



APR 16 2012

To All Interested Government Agencies and Public Groups:

Under the National Environmental Policy Act, an environmental review has been performed on the following action.

TITLE: 2012 Atlantic Bluefish Specifications

LOCATION: Exclusive Economic Zone off the U.S. east coast

SUMMARY: NMFS issues final specifications for the 2012 Atlantic bluefish fishery, including state-by-state commercial quotas, a recreational harvest limit, and recreational possession limits for Atlantic bluefish off the east coast of the United States. The intent of these specifications is to establish the allowable 2012 harvest levels and possession limits to attain the target fishing mortality rate, consistent with the Atlantic Bluefish Fishery Management Plan. The specifications are not anticipated to result in any significant impacts on target and non-target fishery resources, protected resources, habitat, or the affected human communities.


RESPONSIBLE

OFFICIAL: Daniel S. Morris
Acting Regional Administrator, Northeast Region
National Marine Fisheries Service, National Oceanic and Atmospheric
Administration (NOAA)
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The environmental review process led us to conclude that this action will not have a significant impact on the environment. Therefore, an environmental impact statement was not prepared. A copy of the finding of no significant impact (FONSI), including the environmental assessment, is enclosed for your information.

Although NOAA is not soliciting comments on this completed EA/FONSI, we will consider any comments submitted that would assist us in preparing future NEPA documents. Please submit any written comments to the Responsible Official named above.

Sincerely,

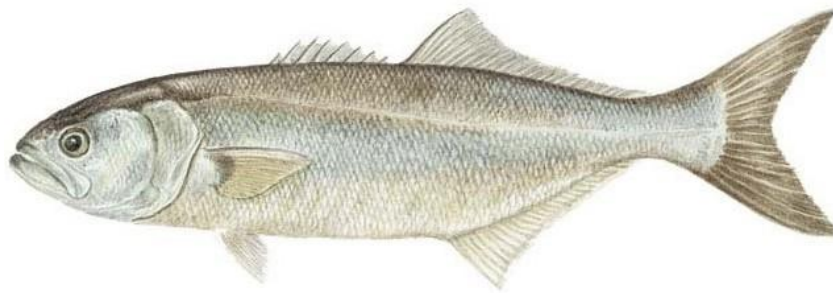


Patricia A. Montanio
NEPA Coordinator

Enclosure



**2012
Bluefish Specifications,
Environmental Assessment,
and
Initial Regulatory Flexibility Analysis**



April 13, 2012



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) under 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 along with a characterization of the environmental impacts of each of those alternatives. Three of the alternatives (referred to as quota-setting alternatives) consist of restrictions on overall landings by the commercial and recreational fisheries for bluefish in 2012 and are needed to prevent those fisheries from overfishing the bluefish stock. Two additional alternatives (referred to as RSA alternatives) address the allowance for some landings (up to 3 percent of the total) to be set aside for research. All of the management measures under consideration would be limited to the 2012 calendar year. This document was developed in accordance with a number of applicable laws and statutes that are described in Section 8.0 (see the Table of Contents to locate document sections).

A comparison of the action alternatives (e.g., Alternatives 1 and 2) relative to “no action” (i.e., Alternative 3) is a requirement under the implementation of the National Environmental Policy Act (NEPA), however, among the quota-setting alternatives, “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 that would extend existing 2011 quota-setting measures into the 2012 fishing year.

Among the three quota-setting alternatives, Alternative 1 is expected to result in neutral to positive impacts on the bluefish resource (See Box ES-1 for landings limits and impacts). Although Alternative 1 allows for a small increase in overall landings compared to the status quo alternative, the bluefish stock is expected to increase anyway; and Alternative 1 is consistent with the recommendations of the Council's Scientific and Statistical Committee (SSC). Alternative 2 has the same overall landings as Alternative 1 (Box ES-1), but allocates more of those landings to the recreational fishery and is also expected to result in neutral to positive impacts on bluefish. Alternative 3 (status quo/no action) has slightly lower overall landings than Alternatives 1 and 2 (Box ES-1) and is expected to have neutral to positive biological impacts overall on bluefish. Alternative 3 may be more restrictive than necessary given the advice of the SSC.

