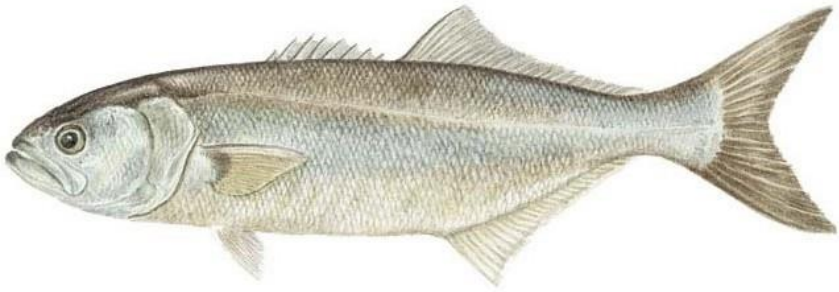
2015 Bluefish Specifications, Environmental Assessment, and Initial Regulatory Flexibility Analysis



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Prepared by the
Mid-Atlantic Fishery Management Council
in cooperation with the
National Marine Fisheries Service

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1.0 EXECUTIVE SUMMARY

This bluefish specifications document was prepared by the Mid-Atlantic Fishery Management Council (Council) in consultation with the National Marine Fisheries Service (NMFS). The document's purpose is to present a range of alternative management measures for the U.S. Atlantic bluefish fishery in 2015 along with a characterization of the environmental impacts of each of those alternatives. For the 2015 specification year, three of the alternatives (referred to as quota-setting alternatives) consist of restrictions on overall landings by the commercial and recreational fisheries for bluefish and are needed to prevent those fisheries from overfishing the bluefish stock. All of the management measures under consideration are limited to the 2015 calendar year. Management measures can be specified for the bluefish fishery for up to five years (Amendment 3; MAFMC 2011). The Council limited specifications timeframe to one year based on the expectation of a new benchmark stock assessment for bluefish in 2015. This document was developed in accordance with a number of applicable laws and statutes that are described in section 8.0.

A comparison of the action alternatives (e.g., Alternatives 1 and 2) relative to the no action" alternative is a requirement of the National Environmental Policy Act (NEPA); however, "no action" would be a failure to make effort to prevent overfishing, which is inconsistent with the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Therefore, "no action", in this document, is actually a status quo or baseline alternative (i.e., Alternative 3) that would extend existing 2014 quota-setting measures into the 2015 fishing year.

Among the quota-setting alternatives (see Box ES-1 for landings limits), preferred Alternative 1 and non-preferred Alternative 2 are expected to result in overall biological impacts on the managed resources and non-target species that range from neutral to slightly positive in 2015, when compared to the status quo (Box ES-2). Alternatives 1 and 2 represent a decrease in landings limits for bluefish when compared to the status quo. Alternative 2 has the same overall landings as Alternative 1, but allocates more of those landings to the recreational fishery. Alternative 2 may be expected to result in slightly higher positive biological impacts than Alternative 1 when compared to the status quo due to the lower commercial quota under this alternative (no transfer alternative). Alternatives 1 and 2 are both consistent with the recommendations of the Council's Scientific and Statistical Committee (SSC). Non-preferred Alternative 3 (status quo) has a higher overall landings than Alternatives 1 and 2 (Box ES-1) and is expected to have negative biological impacts overall on bluefish. Alternative 3 is less restrictive than necessary given the advice of the SSC. Ranking these three alternatives from more likely to less likely to result in overall positive biological impacts, they rank as Alternative 2, Alternative 1, and Alternative 3.

Alternative 1 and Alternative 2 are expected to result in habitat impacts that range from neutral to slightly positive in 2015 when compared to the status quo, to the extent that decreased quotas result in decreased or unchanged contact time of fishing gear with habitat. Alternative 3 is the least restrictive alternative, and is expected to have overall habitat impacts that are neutral for 2015, when compared to current conditions. Ranking these three alternatives from more likely to less likely to result in overall positive habitat impacts, they rank as Alternative 2, Alternative 1, and Alternative 3.

Given the range of potential impacts on Endangered Species Act (ESA)-listed and Marine Mammal Protection Act (MMPA) protected resources, Alternative 1 and Alternative 2 are expected to result in impacts on ESA-listed and MMPA protected resources that range from slight positive to neutral in 2015, when compared to the status quo (Box ES-2). Alternative 3 is the least restrictive alternative, and overall, is expected to have neutral impacts on protected resources for 2015, when compared to current conditions. Ranking these three alternatives from more likely, to less likely to result in overall positive impacts on protected resources, they rank as Alternative 2, Alternative 1, and Alternative 3.

Under Alternative 1, it is expected that social and economic impacts will range from neutral to slight negative in 2015, when compared to the status quo (Box ES-2). Under Alternative 2 it is expected that social and economic impacts will be negative due to the large reduction in commercial fishing opportunity in 2015 when compared to the status quo. Alternative 3 is expected to result in neutral social and economic impacts when compared to existing conditions. Ranking these three alternatives from more likely to less likely to result in overall positive impacts, they rank as Alternative 3, Alternative 1, and Alternative 2.

Box ES-1. Alternative specification values for 2015. All values are in millions of pounds (M lb).

Alternatives	ACL	Commercial ACT	Recreational ACT	Commercial Quota	Recreational Harvest Limit
Alternative 1 (Preferred)	21.544	3.662	17.881	5.119	13.073
Alternative 2 (Non-Preferred: No Transfer)	21.544	3.662	17.881	3.662	14.530
Alternative 3 (Non-Preferred: Status quo)	24.432	4.153	20.278	7.458	13.523

Box ES-2. Overall qualitative summary of the expected impacts of the alternatives considered in this document for 2015. A minus sign (-) signifies an expected negative impact, a plus sign (+) signifies an expected positive impact, and zero is used to indicate a null impact. A "sl" in front of a sign is used to convey a minor effect, such as slight positive (sl+). An 'S' indicates short-term, and an 'L' is indicates long-term impacts.

Alternatives	Biological	EFH	Protected Resources	Economic	Social
Alternative 1 (Preferred)	0/+	0/sl+	0/sl+	0/sl-	0/sl-
Alternative 2 (Non-Preferred: No Transfer)	0/+	0/sl+	0/sl+	-	-
Alternative 3 (Non-Preferred: No Action/Status Quo)	-	0	0	0/L-	0/L-

Cumulative Impacts

When the proposed action is considered in conjunction with all the other pressures placed on fisheries by past, present, and reasonably foreseeable future actions, it is not expected to result in any significant impacts, positive or negative; therefore, there are no significant cumulative effects associated with the action proposed in this document (see section 7.5).

Conclusions

A detailed discussion of the environmental impacts of the alternatives, as well as any cumulative impacts, considered in this specifications document are provided in section 7.0. The preferred action alternative is not associated with significant impacts to the biological, physical, social or economic, environment individually or in conjunction with other actions under NEPA; therefore, a "Finding of No Significant Impact" is determined.

2.0 LIST OF ACRONYMS

ABC	Annual Biological Catch
ACL	Annual Catch Limit
ACT	Annual Catch Target
ALWTRP	Atlantic Large Whale Take Reduction Plan
AM	Accountability Measure
ASMFC	Atlantic States Marine Fisheries Commission or Commission
BiOp	Biological Opinion
BMSY	Biomass at Maximum Sustainable Yield
CEA	Cumulative Effects Assessment
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CV	Coefficient of Variation
CZMA	Coastal Zone Management Act
DPS	Distinct Population Segment
DPSWG	Data Poor Stocks Working Group
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
F	Fishing Mortality Rate
FMSY	Fishing Mortality Rate at Maximum Sustainable Yield
FR	Federal Register
FMP	Fishery Management Plan
FONSI	Finding of No Significant Impact
GARFO	Greater Atlantic Regional Fisheries Office (formerly Northeast Regional Office/NERO)
HPTRP	Harbor Porpoise Take Reduction Plan
IRFA	Initial Regulatory Flexibility Analysis
LNG	Liquefied Natural Gas
LOF	List of Fisheries
MAB	Middle Atlantic Bight
MAFMC	Mid-Atlantic Fishery Management Council
MC	Monitoring Committee
MMPA	Marine Mammal Protection Act
MRFSS	Marine Recreational Fisheries Statistical Survey
MRIP	Marine Recreational Information Program
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSY	Maximum Sustainable Yield
MT	Metric tons
NAO	National Oceanic and Atmospheric Administration Administrative Order
NEFSC	Northeast Fisheries Science Center
NEFOP	Northeast Fisheries Observer Program
NEPA	National Environmental Policy Act
NERO	Northeast Regional Office
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
OFL	Overfishing Limit
OY	Optimum Yield
PRA	Paperwork Reduction Act
RFA	Regulatory Flexibility Act
RHL	Recreational Harvest Limit
RSA	Research Set-Aside
SARC	Stock Assessment Review Committee

SAV	Submerged Aquatic Vegetation
SAW	Stock Assessment Workshop
SBA	Small Business Administration
SFA	Sustainable Fisheries Act
SI/M	Serious Injury/Mortality
SSB	Spawning Stock Biomass
SSC	Scientific and Statistical Committee
TAL	Total Allowable Landings
US	United States
VECs	Valued Ecosystem Components
VTR	Vessel Trip Report

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ENVIRONMENTAL ASSESSMENT

4.0 INTRODUCTION AND BACKGROUND OF SPECIFICATION PROCESS

4.1 PURPOSE AND NEED OF THE ACTION

The purpose of this action (specifications document) is to implement the 2015 commercial quota and recreational harvest limit for the U.S. Atlantic bluefish fishery. This action is needed to prevent overfishing and ensure that the annual catch limit (ACL) for bluefish is not exceeded. This document, which describes the action and its impacts, was developed in accordance with the Magnuson-Stevens Fishery Conservation and Management Act (MSA[1]), the National Environmental Policy Act of 1969 (NEPA), and the Bluefish Fishery Management Plan (FMP). The MSA is the primary domestic legislation governing fisheries management in the U.S. Exclusive Economic Zone (EEZ) and compliance with the MSA requires preventing overfishing on an ongoing basis. Accordingly, failure to specify bluefish management measures to prevent overfishing in 2015 would be inconsistent with that legislation. The management regime and objectives of the fishery are detailed in the FMP and subsequent amendments, available at: http://www.mafmc.org/bluefish/.

4.2 THE SPECIFICATIONS PROCESS

The MSA requires each Council's Scientific and Statistical Committee (SSC) to provide recommendations for acceptable biological catch (ABC), prevention of overfishing, and maximum sustainable yield. The Council's catch limit recommendations for the upcoming fishing year(s) cannot exceed the ABC recommendation of the SSC. In addition, the Monitoring Committees (MCs) established in the FMP for each managed resource are responsible for developing recommendations for the Council on the management measures necessary to achieve the recommended catch limits, including annual catch targets (ACTs) for each species. A memo from the SSC chairman to the Council chair, dated July 30, 2014 (available at: http://www.mamfc.org), provides details on the derivation of ABC for this managed resource and highlights the specific sources of scientific uncertainty that were of particular relevance to the SSC deliberation. Briefing materials for the August 2014 Council Meeting (available at: http://www.mamfc.org) detail the Monitoring Committee recommendations for ACTs that account for management uncertainty, and other recommended changes to management measures for the commercial fishery. An overview of the SSC and MC recommendations is provided below.

Management measures can be specified for the bluefish fishery for up to five years (Amendment 3; MAFMC 2011). The Council limited this specification setting process to one year based on the expectation of a new benchmark stock assessment for bluefish in 2015 that will serve the basis for ABC recommendations in 2016 (and potentially beyond).

Figure 1 provides a diagram of the process for determining annual bluefish management measures that was outlined in Amendment 3 (MAFMC 2011). Accordingly, the SSC first

[1] Magnuson-Stevens Fishery Conservation and Management Act (MSA), portions retained plus revisions made by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSRA).

identifies the catch level above which overfishing is occurring (overfishing limit or OFL) as well as the catch below OFL, called acceptable biological catch or ABC, that adequately accounts for scientific uncertainty in the estimate of OFL and the condition of the stock. Next, the MC determines the annual catch limit (ACL) which, if exceeded, would trigger accountability measures (AMs) such as reductions in future year landings. The MC also recommends a catch level at or below ACL called the annual catch target (ACT) that accounts for various sources of management uncertainty. For bluefish, the ACT is split 83/17 % into recreational and commercial ACTs, respectively, and the discarded (as opposed to landed) 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 M lb. Because these last steps represent a management preference, transfer of landings to the commercial fishery are reflected in the Council's "preferred" management alternative.

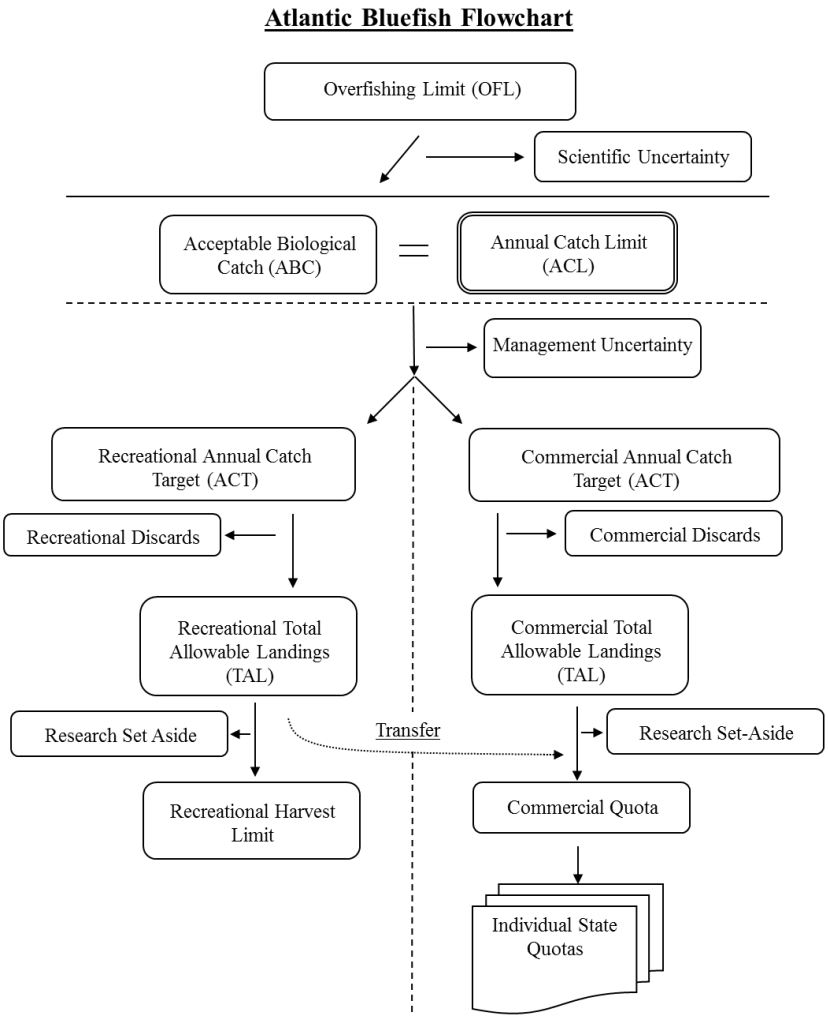

Figure 1. Specification process for bluefish as described in Amendment 3 to the Bluefish FMP (MAFMC 2011).

The SSC, MC, and Council identified values for the management measures listed above according to their respective responsibilities these are reported at www.mafmc.org. An overview is provided here.

For the 2015 fishing year, the SSC recommended OFL for bluefish to be 34.220 M lb and the ABC to be 21.544 M lb. According to the FMP, ACL is set equivalent to ABC and, given the historic underharvest of landings allowances by the fishery the MC concluded that no deduction to accommodate management uncertainty was needed, so ABC = ACL = ACT. More specifically, the recreational ACT (83%) is 17.881 M lb and the commercial ACT (17%) is 3.662 M lb. Estimated discards for the 2014 fishery are the average observed discards for 2011-2013 period (MRIP) and are 3.351 M lb[2] for the recreational fishery, and zero for the commercial fishery for which discards are not estimated in the assessment and considered inconsequential. The resulting recreational TAL is 14.530 M lb and the commercial TAL is 3.662 M lb.

The Council's preferred commercial quota and recreational harvest limit described in section 5.0 were intended to maximize the transfer to the commercial fishery for 2015 fishing year.

Besides conveying the Council's preferred management alternatives to the NMFS Regional Administrator, this specifications document also serves as an environmental assessment (EA) under NEPA and provides the Regional Administrator with a characterization of the impacts of the various management alternatives. Aspects of the affected environment likely to be directly or indirectly affected by the management alternatives are referred to as *valued ecosystem components* (VECs; Beanlands and Duinker 1984). These VECs comprise the affected environment and are specifically defined as the managed resource (bluefish any non-target species); habitat including EFH for the managed resource and non-target species; protected species considered by the endangered species act (ESA) and marine mammal protection act (MMPA); and social and economic aspects of human communities.

The NMFS Regional Administrator will review the recommendations in this document and may make revisions if necessary to achieve FMP objectives and statutory requirements. Because the FMP is cooperatively managed with the Commission, the Commission's Board typically adopts complementary measures for state jurisdictional waters. The Council met jointly with the Board in August 2014 and both management bodies adopted identical management measures for bluefish for the 2015 fishing year

[2] Recreational discards were calculated assuming MRIP mean weight of fish landed or harvested.

5.0 MANAGEMENT ALTERNATIVES

5.1 Quota-Setting Alternatives

In this section, bluefish management alternatives for 2015 are described that would establish an ACL, a commercial and recreational ACT, and a commercial quota and recreational harvest limit. The alternatives presented for 2015 were not adjusted for research set-aside as the Council and the Board, at the 2014 August Council meeting set the 2015 research set-aside at 0% (no research set aside for 2015). The Council did not recommend changes to other regulations currently in place for bluefish, and, therefore, those management measures (i.e., bag limit of 15 fish) would remain unchanged for the 2015 fishing year. Comprehensive descriptions of all federal regulations for bluefish are detailed in the Code of Federal Regulations (CFR) and are available via the NMFS Greater Atlantic Regional Fisheries Office (GARFO) website: http://www.nero.noaa.gov/nero/regs/.

There are three quota-setting alternatives under consideration in this document for the 2015 fishing year. An analysis of those alternatives (i.e., Alternatives 1 and 2) relative to "no action" (i.e., Alternative 3) is a requirement under the implementation of NEPA, however, true "no action", in this case, would be inconsistent with the MSA (see section 5.3). Therefore, "no action," for the purposes of this document, is actually a status quo or baseline alternative that would extend existing 2014 management measures into the 2015 fishing year.

The ABC, ACL, and ACTs under Alternatives 1 and 2, as well as the commercial quota and recreational harvest limits for all alternatives are given below in Table 1.

Alternatives 1 and 2 include an ABC of 21.544 M lb which is 63% of OFL (34.220 M lb) and is associated with a 29% probability of overfishing. Management measures based on this ABC level will adequately ensure that overfishing does not occur (SSC report). The FMP prescribes that ACL is equal to ABC. Commercial and recreational ACTs are reduced from ACL, as needed, to account for management uncertainty. Based on the historic pattern of underharvest, no reduction for management uncertainty is needed, so the sum of the ACTs (Tables 1 and 2) is equal to ACL and ABC. Deducting discards from the ACTs results in a commercial TAL of 3.662 M lb and a recreational TAL of 14.530 M lb.

It is important to note that any commercial quota and recreational harvest limit may be adjusted by NMFS in the 2015 final rule for bluefish. That adjustment would likely be a result of changes in the expected recreational harvest for 2014.

Table 1. Comparison of the 2015 bluefish alternatives and associated catch and landings limits (M lb).

	Alternative 1 (Preferred: Maximum Transfer)	Alternative 2 (Non-Preferred: No Transfer)	Alternative 3 (Non-Preferred: No Action/Status Quo)[a]
ABC	21.544	21.544	24.432
ACL	21.544	21.544	24.432
Commercial ACT	3.662	3.662	4.153
Recreational ACT	17.881	17.881	20.278
Commercial Discards	0	0	0
Recreational Discards	3.351	3.351	3.351
Commercial TAL	3.662	3.662	4.153
Recreational TAL	14.530	14.530	16.927
Commercial Quota	5.119	3.662	7.458
Recreational Harvest Limit	13.073	14.530	13.523

[a]Source: Federal Register /Vol. 79 (35293), No. 119 / Friday, June 20, 2014 /Rules and Regulations.

5.1.2 Alternative 1 (Preferred: Maximum Transfer)

Alternative 1 would maximize the landings to the commercial fishery. Specifically, under this alternative a transfer of 1.457 M lb (the amount that results in a recreational harvest level equal to expected recreational landings of 13.073 M lb – Table 2) from the recreational to the commercial fishery would result in a commercial quota of 5.119 M lb and an RHL of 13.073 M lb. State commercial shares would range from 486 lb to 1.641 M lb in 2015 (Table 3).

5.1.3 Alternative 2 (Non-Preferred: No Transfer)

Alternative 2 would retain the initial 83/17% distribution of landings to the recreational and commercial fisheries, respectively. This results in a commercial quota of 3.662 M lb and a recreational harvest limit of 14.530 M lb (Table 2). State commercial shares would range from 348 lb to 1.174 M lb in 2015 (Table 3).

5.1.4 Alternative 3 (Non-Preferred: No Action/Status Quo)

The status quo alternative would maintain the commercial quota (7.458 M lb) and RHL (13.523 M lb) currently in place for the bluefish fishery (Table 2). The state commercial shares for this alternative would range from 709 lb to 2.391 M lb in 2013 (Table 3).

Table 2. Derivation of alternative bluefish management measures for 2015.

	lb	mt	Basis
OFL	34,220,152	15,522	per SSC
ABC	21,543,572	9,772	Council's policy of P*=0.289
ACL	21,543,572	9,772	= ABC
Mgmt Uncertainty	0	0	per MC
Comm Discards	0	0	from assessment
Rec Discards	3,351,026	1,520	2010-2012 average from MRIP
Comm ACT	3,662,407	1,661	(ACL - Mgmt Uncert) * 17%
Rec ACT	17,881,165	8,111	(ACL - Mgmt Uncert) * 83%
Comm TAL	3,662,407	1,661	Comm ACT - Disc
Rec TAL	14,530,139	6,591	Rec ACT - Disc
TAL (combined)	18,192,546	8,252	Comm + Rec TAL
Expected Recreational Landings	13,073,412	5,930	2011-2013 average
Maximum Transfer	1,456,726	661	Calculated
Comm Quota	5,119,134	2,322	Comm TAL + transfer
RHL	13,073,412	5,930	Rec TAL - transfer

Table 3. State-by-state allocation of the 2015 commercial bluefish quota under the three quota-setting alternatives as well as the reported 2013 commercial landings.

State	% of Quota	Alternative 1	Alternative 2	Alternative 3	2013 Landings
ME	0.6685	34,221	24,483	49,861	28
NH	0.4145	21,218	15,181	30,916	161
MA	6.7167	343,828	245,993	500,970	591,733
RI	6.8081	348,507	249,340	507,787	457,373
CT	1.2663	64,822	46,377	94,448	31,753
NY	10.3851	531,613	380,345	774,580	1,261,359
NJ	14.8162	758,441	542,630	1,105,077	346,251
DE	1.8782	96,145	68,787	140,087	10,074
MD	3.0018	153,662	109,938	223,891	46,116
VA	11.8795	608,112	435,076	886,041	297,087
NC	32.0608	1,641,192	1,174,197	2,391,277	951,278
SC	0.0352	1,802	1,289	2,625	0
GA	0.0095	486	348	709	0
FL	10.0597	514,956	368,427	750,310	110,489
Total	**100.0001**	**5,119,134**	**3,662,407**	**7,458,570**	**4,103,702**

Note: In 2013, a quota transfer of 200,000 lb was made from North Carolina to Massachusetts and a quota transfer for 300,000 lb was made from New Jersey to New York.
Source for landings data: Dealer Data as of July 22, 2014.

