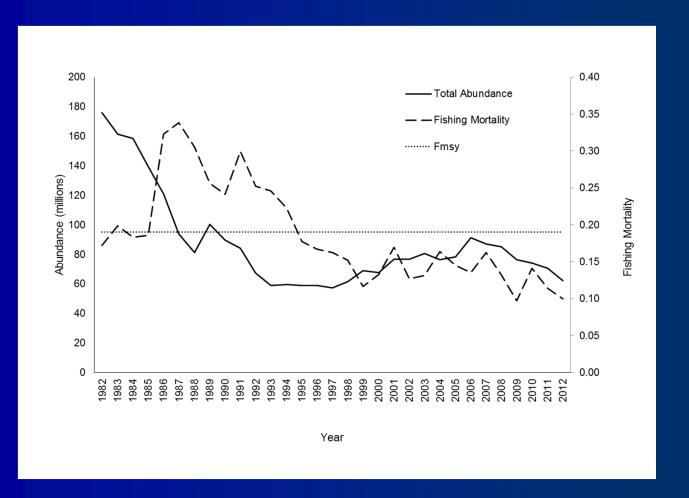


## **Biomass**



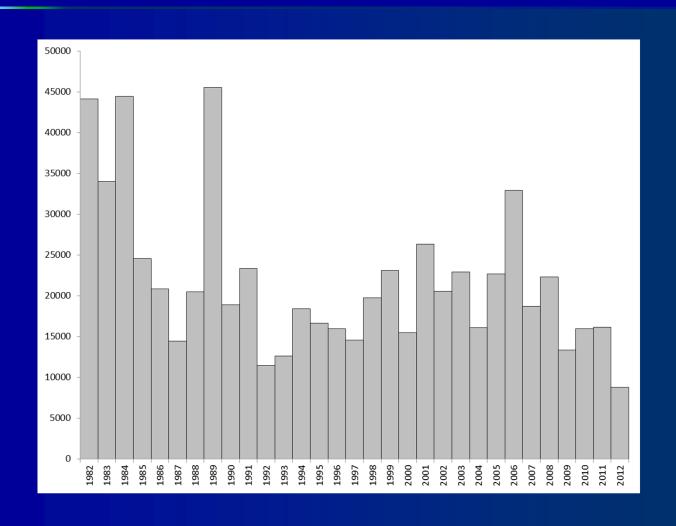


# **Fishing Mortality**



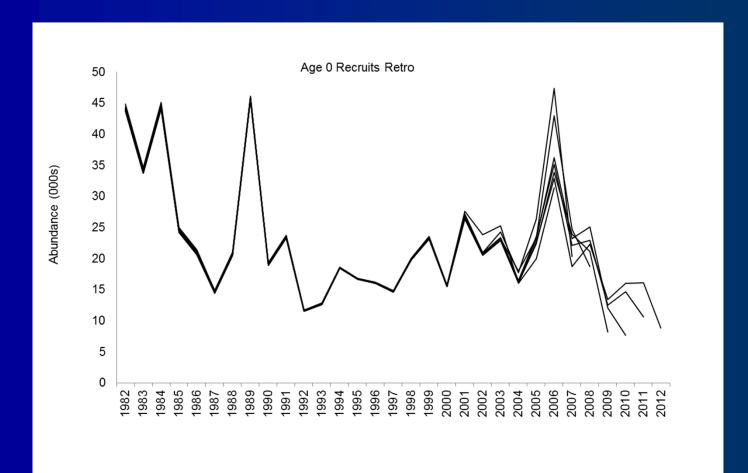


#### Recruits





## Retro





# **Projections**

Table 11. Projection results for bluefish through 2014 under various fishing scenarios. A quota for 2012 and F values for 2013 and 2014 were used to project forward.