Depending upon whether fishing effort increases or decreases these three alternatives are expected to have effects on habitat and EFH, as well as ESA-listed and MMPA-protected resources that range from neutral to slightly positive (Box ES-1). Additionally, compared to the status quo, Alternatives 1, 2, and 3 propose larger, smaller, and equivalent commercial quotas, respectively, and are, therefore, associated with positive, negative, and neutral social and economic impacts for the commercial fishery, respectively.

Box ES-1. Overall qualitative summary of the expected impacts of various alternatives considered in this document. A minus sign (-) signifies an expected negative impact, a plus sign (+) a positive impact, and zero indicates 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’ indicates long-term impacts.

	Biological	EFH	Protected Resources	Economic	Social
Alternative 1 (Preferred: Maximum Transfer) CQ = 10.185 M lb; RHL = 17.234 M lb	0/+	0/sl+	0/sl+	sl+	sl+
Alternative 2 (Non-Preferred: No Transfer) CQ = 5.284 M lb; RHL = 25.929 M lb	0/+	0/sl+	0/sl+	sl-	sl-
Alternative 3 (Non-Preferred: Status quo) CQ = 9.3755 M lb; RHL = 17.813 M lb	0/+	0/sl+	0/sl+	0	0

Research Set-aside

Under both RSA Alternative 1 (No Action) and Alternative 2 (Allow RSA), total allowable landings are consistent. Therefore, the environmental impacts of Alternatives 1 and 2 in 2012 are consistent with the impact of the quota setting alternative that determines total landings. However under Alternative 2, there could be indirect positive effects as scientific information is obtained for management and/or stock assessment purposes. RSA Alternative 2 would result in indirect positive effects from the collaborative efforts among the public, research institutions, and government in broadening the scientific base upon which management decisions are made. There may also be other small indirect positive impacts such as reduced discarding of RSA landed fish during season closures and efficiency of operations. Qualitative summaries of the impacts of the RSA alternatives under consideration are provided in Box ES-2.

Box ES-2. Overall qualitative summary of the expected impacts of research set-aside measures considered in this document. A minus sign (-) signifies an expected negative impact, a plus sign (+) signifies an expected positive impact, and a zero is used to indicate a null impact. A (u) is used when there is some uncertainty whether the impact will be null or as specified (+ or -).

	Biological	EFH	Protected Resources	Economic	Social
Alternative 1 (No Action/No Research Set-Aside)	0	0	0	0	0
Alternative 2 (Preferred; Allow RSA)	+ (u)	0	0	0/(u)	0/(u)

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	MAFMC	Mid-Atlantic Fishery Management Council
ACL	Annual Catch Limit	MMPA	Marine Mammal Protection Act
ALWTRP	Atlantic Large Whale Take Reduction Plan	MRFSS	Marine Recreational Fisheries Statistical Survey
AM	Accountability Measure	MSA	Magnuson-Stevens Fishery Conservation and Management Act
ASAP	Age Structured Assessment Program	MSY	Maximum Sustainable Yield
ASMFC	Atlantic States Marine Fisheries Commission	NAO	NOAA Administrative Order
CEA	Cumulative Effects Assessment	NEFSC	Northeast Fisheries Science Center
CEQ	Council on Environmental Quality	NEFOP	Northeast Fisheries Observer Program
CFR	Code of Federal Regulations	NEPA	National Environmental Policy Act
CV	Coefficient of Variation	NERO	Northeast Regional Office
CZMA	Coastal Zone Management Act	NMFS	National Marine Fisheries Service
DPS	Distinct Population Segment	NOAA	National Oceanic and Atmospheric Administration
DPSWG	Data Poor Stocks Working Group	OFL	Overfishing Limit
EA	Environmental Assessment	OY	Optimal Yield
EEZ	Exclusive Economic Zone	PRA	Paperwork Reduction Act
EFH	Essential Fish Habitat	RFA	Regulatory Flexibility Act
EFP	Exempted Fishing Permit	RIR	Regulatory Impact Review
EIS	Environmental Impact Statement	RSA	Research Set-Aside
EO	Executive Order	SARC	Stock Assessment Review Committee
ESA	Endangered Species Act of 1973	SAW	Stock Assessment Workshop
F	Fishing Mortality Rate	SFA	Sustainable Fisheries Act
FR	Federal Register	SBA	Small Business Administration
FMP	Fishery Management Plan	SSB	Spawning Stock Biomass
FONSI	Finding of No Significant Impact	SSC	Scientific and Statistical Committee
HPTRP	Harbor Porpoise Take Reduction Plan	TED	Turtle Excluder Device
IRFA	Initial Regulatory Flexibility Analysis	US	United States
LNG	Liquefied Natural Gas	VECs	Valued Ecosystem Components
LOF	List of Fisheries	VTR	Vessel Trip Report
LWTRP	Large Whale Take Reduction Plan		