5.2 "True" No-Action Alternatives

Section 5.03(b) of NOAA Administrative Order (NAO) 216-6, "Environmental review procedures for implementing the National Environmental Policy Act," states that "an Environmental Assessment (EA) must consider all reasonable alternatives, including the preferred action and the no action alternative." Consideration of the "no action" alternative is important because it shows what would happen if the proposed action is not taken. Defining exactly what is meant by the "no action" alternative is often difficult. The President's Council on Environmental Quality (CEQ) has explained that there are two distinct interpretations of the "no action:" One interpretation is essentially the status quo, i.e., no change from the current management; and the other interpretation is when a proposed project, such as building a railroad facility, does not take place. In the case of the proposed 2015 specifications for bluefish, determining the no action alternative is slightly more complicated than either of these interpretations suggest.

Status quo management for bluefish includes minimum allowable sizes, bag limits, and reporting requirements. These measures will continue as they are even if the proposed specifications are not implemented. However, the current management program includes catch and landings limits specific to the 2014 fishing year and there are no "roll-over" provisions in the FMP. Thus, if the proposed 2015 specifications are not implemented by January 1, 2015, the fishery will operate without an identified cap on allowable catch and landings; and "no action" is not equivalent to status quo.

For the purposes of this EA, the no action alternative is defined as follows: (1) no 2015 proposed specifications for commercial quota or RHL will be published; (2) the indefinite management measures (minimum sizes, bag limits, possession limits, permit and reporting requirements, etc.) remain unchanged; and (3) no specific cap on the allowable annual catch (i.e., ACLs) and landings.

The no action alternative is inconsistent with the goals and objectives of the FMP, is also inconsistent with the MSA, and is not considered reasonable. Therefore, it is not analyzed further in the EA and the actions (Alternatives 1 and 2) are compared to the status quo alternative (base line) as opposed to the "true" no action alternatives described above.

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6.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT AND FISHERIES

6.1 Description of the Managed Resource

The bluefish, *Pomatomus saltatrix,* is distributed worldwide, but in the western North Atlantic ranges 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 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). Growth rates are fast and they may reach a length of 3.5 ft and a weight of 27 lb (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. More recent studies suggest that spawning is a single, continuous event, but that young are lost from the middle portion resulting in the appearance of a split season. As a result of the bimodal size structure of juveniles, young are referred to as the spring-spawned cohort or summer-spawned cohort. In the MAB, the spring cohort appears to be the primary source of fish that recruit into the adult population.

6.1.1 Description of the Fisheries

The management unit for bluefish (*Pomatomus saltatrix*) is the U.S. waters in the western Atlantic Ocean. The commercial and recreational fisheries for bluefish are fully described in section 2.3 of Amendment 1 to the FMP (MAFMC 1999) and are also outlined by principal port in section 2.3.4 of that document. An overview of commercial and recreational fisheries landings is provided below. Commercial and recreational landings show the relative contributions of each to total landings in Figure 1. Additional information of the fisheries can be found in Council meeting materials available at: http://www.mafmc.org.

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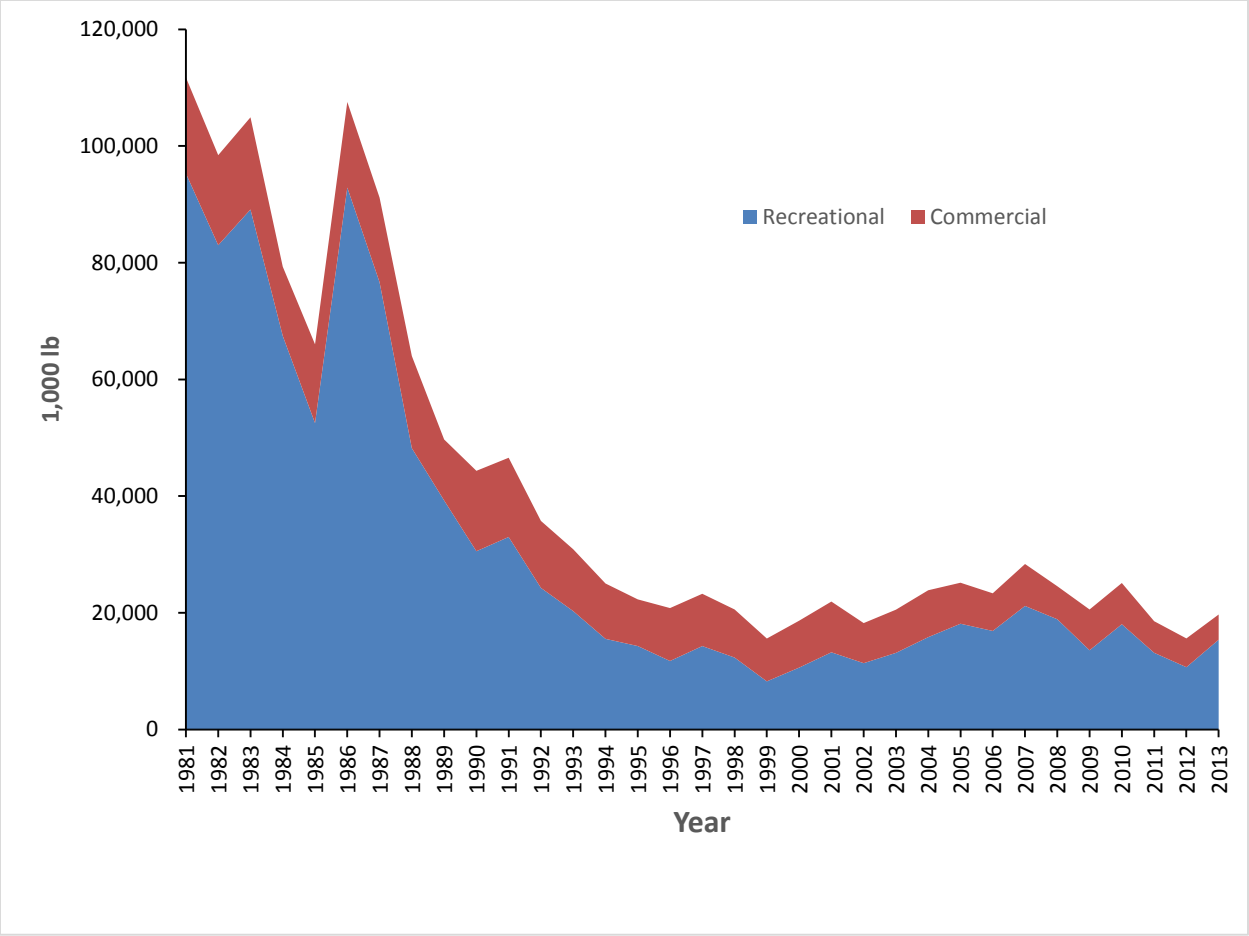

Figure 2. Bluefish commercial and recreational landings 1981-2013. Source: Landings information used to develop this figure was obtained from the "Bluefish 2014 Stock Assessment Update" (Wood 2014).

6.1.2 Description of the Stock (Including Status, Stock Characteristics, and Ecological Relationships)

Reports on "Stock Status," including annual assessment and reference point update reports, Stock Assessment Workshop (SAW) reports, Stock Assessment Review Committee (SARC) panelist reports and peer-review panelist reports are available online at the NEFSC website: http://www.nefsc.noaa.gov/saw/. EFH Source Documents, which include details on stock characteristics and ecological relationships, are available at the following website: http://www.nefsc.noaa.gov/nefsc/habitat/efh/.

An assessment update prepared in July 2014 (Wood 2014) indicates that the bluefish stock is not overfished and overfishing is not occurring based on the most recent peer-reviewed stock assessment. The fishing mortality rate (F) was estimated to be 0.118 in 2013, below the reference point F_{MSY} = 0.19. Fishing mortality steadily declined from 0.32 in 1987 to 0.11 in 1999 and has remained steady since 2000 with an average F=0.133. Stock biomass was estimated to be 123,716 mt in 2013, 84 % of B_{MSY} (147,052 mt). Total stock biomass estimates peaked in 1982 at 362,951 mt, then declined to 80,935 mt by 1996 before increasing steadily to the 127,989

mt in 2010 and slightly declining again to 123,716 mt in 2013. The bluefish stock was declared rebuilt by NMFS in 2009, according to the stock assessment update at that time.

6.1.3 Non-Target Species

The non-target species includes species either landed or discarded (bycatch) as part of fisheries activities used to harvest bluefish. The term "bycatch," as defined by the MSA, means fish that are harvested in a fishery but that are not sold or kept for personal use. Bycatch includes the discard of whole fish at sea or elsewhere, including economic and regulatory discards, and fishing mortality due to an encounter with fishing gear that does not result in capture of fish (i.e., unobserved fishing mortality). Bycatch does not include fish released alive under a recreational catch-and-release fishery management program.

Bluefish is primarily a recreational fishery caught by hook and line. The commercial fishery for bluefish is primarily prosecuted with gillnets, otter trawls, and handlines. This fishery often harvests mixed species, including bonito, Atlantic croaker, weakfish, spiny dogfish, and other species. Given the mixed species nature of the bluefish fishery, incidental catch of non-target species does occur and impacts to those species are considered in this EA.

6.2 Habitat (Including Essential Fish Habitat)

A description of the habitat associated with the bluefish fisheries is presented in section 2.2 of Amendment 1 (MAFMC 1999), and a brief summary of that information is given here. The impact of fishing on bluefish habitat (and EFH) as well as the impact of the bluefish fishery on other species' habitat and EFH can be found in Amendment 1 (section 2.2; MAFMC 1999). Potential impacts associated with the measures proposed in this specifications document on habitat (including EFH) are discussed in section 7.2.

6.2.1 Physical Environment

A description of the physical and biological characteristics of the environment in the mid-Atlantic subregion is found in sections 2.2 and 2.2.1 of Amendment 1. An additional description of the physical and biological characteristics of specific habitats found within the jurisdiction of the Northeast Region can be found in Stevenson et. al. (2004).

6.2.2 Essential Fish Habitat (EFH)

Information on bluefish habitat requirements can be found in the documents titled, "Essential Fish Habitat Source Document: Bluefish, *Pomatomus saltatrix*, Life History and Habitat Characteristics" (Shepherd and Packer 2006). Electronic versions of this source document is available at the following website: http://www.nefsc.noaa.gov/nefsc/habitat/efh/. The current EFH designation definitions by life history stage for bluefish are available at the following website: http://www.nero.noaa.gov/hcd/list.htm. Specific habitats that are designated as bluefish EFH are detailed in section 6.2.2 of this EA. Bluefish are a predominantly pelagic species (Shepherd and Packer 2006). Life history data show that there are only loose associations of bluefish with any particular substrate or submerged aquatic vegetation (SAV;

Shepherd and Packer 2006). Juveniles are the only life-stage that spatially and temporally co-occur on a regular basis with SAV. Bluefish juveniles and adults commonly occur in estuarine areas during the period of the year when eelgrass is present and prey on species which are associated with SAV. Some degree of linkage with SAV is likely, but given the extent to which the life cycle of bluefish occurs offshore outside the range of SAV, it is probably less than for other species (Laney 1997).

6.2.3 Fishery Impact Considerations

A baseline fishing effects analysis is provided in the Mid-Atlantic Council's specification of management measures for the 2004 fishing year (MAFMC 2003). This analysis considered 1995-2001 as the baseline time period. Baseline conditions (i.e., the distribution and intensity of bottom otter trawling in the commercial bluefish fishery) have not changed significantly since 2001. The 2004 evaluation of the habitat impacts of bottom otter trawls, gillnets, and handlines used in the commercial bluefish fishery indicated that the baseline impact of the fishery was minimal and temporary in nature. Consequently, adverse effects of the bluefish fishery on EFH did not need to be minimized. Since commercial landings of bluefish have remained stable since 2001, the adverse impacts of the bluefish fishery have continued to be minimal during the time period 2002-2013. Potential impacts of the proposed 2015 commercial quotas are evaluated in section 7.1 of this EA.

6.3 ESA Listed Species and MMPA Protected Species

Numerous protected species inhabit the affected environment of the bluefish FMP (Table 4). These species are under NMFS jurisdiction and are afforded protection under the Endangered Species Act of 1973 (ESA) and/or the Marine Mammal Protection Act of 1972 (MMPA).

Sections 6.3.1 and 6.3.2 below document the recreational and commercial fishery interactions, respectively. More detailed description of the species listed in Table 4, including their environment, ecological relationships and life history information including recent stock status, is available at: http://www.nero.noaa.gov/prot_res/.

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Table 4. Species Protected Under the ESA and/or MMPA that May Occur in the Affected Environment of the Bluefish Fishery

Species	Status	Potentially affected by this action?
Cetaceans		
North Atlantic right whale (*Eubalaena glacialis*)	Endangered	Yes
Humpback whale (*Megaptera novaeangliae*)	Endangered	Yes
Fin whale (*Balaenoptera physalus*)	Endangered	Yes
Sei whale (*Balaenoptera borealis*)	Endangered	Yes
Blue whale (*Balaenoptera musculus*)	Endangered	No
Sperm whale (*Physeter macrocephalus*	Endangered	No
Minke whale (*Balaenoptera acutorostrata*)	Protected	Yes
Pilot whale (*Globicephala spp*.)[1]	Protected	Yes
Risso's dolphin (*Grampus griseus*)	Protected	Yes
Atlantic white-sided dolphin (*Lagenorhynchus acutus*)	Protected	Yes
Short Beaked Common dolphin (*Delphinus delphis*)[2]	Protected	Yes
Atlantic Spotted dolphin (*Stenella frontalis*)	Protected	Yes
Bottlenose dolphin (*Tursiops truncatus*)[3]	Protected	Yes
Harbor porpoise (*Phocoena phocoena*)	Protected	Yes
Sea Turtles		
Leatherback sea turtle (*Dermochelys coriacea*)	Endangered	Yes
Kemp's ridley sea turtle (*Lepidochelys kempii*)	Endangered	Yes
Green sea turtle (*Chelonia mydas*)	Endangered[4]	Yes
Loggerhead sea turtle (*Caretta caretta*), Northwest Atlantic DPS	Threatened	Yes
Hawksbill sea turtle (*Eretmochelys imbricate*)	Endangered	No
Fish		
Shortnose sturgeon (*Acipenser brevirostrum*)	Endangered	No
Atlantic salmon (*Salmo salar*)	Endangered	Yes
Atlantic sturgeon *(Acipenser oxyrinchus)*		
Gulf of Maine DPS	Threatened	Yes
New York Bight DPS, Chesapeake Bay DPS, Carolina DPS & South Atlantic DPS	Endangered	Yes
Cusk (*Brosme brosme)*	Candidate	Yes
Pinnipeds		

Harbor seal (*Phoca vitulina*)	Protected	Yes
Gray seal (*Halichoerus grypus*)	Protected	Yes
Harp seal (*Phoca groenlandicus*)	Protected	Yes
Hooded seal (*Cystophora cristata*)	Protected	Yes
Corals		
Elkhorn Coral (*Acropora palmata***)**	Threatened	No
Staghorn Coral (*Acropora cervicornis*)	Threatened	No
Pillar Coral (*Dendrogyra cylindrus)*	Threatened	No
Rough cactus coral (*Mycetophyllia ferox)*	Threatened	No
Lobed star coral (*Orbicella annularis)*	Threatened	No
Mountainous star coral (*Orbicella faveolata)*	Threatened	No
Boulder star coral (*Orbicella franksi)*	Threatened	No
Seagrass		
Johnson's Sea Grass	Threatened	No
Critical Habitat		
North Atlantic Right Whale[5]	ESA-listed	No
Northwest Atlantic DPS of Loggerhead Sea Turtle	ESA-listed	No
Atlantic Salmon	ESA-listed	No
Johnson's Sea Grass	ESA-Listed	No
Elkhorn Coral	ESA-listed	No
Staghorn Coral	ESA-listed	No

Notes:

[1] There are 2 species of pilot whales: short finned (*G. melas melas*) and long finned (*G. macrorhynchus*). Due to the difficulties in identifying the species at sea, they are often just referred to as *Globicephala spp*.

[2] Prior to 2008, this species was called "common dolphin."

[3] This includes all stocks of bottlenose dolphins except for the Florida Bay stock (see Waring et. al., 2014 for further details.

[4] Green turtles are currently listed in U.S. waters as threatened except for the Florida breeding population which is listed as endangered. Due to the inability to distinguish between these populations away from the nesting beach, green turtles are considered endangered wherever they occur in U.S. waters. On March 23, 2015, a proposed rule was issued to remove the current range-wide listing and, in its place, list eight DPSs as threatened and three as endangered (80 FR 15272).

[5]Originally designated June 3, 1994 (59 FR 28805); Newly proposed February 20, 2015 (80 FR 9314).

In Table 4, please note that cusk, a NMFS "species of concern," as well as a "candidate species" under the ESA, occurs in the affected environment of the bluefish fishery. Candidate species are those petitioned species that NMFS is actively considering for listing as endangered or threatened under the ESA and also include those species for which NMFS has initiated an ESA status review through an announcement in the Federal Register. Candidate species also receive no substantive or procedural protection under the ESA; however, NMFS recommends that project proponents consider implementing conservation actions to limit the potential for adverse effects on candidate species from any proposed project. NMFS has initiated review of recent stock assessments, bycatch information, and other information for these candidate/proposed species. The results of those efforts are needed to accurately characterize recent interactions between fisheries and the candidate/proposed species in the context of stock sizes. Any conservation measures deemed appropriate for these species will follow the information reviews. Please note that once a species is proposed for listing the conference provisions of the ESA apply (see 50 CFR 402.10).

In regards to cusk, NMFS initiated a status review due to concerns over the status of and threats to cusk, particularly bycatch. NMFS is involved in various proactive conservation initiatives to obtain more information on this data poor species to assess its status and further conservation efforts. These initiatives involve cooperative efforts with industry, scientists, and other partners to learn more about cusk. NMFS is especially interested in the investigation and identification of methods to reduce bycatch or discard mortality of cusk, and, in particular, studies of how to alleviate barotrauma effects in released cusk are of high interest. In the Northeastern U.S., cusk are predominantly caught in the Gulf of Maine in commercial bottom trawl, bottom longline, gillnet, lobster trap, and handline/rod and reel gears, as well recreational handline gear (O'Brien, 2010; GMRI, 2012). Additional information on cusk and some conservation efforts can be found at http://www.nero.noaa.gov/prot_res/CandidateSpeciesProgram/CuskSOC.html; please note, however, as cusk receive no substantive or procedural protection under the ESA (due to its candidate species status), this species will not be discussed further in this document.

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6.3.1 Recreational Fisheries Interactions

The recreational component of the bluefish fishery is prosecuted with hook and line gear. In the absence of an observer program for recreational fisheries, records of recreational hook and line interactions with protected resources are limited. However, as a dedicated observer program exists for all commercial fisheries (see below), there is a wealth of information on observed protected species interactions with all fishing gear types (e.g., bottom trawl, hook and line, gillnet) and therefore, years of data assessing resultant population level effects of these interactions. Additionally, other sources of information, such as state fishing records, stranding databases, and marine mammal stock assessment reports, provide additional sources of information that can assist in better understanding, in general, hook and line interaction risks to protected species. Based on these sources of information, it is believed that hook and line interactions are rare to non-existent for ESA listed or non-listed species of marine mammals and fish (Waring et. al., 2014; NMFS 2013; NMFS 2011; Kocik et. al., 2014). ESA listed species of sea turtles; however, are known to interact with hook and line gear, particularly in nearshore, southern waters (e.g., Virginia, south; Sea Turtle Disentanglement Network; NMFS 2013). Serious injury and mortality to sea turtles can be incurred by hook and line gear interactions, and therefore, can pose a risk to these species. However, the extent to which these interactions are impacting sea turtle populations is still under investigation and therefore, no conclusions can currently be made on the impact of hook and line gear on the continued survival of sea turtle populations. Although recreational fishing affects marine species, nothing in this document would modify the manner in which the recreational bluefish fishery is prosecuted.

6.3.2 Commercial Fisheries Interactions

The bluefish commercial fishery uses gillnets, bottom otter trawls, and hook-and-line gear. This fishery has incidentally caught protected species listed above (section 6.3, Table 4). Except for what has been provided in section 6.3.1, no additional information is available on commercial hook and line interactions with protected species. Gillnet and/or bottom otter trawls are known to interact with ESA listed and non-listed species of marine mammals, fish, and sea turtles. Sea turtles, Atlantic sturgeon, and Atlantic salmon have all been observed serious injured or killed in bottom otter trawl and gillnet gear (Warden 2011a; Warden 2011b; Murray 2008; Murray 2013; Murray and Orphanides 2013; NMFS 2011; NMFS 2013; Stein et. al., 2004; ASMFC 2007; Miller and Shepard 2011; Beardsall et. al., 2013; Kocik et. al., 2014) and therefore, these species are at risk of interacting with these gear types. However, it is important to note, the NMFS observer data for the period of January 2009 to December 2013 (most recent 5 complete years for the observer data time series) indicate no sea turtle, Atlantic sturgeon, or Atlantic salmon interactions where bluefish was the species being targeted.

Depending on species, marine mammals have also been observed seriously injured or killed in gillnet and/or bottom trawl gear. Pursuant to the MMPA, NMFS publishes a List of Fisheries (LOF) annually, classifying U.S. commercial fisheries into one of three categories based on the relative frequency of incidental serious injuries and/or mortalities of marine mammals in each fishery.[3] The bluefish fishery is categorized within the LOF; specifically, based on gear type, Category I, II, and III fisheries can be found in the bluefish fishery (Table 5).

[3] The most recent LOF was issued August 25, 2014; 79 FR 50589.

Table 5. Commercial Fisheries Classification based on 2014 List of Fisheries (LOF).

Fishery (Action Area)	Gears	LOF[4]	Potential for Interactions
See sections 6.4.1 and 6.4.2 for a description of the areas fished the managed resources	Northeast Sink Gillnet	Cat. I	Bottlenose dolphin (offshore stock); Common, risso's, and white-sided dolphins; North Atlantic right, fin, humpback, and minke whales; Gray, harbor, and harp seals; Harbor porpoise; Short- and long-finned pilot whales.
	Mid-Atlantic Gillnet	Cat. I	Bottlenose dolphin stocks (Northern Migratory coastal, Southern Migratory coastal, Northern NC estuarine system, Southern NC estuarine system, and offshore); Common, risso's, and white sided dolphins; Harbor, harp, and gray seals; Harbor porpoise; Humpback and minke whales; Short-and long-finned pilot whales.
	Northeast Bottom Trawl	Cat. II	Bottlenose dolphin (offshore); Common dolphin; Gray, harbor, and harp seals; Harbor porpoise; Long- and short-finned pilot whales; Minke whale; White-sided dolphin.
	Mid-Atlantic bottom trawl fishery	Cat. II	Bottlenose dolphin (offshore); Common, risso's, and white-sided dolphins; Gray and harbor seals; Short- and long-finned pilot whales
	Northeast / Mid-Atlantic bottom longline/hook and line	Cat III	No documented interactions in the most recent 5 years of data

[4] Level of serious injury or mortality to marine mammals is as follows: Category I: frequent; Category II: occasional; and Category III: remote likelihood, or no known.

Based on information provided in Table 5, aside from minke whales, large whale interactions with bottom trawl gear are have never been observed and therefore, this gear type is not expected to pose a serious injury or mortality risk to these species. In regards to minke whales, interactions with bottom trawl gear have been observed; however, the frequency of interactions have declined since 2006 (estimated annual mortality=3.7 whales), with zero observed interactions in 2010 and 2011, and the annual average estimated mortality and serious injury from the Northeast bottom trawl fishery from 2007 to 2011 equaling 1.8 whales. Based on this information, although minke whales have the potential to interact with this gear type, as bottom trawl gear comprises a small component of the bluefish fishery (less than 5% of the directed bluefish landings in 2013 were from bottom trawls; see section 6.4.1), the likelihood of an interaction in the bluefish fishery is likely to be low.