		Quota (000s mt)	F	Jan 1 Abundance (000s)	Mean Biomass (000s mt)	SSB (000s mt)	Yield (000s mt)
F	2012	14.54		71299.60	127.58	121.21	14.54
low	2013		0.10	73900.40	120.82	112.90	9.56
	2014		0.10	77388.80	119.64	109.87	9.68
		Quota (000s mt)	F	Jan 1 Abundance (000s)	Mean Biomass (000s mt)	SSB (000s mt)	Yield (000s mt)
F	2012	14.54		71299.60	127.58	121.21	14.54
status quo	2013		0.114	73900.40	120.18	112.27	10.84
	2014		0.114	76850.60	117.75	108.07	10.85
		Quota (000s mt)	F	Jan 1 Abundance (000s)	Mean Biomass (000s mt)	SSB (000s mt)	Yield (000s mt)
F0.1	2012	14.54		71299.60	127.58	121.21	14.54
	2013		0.16	73900.40	118.13	110.26	14.93
	2014		0.16	75124.00	111.78	102.38	14.42
		Quota (000s mt)	F	Jan 1 Abundance (000s)	Mean Biomass (000s mt)	SSB (000s mt)	Yield (000s mt)
Ftarget	2012	14.54		71299.60	127.58	121.21	14.54
	2013		0.17	73900.40	117.69	109.82	15.80
	2014		0.17	74757.20	110.53	101.19	15.14
		Quota (000s mt)	F	Jan 1 Abundance (000s)	Mean Biomass (000s mt)	SSB (000s mt)	Yield (000s mt)
Fmsy	2012	14.54		71299.60	127.58	121.21	14.54
	2013		0.19	73900.40	116.82	108.96	17.52
	2014		0.19	74032.00	108.07	98.84	16.52



# **Projections**

Table 12. Proje	ction resul	ts for bluefis	sh through	2015 under v	arious fishii	ng scenarios	S.
		Quota (000s mt)	F	Jan 1 Abundance (000s)	Mean Biomass (000s mt)	SSB (000s mt)	Yield (000s mt)
F	2013	12.46		69111.60	119.31	112.99	12.46
status quo	2014		0.097	71616.70	115.90	108.34	8.75
	2015		0.097	74650.70	115.73	106.38	8.85
	•						
F	2013	12.46		69111.60	119.31	112.99	12.46
low	2014		0.10	71616.70	115.77	108.22	9.01
	2015		0.10	74539.60	115.35	106.02	9.09
				•			•
F0.1	2013	12.46		69111.60	119.31	112.99	12.46
	2014		0.16	71616.70	113.24	105.73	14.07
	2015		0.16	72376.20	107.97	98.99	13.55
	_						
Ftarget	2013	12.46		69111.60	119.31	112.99	12.46
	2014		0.17	71616.70	112.83	105.32	14.89
	2015		0.17	72025.70	106.79	97.87	14.23
	•			•			
Fmsy	2013	12.46		69111.60	119.31	112.99	12.46
	2014		0.19	71616.70	112.00	104.51	16.51
	2015		0.19	71332.30	104.48	95.67	15.54
	-						
F	2013	12.46		69111.60	119.31	112.99	12.46
from 2013	2014		0.132	71616.70	114.41	106.88	11.74
P* = 0.341	2015		0.132	73372.20	111.34	102.21	11.55
F	2013	12.46		69111.60	119.31	112.99	12.46
resulting in	2014		0.1384	71616.70	114.14	106.62	12.27
2014 ABC	2015		0.1384	73142.60	110.56	101.46	12.02



# **ABC**

Typical		
OFL	17,521	
B/Bmsy	0.8676	
CV	100%	
sigma	0.832555	
P*	0.341156	
ABC	12,461	
ABC/OFL	0.71122	



# **ABC**

Typical		
OFL	16,506	
B/Bmsy	0.8113	
CV	100%	
sigma	0.832555	
P*	0.316133	
ABC	11,082	
ABC/OFL	0.671387	



# **Projections**

Table 12. Projection results for bluefish through 2015 under various fishing scenarios.											
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12,273 mt

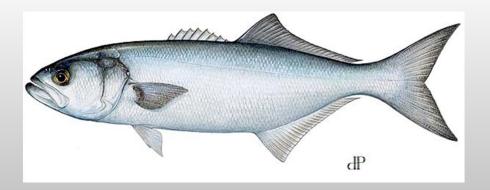


# Projections

Quota	Jan 1	Mean	SSB						
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2014 ABC	2015		0.1364	73142.60	110.56	101.46	12.02

12,273 mt



# MAFMC SSC ABC Recommendation

Bluefish
2014 Fishing Year

#### Level 3

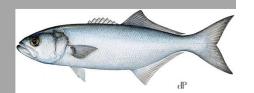
 The structure of the assessment was unchanged from previous specification.