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY	II
2.0 LIST OF ACRONYMS	V
3.0 TABLE OF CONTENTS	6
4.0 INTRODUCTION AND BACKGROUND OF SPECIFICATION PROCESS	9
4.1 PURPOSE AND NEED OF THE ACTION.....	9
5.0 MANAGEMENT ALTERNATIVES.....	11
5.1 QUOTA-SETTING ALTERNATIVES	11
<i>5.1.1 Alternative 1 (Preferred: Maximum Transfer).....</i>	<i>13</i>
<i>5.1.2 Alternative 2 (Non-Preferred: No Transfer)</i>	<i>15</i>
<i>5.1.3 Alternative 3 (Non-Preferred: Status quo (No Action)).....</i>	<i>16</i>
5.2 RSA ALTERNATIVES	16
<i>5.2.1 Alternative 1 (No Research Set-Asides/No-Action).....</i>	<i>16</i>
<i>5.2.2 Alternative 2 (Preferred: Specify Research Set-Asides/Status quo)</i>	<i>16</i>
5.3 “TRUE” NO-ACTION ALTERNATIVES	16
6.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT AND FISHERIES.....	18
6.1 DESCRIPTION OF THE MANAGED RESOURCE.....	18
<i>6.1.1 Description of the Fisheries</i>	<i>18</i>
<i>6.1.2 Characterization of the Bluefish Stock.....</i>	<i>18</i>
<i>6.1.3 Non-Target Species</i>	<i>19</i>
6.2 HABITAT (INCLUDING ESSENTIAL FISH HABITAT).....	19
<i>6.2.1 Physical Environment.....</i>	<i>19</i>
<i>6.2.2 Essential Fish Habitat (EFH).....</i>	<i>20</i>
<i>6.2.3 Fishery Impact Considerations.....</i>	<i>20</i>
6.3 ESA LISTED SPECIES AND MMPA PROTECTED SPECIES.....	20
<i>6.3.1 Recreational Fisheries Interactions.....</i>	<i>22</i>
<i>6.3.2 Commercial Fisheries Interactions</i>	<i>23</i>
6.4 HUMAN COMMUNITIES	24
<i>6.4.1 Commercial Fishery.....</i>	<i>25</i>
<i>6.4.2 Recreational Fishery</i>	<i>28</i>
<i>6.4.3 Port and Community Description</i>	<i>36</i>
<i>6.4.4 Permit Data.....</i>	<i>37</i>
7.0 ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES	39
7.1 BIOLOGICAL IMPACTS	41
<i>7.1.1 RSA.....</i>	<i>41</i>
7.2 HABITAT IMPACTS	42
<i>7.2.1 Research Sea-Aside Measures</i>	<i>43</i>
7.3 ESA LISTED SPECIES AND MMPA PROTECTED SPECIES.....	43
<i>7.3.1 Impacts to Atlantic Sturgeon.....</i>	<i>43</i>
<i>7.3.2 RSA</i>	<i>43</i>
7.4 SOCIOECONOMIC IMPACTS	46
<i>7.4.1 RSA</i>	<i>47</i>
7.5 CUMULATIVE EFFECTS ANALYSIS.....	49
<i>7.5.1 Consideration of the VECs.....</i>	<i>49</i>
<i>7.5.2 Geographic Boundaries</i>	<i>50</i>
<i>7.5.3 Temporal Boundaries.....</i>	<i>50</i>
<i>7.5.4 Actions Other Than Those Proposed in this Amendment.....</i>	<i>50</i>
<i>7.5.5 Magnitude and Significance of Cumulative Effects</i>	<i>52</i>
<i>7.5.6 Preferred Action on all the VECs.....</i>	<i>66</i>