The greatest entanglement risk to large whales is posed by fixed fishing gear (e.g., sink gillnet and trap/pot gear) comprised of lines (vertical or ground) that rise into the water column. As trap/pot gear is not used in the bluefish fishery, the greatest entanglement risk to large whales posed by the bluefish fishery is from gillnet gear. Interactions resulting in large whale serious injury and mortality have been observed in this gear type (although not specifically targeting bluefish). Due to the incidences of interactions with vertical lines associated with gillnet and trap/pot gear, in addition to the endangered status of the species being affected most by these gear types (North Atlantic right whale, fin, and humpback), pursuant to the MMPA, these large whale species where designated as strategic stocks.[5] Section 118(f)(1) of the MMPA requires the preparation and implementation of a Take Reduction Plan (TRP) for any strategic marine mammal stock that interacts with Category I or II fisheries. As a result, to address and mitigate the risk of large whale entanglement in fixed fishing gear comprised of vertical line, including gillnet gear, the Atlantic Large Whale Take Reduction Plan (Plan) was implemented.[6] In regards to gillnet gear, the Plan identifies gear modification requirements and restrictions for Category I gillnet fisheries in the Northeast, Mid-Atlantic, and Southeast regions of the U.S. (designated management areas); these fisheries must comply with all regulations of the Plan.[7] For further details on the gear modification requirements and restrictions under the ALWTRP please see: http://www.greateratlantic.fisheries.noaa.gov/Protected/whaletrp/.

Small cetacean and pinniped species identified in Table 4 , section 6.3, have also been observed seriously injured and killed in gillnet and/or bottom trawl gear; for further information on these

[5] As defined by the MMPA, a strategic stock is a marine mammal stock: (1) for which the level of direct human-caused mortality exceeds the potential biological removal level; (2) which, based on the best available scientific information, is declining and is likely to be listed as a threatened species under the ESA within the foreseeable future; (3) or which is listed as a threatened or endangered species under the ESA, or is designated as depleted under the MMPA.

[6] In 1997, the ALWTRP was implemented; however, since 1997, the Plan has been modified: Sinking Groundline Rule (September 2, 2008; 73 FR 51228), and the Vertical Line Rule (June 27, 2014, 79 FR 36586; December 12, 2014, 79 FR 73848; March 19, 2015, 80 FR 14345).

[7] The fisheries currently regulated under the ALWTRP include: Northeast/Mid-Atlantic American lobster trap/pot; Atlantic blue crab trap/pot; Atlantic mixed species trap/pot; Northeast sink gillnet; Northeast anchored float gillnet; Northeast drift gillnet; Mid-Atlantic gillnet; Southeastern U.S. Atlantic shark gillnet; and Southeast Atlantic gillnet (NMFS 2014).

interactions, see Waring *et al*. 2014. Of these species; however, only harbor porpoise and stocks of bottlenose dolphins have been identified as strategic stocks under the MMPA. As noted above, designation of a marine mammal stock as "strategic" necessitates the development of a TRP under the MMPA. As a result, take reduction plans have been developed and implemented for these species (e.g., Harbor Porpoise Take Reduction Plan (HPTRP) and the Bottlenose Dolphin Take Reduction Plan (BDTRP)). Similar to the large whale plan, the HPTRP and BDTRP identify gear modification requirements and restrictions for Category I gillnet fisheries in the Northeast, Mid-Atlantic, and/or Southeast regions of the U.S. (designated management areas); these fisheries must comply with all regulations of the Plan. For further information on the HPTRP or BDTRP, please visit:
http://www.greateratlantic.fisheries.noaa.gov/protected/porptrp/
http://www.nmfs.noaa.gov/pr/interactions/trt/bdtrp.htm.

6.4 Human Communities

A detailed description of historical fisheries for bluefish is presented in section 2.3 of Amendment 1. The information presented in this section is intended to briefly characterize recent fisheries trends, both commercial and recreational. Landings trends are provided in section 6.1 above. Landings by port are presented in section 6.4.3 below.

6.4.1 Commercial Fishery

In 2013, commercial vessels landed about 4.104 M lb of bluefish valued at approximately $2.94 million.[8] Average coastwide ex-vessel price of bluefish was $0.72/lb in 2013, a 7 % increase from the previous year (2012 price = $0.67/lb). The relative value of bluefish is very low among commercially landed species, approximately 0.33% and 0.16% of the total weight and value, respectively of all finfish and shellfish landed along the U.S. Atlantic coast in 2013. The contribution of bluefish to the total value of all finfish and shellfish varied by state in 2013 (Table 6). Bluefish ranged from < 0.01% of total commercial value in Maine and New Hampshire to 1.63% in New York. There were no bluefish landings in Pennsylvania, South Carolina, and Georgia in 2013. Relative to total landings value, bluefish were most important in New York and North Carolina, contributing the largest percentage of ex-vessel value of all commercial landings in those states. This contribution did not change considerably from the previous complete fishing year (i.e., 2012), and it is not expected to change considerably in 2015.

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[8] Dealer Data as of July 22, 2014.

Table 6. Percent contribution of bluefish to the commercial landings and value of all species combined from Maine through East Coast of Florida, 2013.

State	Pounds of Bluefish as a Percentage of all Species	Value of Bluefish as a Percentage of all Species
ME	<0.01%	<0.01%
NH	<0.01%	<0.01%
MA	0.22%	0.09%
RI	0.51%	0.39%
CT	0.40%	0.18%
NY	3.82%	1.63%
NJ	0.29%	0.17%
PA	-	-
DE	0.14%	0.05%
MD	0.05%	0.02%
VA	0.07%	0.13%
NC	2.31%	0.71%
SC	-	-
GA	-	-
FL (East Coast)	0.66%	0.16%
Total	0.33%	0.16%

Source: NOAA Fisheries - Office of Science and Technology (https://www.st.nmfs.noaa.gov/), January 5, 2015 and Dealer data as of July 22, 2014. There were no bluefish landings in Pennsylvania, South Carolina, or Georgia in 2013.

The economic impact of the commercial bluefish fishery relative to employment and wages is difficult to determine. According to NMFS data, commercial fishermen in the western Atlantic landed approximately 1.300 billion lb of fish and shellfish in 2013. Those landings have been valued at approximately $1.760 billion. Total landed value ranged from approximately $123 thousand in Pennsylvania to $567 million in Massachusetts.[9] However, it can be assumed that only a small amount of the region's fishing vessel employment, wages, and sales are dependent on bluefish since the relative contribution of bluefish to the total value and poundage of all finfish and shellfish is very small.

NMFS VTR data indicate that a total of 1,444 commercial trips targeted bluefish (bluefish ≥ 50 % of total catch) in 2013 (Table 7). Landings from directed trips (996 thousand lb) are approximately 24% of coastwide commercial bluefish landings for 2013 (4.114 M lb). Gillnets accounted for 83% of the directed landings while hook gear accounted for 12% and other gear categories caught the remaining 5%.

[9] NOAA Fisheries - Office of Science and Technology (https://www.st.nmfs.noaa.gov/), January 5, 2015.

Table 7. Commercial gear types associated with bluefish harvest by federally permitted vessels in 2013.

Commercial Gear Type	Trips	Landings (lb)	Pct Total
Gill Net	716	826,502	83%
Hook and Line	699	119,069	12%
Other	29	50,457	5%
Total	1,444	996,028	100%

Source: Bluefish AP Information Document – July 2014 (VTR Data). Available at: http://www.mafmc.org/.

Description of the Areas Fished

The Northeast Region is divided into 46 statistical areas for Federal fisheries management. According to VTR data, bluefish were commercially harvested in 36 statistical areas in 2011 (Figure 3). Six statistical areas, collectively accounted for more than 75 % of VTR-reported landings in 2013, with individual areas contributing 6% to 18% of the total. These areas also represented 70% of the trips that landed bluefish suggesting that resource availability is fairly consistent through the range where harvest occurs.

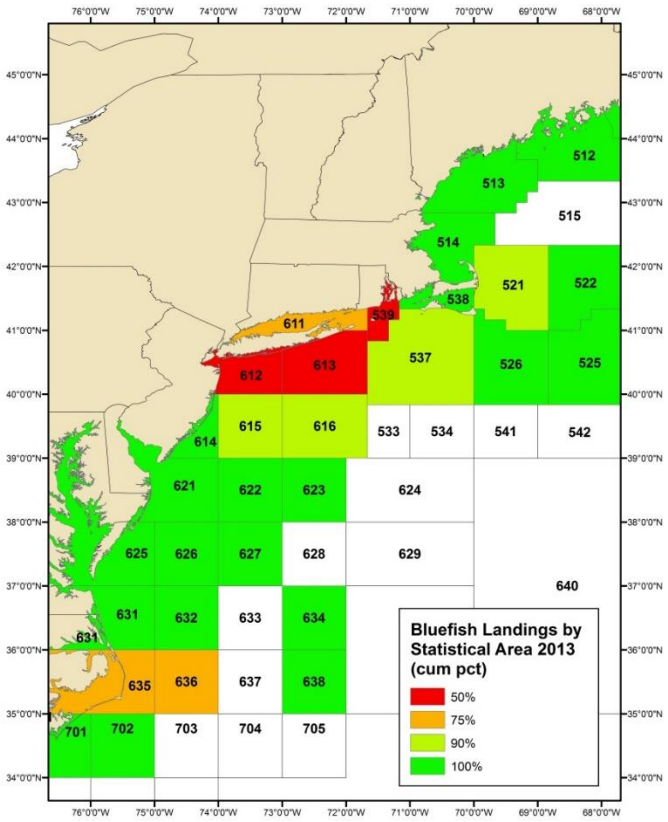

Figure 3. NMFS Northeast statistical areas. Shading reflects the cumulative percentage of landings with red and orange being the primary areas where the commercial landings are taken.

6.4.2 Recreational Fishery

Marine Recreational Information Program (MRIP) catch data by mode indicates that approximately 59% of bluefish were caught from shore in 2013 (Table 8). In addition, 34% of bluefish were caught from private and rental boats and 7% from party and charter boats for the same time period (Table 8).

Table 8. The percentage (%) of bluefish caught and landed by recreational fishermen for each mode, Maine through Florida, 2013.

Mode	Catch (Number A+B1+B2)	Landings (Weight A+B1)
Shore	58.73	47.51
Private/Rental Boat	33.98	25.87
Party/Charter Boat	7.29	26.62
Total	100.0%	100.0%

Source: Marine Recreational Information Program, January 5, 2014.

Trends in directed fishing for bluefish from 1991 to 2013 are provided in Table 9. The lowest annual estimate of directed trips was 1.2 million in 2013; the highest annual estimate of directed trips was 5.6 million trips in 1991. On average, 1.5 million trips were taken for the 2009-2013 period.

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Table 9. Number of bluefish recreational fishing trips, recreational harvest limit, and recreational landings from 1991 to 2015.

Year	Number of Fishing Trips[a]	Recreational Harvest Limit ('000 lb)	Recreational Landings ('000 lb)[b]
1991	5,601,113	None	32,997
1992	4,224,567	None	24,275
1993	3,912,570	None	20,291
1994	3,294,352	None	15,540
1995	3,243,933	None	14,306
1996	2,503,218	None	11,746
1997	1,999,534	None	14,301
1998	1,824,735	None	12,335
1999	1,433,191	None	8,254
2000	1,515,583	25,745	10,606
2001	2,140,110	28,258	13,230
2002	1,866,073	16,365	11,371
2003	2,082,010	26,793	13,135
2004	2,282,546	21,350	15,827
2005	2,496,057	20,353	18,133
2006	2,136,134	16,718	16,894
2007	2,683,736	19,073	21,181
2008	2,128,302	20,451	18,900
2009	1,540,813	19,528	13,583
2010	1,741,279	18,631	18,042
2011	1,602,659	17,813	13,151
2012	1,383,500	17.457	10,684
2013	1,192,330	14,069	15,388
2014	NA	13.179	NA
2015	-	13.073[c]	-

[a]Estimated number of recreational fishing trips (expanded) where the primary species targeted was bluefish, Maine – Florida's East Coast. Source: NOAA Fisheries - Office of Science and Technology https://www.st.nmfs.noaa.gov/),
[b]Atlantic coast from Maine through Florida's east coast.
[c]Alternative 1 (preferred).
NA = Data not available.

Because of the importance of bluefish to recreational anglers, a change in expenditures by bluefish anglers would be expected to impact the sales, service, and manufacturing sectors for the overall recreational fishing industry. The total value recreational anglers place on the opportunity to fish can be divided into actual expenditures and a non-monetary benefit associated with satisfaction. In other words, anglers incur expenses to fish (purchases of gear, bait, boats, fuel, etc.), but do not pay for the fish they catch or retain nor do they pay for the enjoyment of many other attributes of the fishing experience (socializing with friends, being out on the water, etc.). Despite the obvious value of these fish and other attributes of the experience to anglers, no

direct expenditures are made for them, hence the term "non-monetary" benefits. In order to determine the magnitude of non-monetary benefits, a demand curve for recreational fishing must be estimated. In the case of bluefish, as with many recreationally sought species, a demand curve is not available. Part of the problem in estimating a demand curve is due to the many and diverse attributes of a recreational fishing experience: socializing, weather, ease of access and site development, catch rates, congestion, travel expenditures, and costs of equipment and supplies, among others. A recreational angler's willingness-to-pay for bluefish must be separated from the willingness-to-pay for other attributes of the experience. Holding all other factors constant (expenditures, weather, etc.), a decrease in the catch (or retention rate) of bluefish could decrease demand and an increase in the catch (or retention rate) could increase demand. Each change will have an associated decrease/increase in expenditures and non-monetary benefits.

Recreational fishing contributes to the general well-being of participants by affording them with opportunities for relaxation, experiencing nature, and socializing with friends. The potential to catch and ultimately consume fish is an integral part of the recreational experience, though studies have shown that non-catch related aspects of the experience are often as highly regarded by anglers as the number and size of fish caught. Since equipment purchase and travel-related expenditures by marine recreational anglers have a positive effect on local economies, the maintenance of healthy fish stocks is important to fishery managers.

6.4.2.1 Economic impact of the recreational fishery

Anglers' expenditures generate and sustain employment and personal income in the production and marketing of fishing-related goods and services. In 2006, saltwater anglers from Maine through Virginia spent an estimated $1.394 billion on trip-related goods and services (Gentner and Steinback 2008). Private/rental boat fishing comprised the majority of these expenditures ($669.7 million; Table 10), followed by shore fishing ($531.1 million) and party/charter fishing ($193.0 million). Survey results indicate that the average trip expenditure in 2006 was $40.34 for anglers fishing from a private/rental boat, $45.32 for shore anglers, and $149.14 for anglers that fished from a party/charter boat. Adjusted average expenditures in 2013 dollars are $46.61 for private/rental boat trips, $52.37 for shore trips, and $172.34 for party/charter boat trips.[10] Trip-related goods and services included expenditures on private transportation, public transportation, food, lodging, boat fuel, private boat rental fees, party/charter fees, access/boat launching fees, equipment rental, bait, and ice. Unfortunately, estimates of trip expenditures specifically associated with bluefish were not provided in the study. However, if average trip expenditures are assumed to be constant across fishing modes, estimates of the expenditures associated with bluefish can be determined by multiplying the proportion of total trips that targeted bluefish by mode (expanded estimates; Table 11) by the total estimated trip expenditures from the Gentner and Steinback study. According to this procedure, anglers fishing for bluefish from Maine through Virginia spent an estimated $61.00 million on trip-related goods and services in 2013. Approximately $10.64 million was spent by anglers fishing aboard private/rental boats, $35.32 million by those fishing from shore, and $15.05 million by anglers fishing from party/charter boats. Apart from trip-related expenditures, anglers also purchase fishing equipment and other durable items that are used for many trips (i.e., rods, reels, clothing,

[10] The 2006 estimate of expenditures by mode were adjusted to its 2013 equivalent by using the Bureau of Labor Statistics Consumer Price Index.

boats, etc.). Although some of these items may be purchased with the intent of targeting and catching specific species, the fact that these items can be used for multiple trips creates difficulty when attempting to associate durable expenditures with particular species. Therefore, only trip-related expenditures were used in this assessment. It is expected that trip-related goods and services along the east coast (Maine-Florida) would be higher than the estimates presented above as the proportion of total trips that targeted bluefish by mode is higher (Table 11) than the number for trips that targeted bluefish from Maine through Virginia only (Table 12). Since Gentner and Steinback (2008) estimated trip-related goods and services from Maine through Virginia only, estimates of the expenditures associated with bluefish from Maine thought Florida cannot be calculated.

Table 10. Total angler trip expenditures ('000 $) by mode and state in 2006.

State	Party/Charter	Private/Rental	Shore
CT	3,221	23,762	8,819
DE	4,410	34,451	29,909
ME	5,956	10,461	47,913
MD	28,390	68,413	90,266
MA	34,529	72,934	149,833
NH	7,320	5,966	6,887
NJ	65,462	199,889	92,131
NY	34,468	80,847	35,025
RI	5,267	22,988	32,156
VA	3,994	150,032	38,151
Total	193,017	669,743	531,090

Source: Gentner and Steinback 2008.

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Table 11. Angler effort (number of trips) that targeted bluefish in 2013; Maine through Virginia (top) and Maine through Florida (bottom).

Maine through Virginia

Mode	Total Angler Effort	Angler Effort Targeting Bluefish[a]	Percent Angler Effort Targeting Bluefish
Party/Charter	1,574,555	87,302	5.45%
Private/Rental	10,309,893	228,216	2.21%
Shore	8,313,177	674,408	8.11%
Total	20,197,625	989,926	4.90%

Maine through Florida.

Mode	Total Angler Effort	Angler Effort Targeting Bluefish[a]	Percent Angler Effort Targeting Bluefish
Party/Charter	1,910,996	88,064	4.61%
Private/Rental	18,187,684	265,641	1.46%
Shore	16,715,302	838,625	5.02%
Total	36,813,982	1,192,330	3.24%

[a]Total effort targeting bluefish as primary species.
Source: Scott Steinback NMFS/NEFSC.

The bluefish expenditure estimates can be used to reveal how anglers' expenditures affect economic activity such as sales, income, and employment from Maine through Virginia. During the course of a fishing trip, anglers fishing for bluefish purchase a variety of goods and services, spending money on transportation, food, boat fuel, lodging, etc. The sales, employment, and income generated from these transactions are known as the direct effects of anglers' purchases. Indirect and induced effects also occur because businesses providing these goods and services also must purchase goods and services and hire employees, which in turn, generate more sales, income, and employment. These ripple effects (i.e., multiplier effects) continue until the amount remaining in a local economy is negligible. A variety of analytical approaches are available for determining these impacts, such as input-output modeling. Unfortunately, a model of this kind was not available. Nonetheless, the total sales impacts can be approximated by assuming a multiplier of 1.5 to 2.0 for the Northeast Region (Scott Steinback, NMFS/NEFSC, pers. comm., 2009). Given the large geographical area of the Northeast Region, it is likely that the sales multiplier falls within those values. As such, the total estimated sales, income and employment generated from anglers that targeted bluefish in 2013 was likely to be between $91.50 million ($61.00 * 1.5) and $122.00 million ($61.00 * 2.0) from Maine through Virginia. A similar procedure could be used to calculate the total personal income, value-added, and employment generated from bluefish anglers' expenditures, but since these multiplier values have been quite variable in past studies, no estimates were provided here.

6.4.2.2 Value of the fishery to anglers

Behavioral models that examine travel expenditure, catch rates, accessibility of fishing sites, and a variety of other factors affecting angler enjoyment can be used to estimate the "non-monetary" benefits associated with recreational fishing trips. Unfortunately, a model of this kind does not exist specifically for bluefish. Data constraints often preclude researchers from designing species-specific behavioral models. However, a study by Hicks et. al. (1999) estimated the value of access across states in the Northeast region (that is, what people are willing to pay for the opportunity to go marine recreational fishing in a particular state in the Northeast) and the marginal value of catching fish (that is, what people are willing to pay to catch an additional fish). Table 12 shows, on average, the amount anglers in the Northeast states (except for North Carolina which was not included in the study) are willing to pay for a one-day fishing trip. The magnitudes of the values in Table 12 reflect both the relative fishing quality of a state and the ability of anglers to choose substitute sites. The willingness to pay is generally larger for larger states, since anglers residing in those states may need to travel significant distances to visit alternative sites. Several factors need to be considered when examining the values in Table 12. First, note that Virginia has relatively high willingness to pay estimates given its relative size and fishing quality characteristics. In this study, Virginia defines the southern geographic boundary for a person's choice set, a definition that is arbitrary in nature. For example, an angler in southern Virginia is likely to have a choice set that contains sites in North Carolina. The regional focus of the study ignores these potential substitutes and therefore the valuation estimates may be biased upward (Hicks et. al., 1999). Second, the values cannot be added across states since they are contingent upon all of the other states being available to the angler. If it were desirable to know the willingness to pay for a fishing trip within Maryland and Virginia, for example, the welfare measure would need to be recalculated while simultaneously closing the states of Maryland and Virginia.

Table 12. Average willingness to pay for a one-day fishing trip, by state.

State	Mean 1994 ($'s) [a]	Adjusted to 2013 ($'s)[b]
ME	6.40	9.96
NH	0.85	1.32
MA	8.38	13.04
RI	4.23	6.58
CT	3.07	4.78
NY	21.58	33.58
NJ	14.12	21.97
DE	1.43	2.23
MD	12.09	18.81
VA	42.33	65.87

[a]Source: Hicks et. al., 1999.
[b]Prices were adjusted using the Bureau of Labor Statistics Consumer Price Index.

Assuming the average willingness to pay values shown in Table 12 are representative of trips that targeted bluefish, these values can be multiplied by the number of trips that targeted bluefish by state to derive welfare values for bluefish. Table 13 shows the aggregate estimated willingness to pay by state for anglers that targeted bluefish in 2013 (i.e., the value of the opportunity to go recreational fishing for bluefish). New York, New Jersey, Massachusetts and Maryland were the states with the highest estimated aggregate willingness to pay for bluefish day trips. Once again, note that the values cannot be added across states since values are calculated contingent upon all of the other states being available to the angler.

Table 13. Aggregate willingness to pay for anglers that indicated they were targeting bluefish in 2013.

State	Total Effort Targeting Bluefish[a]	Willingness to Pay ($'s)
ME	4,213	41,959
NH	6,761	8,943
MA	219,622	2,864,005
RI	92,980	612,046
CT	140,334	670,433
NY	267,092	8,969,460
NJ	214,892	4,721,814
DE	18,736	41,693
MD	6,044	113,712
VA	19,253	1,268,238

[a]Total effort targeting bluefish as primary species.
Source: Scott Steinback NMFS/NEFSC.

In the Hicks et. al. (1999) study, the researchers also estimated welfare measures for a one fish change in catch rates for 4 different species groups by state. One of the species groups was "small game," of which bluefish is a component. Table 14 shows their estimate of the welfare change associated with a one fish increase in the catch rate of all small game by state. For example, in Massachusetts, it was estimated that all anglers would be willing to pay $4.81 (the 1994 value adjusted to its 2013 equivalent) extra per trip for a one fish increase in the expected catch rate of all small game. The drawback to this type of aggregation scheme is that the estimates relate to the marginal value of the entire set of species within the small game category, rather than for a particular species within the grouping. As such, it is not possible to estimate the marginal willingness to pay for a one fish increase in the expected catch rate of bluefish from the information provided in Table 13.

Table 14. Willingness to pay for a one fish increase in the catch rate of small game per trip, Maine through Virginia.

State	Mean 1994 ($'s)[a]	Adjusted to 2013 ($'s)[b]
ME	3.74	5.82
NH	3.25	5.06
MA	3.09	4.81
RI	3.13	4.87
CT	3.29	5.12
NY	2.43	3.78
NJ	2.69	4.19
DE	3.00	4.67
MD	3.44	5.35
VA	2.46	3.83
All States	2.89	4.50

[a]Source: Hicks et. al., 1999.
[b]Prices were adjusted using the Bureau of Labor Statistics Consumer Price Index.

However, it is possible to calculate the aggregate willingness to pay for a 1 fish increase in the catch rate of small game across all anglers. Assuming that anglers will not adjust their trip taking behavior when small game catch rates at all sites increase by one fish, the estimated total aggregate willingness to pay for a one fish increase in the catch rate of small game in 2013 (Maine through Virginia) was $90.88 million (total trips (20.197 million) x average per trip value ($4.50). This is an estimate of the total estimated welfare gain (or loss) to fishermen of a one fish change in the average per trip catch rate of all small game. Although it is unclear how much of this welfare measure would be attributable to bluefish, the results show that small game in general, in the Northeast, are an extremely valuable resource.