 There were no new estimates of uncertainties associated with maximum fishing mortality rate (OFL).



#### OFL

The OFL = 16,506 mt, based on an  $F_{msy}$  of 0.19.



#### ABC

- **ABC** = **11,082 mt** (24.4 million lb) for the 2014 fishing year
- The ratio of B/BMSY, based on mid-year estimates from 2013, is 0.8113, and that Bluefish exhibit a typical life history.
- The SSC applied the Council's risk policy of P\*
   = 0.316.
- The projection is 67.1% of the catch at OFL.



#### Number of Fishing Years for ABC

Since a benchmark assessment of Bluefish is scheduled for 2014, the SSC does not recommend ABCs for fishing years beyond 2014.



#### Most Significant Sources of Scientific Uncertainty

There is a significant level of missing data involved in the age-length keys (ALKs), which are critical for development of the catch-at-age matrix;

Concern exists about the application of aggregate trawl calibration coefficients (ALBATROSS IV vs BIGELOW), and their influence on the selectivity pattern and results of the assessment. Also, some near shore areas previously sampled by the ALBATROSS IV are unavailable for sampling by the BIGELOW;

#### Most Significant Sources of Scientific Uncertainty (cont'd)

Commercial discards are assumed to be insignificant, which may not be the case;

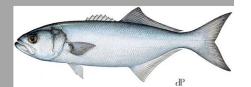
Much of population biomass (~40%) is in the aggregated 6+ age group for which there is relatively little information;

Questions have been raised about the uncertainty in the historical MRFSS/MRIP estimates in general, and are particularly relevant here given the highly episodic nature of Bluefish catches in the recreational fisheries coast wide;

#### Most Significant Sources of Scientific Uncertainty (cont'd)

The basis for the unusual bimodal selectivity curve used in the ASAP model is not well understood.

The updated assessment shows a retrospective bias resulting in the model underestimating recruitment by upwards of 50% near the end of the time series.