8.0 APPLICABLE LAWS.....	67
8.1 MAGNUSON-STEVEN'S FISHERY CONSERVATION AND MANAGEMENT ACT (MSA)	67
<i>8.1.1 National Standards.....</i>	<i>67</i>
8.2 NEPA (FONSI)	67
8.3 ENDANGERED SPECIES ACT.....	72
8.4 MARINE MAMMAL PROTECTION ACT.....	72
8.5 COASTAL ZONE MANAGEMENT ACT.....	72
8.6 ADMINISTRATIVE PROCEDURE ACT.....	72
8.7 SECTION 515 (DATA QUALITY ACT).....	73
8.8 PAPERWORK REDUCTION ACT	74
8.9 IMPACTS OF THE PLAN RELATIVE TO FEDERALISM/EO 13132.....	74
8.10 ENVIRONMENTAL JUSTICE/EO 12898.....	ERROR! BOOKMARK NOT DEFINED.
8.11 REGULATORY FLEXIBILITY ANALYSIS.....	75
<i>8.11.1 Initial Regulatory Flexibility Analysis.....</i>	<i>76</i>
<i>8.11.2 Description of Quota-Setting and RSA Alternatives</i>	<i>79</i>
<i>8.11.3 Analyses of Impacts of Alternatives.....</i>	<i>80</i>
<i>8.11.4 Summary of Impacts</i>	<i>94</i>
<i>8.11.5 Other Impacts</i>	<i>96</i>
9.0 ESSENTIAL FISH HABITAT ASSESSMENT	99
10.0 LITERATURE CITED	100
11.0 LIST OF AGENCIES AND PERSONS CONSULTED	103

List of Figures

Figure 1. Specification process for bluefish as described in Amendment 3 to the Bluefish FMP (Omnibus ACL/AM Amendment).....	10
Figure 2. Bluefish commercial and recreational landings 1981-2010.	18
Figure 3. NMFS Northeast statistical areas.	27

List of Tables

Table 1. Values (M lbs bluefish) associated with the three quota-setting alternatives.	13
Table 2. Recommended bluefish management measures for 2012.....	Error! Bookmark not defined.
Table 3. Derivation of alternative bluefish management measures for 2012. All values are in lbs.....	14
Table 4. State-by-state allocation of the 2012 commercial bluefish quota under the three quota-setting alternatives (adjusted for RSA) as well as the reported 2010 commercial landings.	15
. Table 5. Species currently or pending listing under the ESA that co-occur with the bluefish management unit.	21
Table 6. Commercial Fisheries Classification based on 2012 List of Fisheries (LOF).	23
Table 7. Percent contribution of bluefish to the commercial landings and value of all species combined from Maine through East Coast of Florida, 2010.	25
Table 8. Commercial gear types associated with bluefish harvest by federally permitted vessels in 2010.	26
Table 9. Statistical areas that accounted for at least 5 % of the VTR-reported bluefish catch and/or trips in 2010 VTR data.	27
Table 10. The percentage (%) of bluefish caught and landed by recreational fishermen for each mode, Maine through Florida, 1999-2010.	28
Table 11. Number of bluefish recreational fishing trips, recreational harvest limit, and recreational landings from 1991 to 2012.	29
Table 12. Total angler trip expenditures ('000 \$) by mode and state in 2006.	31
Table 13. Angler effort (number of trips) that targeted bluefish in 2010, Maine through Florida.	32
Table 14. Average willingness to pay for a one-day fishing trip, by state.....	33
Table 15. Aggregate willingness to pay for anglers that indicated they were targeting bluefish in 2010.....	34