Although not addressed here, recreational fishing participants and non-participants may also hold additional intrinsic value out of a desire to be altruistic to friends and relatives who fish or to bequeath a fishery resource to future generations. A properly constructed valuation assessment would include both use and intrinsic values in the estimation of total net economic value. Currently, however, there have been no attempts to determine the altruistic value (i.e., non-use value) of bluefish in the Northeast.

6.4.3 Port and Community Description

U.S. fishing communities directly involved in the harvest or processing of bluefish occur in coastal states from Maine through North Carolina. This EA is most concerned with the top bluefish ports which are identified in Table 15. Ten ports qualified as "top bluefish ports", i.e., those ports where 100,000 lb or more of bluefish were landed (Table 15). Wanchese, NC was by far the most important commercial bluefish port, followed by Point Judith, RI, Montauk, NY,

and Hampton Bays. The recreational fisheries landings (numbers of fish and lb of fish) by state in 2013 is provided in Table 16.

The full range of ports and communities that are involved in the harvest of bluefish are fully described in the 2002 Bluefish Specification Document (section 4.3; MAFMC 2001) and are available via the internet at http://www.nero.noaa.gov/ro/doc/nr02.htm. Additional information on "Community Profiles for the Northeast US Fisheries" can be found at http://www.nefsc.noaa.gov/read/socialsci/community_profiles/.

A description of the fishing communities in the Southeast U.S. can be found at http://sero.nmfs.noaa.gov/sf/socialsci/pdfs/SA%20Fishing%20Community%20Report.pdf.

Table 15. Top ports of bluefish landings (in lb), based on NMFS 2013 dealer data. Since this table includes only the "top ports" (ports where landings of bluefish were > 100,000 lb), it does not include all of the landings for the year.

Port[a]	Pounds	# Vessels
Wanchese, North Carolina	612,147	15
Point Judith, Rhode Island	400,572	90
Montauk, New York	354,559	84
Hampton Bays, New York	345,573	30
Hatteras, North Carolina	174,150	13
Amagansett, New York	152,111	4
Point Pleasant, New Jersey	124,769	67
Chatham, Massachusetts	124,578	24
Belford, New Jersey	115,374	13
Shinnecock, New York	107,809	

[a]Ports with less than 3 vessels not reported for confidentiality issues.
Source: Dealer Weighout Data, as of June 24, 2014.

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Table 16. MRIP estimates of 2013 recreational harvest and total catch for bluefish.

State	Harvest			Catch
	Pounds of Fish	Number of Fish	Average wt of fish (lb)	Number of Fish
ME	62,654	19,542	3.2	41,726
NH	0	0	-	85
MA	2,141,185	371,734	5.8	829,473
RI	1,382,072	312,040	4.4	934,810
CT	4,192,558	875,068	4.8	1,599,615
NY	3,684,907	983,041	3.7	1,990,952
NJ	1,833,248	740,335	2.5	1,617,134
DE	26,230	24,391	1.1	94,726
MD	65,389	55,544	1.2	316,501
VA	274,713	188,367	1.5	408,435
NC	988,664	1,183,627	0.8	3,055,543
SC	109,218	298,451	0.4	607,472
GA	3,645	3,408	1.1	10,783
FL (East Coast)	516,404	409,076	1.3	1,901,087
Total	15,280,887	5,464,624	2.8	13,408,342

Source: Bluefish AP Information Document – July 2014 (MRIP Data). Available at: http://www.mafmc.org/.

6.4.4 Permit Data

Vessel and Dealer Activity

Federal permit data indicate that 2,954 commercial bluefish permits were issued in 2013 (Table 17). A subset of federally-permitted vessels were active in 2013. Dealer reports indicate 602 vessels with commercial bluefish permits that actually landed bluefish.

Of the 394 federally-permitted bluefish dealers, there were 167 dealers who bought bluefish in 2013 (Table 17).

Table 17. Permitted and active bluefish vessels and dealers by state for 2013.

State	Permitted Vessels	Active Vessels	Permitted Dealers	Active Dealers
MA	1,040	154	113	44
NJ	460	83	58	9
NY	320	124	89	45
ME	258	-	12	-
RI	212	101	41	26
NC	153	71	26	19
VA	133	33	19	11
NH	131	7	8	-
CT	66	10	4	-
MD	60	12	10	3
FL	52	-	6	5
DE	49	-	-	-
PA	13	-	3	
OTHER	7	7	5	5
TOTAL	2,954	602	394	167

Note: States with less than 3 dealers reporting are not reported for confidentiality issues.
Source: Bluefish AP Information Document – July 2014 (NMFS Permit Database and Dealer Weighout Data). Available at: http://www.mafmc.org/.

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7.0 ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES

This EA analyzes the impacts of the alternatives described fully under section 5.0. These alternatives specify commercial quotas and recreational harvest limits for the 2015 bluefish fisheries that are necessary to ensure overfishing does not occur and ACLs are not exceeded (Table 18). The Council did not recommend changes to other regulations in place for these fisheries; therefore, any other management measures in place will remain unchanged (status quo) for the 2015 fishing year (see section 5.3 for additional discussion). The Council and Commission's Board met in August 2014 to adopt 2015 management measures. The nature and extent of the management program for the managed resource fisheries have been examined in detail in the EAs and EISs prepared for management actions for the FMP. The aspects of the environment VECs that could be affected by the proposed actions in this EA are detailed in section 6.0, and the analysis in this section focuses on impacts of the alternatives described in section 5.0 relative to each VECs (managed resources and non-target species, habitat (including EFH), ESA-listed and MMPA protected species, and human communities).

For purposes of comparing each of the alternatives, the proposed 2015 allowable landings under each alternative is compared to the 2014 previously implemented commercial quota and recreational harvest limit and 2013 realized landings, to provide the increase or decrease in quota or harvest limit (as a percentage) that is expected under each of the alternatives (Table 19).

Changes in landings can result in changes in fishing effort. The direction and magnitude of change is dependent on factors such as fish abundance/availability and how the fishery responds to changes in regulations. The extent of interactions between fishing gear and habitat and other non-target species, including protected species, is related to fishing effort. The magnitude of change in effort that results from changes in quota and availability is difficult to quantify; however, it is not expected to be significant. Therefore, the following describes the general directionality of impacts in response to these two factors (Table 20).

Table 18. Comparison of the 2015 bluefish alternatives and associated catch and landings limits (M lb).

Alternatives	Commercial Quota	Recreational Harvest Limit
Alternative 1 (Preferred: Maximum Transfer)	5.119	13.073
Alternative 2 (Non-Preferred: No Transfer)	3.662	14.530
Alternative 3 (Non-Preferred: No Action/Status Quo)	7.458	13.523

Table 19. The percent difference between the proposed commercial quotas and recreational harvest limits under each alternative for 2015 relative to 2014 limits and 2013 realized landings.

2015 Alternatives		Alternative 1 (Preferred: Maximum Transfer)	Alternative 2 (Non-Preferred: No Transfer)	Alternative 3 (Non-Preferred: No Action/Status Quo)
2014	**Commercial Quota**	-31.4%	-50.9%	0.0%
	Recreational Harvest Limit	-3.3%	7.4%	0.0%
2013	**Commercial Landings**	24.7%	-10.8%	81.7%
	Recreational Landings	-15.0%	-5.6%	-12.1%

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Table 20. Expected changes in fishing effort that result from changes to landings limits and/or fish availability.

Change in quota	Fish abundance/availability		
	Decrease in availability	**No change in availability**	**Increase in availability**
Decrease in quota	A) Fishing effort (number of trips) may decrease as a result of a decrease in quota; however, because of the decrease in availability (trips catching fewer fish), fishermen may need to take additional trips to offset the lower cpue; managers may reduce trip limits or adjust regulations that extend the fishing season and affect effort; therefore fishing effort may be the same or increase.	B) Fishing effort may decrease as a result of a decrease in quota under similar availability (trips catching similar amounts of fish); however, managers may reduce trip limits or adjust regulations that extend the fishing season and affect effort; therefore fishing effort may be the same or decrease.	C) Fishing effort may decrease as a result of a decrease in quota; likewise under increased availability (trips catching more fish), effort may decrease; however, managers may reduce trip limits or adjust regulations that extend the fishing season and affect effort; therefore fishing effort may be the same or decrease.
No change in quota	D) Fishing effort may remain the same as the quota has not changed; however, because of the decrease in availability (trips catching fewer fish), fishermen may need to take more trips to catch the same amount of fish; therefore fishing effort may be the same or increase.	E) Fishing effort may remain the same given the quota has not changed and availability is expected to be similar.	F) Fishing effort may remain the same as the quota has not changed; however, because of the increase in availability (trips catching more fish), fishermen may be able to catch the same amount of fish with fewer trips thus decreasing effort; therefore fishing effort may be the same or decrease.
Increase in quota	G) Fishing effort may increase in response to the increase in quota; because of the decrease in availability (trips catching fewer fish), fishermen may need to take more trips to catch the same amount of fish; however, managers may increase trip limits or adjust regulations in response to the higher quota allowing fewer trips to catch more fish; therefore, fishing effort may be the same or increase.	H) Fishing effort may increase in response to the increase in quota under similar fish availability due to fishermen taking more trips to catch quota; however, managers may increase trip limits or adjust regulations in response to the higher quota allowing fewer trips to catch more fish; therefore, fishing effort may be the same or increase.	I) Fishing effort may increase in response to the increase in quota; because of the increase in availability (trips catching more fish), fishermen may be able to catch the same amount of fish with fewer trips thus decreasing effort; managers may increase trip limits or adjust regulations, but this may be offset by higher cpue; therefore, fishing effort may be the same or decrease, depending on the combination of factors.

A decrease in effort may result in positive impacts (+) as a result of fewer encounter rates with non-targets or ESA listed and MMPA protected species and fewer habitat gear impacts, and an increase in effort may result in a negative impact (-). Similar effort result in neutral impacts (0). The magnitude of negative effects of increases in fishing effort in the recreational fishery on non-target species may be offset by the use of ethical angler practices, which include using proper catch and release techniques and use of gear which minimizes mortality (i.e., circle or j hooks) on non-target species. In addition, the commercial fishery may avoid non-target species, particularly those that cannot be landed because commercial fishermen do not find it lucrative to spend additional fuel costs and resources sorting/processing species that the commercial vessels do not have permits to land or a market to sell.

A general evaluation of effort in response to these two important factors (i.e., quota levels and fish availability) is generalized in Table 20; however, fishing effort does not always respond as expected (increase or decrease) as a result of consideration of only these two factors. Fishing demand models are used to forecast the demand for trips as well as to determine the value that commercial fishermen or recreational anglers place on the various factors that affect their behavior. Models can attempt to predict how changes in fishing site characteristics (travel costs, catch rates, available species, etc.), fishery management policies, and other characteristics affect the demand for fishing trips. Limited data is available to address many of these factors. This makes evaluation of changes in fishing behavior difficult and complex and therefore makes it difficult to predict how fishing effort will change each year.

For all alternatives, fish availability is not expected to change substantially and would be expected to remain relatively stable (mid column in Table 20) both as a function of stock productivity and generally consistent fishing mortality through implementation of any of the proposed alternatives. Fishery-wide landings ("quota" in Table 19), will either decrease (Alternatives 1 and 2; top row in Table 20) or stay the same (Alternative 3; middle row in Table 20).

7.1 Biological Impacts

Biological impacts include the effects of the actions on the managed resource and non-target species. The overall decrease in catch limits under Alternatives 1 (preferred - maximum transfer) and 2 (no transfer) for 2015 are consistent with the ABC recommendations of the SSC and are there therefore based on the best scientific information available and are intended to prevent overfishing. Continuing to prevent overfishing, as was done in 2014, is expected to result in neutral impacts on the managed resource overall. However, there may be a positive biological impacts on the managed resource because of the decrease in catch limits. Fishing effort and interactions with other non-target species are expected to decrease in 2015 given the reduction in catch limits and stable bluefish availability, when compared to the status quo alternative (Table 20; cell B). It is expected that the decrease in fishing effort under Alternative 2 would be greater than under Alternative 1 given the larger reduction in commercial quota associated with Alternative 2 which could shorten the commercial fishing seasons and minimize commercial effort relative to Alternative 1.

Alternative 3 (status quo) is expected to result in negative biological impacts since fully achieving the landings limits under this alternative would result in catches above the upper limit recommended by the SSC. Fishing effort and interactions with other non-target species are expected to remain unchanged when compared to current conditions in 2015 given no change in catch limits and stable bluefish availability (Table 20; cell E).

Biological impacts differ between the recreational and commercial fisheries as stated in sections 6.1.3 (non-target species) and 6.3 (Protected Resources). Commercial fishing effort is likely to be minimized the greatest under Alternative 2, closely followed by Alternative 1; while under Alternative 3, commercial fishing effort is expected to remain at current levels. The corresponding impacts on non-target and Protected Resources follows that pattern with a decrease in bycatch and encounters under Alternative 1 (positive impacts), followed by Alternative 2 (positive impacts), and neutral impacts under Alternative 3. Fishing effort is expected to remain constant under Alternative 3 when compared to current conditions, while a downward shift in commercial effort and associated impacts (see above) would occur under Alternatives 1 and 2. In summary, all three alternatives have impacts that range from negative to positive, however, the greatest potential for positive biological impacts are associated with Alternative 2 (no transfer), followed by Alternative 1 (maximum transfer), and Alternative 3 (status quo) has the potential for negative biological impacts.

7.2 Habitat Impacts

Habitat impacts in this fishery are primarily associated with bottom trawling since gillnets and hook-and-line, the other fishery gear types used, are not associated with adverse impacts to habitat. Alternatives 1 and 2 would decrease the commercial quota by 31 and 51%, respectively, when compared to the status quo (Alternative 3). Therefore, they have the potential to reduce adverse habitat impacts of bottom trawling when compared to Alternative 3. However, as indicated before, because there is no significant directed trawl fishery for bluefish (Table 7), bottom trawling activity is related to the availability and market value of other species and would probably not be affected by a decrease of this magnitude in the commercial bluefish quota. If there was an effect, it would be slight positive. Alternative 3 is expected to result in neutral habitat impacts when compared to current conditions. EFH impacts associated with the bluefish fishery were determined to be minimal and therefore consistent with the baseline impacts of the fishery that were assessed in the 2004 Annual Specifications EA (section 6.2.3). As stated above, commercial effort is not expected to increase significantly, therefore, this action would continue to minimize the adverse effects of this fishery on EFH to the extent practicable, pursuant to section 305 (a)(7) of the MSA.

7.3 ESA Listed Species and MMPA Protected Species

Section 6.3 describes the ESA listed and MMPA protected species VEC and other related impact considerations. All fishing gears are required to meet gear restrictions as required under the Atlantic Large Whale Take Reduction Plan (ALWTRP), Bottlenose Take Reduction Plan (BDTRP), and Harbor Porpoise Take Reduction Plan (HPTRP). These plans contain measures designed to reduce interactions/impacts associated with fishing gears.

7.3.1 No Action/Status Quo (Alternative 3)

The No Action/Status Quo alternative (Alternative 3), would maintain the current 2014 specifications that are in place for the bluefish fishery. As a result, fishing behavior (e.g., effort) in the bluefish fishery is expected to remain the same.

Non-ESA Listed Species Impacts

Impacts of the No Action on non-ESA listed species, which consist of species of cetaceans and pinnipeds (marine mammals), are somewhat uncertain, as quantitative analysis has not been performed. The bluefish fishery is comprised of a recreational and commercial component. Regardless of FMP, information on recreational fishing impacts on non-ESA listed species of marine mammals is limited, specifically because there is no observer program for recreational fisheries. As a result, records of non-ESA listed species interactions with recreational fisheries are limited and therefore, it is unclear to what extent recreational fisheries effect populations of non-ESA listed species of marine mammals. However, as a dedicated observer program exists for all commercial fisheries, there is a wealth of information on observed marine mammal interactions with all fishing gear types (e.g., bottom trawl, hook and line, gillnet) and therefore, years of data assessing resultant population level effects of these interactions. This information, provides the most robust overall assessment of fishery (by fishery category, not FMP) and gear impacts to marine mammals (Waring et al. 2014) and therefore, will serve as the best available information in our assessment of the No Action on non-ESA listed species of cetaceans and pinnipeds. Again, although it is referencing commercial fisheries, Waring et al. (2014) serves as the best available information in our assessment of the bluefish fishery as a whole.

As provided in Waring et al. (2014), aside from harbor porpoise and several stocks of bottlenose dolphin, there has been no indication that takes of non-ESA listed species of marine mammals in commercial fisheries has gone above and beyond levels which would result in the inability of each species population to sustain itself. Specifically, aside from harbor porpoise and several stocks of bottlenose dolphin, potential biological removal (PBR) has not been exceeded for any of the non-ESA listed marine mammal species identified in section 6.3 (Waring et al. 2014). Although harbor porpoise and several stocks of bottlenose dolphin have experienced levels of take that have resulted in the exceedance of each species PBR, take reduction plans have been implemented to reduce bycatch in the fisheries affecting these species (HPTRP, effective January 1, 1999 (63 FR 71041); BDTRP, effective April 26, 2006 (71 FR 24776)). These plans are still in place and are continuing to assist in decreasing bycatch levels for these species. Although the information presented in Waring et al. (2014) is a collective representation of commercial fishery interactions with non-ESA listed species of marine mammals, and does not address the effects of the bluefish or any other FMP specifically, the information does demonstrate that allocations in the bluefish fishery, or any other FMP, whether higher or lower, has not resulted in a collective level of take that threatens the continued existence of non-ESA listed marine mammal populations. Based on this information, it is not expected that the proposed specifications under the No Action will result in levels of take that will affect the continued existence of non- ESA listed species of marine mammals. For these reasons, the No Action is expected to have neutral impacts on non- ESA listed species of marine mammals.

ESA Listed Species Impacts

Similar to non-ESA listed species, impacts to ESA listed species from the No Action are somewhat uncertain, as quantitative analysis has not been performed. However, we have considered, to the best of our ability, how the fishery has operated in regards to listed species from 2011, when major changes to the FMP had been experienced from implementation of Amendment 3, to the present. During this time, a biological opinion (Opinion) on the bluefish FMP had been issued by NMFS in 2010 (NMFS 2010), with a subsequent replacement of this Opinion in 2013(NMFS 2013). The Opinion issued on October 29, 2010, included an incidental take statement authorizing the take of specific numbers of ESA listed species of sea turtles. Until December 16, 2013, when NMFS issued a new Opinion on the operation of seven commercial fisheries, including the bluefish fishery, the bluefish fishery has been covered by the incidental take statement authorized and issued with the 2010 Opinion. It should be noted that the 2010 Opinion did not authorize the incidental take of ESA listed Atlantic salmon. Take of Atlantic salmon in the bluefish fishery was not expected; however, analysis of information since the 2010 Opinion was completed changed this determination and as a result, in NMFS most recent batched biological opinion issued on December 16, 2013, incidental take of Atlantic salmon is authorized (see NMFS 2013). In addition, as Atlantic sturgeon were not listed at the time the 2010 Opinion was written, this species was not considered in the opinion; however, since this species listing in 2012 (77 FR 5880 and 77 FR 5914, February 6, 2012), it has been included in the most Opinion issued by NMFS on December 16, 2013 .

The 2010 Opinion concluded that the fishery may affect, but would not jeopardize the continued existence of any ESA listed species of sea turtles or whales. Since 2010, the allocations for the bluefish fishery have increased, decreased, or remained stable. The No Action will retain the specifications authorized for fishing year 2014 and therefore, specifications will be no greater than those that have been previously authorized for the fishery. As a result, changes in fishing effort or behavior are not expected. As previously authorized specifications for the bluefish fishery over the last 5 years (i.e., 2010 to the present) have not resulted in the exceedance of NMFS authorized take of any ESA listed species, the specifications for the fishery under the No Action are not expected to result in the bluefish fishery introducing any new risks or additional takes to ESA listed species that have not already been considered and authorized by NMFS to date (NMFS 2013). As a result, the specifications under the "No Action" are not, as concluded in the NMFS 2013 Opinion, expected to result in levels of take that would jeopardize the continued existence of ESA listed species. For these reasons, the No Action would likely have neutral impacts on protected resources.

7.3.2 Alternatives 1 and 2

Alternatives 1 and 2, overall, would result in a reduction in quota from fishing year 2014. This is likely to result in a decrease in fishing effort in the bluefish fishery. With a reduction in fishing effort, the potential for protected species (ESA and non-ESA listed species) interactions with bluefish fishery gear and therefore, serious injury or mortality, may be reduced. Similar to the No Action, the proposed specifications under Alternative 1 or 2 are no greater than or are within the range of the specifications that have been authorized by the fishery over the last 5 years (since 2010). As previously authorized specifications for the bluefish fishery over the last 5years have not resulted in the exceedance of NMFS authorized take of any ESA listed species or resulted in

levels of take of non-ESA listed species that jeopardize the continued existence of non-ESA listed marine mammal populations ,we do not expect Alternative 1 or 2 to introduce any new risks or additional takes to protected species that have not already been considered and/or authorized by NMFS to date (NMFS 2013; Waring et al. 2014). For these, and the reasons stated above, the proposed specifications are likely to have low positive to neutral impacts to protected species.

When compared to the No Action, the proposed specifications under Alternative 1 or 2 are likely to have a more positive impact on protected species as there is a chance that the proposed specifications, which are lower than those in the No Action, will decrease effort, and therefore, decrease the potential for an interaction with a protected species.

7.4 Socioeconomic Impacts

Alternative 1

This alternative specifies a commercial quota of 5.119 M lb and recreational landing limit of 13.073 M lb for bluefish. Under this scenario, the bluefish specifications would result in an aggregate decrease of approximately 31.4 and 3.3%, respectively, in allowable commercial landings and recreational harvest limit relative to the 2014 implemented limits.

Under this alternative, a total of 57 business entities in the Northeast were projected to incur revenue losses of 5% or more (see section 8.11). More specifically, 34 business entities were projected to incur in revenue losses of 5-9%, 10 entities of 10-19%, 3 entities of 20-29%, and 10 entities of 30-39%. In addition, 944 entities were projected to incur in revenue losses of less than 5% in 2015. While it is expected that in relative terms 57 small business entities are likely to be impacted with revenue reductions of 5% or more in the Northeast, 39% of these entities (22 entities) had gross sales of $1,000 or less and 61% of the impacted entities (35 entities) had gross sales of $10,000 or less, thus likely indicating that the dependence on fishing for some of these vessels is very small.
In addition, it was estimated that on average, reduction in revenues due to the potential decrease in landings associated with the 2015 quota compared to the 2014 quota are expected to be approximately 3.4% for fishermen that land bluefish in North Carolina (on average 60 vessels landed bluefish in North Carolina for the 2011-2013 period). Furthermore, it is estimated that on average, overall revenues for fishermen that landed bluefish in Florida (on average 1,227 vessels landed bluefish in Florida for the 2011-2013 period) would decrease by approximately 0.3%.

It is likely that the threshold analysis presented above overestimates the negative economic impacts to small business entities due to the fact that changes in bluefish revenues associated with the potential quota change for 2015 versus 2014 implemented quotas were applied to all entities. However, given the 2015 state-by-state bluefish allocation (Table 3), it is expected that the 2015 bluefish quota under this alternative would only constrain landings for business entities that land bluefish in Massachusetts, Rhode Island, and New York when compared to 2013 landings.

Furthermore, while the 2015 commercial quota under this alternative is lower than the commercial quota implemented in 2014, it is higher than the realized commercial landings in 2013. Unless market conditions change substantially in 2015, it would be expected that commercial bluefish fishermen would likely have bluefish landings close to landings in recent years (i.e., 2013).