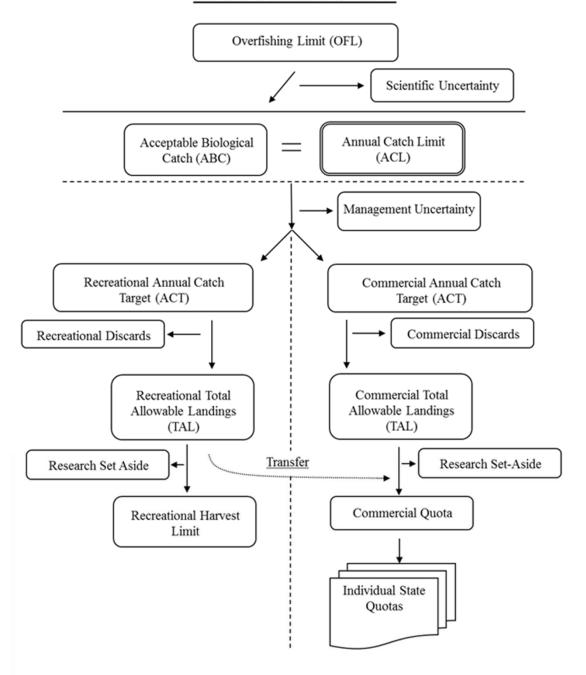




## **Options**

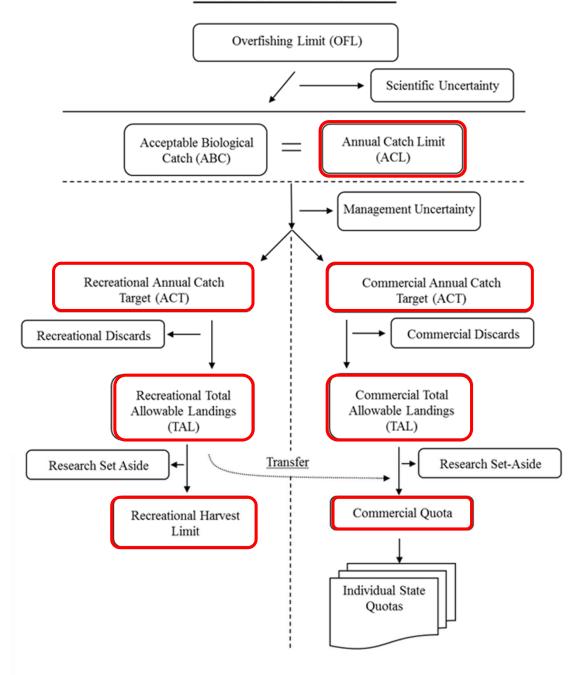
- Updated ABC effect on specified ACL
- Updated ABC < specified ABC</p>
  - ACL is automatically affected
- Updated ABC > specified ABC
  - ACL not automatically affected

#### **Atlantic Bluefish Flowchart**





#### **Atlantic Bluefish Flowchart**







		Existing	
2014 Management Measure	Basis	mt	M lb
OFL			
ABC	Constant F (0.132)	12,273	27,057,333
ACL	= ABC	12,273	27,057,333
Mgmt Uncertainty	per MC	0	0
Comm Discards	from assessment	0	0
Rec Discards	Three Year Average	1,638	3,611,172
Comm ACT	(ACL - Mgmt Uncert) * 17%	2,086	4,599,747
Rec ACT	(ACL - Mgmt Uncert) * 83%	10,187	22,457,587
Comm TAL	Comm ACT - Disc	2,086	4,599,747
Rec TAL	Rec ACT - Disc	8,549	18,846,415
TAL (combined)	Comm + Rec TAL	10,635	23,446,162
Proj. Recreational Landings	Three Year Average	6382	14,068,836
Maximum Transfer	Calculated	1,970	4,342,460
pre-RSA Comm Quota	Comm TAL + transfer	4,056	8,942,207
pre-RSA RHL	Rec TAL - transfer	6,579	14,503,955
Comm RSA Deduction (3%)	3% of Comm Quota	122	268,266
Rec RSA Deduction (3%)	3% of RHL	197	435,119
Adjusted Comm Quota	Comm Quota - RSA	3,934	8,673,941
Adjusted RHL	RHL - RSA	6,382	14,068,836



		Exis	ting	ABC U	pdate
2014 Management Measure	Basis	mt	M lb	mt	M lb
OFL	Yield at Fmsy (0.19)			16,506	36,389,501
ABC	Risk Policy ( $P^* = 0.316$ )	12,273	27,057,333	11,082	24,431,628
ACL	= ABC	12,273	27,057,333	11,082	24,431,628
Mgmt Uncertainty	per MC	0	0	0	0
Comm Discards	from assessment	0	0	0	0
Rec Discards	Three Year Average	1,638	3,611,172	1,520	3,351,026
Comm ACT	(ACL - Mgmt Uncert) * 17%	2,086	4,599,747	1,884	4,153,377
Rec ACT	(ACL - Mgmt Uncert) * 83%	10,187	22,457,587	9,198	20,278,251
Comm TAL	Comm ACT - Disc	2,086	4,599,747	1,884	4,153,377
Rec TAL	Rec ACT - Disc	8,549	18,846,415	7,678	16,927,225
TAL (combined)	Comm + Rec TAL	10,635	23,446,162	9,562	21,080,602
Proj. Recreational Landings	Three Year Average	6382	14,068,836	5,978	13,179,234
Maximum Transfer	Calculated	1,970	4,342,460	1,515	3,340,386
pre-RSA Comm Quota	Comm TAL + transfer	4,056	8,942,207	3,399	7,493,762
pre-RSA RHL	Rec TAL - transfer	6,579	14,503,955	6,163	13,586,839
Comm RSA Deduction (3%)	3% of Comm Quota	122	268,266	102	224,813
Rec RSA Deduction (3%)	3% of RHL	197	435,119	185	407,605
Adjusted Comm Quota	Comm Quota - RSA	3,934	8,673,941	3,297	7,268,949
Adjusted RHL	RHL - RSA	6,382	14,068,836	5,978	13,179,234