Table 16. Willingness to pay for a one fish increase in the catch rate of small game per trip, Maine through Virginia.	35
Table 17. MRFSS estimates of 2010 recreational harvest and total catch for bluefish.	36
Table 18. Top ports of bluefish landings (in pounds), based on NMFS 2010 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.	37
Table 19. Dealers reporting buying bluefish by state in 2010.	38
Table 19. Catch and landings levels for the management alternatives.	39
Table 20. Percent difference in 2012 landings limits for each alternative relative to 2011 limits and 2010 landings.	39
Table 21. Expected changes in fishing effort that result from changes to landings limits and fish availability.	40
Table 23. Pounds of RSA under each alternative evaluated.	48
Table 24. 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).	53
Table 24. Summary of the effects of past, present, and reasonably foreseeable future actions on the managed resource.	57
Table 25. Summary of the effects of past, present, and reasonably foreseeable future actions on the non-target species.	59
Table 26. Summary of the effects of past, present, and reasonably foreseeable future actions on the habitat.	61
Table 27. Summary of the effects of past, present, and reasonably foreseeable future actions on the protected resources.	63
Table 28. Summary of the effects of past, present, and reasonably foreseeable future actions on human communities.	65
Table 29. Magnitude and significance of the cumulative effects; the additive and synergistic effects of the preferred action, as well as past, present, and future actions.	66
Table 30. Percentage changes associated with allowable commercial landings for various quota alternatives in 2012 (adjusted quota for RSA) relative to 2010 landings by state.	80
Table 31. Threshold analysis of revenues for participating vessels under Alternative 1 (preferred alternative), based on dealer data.	82
Table 32. Review of revenue impacts under quota Alternative 1 (preferred alternative), by home port state, based on dealer data.	83
Table 33. Threshold analysis of revenues for participating vessels under non-preferred Alternative 2 quota, based on dealer data.	85
Table 34. Review of revenue impacts under non-preferred Alternative 2 quota, by home port state, based on dealer data.	86
Table 35. Federal permits held by the 51 vessels (holding any Federal fishing permit in 2010) projected to have revenue reductions of more than 5% under non-preferred Alternative 2 quota.	88
Table 36. Descriptive information for the 51 vessels (holding any Federal fishing permit in 2010) projected to have revenue reductions of more than 5% under non-preferred Alternative 2 quota. Based on 2010 descriptive data from NMFS permit files.	89
Table 37. Distribution of the 51 vessels (holding any Federal fishing permit in 2010) projected to have revenue reductions of more than 5% under non-preferred Alternative 2 quota. Distribution by state, county, and home port, from 2010 NMFS permit files - home	90
Table 38. Threshold analysis of revenues for participating vessels under Alternative 3 (status quo), based on dealer data.	92
Table 39. Review of revenue impacts under quota Alternative 3 (status quo), by home port state, based on dealer data.	93
Table 40. Counties identified as having ≥ 4 commercial vessels showing revenue reductions of 5 % or more as a consequence of quota scenario 2 evaluated in this document (sections 8.11.2 and 8.11.5).	98

ENVIRONMENTAL ASSESSMENT

4.0 INTRODUCTION AND BACKGROUND OF SPECIFICATION PROCESS

4.1 PURPOSE AND NEED OF THE ACTION

The purpose of this action (specification of bluefish management measures) is to implement the 2012 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 in 2012 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), 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 2012 would be inconsistent with that legislation. As required by the MSA, the Council's Scientific and Statistical Committee (SSC) provides ongoing advice for preventing overfishing and achieving maximum sustainable yield. The Bluefish Monitoring Committee (MC), created through the FMP, develops specific management measures which serve to constrain bluefish catch to the identified levels. The advice of the SSC and MC provided the basis for the Council's development of the preferred bluefish management measures.

Figure 1 provides a diagram of the process for determining annual bluefish management measures that was outlined in Amendment 3 to the FMP (MAFMC 2011). Accordingly, the SSC first 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 uncertainty in the efficacy of the management measures. 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). In the final steps, if desired, the Council may dedicate up to 3 % of those landings for scientific research as a research set-aside (RSA). 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, the specification of an RSA allowance and the transfer of landings to the commercial fishery are reflected in the Council's "preferred" management alternative.