Amendment 1 implemented a transfer provision as a tool to mitigate the adverse economic impacts of prematurely closing a fishery when surplus quota exists. In fact, under the Interstate Management Plan for Atlantic Bluefish, states have been very cooperative in transferring commercial bluefish quota when needed to states that are running a deficit. If quota allocations were to be transferred from a state or states that do not land their entire bluefish quota allocation for 2015, then the number of affected entities described in this threshold analysis could potentially decrease, thus decreasing economic burden.

Under Alternative 1, the bluefish 2015 recreational harvest limit would be 13.073 M lb. While the proposed recreational harvest limit under preferred Alternative 1 for 2015 is lower than the limit implemented in 2014 (13.523 M lb) and 2013 recreational landings (15.388 M lb), the projected landings for 2015 are expected to be similar to the proposed limit under this alternative. The possession limit would remain at 15 fish. It is not anticipated that this management measure will have any negative effects on recreational fishermen or affect the demand for party/charter boat trips. This alternative is not expected to significantly affect angler satisfaction nor expected to result in landings in excess of the recreational harvest limit.

It is important to stress that these changes as well as those described under the other quota scenarios represent merely the potential, i.e., based on available data. Actual changes in revenue will likely vary. This variation would occur for several reasons, including impacts undetermined for unidentifiable business entities, revenues earned or lost due to possession limits and seasons set by a state to manage sub-allocations of quota, and other potential reductions in 2015 not accounted for here (section 5.0). Furthermore, it is possible that given the potential decrease in bluefish landings under this alternative, price for this species may increase holding all other factors constant. If this occurs, an increase in the price for this species may mitigate some of the revenue reductions associated with lower quantity of quota availability.

Even though preferred Alternative 1 (as well as Alternative 2) represents an overall decrease in commercial fishing opportunities when compared to the status quo (Alternative 3), it is consistent with the ABC recommendations of the Council's Science and Statistical Committee (SSC) and are therefore based on the best scientific information available and are intended to prevent overfishing. As a result of the lower commercial bluefish quota under Alternative 1, it is likely that it will result in neutral to slight negative socio economic impacts when compared to Alternative 3 (status quo).

Alternative 2

Non-preferred Alternative 2 specifies a commercial quota of 3.662 M lb and recreational landing limit of 14.530 M lb for bluefish. Under this scenario, the bluefish specifications would result in

an aggregate of approximately 50.9% decrease and 7.4% increase, respectively, in allowable commercial landings and recreational harvest limit relative to the 2014 implemented limits.

Under this alternative, a total of 87 business entities in the Northeast were projected to incur revenue losses of 5% or more (see section 8.11). More specifically, 36 business entities were projected to incur in revenue losses of 5-9%, 32 entities of 10-19%, 5 entities of 20-29%, 4 entities of 30-39%, 1 entity of 40-49%, and 9 entities of 50% or more. In addition, 914 entities were projected to incur in revenue losses of less than 5% in 2015. While it is expected that in relative terms 87 small business entities are likely to be impacted with revenue reductions of 5% or more, 28% of these entities (24 entities) had gross sales of $1,000 or less and 54% of the impacted entities (47 entities) had gross sales of $10,000 or less, thus likely indicating that the dependence on fishing for some of these vessels is very small.

In addition, it was estimated that on average, reduction in revenues due to the potential decrease in landings associated with the 2015 quota compared to the 2014 quota are expected to be approximately 5.54% for fishermen that land bluefish in North Carolina (on average 60 vessels landed bluefish in North Carolina for the 2011-2013 period). Furthermore, it is estimated that on average, overall revenues for fishermen that landed bluefish in Florida (on average 1,227 vessels landed bluefish in Florida for the 2011-2013 period) would decrease by approximately 0.4%.

As indicated above, Amendment 1 implemented a transfer provision as a tool to mitigate the adverse economic impacts of prematurely closing a fishery when surplus quota exists to decrease economic burden for states that may have quotas that constrain landings. However, given that under this alternative the overall commercial quota in 2015 is substantially lower than the 2014 coastwide quota and the 2013 coastwide landings, the amount of bluefish that could potentially be transferred among states would be lower than under Alternatives 3 and 1, thus potentially allowing for less economic relief. The statements related to the limitations of the economic analysis presented under Alternative 1 also apply here.

Under Alternative 2, the bluefish 2015 recreational harvest limit would be 14.530 M lb. The proposed recreational harvest limit under this non-preferred alternative for 2015 is higher than the limit implemented in 2014 (13.523 M lb) and the projected landings for 2015 (13.073 M lb). The possession limit would remain at 15 fish. It is not anticipated that this management measure will have any negative effects on recreational fishermen or affect the demand for party/charter boat trips. This alternative is not expected to significantly affect angler satisfaction nor expected to result in landings in excess of the recreational harvest limit.

Alternative 2 contains the smallest commercial quota. As a result of the lower bluefish commercial quota, negative economic impacts on the bluefish fishery are likely to occur, relative to Alternative 3 (status quo).

Alternative 3

This alternative (status quo) specifies a commercial quota of 7.458 M lb and recreational landing limit of 13.523 M lb for bluefish. Under this scenario, the bluefish specifications would result in no aggregate change in allowable commercial landings or recreational harvest limit relative to

the 2014 implemented limits. This alternative would provide the same fishing opportunities to commercial fishermen and recreational anglers in 2015 when compared to 2014 opportunities. As such, it is expected that no changes in revenues or fishing opportunities would occur.

While the overall 2015 commercial quota under this alternative is the same as the commercial quota implemented in 2014 and higher (83%) than the coastwide bluefish landings for 2013, when this allocation is distributed to the states, all states except Massachusetts (15% lower) and New York (39% lower) will be constrained by the 2015 quota when compared to the 2013 landings (Table 3).

As indicated above, Amendment 1 implemented a transfer provision as a tool to mitigate the adverse economic impacts of prematurely closing a fishery when surplus quota exists to decrease economic burden for states that may have quotas that constrain landings. However, given that under this alternative the overall commercial quota in 2015 is substantially higher than the 2013 coastwide landings, the amount of bluefish that could potentially be transferred among states would be higher than under Alternatives 2 and 1; and it is expected that this toll would mitigate any adverse economic impacts due to quota constraints in Massachusetts and New York.

In summary, all three alternatives have impacts that range from neutral to negative, however, the greatest potential for positive biological impacts are associated with Alternative 3 (status quo), followed by Alternative 1 (maximum transfer), and Alternative 2 (no transfer) has the potential for negative biological impacts. However, Alternative 3 is less restrictive than necessary given the advice of the SSC.

7.5 Cumulative Effects Analysis

A cumulative effects analysis (CEA) is required by the Council on Environmental Quality (CEQ) (40 CFR part 1508.7). The purpose of CEA is to consider the combined effects of many actions on the human environment over time that would be missed if each action were evaluated separately. CEQ guidelines recognize that it is not practical to analyze the cumulative effects of an action from every conceivable perspective, but rather, the intent is to focus on those effects that are truly meaningful. A formal cumulative impact assessment is not necessarily required as part of an EA under NEPA as long as the significance of cumulative impacts have been considered (U.S. EPA 1999). The following remarks address the significance of the expected cumulative impacts as they relate to the federally managed bluefish fishery.

7.5.1 Consideration of the VECs

In section 6.0 (Description of the Affected Environment), the VECs that exist within the bluefish fishery environment are identified. Therefore, the significance of the cumulative effects will be discussed in relation to the VECs listed below.

1. Managed resource (bluefish)
2. Non-target species
3. Habitat including EFH for the managed resource and non-target species
4. ESA listed and MMPA protected species
5. Human communities

7.5.2 Geographic Boundaries

The analysis of impacts focuses on actions related to the harvest of bluefish. The core geographic scope for each of the VECs is focused on the Western Atlantic Ocean (section 6.0). The core geographic scopes for the managed resources are the range of the management units (section 6.1). For non-target species, those ranges may be expanded and would depend on the biological range of each individual non-target species in the Western Atlantic Ocean. For habitat, the core geographic scope is focused on EFH within the EEZ but includes all habitat utilized by bluefish and non-target species in the Western Atlantic Ocean. The core geographic scope for endangered and protected resources can be considered the overall range of these VECs in the Western Atlantic Ocean. For human communities, the core geographic boundaries are defined as those U.S. fishing communities directly involved in the harvest or processing of the managed resources, which were found to occur in coastal states from Maine through North Carolina (section 6.4).

7.5.3 Temporal Boundaries

The temporal scope of past and present actions for VECs is primarily focused on actions that have occurred after FMP implementation (1990). For endangered and other protected resources, the scope of past and present actions is on a species-by-species basis (section 6.3) and is largely focused on the 1980s and 1990s through the present, when NMFS began generating stock assessments for marine mammals and sea turtles that inhabit waters of the U.S. EEZ. The temporal scope of future actions for all five VECs extends about three year (2017) into the future. This period was chosen as a reasonable time period because the dynamic nature of resource management for this species and lack of information on projects that may occur in the future make it very difficult to predict impacts beyond this timeframe with any certainty.

7.5.4 Actions Other Than Those Proposed in this Amendment

The impacts of each of the alternatives considered in this specifications document are given in sections 7.1 through 7.4. Table 21 presents meaningful past (P), present (Pr), or reasonably foreseeable future (RFF) actions to be considered other than those actions being considered in this specifications document. These impacts are described in chronological order and qualitatively, as the actual impacts of these actions are too complex to be quantified in a meaningful way. When any of these abbreviations occur together (i.e., P, Pr, RFF), it indicates that some past actions are still relevant to the present and/or future actions.

Past and Present Actions

The historical management practices of the Council have resulted in positive impacts on the health of the bluefish stock (section 6.1). Actions have been taken to manage the commercial and recreational fisheries for this species through amendment actions. In addition, the annual specifications process is intended to provide the opportunity for the Council and NMFS to regularly assess the status of the fishery and to make necessary adjustments to ensure that there is a reasonable expectation of meeting the objectives of the FMP. The statutory basis for federal fisheries management is the MSA. To the degree with which this regulatory regime is complied,

the cumulative impacts of past, present, and reasonably foreseeable future federal fishery management actions on the VECs should generally be associated with positive long-term outcomes. Constraining fishing effort through regulatory actions can often have negative short-term socioeconomic impacts. These impacts are usually necessary to bring about long-term sustainability of a given resource, and as such, should, in the long-term, promote positive effects on human communities, especially those that are economically dependent upon the bluefish stock.

Non-fishing activities that introduce chemical pollutants, sewage, changes in water temperature, salinity, dissolved oxygen, and suspended sediment into the marine environment pose a risk to all of the identified VECs. Human-induced non-fishing activities tend to be localized in nearshore areas and marine project areas where they occur. Examples of these activities include, but are not limited to agriculture, port maintenance, beach nourishment, coastal development, marine transportation, marine mining, dredging and the disposal of dredged material. Wherever these activities co-occur, they are likely to work additively or synergistically to decrease habitat quality and, as such, may indirectly constrain the sustainability of the managed resource, non-target species, and protected resources. Decreased habitat suitability would tend to reduce the tolerance of these VECs to the impacts of fishing effort. Mitigation of this outcome through regulations that would reduce fishing effort could then negatively impact human communities. The overall impact to the affected species and its habitat on a population level is unknown, but likely neutral to low negative, since a large portion of this species has a limited or minor exposure to these local non-fishing perturbations.

In addition to guidelines mandated by the MSA, NMFS reviews these types of effects through the review processes required by Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act for certain activities that are regulated by federal, state, and local authorities. The jurisdiction of these activities is in "waters of the U.S." and includes both riverine and marine habitats.

Reasonably Foreseeable Future Actions

For many of the proposed non-fishing activities to be permitted under other federal agencies (such as beach nourishment, offshore wind facilities, etc.), those agencies would conduct examinations of potential impacts on the VECs. The MSA (50 CFR 600.930) imposes an obligation on other federal agencies to consult with the Secretary of Commerce on actions that may adversely affect EFH. The eight Fishery Management Councils are engaged in this review process by making comments and recommendations on any federal or state action that may affect habitat, including EFH, for their managed species and by commenting on actions likely to substantially affect habitat, including EFH.

In addition, under the Fish and Wildlife Coordination Act (Section 662), “whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted, the channel deepened, or the stream or other body of water otherwise controlled or modified for any purpose whatever, including navigation and drainage, by any department or agency of the U.S., or by any public or private agency under federal permit or license, such department or agency first shall consult with the U.S. Fish and Wildlife Service (USFWS), Department of the Interior, and with the head of the agency exercising administration over the wildlife resources of the particular state wherein the” activity is taking place. This act provides another avenue for review

of actions by other federal and state agencies that may impact resources that NMFS manages in the reasonably foreseeable future.

In addition, NMFS and the USFWS share responsibility for implementing the ESA. ESA requires NMFS to designate "critical habitat" for any species it lists under the ESA (i.e., areas that contain physical or biological features essential to conservation, which may require special management considerations or protection) and to develop and implement recovery plans for threatened and endangered species. The ESA provides another avenue for NMFS to review actions by other entities that may impact endangered and protected resources whose management units are under NMFS' jurisdiction.

7.5.5 Magnitude and Significance of Cumulative Effects

In determining the magnitude and significance of the cumulative effects, the additive and synergistic effects of the proposed action, as well as past, present, and future actions, must be taken into account. The following section discusses the effects of these actions on each of the VECs.

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Table 21. Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Actions on the five VECs (not including those actions considered in this specifications document).

Action	Description	Impacts on Managed Resource	Impacts on Non-target Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Human Communities
P, Pr Original FMP and subsequent Amendments and Frameworks to the FMP	Established commercial and recreational management measures	**Indirect Positive** Regulatory tool available to rebuild and manage stocks	**Indirect Positive** Reduced fishing effort	**Indirect Positive** Reduced fishing effort	**Indirect Positive** Reduced fishing effort	**Indirect Positive** Benefited domestic businesses
P, Pr Bluefish Specifications	Establish annual quotas, RHLs, other fishery regulations (commercial and recreational)	**Indirect Positive** Regulatory tool to specify catch limits, and other regulation; allows response to annual stock updates	**Indirect Positive** Reduced effort levels	**Indirect Positive** Reduced effort levels	**Indirect Positive** Reduced effort levels	**Indirect Positive** Benefited domestic businesses
P, Pr, RFF Developed and Applied Standardized Bycatch Reporting Methodology	Established acceptable level of precision and accuracy for monitoring of bycatch in fisheries	**Neutral** May improve data quality for monitoring total removals of managed resource	**Neutral** May improve data quality for monitoring removals of non-target species	**Neutral** Will not affect distribution of effort	**Neutral** May increase observer coverage and will not affect distribution of effort	**Potentially Indirect Negative** May impose an inconvenience on vessel operations
Pr Omnibus Amendment ACLs/AMs Implemented	Establish ACLs and AMs for plan species	**Indirect Positive** Increase accountability of specified catch limits	**Indirect Positive** Increase accountability of specified catch limits	**Indirect Positive** Increase accountability of specified catch limits	**Indirect Positive** Increase accountability of specified catch limits	**Indirect Positive** Increase accountability of specified catch limits
P, Pr, RFF Agricultural runoff	Nutrients applied to agricultural land are introduced into aquatic systems	**Indirect Negative** Reduced habitat quality	**Indirect Negative** Reduced habitat quality	**Direct Negative** Reduced habitat quality	**Indirect Negative** Reduced habitat quality	**Indirect Negative** Reduced habitat quality negatively affects resource
P, Pr, RFF Port maintenance	Dredging of coastal, port and harbor areas for port maintenance	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Uncertain – Likely Direct Negative** Dependent on mitigation effects	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Uncertain – Likely Mixed** Dependent on mitigation effects

Table 21 (Continued). Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Actions on the five VECs (not including those actions considered in this specifications document).

Action	Description	Impacts on Managed Resource	Impacts on Non-target Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Human Communities
P, Pr, RFF Offshore disposal of dredged materials	Disposal of dredged materials	**Indirect Negative** Reduced habitat quality	**Indirect Negative** Reduced habitat quality	**Direct Negative** Reduced habitat quality	**Indirect Negative** Reduced habitat quality	**Indirect Negative** Reduced habitat quality negatively affects resource viability
P, Pr, RFF Beach nourishment	Offshore mining of sand for beaches	**Indirect Negative** Localized decreases in habitat quality	**Indirect Negative** Localized decreases in habitat quality	**Direct Negative** Reduced habitat quality	**Indirect Negative** Localized decreases in habitat quality	**Mixed** Positive for mining companies, possibly negative for fishing industry
	Placement of sand to nourish beach shorelines	**Indirect Negative** Localized decreases in habitat quality	**Indirect Negative** Localized decreases in habitat quality	**Direct Negative** Reduced habitat quality	**Indirect Negative** Localized decreases in habitat quality	**Positive** Beachgoers like sand; positive for tourism
P, Pr, RFF Marine transportation	Expansion of port facilities, vessel operations and recreational marinas	**Indirect Negative** Localized decreases in habitat quality	**Indirect Negative** Localized decreases in habitat quality	**Direct Negative** Reduced habitat quality	**Indirect Negative** Localized decreases in habitat quality	**Mixed** Positive for some interests, potential displacement for others
P, Pr, RFF Installation of pipelines, utility lines and cables	Transportation of oil, gas and energy through pipelines, utility lines and cables	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Uncertain – Likely Direct Negative** Reduced habitat quality	**Potentially Direct Negative** Dependent on mitigation effects	**Uncertain – Likely Mixed** Dependent on mitigation effects
P, Pr, RFF National Offshore Aquaculture Act of 2007	Bill that would grant DOC authority to issue permits for offshore aquaculture in federal waters	**Potentially Indirect Negative** Localized decreases in habitat quality possible	**Potentially Indirect Negative** Localized decreases in habitat quality possible	**Direct Negative** Localized decreases in habitat quality possible	**Potentially Indirect Negative** Localized decreases in habitat quality possible	**Uncertain – Likely Mixed** Costs/benefits remain unanalyzed

Table 21 (Continued). Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Actions on the five VECs (not including those actions considered in this specifications document).

Action	Description	Impacts on Managed Resource	Impacts on Non-target Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Human Communities
RFF Offshore Wind Energy Facilities (within 3 years)	Construction of wind turbines to harness electrical power (Several proposed from ME through NC, including NY/NJ, DE, and VA)	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Potentially Direct Negative** Localized decreases in habitat quality possible	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Uncertain – Likely Mixed** Dependent on mitigation effects
Pr, RFF Liquefied Natural Gas (LNG) terminals (within 3 years)	Transport natural gas via tanker to terminals offshore and onshore (1 terminal built in MA; 1 under construction; proposed in RI, NY, NJ and DE)	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Potentially Direct Negative** Localized decreases in habitat quality possible	**Uncertain – Likely Indirect Negative** Dependent on mitigation effects	**Uncertain – Likely Mixed** Dependent on mitigation effects
RFF Convening Gear Take Reduction Teams (within next 3 years)	Recommend measures to reduce mortality and injury to marine mammals	**Indirect Positive** Will improve data quality for monitoring total removals	**Indirect Positive** Reducing availability of gear could reduce bycatch	**Indirect Positive** Reducing availability of gear could reduce gear impacts	**Indirect Positive** Reducing availability of gear could reduce encounters	**Indirect Negative** Reducing availability of gear could reduce revenues
RFF Strategy for Sea Turtle Conservation for the Atlantic Ocean and the Gulf of Mexico Fisheries (w/in next 3 years)	May recommend strategies to prevent the bycatch of sea turtles in commercial fisheries operations	**Indirect Positive** Will improve data quality for monitoring total removals	**Indirect Positive** Reducing availability of gear could reduce bycatch	**Indirect Positive** Reducing availability of gear could reduce gear impacts	**Indirect Positive** Reducing availability of gear could reduce encounters	**Indirect Negative** Reducing availability of gear could reduce revenues

Table 21 (Continued). Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Actions on the five VECs (not including those actions considered in this specifications document).

Action	Description	Impacts on Managed Resource	Impacts on Non-target Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Human Communities
RFF Protection for Deep Sea Corals in the Mid-Atlantic (within next 3 years)	Minimize the impacts of fishing gear on deep sea corals in the Mid-Atlantic	**Uncertain – Likely Indirect Positive** Dependent on mitigation effects	**Uncertain – Likely Indirect Positive** Dependent on mitigation effects	**Uncertain – Likely Indirect Positive** Dependent on mitigation effects	**Uncertain – Likely Indirect Positive** Dependent on mitigation effects	**Uncertain – Likely Mixed** Dependent on mitigation effects
RFF ABC Omnibus Framework	Automatic incorporation of new accepted / approved biological reference points status determination. Addresses constant multi-year ABCs specifications	**Neutral** Administrative - no direct or indirect impacts	**Neutral** Administrative - no direct or indirect impacts	**Neutral** Administrative - no direct or indirect impacts	**Neutral** Administrative - no direct or indirect impacts	**Uncertain –** Likely Mixed Dependent on mitigation effects

7.5.5.1 Managed Resource

Those past, present, and reasonably foreseeable future actions, whose effects may impact the managed resource and the direction of those potential impacts, are summarized in Table 21. The indirectly negative actions described in Table 21 are localized in nearshore areas and marine project areas where they occur. Therefore, the magnitude of those impacts on the managed resource is expected to be limited due to a lack of exposure to the population at large. Agricultural runoff may be much broader in scope, and the impacts of nutrient inputs to the coastal system may be of a larger magnitude, although the impact on productivity of the managed resources is unquantifiable. As described above (section 7.5.4), NMFS has several means under which it can review non-fishing actions of other federal or state agencies that may impact NMFS' managed resources prior to permitting or implementation of those projects. This serves to minimize the extent and magnitude of indirect negative impacts those actions could have on resources under NMFS' jurisdiction.

Past fishery management actions taken through the FMP and annual specification process have had a positive cumulative effect on the managed resource. It is anticipated that the future management actions, described in Table 22, will result in additional indirect positive effects on the managed resource through actions which reduce and monitor bycatch, protect habitat, and protect ecosystem services on which bluefish productivity depends. The 2012 fishing year was the first year of implementation for an Amendment which requires specification of ACLs and ACTs, and this process has been carried forward into the 2015 proposed measures. This represents a major change to the current management program and is expected to lead to improvements in resource sustainability over the long-term. These impacts could be broad in scope. Overall, the past, present, and reasonably foreseeable future actions that are truly meaningful to tilefish have had a positive cumulative effect.

Catch limits, commercial quotas and recreational harvest limits for the managed resource have been specified to ensure the stock is managed in a sustainable manner, and measures are consistent with the objectives of the FMP under the guidance of the MSA. The impacts from annual specification of management measures established in previous years on the managed resource are largely dependent on how effective those measures were in meeting their intended objectives (i.e., preventing overfishing, achieve OY) and the extent to which mitigating measures were effective. The proposed action in this document would positively reinforce the past and anticipated positive cumulative effects on the bluefish stock, by achieving the objectives specified in the FMP. Therefore, the proposed action would not have any significant effect on the managed resources individually or in conjunction with other anthropogenic activities (see Table 22).

Table 22. Summary of the effects of past, present, and reasonably foreseeable future actions on the managed resource.