		Existing	Updated	Difference
State	Pct	lb	lb	lb
ME	0.6685	57,985	48,593	9,392
NH	0.4145	35,953	30,130	5,823
MA	6.7167	582,603	488,233	94,370
RI	6.8081	590,531	494,877	95,654
СТ	1.2663	109,838	92,047	17,791
NY	10.3851	900,797	754,888	145,909
NJ	14.8162	1,285,148	1,076,982	208,166
DE	1.8782	162,914	136,525	26,389
MD	3.0018	260,374	218,199	42,175
VA	11.8795	1,030,421	863,515	166,906
NC	32.0608	2,780,935	2,330,483	450,452
SC	0.0352	3,053	2,559	494
GA	0.0095	824	691	133
FL	10.0597	872,572	731,234	141,338
Total Comm	100.0001	8,673,941	7,268,949	1,404,992

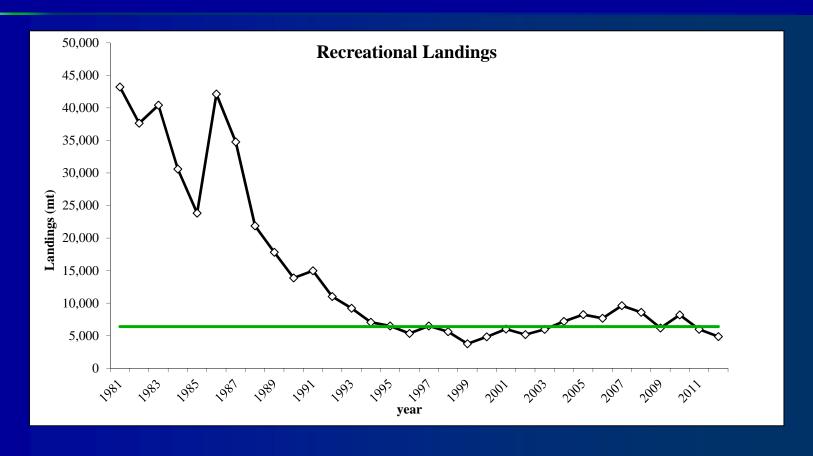


Management Measures	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TAL (M lb) *	35.328	37.841	26.866	37.293	31.85	30.853	24.797	27.762	28.156	29.356	29.264	27.293	28.267
Comm. Quota (M lb)†	9.583	9.583	10.5	10.5	10.5	10.5	8.081	8.689	7.705	9.828	10.213	9.375	10.317
Comm. Landings (M lb)	8.040	8.697	6.869	7.403	8.041	6.694	6.706	7.182	5.699	6.947	7.069	5.413	4.930
Rec. Target†	25.745	28.258	16.365	26.793	21.35	20.353	16.718	19.073	20.451	19.528	18.631	17.813	17.457
Rec. Landings (M lb)	10.606	13.230	11.371	13.136	17.222	19.852	16.445	21.690	19.672	14.513	16.194	11.499	10.684
Rec. Possession Limit	10	15	15	15	15	15	15	15	15	15	15	15	15
Total Landings	18.646	21.918	18.234	20.537	23.197	23.207	23.849	28.662	24.868	20.573	25.111	16.581	15.614
Overage/Underage (M lb)	-16.682	-15.923	-8.632	-16.756	-8.653	-7.646	-0.948	0.900	-3.288	-8.783	-4.153	-10.712	-12.653
Target F	N/A	N/A	N/A	N/A	N/A	0.15	0.15	0.15	0.15	0.15	0.15	0.15	N/A
ASAP F estimate	0.13	0.15	0.13	0.14	0.15	0.15	0.14	0.16	0.12	0.1	0.14	0.11	0.097

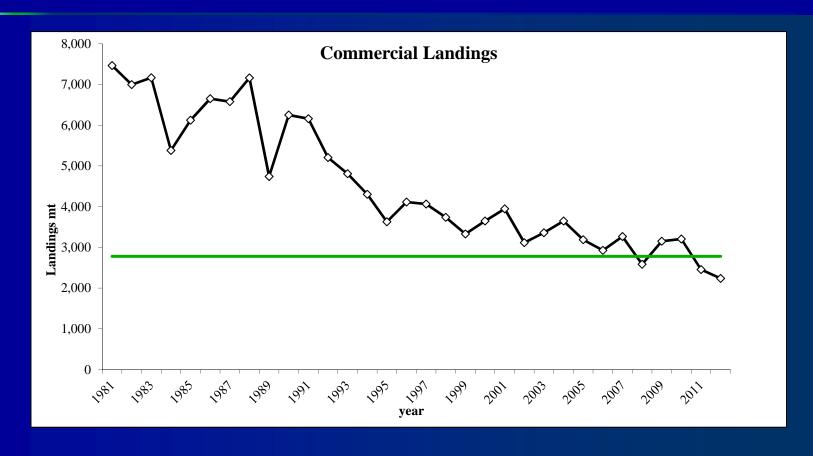


Management Measures	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
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Comm. Landings (M lb)	8.040	8.697	6.869	7.403	8.041	6.694	6.706	7.182	5.699	6.947	7.069	5.413	4.930	
Rec. Target†	25.745	28.258	16.365	26.793	21.35	20.353	16.718	19.073	20.451	19.528	18.631	17.813	17.457	
Rec. Landings (M lb)	10.606	13.230	11.371	13.136	17.222	19.852	16.445	21.690	19.672	14.513	16.194	11.499	10.684	
Rec. Possession Limit	10	15	15	15	15	15	15	15	15	15	15	15	15	
Total Landings	18.646	21.918	18.234	20.537	23.197	23.207	23.849	28.662	24.868	20.573	25.111	16.581	15.614	
Overage/Underage (M lb)	-16.682	-15.923	-8.632	-16.756	-8.653	-7.646	-0.948	0.900	-3.288	-8.783	-4.153	-10.712	-12.653	
Target F	N/A	N/A	N/A	N/A	N/A	0.15	0.15	0.15	0.15	0.15	0.15	0.15	N/A	
ASAP F estimate	0.13	0.15	0.13	0.14	0.15	0.15	0.14	0.16	0.12	0.1	0.14	0.11	0.097	