Action	Past to the Present		Reasonably Foreseeable Future
Original FMP and subsequent Amendments and Frameworks to the FMP	**Indirect Positive**		
Bluefish Specifications	**Indirect Positive**		
Developed and Implement Standardized Bycatch Reporting Methodology	**Neutral**		
Amendment to address ACLs/AMs implemented	**Indirect Positive**		
Agricultural runoff	**Indirect Negative**		
Port maintenance	**Uncertain – Likely Indirect Negative**		
Offshore disposal of dredged materials	**Indirect Negative**		
Beach nourishment – Offshore mining	**Indirect Negative**		
Beach nourishment – Sand placement	**Indirect Negative**		
Marine transportation	**Indirect Negative**		
Installation of pipelines, utility lines and cables	**Uncertain – Likely Indirect Negative**		
National Offshore Aquaculture Act of 2007	**Potentially Indirect Negative**		
Offshore Wind Energy Facilities (within 3 years)			**Uncertain – Likely Indirect Negative**
Liquefied Natural Gas (LNG) terminals (within 3 years)		**Uncertain – Likely Indirect Negative**	
Convening Gear Take Reduction Teams (within 3 years)			**Indirect Positive**
Strategy for Sea Turtle Conservation for the Atlantic Ocean and the Gulf of Mexico Fisheries (within next 3 years)			**Indirect Positive**
Protection for Deep Sea Corals in the Mid-Atlantic			**Uncertain – Likely Indirect Positive**
ABC Omnibus Framework			**Neutral**
Summary of past, present, and future actions excluding those proposed in this specifications document	**Overall, actions have had, or will have, positive impacts on the managed resources * See section 7.5.5.1 for explanation.**		

7.5.5.2 Non-Target Species or Bycatch

Those past, present, and reasonably foreseeable future actions, whose effects may impact non-target species and the direction of those potential impacts, are summarized in Table 21. The effects of indirectly negative actions described in Table 21 are localized in nearshore areas and marine project areas where they occur. Therefore, the magnitude of those impacts on non-target species is expected to be limited due to a lack of exposure to the population at large. Agricultural runoff may be much broader in scope, and the impacts of nutrient inputs to the coastal system may be of a larger magnitude, although the impact on productivity of non-target resources and the oceanic ecosystem is unquantifiable. As described above (section 7.5.4), NMFS has several means under which it can review non-fishing actions of other federal or state agencies that may impact NMFS' managed resources prior to permitting or implementation of those projects. At this time, NMFS can consider impacts to non-target species (federally-managed or otherwise) and comment on potential impacts. This serves to minimize the extent and magnitude of indirect negative impacts those actions could have on resources within NMFS' jurisdiction.

Past fishery management actions taken through the FMP and annual specification process have had a positive cumulative effect on non-target species. Implementation and application of a standardized bycatch reporting methodology would have a particular impact on non-target species by improving the methods which can be used to assess the magnitude and extent of a potential bycatch problem. Better assessment of potential bycatch issues allows more effective and specific management measures to be developed to address a bycatch problem. It is anticipated that future management actions, described in Table 23, will result in additional indirect positive effects on non-target species through actions which reduce and monitor bycatch, protect habitat, and protect ecosystem services on which the productivity of many of these non-target resources depend. The impacts of these future actions could be broad in scope, and it should be noted the managed resource and non-target species are often coupled in that they utilize similar habitat areas and ecosystem resources on which they depend. Overall, the past, present, and reasonably foreseeable future actions that are truly meaningful have had a positive cumulative effect on non-target species.

Catch limits, commercial quotas and recreational harvest limits for the managed resource have been specified to ensure the stock is managed in a sustainable manner, and measures are consistent with the objectives of the FMP under the guidance of the MSA. The proposed actions in this document have impacts that range from neutral to positive or negative impacts, and would not change the past and anticipated positive cumulative effects on non-target species and thus, would not have any significant effect on these species individually or in conjunction with other anthropogenic activities (Table 23).

Table 23. Summary of the effects of past, present, and reasonably foreseeable future actions on the non-target species.

Action	Past to the Present		Reasonably Foreseeable Future
Original FMP and subsequent Amendments and Frameworks to the FMP	**Indirect Positive**		
Bluefish Specifications	**Indirect Positive**		
Developed and Implement Standardized Bycatch Reporting Methodology	**Neutral**		
Amendment to address ACLs/AMs implemented	**Indirect Positive**		
Agricultural runoff	**Indirect Negative**		
Port maintenance	**Uncertain – Likely Indirect Negative**		
Offshore disposal of dredged materials	**Indirect Negative**		
Beach nourishment – Offshore mining	**Indirect Negative**		
Beach nourishment – Sand placement	**Indirect Negative**		
Marine transportation	**Indirect Negative**		
Installation of pipelines, utility lines and cables	**Uncertain – Likely Indirect Negative**		
National Offshore Aquaculture Act of 2007	**Potentially Indirect Negative**		
Offshore Wind Energy Facilities (within 3 years)			**Uncertain – Likely Indirect Negative**
Liquefied Natural Gas (LNG) terminals (within 3 years)		**Uncertain – Likely Indirect Negative**	
Convening Gear Take Reduction Teams (within 3 years)			**Indirect Positive**
Strategy for Sea Turtle Conservation for the Atlantic Ocean and the Gulf of Mexico Fisheries (within next 3 years)			**Indirect Positive**
Protection for Deep Sea Corals in the Mid-Atlantic			**Uncertain – Likely Indirect Positive**
ABC Omnibus Framework			**Neutral**
Summary of past, present, and future actions excluding those proposed in this specifications document	**Overall, actions have had, or will have, positive impacts on the non-target species; * See section 7.5.5.2 for explanation.**		

7.5.5.3 Habitat (Including EFH)

Those past, present, and reasonably foreseeable future actions, whose effects may impact habitat (including EFH) and the direction of those potential impacts, are summarized in Table 21. The direct and indirect negative actions described in Table 21 are localized in nearshore areas and marine project areas where they occur. Therefore, the magnitude of those impacts on habitat is expected to be limited due to a lack of exposure to habitat at large. Agricultural runoff may be much broader in scope, and the impacts of nutrient inputs to the coastal system may be of a larger magnitude, although the impact on habitat and EFH is unquantifiable. As described above (section 7.5.4), NMFS has several means under which it can review non-fishing actions of other federal or state agencies that may impact NMFS' managed resources and the habitat on which they rely prior to permitting or implementation of those projects. This serves to minimize the extent and magnitude of direct and indirect negative impacts those actions could have on habitat utilized by resources under NMFS' jurisdiction.

Past fishery management actions taken through the FMP and annual specification process have had a positive cumulative effect on habitat and EFH. The actions have constrained fishing effort at a large scale and locally, which may reduce habitat impacts. As required under these FMP actions, EFH and Habitat Areas of Particular Concern (HAPCs) were designated for the managed resources. It is anticipated that the future management actions, described in Table 24, will result in additional direct or indirect positive effects on habitat through actions which protect EFH for federally-managed species and protect ecosystem services on which these species' productivity depends. These impacts could be broad in scope. All of the VECs are interrelated; therefore, the linkages among habitat quality and EFH, managed resources and non-target species productivity, and associated fishery yields should be considered. For habitat and EFH, there are direct and indirect negative effects from actions which may be localized or broad in scope; however, positive actions that have broad implications have been, and it is anticipated will continue to be, taken to improve the condition of habitat. There are some actions, which are beyond the scope of NMFS and Council management such as coastal population growth and climate changes, which may indirectly impact habitat and ecosystem productivity. Overall, the past, present, and reasonably foreseeable future actions that are truly meaningful to habitat have had a neutral to positive cumulative effect.

Catch limits, commercial quotas and recreational harvest limits for the managed resource have been specified to ensure the stock is managed in a sustainable manner, and measures are consistent with the objectives of the FMP under the guidance of the MSA. The proposed actions in this document would not change the past and anticipated cumulative effects on habitat and thus, would not have any significant effect on habitat individually or in conjunction with other anthropogenic activities (Table 24).

Table 24. Summary of the effects of past, present, and reasonably foreseeable future actions on the habitat.

Action	Past to the Present	Reasonably Foreseeable Future
Original FMP and subsequent Amendments and Frameworks to the FMP	**Indirect Positive**	
Bluefish Specifications	**Indirect Positive**	
Developed and Implement Standardized Bycatch Reporting Methodology	**Neutral**	
Amendment to address ACLs/AMs implemented	**Indirect Positive**	
Agricultural runoff	**Direct Negative**	
Port maintenance	**Uncertain – Likely Direct Negative**	
Offshore disposal of dredged materials	**Direct Negative**	
Beach nourishment – Offshore mining	**Direct Negative**	
Beach nourishment – Sand placement	**Direct Negative**	
Marine transportation	**Direct Negative**	
Installation of pipelines, utility lines and cables	**Uncertain – Likely Direct Negative**	
National Offshore Aquaculture Act of 2007	**Direct Negative**	
Offshore Wind Energy Facilities (within 3 years)		**Potentially Direct Negative**
Liquefied Natural Gas (LNG) terminals (within 3 years)	**Potentially Direct Negative**	
Convening Gear Take Reduction Teams (within 3 years)		**Indirect Positive**
Strategy for Sea Turtle Conservation for the Atlantic Ocean and the Gulf of Mexico Fisheries (within next 3 years)		**Indirect Positive**
Protection for Deep Sea Corals in the Mid-Atlantic		**Uncertain – Likely Indirect Positive**
ABC Omnibus Framework		**Neutral**
Summary of past, present, and future actions excluding those proposed in this specifications document	**Overall, actions have had, or will have, neutral to positive impacts on habitat, including EFH * See section 7.5.5.3 for explanation.**	

7.5.5.4 ESA Listed and MMPA Protected Species

Those past, present, and reasonably foreseeable future actions, whose effects may impact the protected resources and the direction of those potential impacts, are summarized in Table 21. The indirectly negative actions described in Table 21 are localized in nearshore areas and marine project areas where they occur. Therefore, the magnitude of those impacts on protected resources, relative to the range of many of the protected resources, is expected to be limited due to a lack of exposure to the population at large. Agricultural runoff may be much broader in scope, and the impacts of nutrient inputs to the coastal system may be of a larger magnitude, although the impact on protected resources either directly or indirectly is unquantifiable. As described above (section 7.5.4), NMFS has several means, including ESA, under which it can review non-fishing actions of other federal or state agencies that may impact NMFS' protected resources prior to permitting or implementation of those projects. This serves to minimize the extent and magnitude of indirect negative impacts those actions could have on protected resources under NMFS' jurisdiction.

NMFS will implement any appropriate measures outlined in the Opinion to mitigate harm to Atlantic sturgeon and sea turtles. Further, it is likely that rates of protected resources encounters and mortalities by the bluefish fishery will not increase from the approval of this action (see section 7.3).

Past fishery management actions taken through the FMP and annual specification process are likely to have had a positive cumulative effect on ESA listed and MMPA protected species through the reduction of fishing effort (potential interactions). It is anticipated that the future management actions, specifically those recommended by the ALWTRP and the development of strategies for sea turtle conservation described in Table 25, will result in additional indirect positive effects on the protected resources. These impacts could be broad in scope. Overall, the past, present, and reasonably foreseeable future actions that are truly meaningful to protected resources have had a positive cumulative effect.

Catch limits, commercial quotas and recreational harvest limits for the managed resource have been specified to ensure the stock is managed in a sustainable manner, and measures are consistent with the objectives of the FMP under the guidance of the MSA. The proposed actions in this document would not change the past and anticipated cumulative effects on ESA listed and MMPA protected species and thus, would not have any significant effect on protected resources individually or in conjunction with other anthropogenic activities (Table 25).

Table 25. Summary of the effects of past, present, and reasonably foreseeable future actions on the protected resources.

Action	Past to the Present		Reasonably Foreseeable Future
Original FMP and subsequent Amendments and Frameworks to the FMP	**Indirect Positive**		
Bluefish Specifications	**Indirect Positive**		
Developed and Implement Standardized Bycatch Reporting Methodology	**Neutral**		
Amendment to address ACLs/AMs implemented	**Indirect Positive**		
Agricultural runoff	**Indirect Negative**		
Port maintenance	**Uncertain – Likely Indirect Negative**		
Offshore disposal of dredged materials	**Indirect Negative**		
Beach nourishment – Offshore mining	**Indirect Negative**		
Beach nourishment – Sand placement	**Indirect Negative**		
Marine transportation	**Indirect Negative**		
Installation of pipelines, utility lines and cables	**Potentially Direct Negative**		
National Offshore Aquaculture Act of 2007	**Potentially Indirect Negative**		
Offshore Wind Energy Facilities (within 3 years)			**Uncertain – Likely Indirect Negative**
Liquefied Natural Gas (LNG) terminals (within 3 years)		**Uncertain – Likely Indirect Negative**	
Convening Gear Take Reduction Teams (within 3 years)			**Indirect Positive**
Strategy for Sea Turtle Conservation for the Atlantic Ocean and the Gulf of Mexico Fisheries (within next 3 years)			**Indirect Positive**
Protection for Deep Sea Corals in the Mid-Atlantic			**Uncertain – Likely Indirect Positive**
ABC Omnibus Framework			**Neutral**
Summary of past, present, and future actions excluding those proposed in this specifications document	**Overall, actions have had, or will have, positive impacts on protected resources * See section 7.5.5.4 for explanation.**		

7.5.5.5 Human Communities

Those past, present, and reasonably foreseeable future actions, whose effects may impact human communities and the direction of those potential impacts, are summarized in Table 21. The indirectly negative actions described in Table 21 are localized in nearshore areas and marine project areas where they occur. Therefore, the magnitude of those impacts on human communities is expected to be limited in scope. It may, however, displace fishermen from project areas. Agricultural runoff may be much broader in scope, and the impacts of nutrient inputs to the coastal system may be of a larger magnitude. This may result in indirect negative impacts on human communities by reducing resource availability; however, this effect is unquantifiable. As described above (section 7.5.4), NMFS has several means under which it can review non-fishing actions of other federal or state agencies prior to permitting or implementation of those projects. This serves to minimize the extent and magnitude of indirect negative impacts those actions could have on human communities.

Past fishery management actions taken through the FMP and annual specification process have had both positive and negative cumulative effects by benefiting domestic fisheries through sustainable fishery management practices, while at the same time potentially reducing the availability of the resource to all participants. Sustainable management practices are, however, expected to yield broad positive impacts to fishermen, their communities, businesses, and the nation as a whole. It is anticipated that the future management actions, described in Table 26, will result in positive effects for human communities due to sustainable management practices, although additional indirect negative effects on the human communities could occur through management actions that may implement gear requirements or area closures and thus, reduce revenues. Overall, the past, present, and reasonably foreseeable future actions that are truly meaningful to human communities have had an overall positive cumulative effect.

Catch limits, commercial quotas and recreational harvest limits for the managed resource have been specified to ensure the stock is managed in a sustainable manner, and measures are consistent with the objectives of the FMP under the guidance of the MSA. The impacts from annual specification measures established in previous years on the managed resources are largely dependent on how effective those measures were in meeting their intended objectives and the extent to which mitigating measures were effective. Overages may alter the timing of commercial fishery revenues (revenues realized a year earlier), and there may be impacts on some fishermen caused by unexpected reductions in their opportunities to earn revenues in the commercial fisheries in the year during which the overages are deducted. Similarly recreational fisheries may have decreased harvest opportunities due to reduced harvest limits as a result of overages, or more restrictive recreational management measures that must be implemented (i.e., minimum fish size, possession limits, fishing seasons).

Despite the potential for neutral to negative short-term effects on human communities, the expectation is that there would be a positive long-term effect on human communities due to the long-term sustainability of bluefish. Overall, the proposed actions in this document would not change the past and anticipated cumulative effects on human communities and thus, would not have any significant effect on human communities individually, or in conjunction with other anthropogenic activities (Table 26).

Table 26. Summary of the effects of past, present, and reasonably foreseeable future actions on human communities.

Action	Past to the Present	Reasonably Foreseeable Future
Original FMP and subsequent Amendments and Frameworks to the FMP	**Indirect Positive**	
Bluefish Specifications	**Indirect Positive**	
Developed and Implement Standardized Bycatch Reporting Methodology	**Potentially Indirect Negative**	
Amendment to address ACLs/AMs implemented	**Indirect Positive**	
Agricultural runoff	**Indirect Negative**	
Port maintenance	**Uncertain – Likely Mixed**	
Offshore disposal of dredged materials	**Indirect Negative**	
Beach nourishment – Offshore mining	**Mixed**	
Beach nourishment – Sand placement	**Positive**	
Marine transportation	**Mixed**	
Installation of pipelines, utility lines and cables	**Uncertain – Likely Mixed**	
National Offshore Aquaculture Act of 2007	**Uncertain – Likely Mixed**	
Offshore Wind Energy Facilities (within 3 years)		**Uncertain – Likely Mixed**
Liquefied Natural Gas (LNG) terminals (within 3 years)	**Uncertain – Likely Mixed**	
Convening Gear Take Reduction Teams (within 3 years)		**Indirect Negative**
Strategy for Sea Turtle Conservation for the Atlantic Ocean and the Gulf of Mexico Fisheries (within next 3 years)		**Indirect Negative**
Protection for Deep Sea Corals in the Mid-Atlantic		**Uncertain – Likely Indirect Positive**
ABC Omnibus Framework		**Neutral**
Summary of past, present, and future actions excluding those proposed in this specifications document	**Overall, actions have had, or will have, positive impacts on human communities * See section 7.5.5.5 for explanation.**	

7.5.6 Preferred Action on all the VECS

The Council has identified its preferred action alternatives in section 5.0. The cumulative effects of the range of actions considered in this document can be considered to make a determination if significant cumulative effects are anticipated from the preferred action.

The direct and indirect impacts of the proposed action on the VECs are described in sections 7.1 through 7.4. The magnitude and significance of the cumulative effects, which include the additive and synergistic effects of the proposed action, as well as past, present, and future actions, have been taken into account throughout this section 7.5. The action proposed in this annual specifications document builds off action taken in the original FMP and subsequent amendments and framework documents. When this action is considered in conjunction with all the other pressures placed on fisheries by past, present, and reasonably foreseeable future actions, it is not expected to result in any significant impacts, positive or negative. Based on the information and analyses presented in these past FMP documents and this document, there are no significant cumulative effects associated with the action proposed in this document (Table 27).

Table 27. Magnitude and significance of the cumulative effects; the additive and synergistic effects of the 2015 preferred action, as well as past, present, and future actions.

VEC	Status in 2014	Net Impact of P, Pr, and RFF Actions	Impact of the Preferred Action for 2015	Significant Cumulative Effects
Managed Resource	Complex and variable (section 6.1)	Positive (sections 7.5.4 and 7.5.5.1)	Neutral to positive (section 7.1)	**None**
Non-target Species	Complex and variable (section 6.1)	Positive (sections 7.5.4 and 7.5.5.2)	Positive (section 7.1)	**None**
Habitat	Complex and variable (section 6.2)	Neutral to positive (sections 7.5.4 and 7.5.5.3)	Neutral to slight positive (section 7.2)	**None**
Protected Resources	Complex and variable (section 6.3)	Positive (sections 7.5.4 and 7.5.5.4)	Neutral to Slight positive (section 7.3)	**None**
Human Communities	Complex and variable (section 6.4)	Positive (sections 7.5.4 and 7.5.5.5)	Neutral to slight negative (section 7.4)	**None**

8.0 APPLICABLE LAWS

8.1 Magnuson-Stevens Fishery Conservation and Management Act (MSA)

8.1.1 National Standards

Section 301 of the MSA requires that FMPs contain conservation and management measures that are consistent with the ten National Standards. The most recent FMP amendments address how the management actions implemented comply with the National Standards. First and foremost, the Council continues to meet the obligations of National Standard 1 by adopting and implementing conservation and management measures that will continue to prevent overfishing, while achieving, on a continuing basis, the optimum yield for bluefish and the U.S. fishing industry. To achieve OY, both scientific and management uncertainty need to be addressed when establishing catch limits that are less than the OFL; therefore, the Council has developed recommendations that do not exceed the ABC recommendations of the SSC which have been developed to explicitly address scientific uncertainty. The Council uses the best scientific information available (National Standard 2) and manages this species throughout its range (National Standard 3). These management measures do not discriminate among residents of different states (National Standard 4), they do not have economic allocation as their sole purpose (National Standard 5), the measures account for variations in these fisheries (National Standard 6), they avoid unnecessary duplication (National Standard 7), they take into account the fishing communities (National Standard 8) and they promote safety at sea (National Standard 10). Finally, actions taken are consistent with National Standard 9, which addresses bycatch in fisheries. By continuing to meet the National Standards requirements of the MSA through future FMP amendments, framework actions, and the annual specification setting process, the Council will insure that cumulative impacts of these actions will remain positive overall for the ports and communities that depend on this fishery, the Nation as a whole, and certainly for the resources.

8.2 NEPA (FONSI)

National Oceanic and Atmospheric Administration Administrative Order (NAO) 216-6 (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality regulations at 40 C.F.R. 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria and CEQ's context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to jeopardize the sustainability of any target species that may be affected by the action?

None of the proposed specifications presented in this document are expected to jeopardize the sustainability of bluefish (section 7.0 of the EA). The preferred alternative to establish catch and landing limits for bluefish is consistent with the FMP objectives and recommendations of the Council's SSC. The proposed action is not expected to result in overfishing. The proposed

action will aid in the long-term sustainability of harvest from the bluefish stock (section 7.1 of the EA).

2) Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target species?

None of the proposed action's specifications presented in this document are expected to jeopardize the sustainability of any non-target species. The bluefish fishery is primarily a recreational fishery and prosecuted using hook and line and handlines, and the proposed measures are not expected to alter these fishing methods or activities. None of the specifications are expected to significantly alter fishing methods or activities or are expected to alter the spatial and/or temporal distribution of current fishing effort.

3) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in FMPs?

The proposed action as described in section 7.0 of the EA is not expected to cause damage to the ocean, coastal habitats, and/or EFH as defined under the MSA and identified in the FMP. In general, bottom-tending mobile gear, primarily otter trawls, have the potential to adversely affect EFH for the species detailed in section 6.2 of the EA. However, the bluefish fishery is primarily a recreational fishery which is prosecuted using hook and line gear. In the commercial fishery, bluefish are caught as a targeted species primarily with bottom gill nets and incidentally to other species in bottom trawls. Bottom trawls are known to adversely impact benthic habitats. Under the proposed action, trawl fishing effort for bluefish not expected to increase. Neither these, nor any of the other measures included in the proposed action will have any adverse habitat impact.

4) Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?

None of the measures alter the manner in which the industry conducts fishing activities for bluefish. Therefore, no changes in fishing behavior that would affect safety are anticipated. The overall effect of the proposed actions on bluefish, including the communities in which they operate, will not impact adversely public health or safety. NMFS will consider comments received concerning safety and public health issues.

5) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?

None of the specifications are expected to significantly alter fishing methods or activities or are expected to alter the spatial and/or temporal distribution of current fishing effort (section 7.0 of the EA). This action is not expected to affect endangered or threatened species or critical habitat in any manner not considered in previous consultations on the fishery.

6) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

The proposed action is not expected to have a substantial impact on biodiversity and ecosystem function within the affected area. This action merely revises the catch and landings limits for the 2015 bluefish fishery. None of the proposed specifications are expected to alter fishing methods or activities. None of the proposed specifications are expected to significantly increase fishing effort or the spatial and/or temporal distribution of current fishing effort.

7) Are significant social or economic impacts interrelated with natural or physical environmental effects?

The proposed action is not expected to have a significant social or economic impact, nor are the potential socio-economic impacts interrelated with natural or physical effects. None of the specifications are expected to significantly alter fishing methods or activities or are expected to alter the spatial and/or temporal distribution of current fishing effort (section 7.0 of the EA). Therefore, there are no social or economic impacts interrelated with significant natural or physical environmental effects.

8) Are the effects on the quality of the human environment likely to be highly controversial?

The impacts of the proposed measures on the human environment are described in section 7.0 of the EA. This action merely revises catch and landing limits for the 2015 bluefish fishery. The proposed action is based on measures contained in the FMP which have been in place for many years. In addition, the scientific information upon which the annual quotas are based has been peer-reviewed and is the most recent information available. The measures contained in this action are not expected to be highly controversial.

9) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?

This action merely revises the catch and landings limits for the 2015 bluefish fishery. It is possible that historic or cultural resources such as shipwrecks could be present in the area where the bluefish fishery is prosecuted. However, vessels try to avoid fishing too close to wrecks due to the possible loss or entanglement of fishing gear. Therefore, it is not likely that the proposed action would result in substantial impacts to unique areas.

10) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

The impacts of the proposed measures on the human environment are described in section 7.0 of the EA. The action merely revises the catch and landings limits for the 2015 bluefish fishery. None of the proposed specifications are expected to alter fishing methods or activities or are expected to significantly increase fishing effort or the spatial and/or temporal distribution of current fishing effort. The measures contained in this action are not expected to have highly uncertain, unique, or unknown risks on the human environment.

11) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

As discussed in section 7.5 of the EA, the proposed action is not expected to have individually insignificant, but cumulatively significant impacts. The actions, together with past, present, and future actions are not expected to result in significant cumulative impacts on the biological, physical, and human components of the environment.

12) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural or historical resources?

The impacts of the proposed measures on the human environment are described in section 7.0 of the EA. The action merely revises catch and landings limits for the 2015 bluefish fishery. Although there are shipwrecks present in areas where fishing occurs, including some registered on the National Register of Historic Places, vessels try to avoid fishing too close to wrecks due to the possible loss or entanglement of fishing gear. Therefore, it is not likely that the proposed action would adversely affect the historic resources.

13) Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species?

This action merely revises catch and landings limits for the 2015 bluefish fishery. There is no evidence or indication that this fishery has ever resulted in the introduction or spread of nonindigenous species. None of the specifications are expected to significantly alter fishing methods or activities or are expected to alter the spatial and/or temporal distribution of current fishing effort. Therefore, it is highly unlikely that the proposed specifications would result in the introduction or spread of a non-indigenous species.

14) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

This action merely revises the catch and landings limits for the 2015 bluefish fishery. None of the proposed specifications are expected to significantly increase fishing effort or alter the spatial and/or temporal distribution of current fishing effort. In addition, these specifications are

consistent with the bluefish FMP. None of these specifications result in significant effects nor do they represent a decision in principle about a future consideration. The impact of any future changes will be analyzed as to their significance in the process of developing and implementing them.

15) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

This action merely revises the catch and landings limits for the 2015 bluefish fishery. None of the specifications are expected to alter fishing methods or activities such that they threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment. In fact, the proposed measures have been found to be consistent with other applicable laws (see sections 8.3-8.11 below).

16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

The impacts of the preferred alternatives on the biological, physical, and human components of the environment are described in section 7.0 of the EA. The cumulative effects of the proposed action on target and non-target species are detailed in section 7.5 of the EA. None of the proposed specifications are expected to increase fishing effort or alter the spatial and/or temporal distribution of current fishing effort. The synergistic interaction of improvements in the efficiency of the fishery through implementation of catch and landings limits based on the overfishing definitions contained in the FMP are expected to generate positive impacts overall, but the implementation of the proposed 2015 management measures are not expected to result in any cumulative adverse effects that would have a substantial effect on target or non-target species.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting EA prepared for the 2015 bluefish fishery specifications, it is hereby determined that the proposed actions in this specification package will not significantly impact the quality of the human environment as described above and in the EA. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an EIS for this action is not necessary.

for Bullard — 7/20/15

Regional Administrator for GARFO, NMFS, NOAA — *Date*

8.3 Endangered Species Act

Sections 6.3 and 7.3 should be referenced for an assessment of the impacts of the proposed action on endangered species and protected resources. None of the specifications proposed in this document are expected to alter fishing methods or activities. Therefore, this action is not expected to affect endangered or threatened species or critical habitat in any manner not considered in previous consultations on the fishery (i.e., see NMFS 2013).

8.4 Marine Mammal Protection Act

Sections 6.3 and 7.3 should be referenced for an assessment of the impacts of the proposed action on marine mammals. None of the specifications proposed in this document are expected to alter fishing methods or activities. Therefore, this action is not expected to affect marine mammals or critical habitat in any manner not considered in previous assessments of the fishery.

8.5 Coastal Zone Management Act

The Coastal Zone Management Act (CZMA) of 1972, as amended, provides measures for ensuring stability of productive fishery habitat while striving to balance development pressures with social, economic, cultural, and other impacts on the coastal zone. It is recognized that responsible management of both coastal zones and fish stocks must involve mutually supportive goals. The Council has developed this specifications document and will submit it to NMFS; NMFS must determine whether this action is consistent to the maximum extent practicable with the CZM programs for each state (Maine through Florida).

8.6 Administrative Procedure Act

Sections 551-553 of the Federal Administrative Procedure Act establish procedural requirements applicable to informal rulemaking by federal agencies. The purpose is to ensure public access to the federal rulemaking process and to give the public notice and opportunity to comment before the agency promulgates new regulations.

The Administrative Procedure Act requires solicitation and review of public comments on actions taken in the development of an FMP and subsequent amendments and framework adjustments. Development of this specifications document provided many opportunities for public review, input, and access to the rulemaking process. This action and the proposed specifications document was developed through a multi-stage process that was open to review by affected members of the public. The public had the opportunity to review and comment on management measures during the SSC meeting held on July 23, 2014 in Baltimore, MD, during the MC meeting (via webinar) held July 25, 2014, and during the MAFMC meeting held on August 11-14, 2014 in Washington, DC. In addition, the public will have further opportunity to comment on this specifications document once NMFS publishes a request for comments notice in the Federal Register (FR).

8.7 Section 515 (Information Quality Act)

Utility of Information Product

This action proposes catch and landings limits (commercial and recreational fisheries) in 2015 for the bluefish fishery. This document includes: A description of the alternatives considered, the preferred action and rationale for selection, and any changes to the implementing regulations of the FMP. As such, this document enables the implementing agency (NMFS) to make a decision on implementation of annual specifications (i.e., management measures) and this document serves as a supporting document for the proposed rule.

The action contained within this specifications document was developed to be consistent with the FMP, MSA, and other applicable laws, through a multi-stage process that was open to review by affected members of the public. The public had the opportunity to review and comment on management measures during a number of public meetings (see section 8.6). In addition, the public will have further opportunity to comment on this specifications document once NMFS publishes a request for comments notice in the FR.

Integrity of Information Product

The information product meets the standards for integrity under the following types of documents: Other/Discussion (e.g., Confidentiality of Statistics of the MSA; NOAA Administrative Order 216-100, Protection of Confidential Fisheries Statistics; 50 CFR 229.11, Confidentiality of information collected under the Marine Mammal Protection Act).

Objectivity of Information Product

The category of information product that applies here is "Natural Resource Plans." This section (section 8.0) describes how this document was developed to be consistent with any applicable laws, including MSA with any of the applicable National Standards. The analyses used to develop the alternatives (i.e., policy choices) are based upon the best scientific information available and the most up to date information is used to develop the EA which evaluates the impacts of those alternatives (see section 7.0 of this document for additional details). The specialists who worked with these core data sets and population assessment models are familiar with the most recent analytical techniques and are familiar with the available data and information relevant to the bluefish fishery.

The review process for this specifications document involves MAFMC, NEFSC, GARFO, and NMFS headquarters. The NEFSC technical review is conducted by senior level scientists with specialties in fisheries ecology, population dynamics and biology, as well as economics and social anthropology. The MAFMC review process involves public meetings at which affected stakeholders have the opportunity to comments on proposed management measures. Review by GARFO is conducted by those with expertise in fisheries management and policy, habitat conservation, protected resources, and compliance with the applicable law. Final approval of the specifications document and clearance of the rule is conducted by staff at NOAA Fisheries Headquarters, the Department of Commerce, and the U.S. Office of Management and Budget.

8.8 Paperwork Reduction Act

The Paperwork Reduction Act (PRA) concerns the collection of information. The intent of the PRA is to minimize the federal paperwork burden for individuals, small businesses, state and local governments, and other persons as well as to maximize the usefulness of information collected by the Federal government. There are no changes to the existing reporting requirements previously approved under this FMP for vessel permits, dealer reporting, or vessel logbooks. This action does not contain a collection-of-information requirement for purposes of the PRA.

8.9 Impacts of the Plan Relative to Federalism/EO 13132

This specifications document does not contain policies with federalism implications sufficient to warrant preparation of a federalism assessment under Executive Order (EO) 13132.

8.10 Environmental Justice/EO 12898

This EO provides that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." EO 12898 directs each Federal agency to analyze the environmental effects, including human health, economic, and social effects of Federal actions on minority populations, low-income populations, and Indian tribes, when such analysis is required by NEPA. Agencies are further directed to "identify potential effects and mitigation measures in consultation with affected communities, and improve the accessibility of meetings, crucial documents, and notices."

The proposed actions are not expected to affect participation in the bluefish fisheries. Since the proposed action represents no changes relative to the current levels of participation in these fisheries, no negative economic or social effects in the context of EO 12898 are anticipated as a result. Therefore, the proposed action is not expected to cause disproportionately high and adverse human health, environmental or economic effects on minority populations, low-income populations, or Indian tribes.

8.11 Regulatory Impact Review/EO 12866

This action is exempt from the procedures of EO 12866 because this action contains no implementing regulations. Therefore a Regulatory Impact Review is not required.

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8.11 Regulatory Flexibility Analysis

The Regulatory Flexibility Act (RFA) requires the Federal rulemaker to examine the impacts of proposed and existing rules on small businesses, small organizations, and small governmental jurisdictions. In reviewing the potential impacts of proposed regulations, the agency must either certify that the rule "will not, if promulgated, have a significant economic impact on a substantial number of small entities." A determination of substantial depends on the context of the proposed action, the problem to be addressed, and the structure of the regulated industry. Standards for determining significance are discussed below. As indicated in section 4.0, the proposed actions in this specifications document would only modify the commercial quota and recreational harvest limit for bluefish for 2015.

The overall coast-wide commercial bluefish quota for 2015 (5.119 M lb) under preferred Alternative 1 is 31.4% lower than the bluefish commercial quota for 2014 (7.458 M lb) and approximately 24.7% above the commercial landings for 2013 (Tables 18 and 19). This commercial quota would allow fishermen lower fishing opportunities for bluefish in 2015 compared to the 2014 implemented quota and could potentially result in slight negative economic impacts to business entities that commercially harvest bluefish. The NMFS Quota Report as of the week ending December 27, 2014 indicates that overall bluefish commercial landings (4.503 M lb; preliminary values) are within the overall commercial quota for 2014 (60% of the quota landed). Therefore, the 2015 overall quota was not adjusted for overages. In 2013, commercial landings were 4.103 M lb or 54.8% below the adjusted commercial quota implemented that year (9.075 M lb). Unless market conditions change substantially in year 2015, it would be expected that commercial bluefish fishermen would likely have bluefish landings close to landings in recent years (i.e., 2013). Given the potential for fishing opportunities in 2015 when compared to 2014, and commercial landings compared to the commercial quotas implemented in recent years, it is expected that overall ex-vessel revenues from bluefish will remain about the same in 2015 when compared to recent years as a consequence of the proposed commercial quota if market conditions remain relatively stable.

While the 2015 commercial quota under Alternative 1 is lower than the commercial quota implemented in 2014, when individual state allocations are compared to 2013 landings (last year for which complete landings data are available), the overall commercial coast-wide quota for 2015 is not expected to constrain overall landings that year, however, the state specific allocation for Massachusetts, Rhode Island, and New York in 2015, are expected to constrain landings in those states when compared to 2013 by 41.9, 23.8, and 57.9%, respectively (Tables 3 and 28). As such, negative economic impacts are expected for business entities that land bluefish in those states in 2015. However, Amendment 1 implemented a transfer provision as a tool to mitigate the adverse economic impacts of prematurely closing a fishery when surplus quota exists. In fact, under the Interstate Management Plan for Atlantic Bluefish, states have been very cooperative in transferring commercial bluefish quota when needed to states that are running a deficit. If quota allocations were to be transferred from a state or states that do not land their entire bluefish quota allocation for 2015, then potential negative economic burden for states that may have a 2015 quota that would constrain commercial landings when compared to recent year's landings may decrease.

Table 28. The percent difference between the proposed commercial quotas for each state under each alternative for 2015 relative to 2014 limits and 2013 realized landings.

Compared to 2014 initial commercial quota

State	Alternative 1 (Preferred: Maximum Transfer)	Alternative 2 (Non-Preferred: No Transfer)	Alternative 3 (Non-Preferred: No Action/Status Quo)
ME	-31%	-51%	0%
NH	-31%	-51%	0%
MA	-31%	-51%	0%
RI	-31%	-51%	0%
CT	-31%	-51%	0%
NY	-31%	-51%	0%
NJ	-31%	-51%	0%
PA	-31%	-51%	0%
DE	-31%	-51%	0%
MD	-31%	-51%	0%
VA	-31%	-51%	0%
NC	-31%	-51%	0%
SC	-31%	-51%	0%
GA	-31%	-51%	0%
FL (East Coast)	-31%	-51%	0%
Total	-31%	-51%	0%

Note: This does not account for inseason transfers among states (see Table 3).

Compared to 2013 commercial landings

State	Alternative 1 (Preferred: Maximum Transfer)	Alternative 2 (Non-Preferred: No Transfer)	Alternative 3 (Non-Preferred: No Action/Status Quo)
ME	122,119%	87,340%	177,973%
NH	13,079%	9,329%	19,102%
MA	-42%	-58%	-15%
RI	-24%	-45%	11%
CT	104%	46%	197%
NY	-58%	-70%	-39%
NJ	119%	57%	219%
PA	-	-	-
DE	854%	583%	1,291%
MD	233%	138%	385%
VA	105%	46%	198%
NC	73%	23%	151%
SC	-	-	-
GA	-	-	-
FL (East Coast)	366%	233%	579%
Total	25%	-11%	82%

Under Alternative 1 (preferred), the bluefish 2015 recreational harvest limit would be 13.073 M lb. The proposed recreational harvest limit under preferred Alternative 1 for 2015 is 3.3% lower than the limit implemented in 2014 (13.523 M lb) and 15.0% lower than the 2013 recreational landings (Tables 18 and 19). However, the projected recreational landings for 2015 (13.073 M lb) are expected to be similar to the proposed limit under this alternative (13.073 M lb). If bluefish recreational landings in 2015 are the same as the 2015 projected landings, the recreational harvest limit under this scenario is not expected to be exceeded in 2015. The recreational harvest limit under this alternative will likely maintain the recreational satisfaction for the bluefish recreational fishery, relative to 2014, and that no adverse economic impacts would occur. The possession limit would remain at 15 fish.

On a coast-wide basis, neutral economic impacts are anticipated as a result of this action due to the fact that the commercial quota and recreational harvest limit under the preferred alternative for 2015 will not constrain commercial or recreational landings in that year. However, on a state-by-state basis, it is expected that bluefish revenues for commercial business entities that land bluefish in Massachusetts, Rhode Island, and New York would occur in 2015 when compared to 2013 landings which could result in slight negative economic impacts. An Initial Regulatory Flexibility Analysis (IRFA) was prepared to further evaluate the economic impacts of the three alternatives on small business entities. This analysis is undertaken in support of a more thorough analysis for the 2015 specifications for fishing for bluefish.

8.11.1 Initial Regulatory Flexibility Analysis

An IRFA which evaluates the economic impacts of the alternatives on small business entities is provided in this section. When an agency publishes a general notice of proposed rulemaking for any proposed rule, the agency is required to prepare an IRFA describing the impacts of the proposed rule on small entities. Agencies also are required to prepare a Final Regulatory Flexibility Analysis (FRFA) when they promulgate the final rule. However, agencies may forgo the preparation of a regulatory flexibility analysis if they can certify that the rule would not have a significant economic impact on a substantial number of small entities. The IRFA was prepared to further evaluate the economic impacts of the three quota alternatives on small business entities.

8.11.1.1 Description of the Reasons Why Action by the Agency is Being Considered

A complete description of the purpose and need and objectives of this proposed rule is found under section 4.0. A statement of the problem for resolution is presented under section 4.0.

8.11.1.2 The Objectives and Legal Basis of the Proposed Rule

A complete description of the objectives of this proposed rule is found under section 4.0. This action is taken under the authority of the MSA and regulations at 50 CFR part 648.

8.11.1.3 Estimate of the Number of Small Entities

The potential number of small entities (i.e., those which fit the definition of a small business) that may be affected by the proposed rule is presented below.

8.11.1.4 Reporting Requirements

There are no changes to the existing reporting requirements previously approved under this FMP for vessel permits, dealer reporting, or vessel logbooks. This action does not contain a collection-of-information requirement for purposes of the PRA.

8.11.1.5 Conflict with Other Federal Rules

This action does not duplicate, overlap, or conflict with other Federal rules.

8.11.1.6 Analysis of Economic Impacts

A description of the bluefish fisheries is presented in section 6.0 of the EA and section 2.3 of Amendment 1 to the Bluefish FMP (MAFMC 1999). A detailed description of ports and communities is found in the 2002 Bluefish Specifications Document (MAFMC 2001). Recent landing patterns among ports are presented in section 6.4.3 and an analysis of permit data is found in section 6.4.4. Additional information on "Community Profiles for the Northeast US Fisheries" can be found at http://www.nefsc.noaa.gov/read/socialsci/community_profiles/. A description of the fishing communities in the Southeast U.S. can be found at http://sero.nmfs.noaa.gov/sf/socialsci/pdfs/SA%20Fishing%20Community%20Report.pdf.

A full description of the alternatives analyzed in this section and the harvest limits derivation process is presented in sections 4.0 and 5.0.

Description and estimates of number of small entities to which the rule applies

The Small Business Administration (SBA) defines a small business in the commercial harvesting sector, as a firm with receipts (gross revenues) of up to $5.5 and $20.5 million for shellfish and for finfish business, respectively. A small business in the recreational fishery is a firm with receipts of up to $7.5 million. The proposed 2015 bluefish quotas could affect any business entity holding an active Federal permit for bluefish.

In order to identify firms, new vessel ownership data, which have been added to the permit database, was used to identify all the individuals who own fishing vessels. With this information, vessels were grouped together according to common owners. The resulting groupings were then treated as a fishing business (firm or affiliate), for purposes of identifying small and large firms. [11] The ownership database shows that for the 2011-2013 period, 1,111 affiliate firms held a bluefish commercial and/or party/charter federal permit. However, not all of those affiliate firms are active participants in the fishery. According to the ownership database, 1,009 affiliate firms landed bluefish during the 2011-2013 period, with 1,001 of those

[11] Affiliate database for 2011-2013 was provided by Andrew Kitts, NMFS, NEFSC, SSB.

business affiliates categorized as small business and 8 categorized as large business. In this IRFA, the primary units of observation when performing the threshold analysis (presented below) are the small business firms identified above. [12] Table 29 describes the number of small firms that are active in the bluefish fishery, their average total revenues, and their average bluefish revenues.

Table 29. Small entities average revenues and bluefish revenues, 2011-2013.

Revenue (millions of dollars(M))	Count of Firms	Average Gross Receipts	Average Bluefish Receipts	Bluefish Receipts as a Proportion of Gross Receipts
<0.5M	**698**	28,007,716	731,575	2.61%
0.5-1M	**124**	29,816,172	322,417	1.08%
1-2M	**73**	33,373,541	263,615	0.79%
2-4M	**66**	59,965,378	177,695	0.30%
4-20.5 M	**38**	97,708,499	167,540	0.17%
>20.5 M	**2**	16,435,231	19,471	0.12%
Total	**1,001**	265,306,538	5,038,636	0.63%

In this IRFA, the primary units of observation when performing the threshold analysis (presented below) are the small business firms identified above. However, the affiliate database used to identify small/large business firms that have recently participated in the bluefish fishery does not contain detailed ownership data for business entities in the South Atlantic Region. As such, in order to further assess the impacts of the proposed regulations South Atlantic Trip Ticket Report data was used identify vessels that have recently participated in the bluefish fishery. For example, dealer data shows that for the 2011-2013 period, on average 60 vessels (57 in 2013, 56 in 2012, and 66 in 2011) landed bluefish in North Carolina; however, South Atlantic Trip Ticket Report indicates that on average 765 vessels (790 in 2013, 736 in 2012, and 768 in 2011) landed bluefish in North Carolina for the 2011-2013 period (Stephanie McInerny, NC Division of Marine Fisheries, pers. comm., 2014). Some of these vessels may be included among the business entities identified as landing bluefish in the affiliate data during the 2011-2013 period. As such, double counting is possible. In addition, up to 1,227 vessels on average (1,338 in 2013 and 1,115 in 2011) may have landed bluefish in Florida's east coast for years 2011 and 2013 period (Steve Brown, Fla Fish and Wildlife Conservation Commission, pers. comm., 2014).[13] Bluefish landings in Georgia and South Carolina were next to nil in the 2011-2013 period; as such, it was assumed that no commercial bluefish fishing activity for those two states took place in 2011-2013.

[12] The eight firms that were categorized as large entities (not included in Table 29) had combined average gross receipts for all species combined of $108,054,695 and average bluefish receipts of $23,323. As such, bluefish receipts as a proportion of gross receipts is <0.01% for these large entities combined.

[13] 2012 data was not available at the time this specifications document was prepared. However, it is not expected that 2012 vessel participation will significantly deviate from this average.

Description and estimate of economic impact on small entities

Procedurally, the economic effects of the commercial quota alternatives were estimated as follows. First, the expected change in average bluefish revenues due to the proposed quota levels (2015 quota levels versus current (2014) quota levels) under each alternative were calculated for each business entity. The second step was to add or deduct, as appropriate, the expected change in bluefish revenues for each business entity from the average estimate total revenues from all species landed for each business entity. The third step, was to compare the estimated new revenues (2015) for each entity (after adjustments in bluefish landings were made) to the revenues from all species to the base year (average 2011-2013) for every business entity due to the proposed quota changes. For each quota alternative a summary table was constructed that reports the results of the threshold analysis.

The effects of actions were analyzed by employing quantitative approaches to the extent possible. In the current analysis, effects on profitability associated with the proposed management measures should be evaluated by looking at the impact the proposed measures on individual business entities costs and revenues. However, in the absence of cost data for individual business entities engaged in this fishery, changes in gross revenues are used a proxy for profitability. Where quantitative data were not available, qualitative analyses were conducted.

The threshold analysis described above is intended to identify impacted business entities and to characterize the potential economic impact on directly affected entities. In addition to evaluating if the proposed regulations reduce profit for a significant number of small entities, the RFA also requires that disproportionality be evaluated. Disproportionality is judged to occur when a proportionate effect on profits, costs, or net revenue is expected to occur for a substantial number of small entities compared to large entities, that is, if a regulation places a substantial number of small entities at a significant competitive disadvantage. According to the SBA definition of small business presented above, all permitted business entities in these fisheries readily fall within the definition of small business. Therefore, there are no disproportionality issues.

Alternative 1 (*Preferred: Maximum Transfer)*

This alternative specifies a commercial quota of 5.119 M lb and recreational landing limit of 13.073 M lb for bluefish. Under this scenario, the bluefish specifications would result in an aggregate decrease of approximately 31.4 and 3.3%, respectively, in allowable commercial landings and recreational harvest limit relative to the 2014 implemented limits (Tables 18 and 19).

Commercial Impacts

The results of the threshold analysis from affiliate data are reported in Table 30. A total of 57 business entities were projected to incur revenue losses of 5% or more. More specifically, 34 business entities were projected to incur in revenue losses of 5-9%, 10 entities of 10-19%, 3 entities of 20-29%, and 10 entities of 30-39%. In addition, 944 entities were projected to incur in revenue losses of less than 5% in 2015.

Table 30. Threshold analysis of revenues for participating small business entities under quota Alternative 1 (Preferred: Maximum Transfer) in 2015, based on affiliate data.

Revenue (millions of dollars(M))	Count of Firms	Number of Entities Impacted by > 5% Reduction	Number of Impacted Small Business Entities by Reduction Percentile (%)							
			< 1	1 - < 5	5-9	10-19	20-29	30-39	40-49	≥ 50
<0.5M	**698**	56	520	122	33	10	3	10	0	0
0.5-1M	**124**	1	114	9	1	0	0	0	0	0
1-2M	**73**	0	69	4	0	0	0	0	0	0
2-4M	**66**	0	66	0	0	0	0	0	0	0
4-20.5 M	**38**	0	38	0	0	0	0	0	0	0
>20.5 M	**2**	0	2	0	0	0	0	0	0	0
Total	**1,001**	57	809	135	34	10	3	10	0	0

Council staff further examined the level of ex-vessel revenues for the impacted business entities with revenue reduction of 5% or more to assess further impacts. For example, according to affiliate data, it was estimated that 26% of the small business entities (9 out of 34) projected to incur revenue reductions of 5-9% had total gross sales (average for all possible species combined not just bluefish in 2011-2013) of $1,000 or less and 53% of the impacted entities (18 out of 34) had gross sales of $10,000 or less; 30% of the entities (3 out of 10) projected to incur revenue reductions of 10-19% had total gross sales of $1,000 or less and 50% of the impacted entities (5 out of 10) had gross sales of $10,000 or less; 33% of the entities (1 out of 3) projected to incur revenue reductions of 20-29% had total gross sales of $1,000 or less and 100% of the impacted entities (3 out of 3) had gross sales of $10,000 or less; and 90% of the entities (9 out of 10) projected to incur revenue reductions of 30-39% had total gross sales of $1,000 or less.