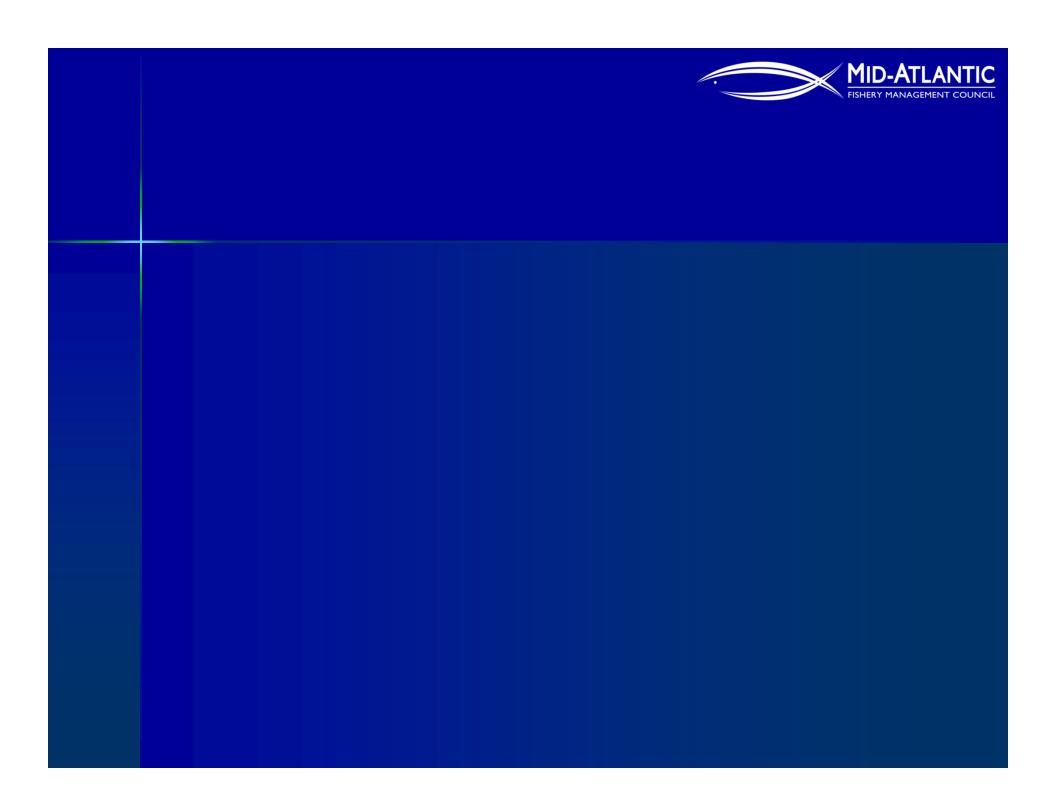
## **Fishery Performance Report**

- Delay in "arrival" of bluefish
- Plenty of large bluefish offshore
- Cooler than normal water temps
- Fuel cost constraining offshore effort
- Reduced catches last year from Hurricane Sandy
- Greater than usual baitfish abundance
- Reduced striped bass abundance offset
- Bag limit too high



#### Summary

- No overfishing / Not overfished
- $\blacksquare$  ABC<sub>2014</sub> = 12,273 mt
- SSC Adjusted ABC
- Updated ABC<sub>2014</sub> = 11,082 mt
- Fishery underperforming (67.3% TAL<sub>2010-2012</sub>)
- Benchmark Assessment in 2014
- Need to Adjust 2014 Management Measures



#### **Motion**



■ Move to adopt for bluefish in 2014...

an ACL of 24.432 M lb equivalent to ABC, a recreational ACT of 20.278 M lb and a commercial ACT of 4.153 M lb corresponding to a recreational TAL of 16.927 M lb and a commercial TAL of 4.153 M lb, and to allow a transfer of up to 3.340 M lb from the opmercial TAL

recreational

to the commercial TAL

resulting in a recreational harvest limit of 13.587 M lb and a commercial quota of 7.494 M lb.

Augustine/Himchak 17/0/0

Board Unanimous

#### Motion



Move to allow a research set-aside of up to 3%, 632,418 lbs, of the combined recreational and commercial TALs in 2014.

Augustine/Nowalski (Board)
Carries with one objection
Deem/O'Reilly (Council)
13/2/0



		Existing		ABC Update	
2014 Management Measure	Basis	mt	M lb	mt	M lb
OFL	Yield at Fmsy (0.19)			16,506	36,389,501
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Mgmt Uncertainty	per MC	0	0	0	0
Comm Discards	from assessment	0	0	0	0
Rec Discards	Three Year Average	1,638	3,611,172	1,520	3,351,026
Comm ACT	(ACL - Mgmt Uncert) * 17%	2,086	4,599,747	1,884	4,153,377
Rec ACT	(ACL - Mgmt Uncert) * 83%	10,187	22,457,587	9,198	20,278,251
Comm TAL	Comm ACT - Disc	2,086	4,599,747	1,884	4,153,377
Rec TAL	Rec ACT - Disc	8,549	18,846,415	7,678	16,927,225
TAL (combined)	Comm + Rec TAL	10,635	23,446,162	9,562	21,080,602
Proj. Recreational Landings	Three Year Average	6382	14,068,836	5,978	13,179,234
Maximum Transfer	Calculated	1,970	4,342,460	1,515	3,340,386
pre-RSA Comm Quota	Comm TAL + transfer	4,056	8,942,207	3,399	7,493,762
pre-RSA RHL	Rec TAL - transfer	6,579	14,503,955	6,163	13,586,839
Comm RSA Deduction (3%)	3% of Comm Quota	122	268,266	102	224,813
Rec RSA Deduction (3%)	3% of RHL	197	435,119	185	407,605
Adjusted Comm Quota	Comm Quota - RSA	3,934	8,673,941	3,297	7,268,949
Adjusted RHL	RHL - RSA	6,382	14,068,836	5,978	13,179,234