While the analysis presented above indicates that in relative terms 57 small business entities are likely to be impacted with revenue reductions of 5% or more, 39% of these entities (22 entities) had gross sales of $1,000 or less and 61% of the impacted entities (35 entities) had gross sales of $10,000 or less, thus likely indicating that the dependence on fishing for some of these vessels is very small.

The threshold analysis presented in Table 30 is based on Northeast affiliate data and represents potential impacts on business entities participating in the fishery on the North Atlantic region. In order to further assess the impacts of the commercial 2015 quota measure on commercial vessels participating in the bluefish fishery in North Carolina, South Atlantic Trip Ticket Report data was reviewed. South Atlantic Trip Ticket Report data indicate that on average 765 vessels landed bluefish in North Carolina in 2011-2013. On average, these vessels generated 10.8% of their total ex-vessel revenue from bluefish landings. Under this alternative, landings are projected to decrease as a consequence of the 2015 allocation when compared to the 2014 allocation by approximately 31.4%. On average, reduction in revenues due to the potential decrease in landings associated with the 2015 quota compared to the 2014 quota are expected to be approximately 3.4% for fishermen that land bluefish in that state. In order to further assess the impacts of the commercial 2015 quota measure on commercial vessels participating in the bluefish fishery in Florida (east coast), South Atlantic Trip Ticket Report data was reviewed.

South Atlantic Trip Ticket Report data indicate that on average 1,227 vessels landed bluefish in North Carolina in 2011 and 2013. On average, these vessels generated 0.83% of their total ex-vessel revenue from bluefish landings. Under this alternative, landings are projected to decrease as a consequence of the 2015 allocation when compared to the 2014 allocation by approximately 31.4%. On average, reduction in revenues due to the potential decrease in landings associated with the 2015 quota compared to the 2014 quota are expected to be approximately 0.3% for fishermen that land bluefish in that state.

It is likely that the threshold analysis conducted above overestimates the negative economic impacts to small business entities due to the fact that changes in bluefish revenues associated with the potential quota change for 2015 versus 2014 implemented quotas were applied to all entities. As previously indicated, given the 2015 state-by-state bluefish allocation (Tables 3 and 28), it is expected that the 2015 bluefish quota under this alternative would only constrain landings for business entities that land bluefish in Massachusetts, Rhode Island, and New York when compared to 2013 landings.

Furthermore, as indicated above, while the 2015 commercial quota under this alternative is lower than the commercial quota implemented in 2014, it is higher than the realized commercial landings in 2013. Unless market conditions change substantially in 2015, it would be expected that commercial bluefish fishermen would likely have bluefish landings close to landings in recent years (i.e., 2013).

Amendment 1 implemented a transfer provision as a tool to mitigate the adverse economic impacts of prematurely closing a fishery when surplus quota exists. In fact, under the Interstate Management Plan for Atlantic Bluefish, states have been very cooperative in transferring commercial bluefish quota when needed to states that are running a deficit. If quota allocations were to be transferred from a state or states that do not land their entire bluefish quota allocation for 2015, then the number of affected entities described in this threshold analysis could potentially decrease, thus decreasing economic burden.

It is important to stress that these changes as well as those described under the other quota scenarios represent merely the potential, i.e., based on available data. Actual changes in revenue will likely vary. This variation would occur for several reasons, including impacts undetermined for unidentifiable business entities, revenues earned or lost due to possession limits and seasons set by a state to manage sub-allocations of quota, and other potential reductions in 2015 not accounted for here (section 5.0). Furthermore, it is possible that given the potential decrease in bluefish landings under this alternative, price for this species may increase holding all other factors constant. If this occurs, an increase in the price for this species may mitigate some of the revenue reductions associated with lower quantity of quota availability.

Even though preferred Alternative 1 (as well as Alternative 2) represents an overall decrease in commercial fishing opportunities when compared to the status quo (Alternative 3), it is consistent with the ABC recommendations of the Council's Science and Statistical Committee (SSC) and are therefore based on the best scientific information available and are intended to prevent overfishing.

Recreational Impacts

Under Alternative 1, the bluefish 2015 recreational harvest limit would be 13.073 M lb. While the proposed recreational harvest limit under preferred Alternative 1 for 2015 is lower than the limit implemented in 2014 (13.523 M lb) and 2013 recreational landings (15.388 M lb), the projected landings for 2015 are expected to be similar to the proposed limit under this alternative. The possession limit would remain at 15 fish. It is not anticipated that this management measure will have any negative effects on recreational fishermen or affect the demand for party/charter boat trips. This alternative is not expected to significantly affect angler satisfaction nor expected to result in landings in excess of the recreational harvest limit.

According to MRFSS data, the number of recreational fishing trips for all modes combined in the North Atlantic, Mid-Atlantic, and South Atlantic regions in 2013 were 6.15, 14.03, and 16.61 million, respectively. Of the total number of fishing trips for all modes combined in the North Atlantic, Mid-Atlantic, and South-Atlantic regions, approximately 0.38 million (6.2%), 1.18 million (8.4%), and 0.33 million trips (2.0%) were party/charter fishing trips, respectively. It is estimated that the number of party/charter fishing trips that sought bluefish as the primary species from Maine thought Florida (i.e., total effort targeting bluefish by party/charter mode) in 2013 was approximately 88 thousand (Table 11).

At the present time there are neither behavioral or demand data available to estimate how sensitive party/charter boat anglers might be to proposed fishing regulations. However, given the level of the recreational harvest limit for 2015 and projected recreational landings for that year, it is likely that the proposed recreational harvest limits under all alternatives evaluated in this document will not negatively impact angler satisfaction or the demand for party/charter boat trips. Currently, the market demand for this sector is relatively stable. Overall, it is not expected that the final recreational management measures will affect gross revenues of businesses providing goods and services to anglers participating in the party/charter boat, private/rental boat, and shore fisheries for bluefish.

Alternative 2 (Non-Preferred: No Transfer)

Non-preferred Alternative 2 specifies a commercial quota of 3.662 M lb and recreational landing limit of 14.530 M lb for bluefish. Under this scenario, the bluefish specifications would result in an aggregate of approximately 50.9% decrease and 7.4% increase, respectively, in allowable commercial landings and recreational harvest limit relative to the 2014 implemented limits (Tables 18 and 19).

Commercial Impacts

The results of the threshold analysis from affiliate data are reported in Table 31. A total of 87 business entities were projected to incur revenue losses of 5% or more. More specifically, 36 business entities were projected to incur in revenue losses of 5-9%, 32 entities of 10-19%, 5 entities of 20-29%, 4 entities of 30-39%, 1 entity of 40-49%, and 9 entities of 50% or more. In addition, 914 entities were projected to incur in revenue losses of less than 5% in 2015.

Table 31. Threshold analysis of revenues for participating small business entities under quota Alternative 2 (Non-Preferred: No Transfer) in 2015, based on affiliate data.

Revenue (millions of dollars(M))	Count of Firms	Number of Entities Impacted by > 5% Reduction	Number of Impacted Small Business Entities by Reduction Percentile (%)							
			< 1	1 - < 5	5-9	10-19	20-29	30-39	40-49	≥ 50
<0.5M	**698**	81	453	164	31	31	5	4	1	9
0.5-1M	**124**	4	110	10	3	1	0	0	0	0
1-2M	**73**	2	68	3	2	0	0	0	0	0
2-4M	**66**	0	65	1	0	0	0	0	0	0
4-20.5 M	**38**	0	38	0	0	0	0	0	0	0
>20.5 M	**2**	0	2	0	0	0	0	0	0	0
Total	**1,001**	87	736	178	36	32	5	4	1	9

Council staff further examined the level of ex-vessel revenues for the impacted business entities with revenue reduction of 5% or more to assess further impacts. For example, according to affiliate data, it was estimated that 8% of the small business entities (4 out of 36) projected to incur revenue reductions of 5-9% had total gross sales (average for all possible species combined not just bluefish in 2011-2013) of $1,000 or less and 53% of the impacted entities (19 out of 36) had gross sales of $10,000 or less; 25% of the entities (8 out of 32) projected to incur revenue reductions of 10-19% had total gross sales of $1,000 or less and 44% of the impacted entities (14 out of 32) had gross sales of $10,000 or less; 40% of the entities (2 out of 5) projected to incur revenue reductions of 20-29% had total gross sales of $1,000 or less and 60% of the impacted entities (3 out of 5) had gross sales of $10,000 or less; 25% of the entities (1 out of 4) projected to incur revenue reductions of 30-39% had total gross sales of $1,000 or less and 75% of the impacted entities (3 out of 4) had gross sales of $10,000 or less; 100% of the entities (1 out of 1) projected to incur revenue reductions of 40-49% had total gross sales of $1,000 or less; and 89% of the entities (8 out of 9) projected to incur revenue reductions of 50% or more had total gross sales of $1,000 or less.

While the analysis presented above indicates that in relative terms 87 small business entities are likely to be impacted with revenue reductions of 5% or more, 28% of these entities (24 entities) had gross sales of $1,000 or less and 54% of the impacted entities (47 entities) had gross sales of $10,000 or less, thus likely indicating that the dependence on fishing for some of these vessels is very small.

The threshold analysis presented in Table 31 is based on Northeast affiliate data and represents potential impacts on business entities participating in the fishery on the North Atlantic region. In order to further assess the impacts of the commercial 2015 quota measure on commercial vessels participating in the bluefish fishery in North Carolina, South Atlantic Trip Ticket Report data was reviewed. South Atlantic Trip Ticket Report data indicate that on average 765 vessels landed bluefish in North Carolina in 2011-2013. On average, these vessels generated 10.8% of their total ex-vessel revenue from bluefish landings. Under this alternative, landings are projected to decrease as a consequence of the 2015 allocation when compared to the 2014 allocation by approximately 50.9%. On average, reduction in revenues due to the potential

decrease in landings associated with the 2015 quota compared to the 2014 quota are expected to be approximately 5.5% for fishermen that land bluefish in that state. In order to further assess the impacts of the commercial 2015 quota measure on commercial vessels participating in the bluefish fishery in Florida (east coast), South Atlantic Trip Ticket Report data was reviewed. South Atlantic Trip Ticket Report data indicate that on average 1,227 vessels landed bluefish in North Carolina in 2011 and 2013. On average, these vessels generated 0.83% of their total ex-vessel revenue from bluefish landings. Under this alternative, landings are projected to decrease as a consequence of the 2015 allocation when compared to the 2014 allocation by approximately 50.9%. On average, reduction in revenues due to the potential decrease in landings associated with the 2015 quota compared to the 2014 quota are expected to be approximately 0.4% for fishermen that land bluefish in that state.

It is likely that the threshold analysis conducted above overestimates the negative economic impacts to small business entities due to the fact that changes in bluefish revenues associated with the potential quota change for 2015 versus 2014 implemented quotas were applied to all entities. As previously indicated, given the 2015 state-by-state bluefish allocation (Tables 3 and 28), it is expected that the 2015 bluefish quota under this alternative would only constrain landings for business entities that land bluefish in Massachusetts, Rhode Island, and New York when compared to 2013 landings.

As indicated above, Amendment 1 implemented a transfer provision as a tool to mitigate the adverse economic impacts of prematurely closing a fishery when surplus quota exists to decrease economic burden for states that may have quotas that constrain landings. However, given that under this alternative the overall commercial quota in 2015 is substantially lower than the 2014 coastwide quota and the 2013 coastwide landings, the amount of bluefish that could potentially be transferred among states would be lower than under Alternatives 3 and 1, thus potentially allowing for less economic relief.

Recreational Impacts

Under Alternative 2, the bluefish 2015 recreational harvest limit would be 14.530 M lb. The proposed recreational harvest limit under this non-preferred alternative for 2015 is higher than the limit implemented in 2014 (13.523 M lb) and the projected landings for 2015 (13.073 M lb). The possession limit would remain at 15 fish. It is not anticipated that this management measure will have any negative effects on recreational fishermen or affect the demand for party/charter boat trips. This alternative is not expected to significantly affect angler satisfaction nor expected to result in landings in excess of the recreational harvest limit.

Alternative 3 (Non-Preferred: No Action/Status Quo)

This alternative (no action/status quo measures) specifies a commercial quota of 7.458 M lb and recreational landing limit of 13.523 M lb for bluefish. Under this scenario, the bluefish specifications would result in no aggregate change in allowable commercial landings or recreational harvest limit relative to the 2014 implemented limits (Tables 18 and 19). This alternative would provide the same fishing opportunities to commercial fishermen and

recreational anglers in 2015 when compared to 2014 opportunities. As such, it is expected that no changes in revenues or fishing opportunities would occur.

While the overall 2015 commercial quota under this alternative is the same as the commercial quota implemented in 2014 and higher (83%) than the coastwide bluefish landings for 2013, when this allocation is distributed to the states, all states except Massachusetts (15% lower) and New York (39% lower) will be constrained by the 2015 quota when compared to the 2013 landings (Tables 3 and 28).

As indicated above, Amendment 1 implemented a transfer provision as a tool to mitigate the adverse economic impacts of prematurely closing a fishery when surplus quota exists to decrease economic burden for states that may have quotas that constrain landings. However, given that under this alternative the overall commercial quota in 2015 is substantially higher than the 2013 coastwide landings, the amount of bluefish that could potentially be transferred among states would be higher than under Alternatives 2 and 1; and it is expected that this toll would mitigate any adverse economic impacts due to quota constraints in Massachusetts and New York.

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9.0 ESSENTIAL FISH HABITAT ASSESSMENT

9.1 Description of the Proposed Action

The proposed action (fully described in section 5.0 of this document) would establish Federal management measures for commercial and recreational bluefish fisheries on the Atlantic Coast of the U.S. for fishing year 2015 (beginning January 1, 2015). The purpose of the proposed action is to implement specifications for the bluefish fisheries that are necessary to prevent overfishing and not exceed the ACLs.

9.2 Potential Adverse Effects of the Proposed Action on EFH

An evaluation of the impacts of the proposed action on EFH is provided in section 7.0 of this document. Bluefish are primarily caught recreationally using hook and line. The principal commercial gear used in the directed bluefish fishery is the bottom gillnet. Gillnets accounted for 83.0% of the directed bluefish landings in 2013 while hook gear accounted for 12.0% and other gear categories caught the remaining 5% (Table 7; thus, less than 5% of the directed bluefish landings in 2013 were from bottom trawls). The proposed 2015 commercial quota could either increase or decrease landings of bluefish. Landings could increase by as much as 25% relative to 2013 realized landings if the entire commercial quota is taken, but even if there is a significant increase in the catch, it is unlikely that there would be a significant increase in bottom trawling effort or in adverse EFH impacts because bluefish are not generally targeted in the bottom trawl fishery. Estimated commercial landings in 2013 only reached 45.2% of the 2013 commercial quota.

9.3 Conclusions

It was concluded in the 2004 Annual Specifications EA that the baseline impact of the bluefish fishery on EFH is minimal and temporary in nature (MAFMC 2003). Additionally, the specified recreational and commercial catch quotas that have been implemented since then have not required any habitat impact mitigation. Since the proposed action is only expected to have minimal adverse impacts on EFH , it will continue to minimize the adverse impacts of the recreational and commercial bluefish fisheries on EFH to the extent practicable, pursuant to section 305 (a)(7) of the MSA.

10.0 LITERATURE CITED

Able, K.W. and M.P. Fahay. 1998. The first year in the life of estuarine fishes in the Middle Atlantic Bight. Rutgers University Press, New Brunswick, NJ. 342 p.

Atlantic States Marine Fisheries Commission (ASMFC). 2007. Special report to the Atlantic Sturgeon Management Board: estimation of Atlantic sturgeon bycatch in coastal Atlantic commercial fisheries of New England and the Mid-Atlantic. August 2007. 95 pp.

Beanlands, G.E., and P. N. Duinker. 1984. Ecological framework adjustment for environmental impact assessment. Journal of Environmental Management. 8:3.

Beardsall, J.W., M. F. McLean, S. J. Cooke, B. C. Wilson, M. J. Dadswell, A. M. Redden, and M. J. W. Stokesbury. 2013. Consequences of incidental otter trawl capture on survival and physiological condition of threatened Atlantic sturgeon. Transactions of the American Fisheries Society 142:1202–1214.

Bigelow, H.B. and W.C. Schroeder. 1953. Fishes of the Gulf of Maine. U.S. Fish Wildl. Serv., Fish. Bull. 53. 577 p

Brown, S. 2014. Personal Communication. Fla. Fish and Wildlife Conservation Commission. St. Petersburg, Fla.

Damon-Randall, K. 2011. Personal Communication. NMFS/GAR/GARFO/PRD. Gloucester, MA.

Gentner, B. and S. Steinback 2008. The economic contribution of marine angler expenditures in the United States, 2006. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-F/SPO-94. 301 pp.

GMRI, 2012. Workshop on proactive conservation planning for Northwest Atlantic cusk. December 7-8, 2011. Gulf of Maine Research Institute, Portland, Maine. Funded by and held in coordination with NMFS.

Hicks, R., S. Steinback, A. Gautam, and E. Thunberg. 1999. Volume II. The economic value of New England and Mid-Atlantic sportfishing in 1994. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-F/SPO. 45 pp.

Kocik. J.F., S.E. Wigley, and D. Kircheis. 2014. Annual bycatch update Atlantic salmon 2013 U.S. Atlantic Salmon Assessment Committee Working Paper 2014:05. Old Lyme, CT. 6 pp. (cited with permission of authors).

Laney, R.W. 1997. The relationship of submerged aquatic vegetation (SAV) ecological value to species managed by the Atlantic States Marine Fisheries Commission (ASMFC): summary for the ASMFC SAV Subcommittee. pp. 11-35 *in* C.D. Stephan and T.E. Bigford, eds. Atlantic Coastal Submerged Aquatic Vegetation: a review of its ecological role, anthropogenic impacts,

state regulation, and value to Atlantic coastal fish stocks. Atlantic States Marine Fisheries Commission, Washington, D.C. Habitat Management Series #1.

Mid-Atlantic Fishery Management Council (MAFMC). 1999. Amendment 1 to the bluefish fishery management plan. Dover, DE. 341 pp. + append.

_____. 2001. 2002 Atlantic bluefish specifications. Dover, DE. 114 pp.

_____. 2003. 2004 Atlantic bluefish specifications. Dover, DE. 79 pp.

_____. 2011. Amendment 3 to the bluefish fishery management plan (Omnibus ACL/AM Amendment). Dover, DE. 552 p. + append.

McInerny, S. 2014. Personal Communication. NC Division of Marine Fisheries. Morehead City, NC.

Miller, T. and G. Shepard. 2011. Summary of discard estimates for Atlantic sturgeon. Northeast Fisheries Science Center, Population Dynamics Branch, August 2011.

Murray, K.T., 2008. Estimated average annual bycatch of loggerhead sea turtles (*Caretta caretta*) in US mid-Atlantic bottom otter trawl gear, 1996–2004, second ed. US Dep. Commer., Northeast Fish Sci. Cent. Ref. Doc. 08-20, p. 32. Available at: http://www.nefsc.noaa.gov/publications/crd/crd0820.

Murray, K.T. 2013. Estimated loggerhead and unidentified hard-shelled turtle interactions in mid-Atlantic gillnet gear, 2007-2011. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-NM-225. 20 pp. Available at http://www.nefsc.noaa.gov/publications/tm/.

Murray, K.T. and C.D.Orphanides. 2013. Estimating the risk of loggerhead turtle *Caretta caretta* bycatch in the U.S. mid-Atlantic using fishery-independent and –dependent data. Marine Ecology Progress Series. 477:259-270.

Northeast Fisheries Science Center (NEFSC). 2012. Bluefish 2011 stock assessment update. 44 p. Unpubl. Report.

_____. 2011. Bycatch working group discussion notes. NMFS Sturgeon Workshop, Alexandria, VA. February 11, 2011.

_____. 2013. Endangered Species Act Section 7 Consultation on the Continued Implementation of Management Measures for the Northeast Multispecies, Monkfish, Spiny Dogfish, Atlantic Bluefish, Northeast Skate Complex, Mackerel/Squid/Butterfish, and Summer Flounder/Scup/Black Sea Bass Fisheries. Available at: *http://www.greateratlantic.fisheries.noaa.gov/protected/section7/bo/actbiops/batchedfisheriesopinionfinal121613.pdf*.

_____. 2014. Final environmental impact statement for amending the Atlantic large whale take reduction plan: vertical line rule. National Marine Fisheries Service. May 2014.

O'Brien, L. 2010. Status of fishery resources off the Northeastern US: cusk (*Brosme brosme*). NMFS Northeast Fisheries Science Center Resource Evaluation and Assessment Division.

O'Hara K.J., S. Iudicello, and R. Bierce. 1988. A citizens guide to plastic in the ocean: more than a litter problem. Center for Environmental Education, Washington, D.C. 131 p.

Stein, A. B., K. D. Friedland, and M. Sutherland. 2004. Atlantic sturgeon marine bycatch and mortality on the continental shelf of the Northeast United States. North American Journal of Fisheries Management 24: 171-183.

Salerno, D.J., J. Burnett and R.M. Ibara. 2001. Age, growth, maturity, and spatial distribution of bluefish, Pomatomus saltatrix, off the northeast coast of the United States, 1985 - 96. Journal of Northwest Atlantic Fishery Science 29:31-39.

Steinback, S. 2009. Personal communication. NMFS/NEFSC/SSB. Woods Hole, MA.

Shepherd, G.R. and D. B. Packer. 2006. Essential Fish Habitat Source Document: Bluefish, *Pomatomus saltatrix*, Life History and Habitat Characteristics 2nd edition. NOAA Technical Memorandum, NMFS-NE-198:100.

Stevenson D, Chiarella L, Stephan D, Reid R, Wilhelm K, McCarthy J, Pentony M. 2004. Characterization of the fishing practices and marine benthic ecosystems of the northeast US shelf, and an evaluation of the potential effects of fishing on essential habitat. NOAA Tech Memo NMFS NE 181; 179 p.

Warden, M.L. 2011a. Modeling loggerhead sea turtle (*Caretta caretta*) interactions with US Mid-Atlantic bottom trawl gear for fish and scallops, 2005–2008. Biological Conservation 144: 2202–2212.

Warden, M.L. 2011b. Proration of loggerhead sea turtle (*Caretta caretta*) interactions in US Mid-Atlantic bottom otter trawls for fish and scallops, 2005-2008, by managed species landed. NEFSC Reference Document 11-04; 8 pp. Available at: http://www.nefsc.noaa.gov/publications/crd/.

Waring, G.T., E. Josephson, K. Maze-Foley, and P.E. Rosel, editors. 2014. U.S. Atlantic and Gulf of Mexico marine mammal stock assessments—2013. NOAA Tech Memo NMFS- NE-228. 475 pp.

Wood, A. D. 2014. Bluefish 2014 Stock Assessment Update: Data and Model Update Through 2013. Coastal Pelagic Working Group, Northeast Fisheries Science Center, NOAA Fisheries. 37 pp. Unpubl. Report.

11.0 LIST OF AGENCIES AND PERSONS CONSULTED

In preparing this specifications document, the Council consulted with NMFS, New England and South Atlantic Fishery Management Councils, Fish and Wildlife Service, and the states of Maine through Florida through their membership on the Mid-Atlantic and New England Fishery Management Councils, and the Atlantic States Marine Fisheries Commission. To ensure compliance with NMFS formatting requirements, the advice of NMFS GARFO personnel was sought.

Copies of the specifications document, including the Environmental Assessment and Initial Regulatory Flexibility Analysis and other supporting documents for the specifications are available from Dr. Christopher M. Moore, Executive Director, Mid-Atlantic Fishery Management Council, Suite 201, 800 North State Street, Dover, DE 19901