Atlantic Bluefish Flowchart

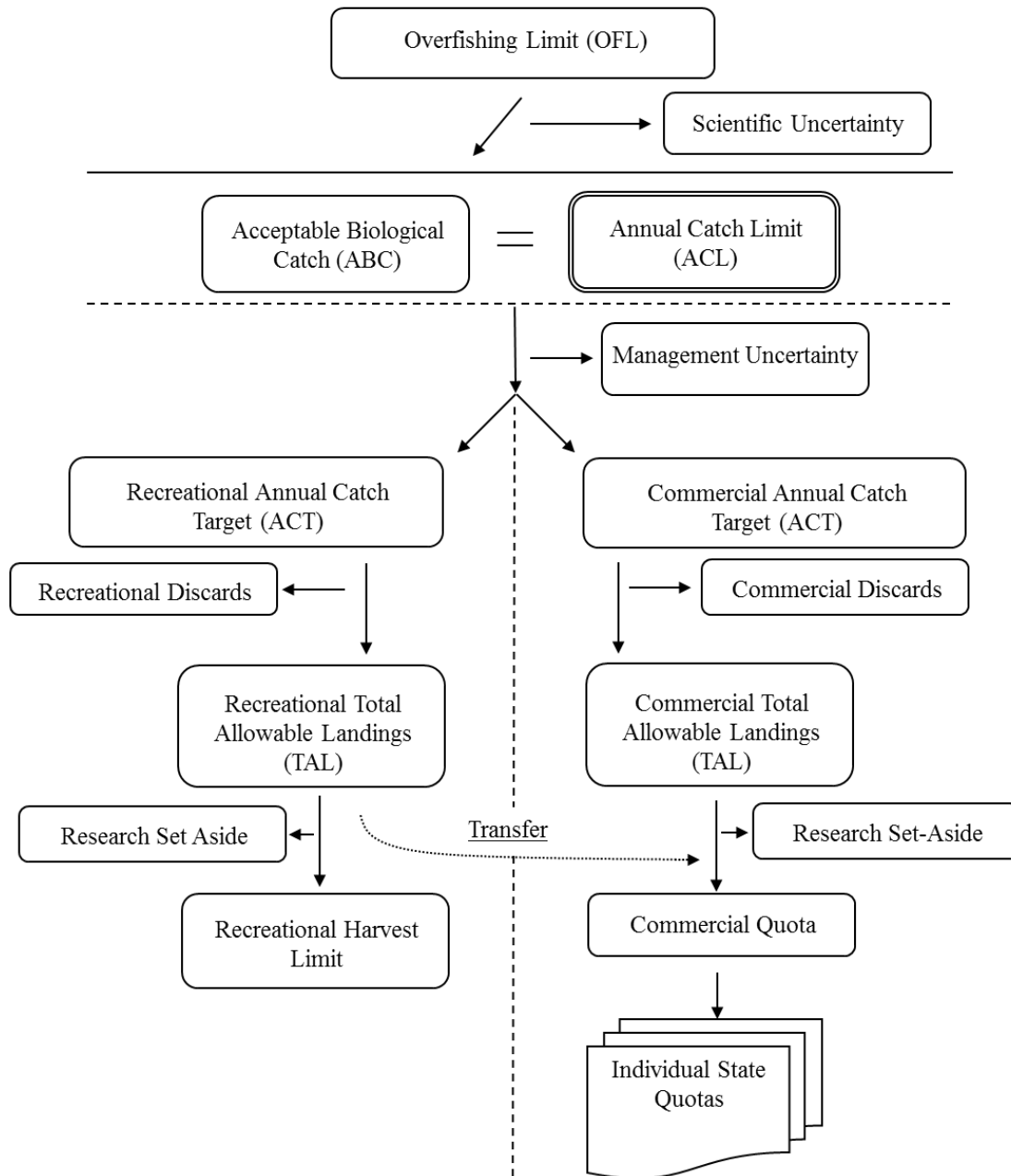


Figure 1. Specification process for bluefish as described in Amendment 3 to the Bluefish FMP (Omnibus ACL/AM Amendment).

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 2012 fishing year, the SSC determined OFL for bluefish to be 40.944 M lb and the ABC to be 32.044 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 26.597 M lb and the commercial ACT (17%) is 5.448 M lb. Estimated discards for the 2012 fishery are the average observed discards for the past three years and are 4.350 M lb 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 22.247 M lb and the commercial TAL is 5.448 M lb. The Council's preferred alternative, which would allow for full utilization of the RSA allowance (up to 3% of the TAL) and maximize the transfer to the commercial fishery, is described in Section 5.0. Besides conveying the Council's preferred management alternative 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 2011 and both management bodies adopted identical management measures for bluefish for 2012.

5.0 MANAGEMENT ALTERNATIVES

5.1 Quota-Setting Alternatives

In this section, bluefish management alternatives for 2012 are described that would establish an ACL, a commercial and recreational ACT, a commercial quota and recreational harvest limit, and also accommodate a research set-aside of available landings. In considering these alternatives, 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 2012 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 Northeast Regional Office (NERO) website: <http://www.nero.noaa.gov/nero/regs/>.

There are three quota-setting alternatives under consideration in this document. 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, “no action”, in this case, would be a failure to make efforts to prevent overfishing, which is inconsistent with the MSA. Therefore, “no action”, for the purposes of this document, is actually a status quo or baseline alternative that would extend existing 2011 management measures into the 2012 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. For no-action (Alternative 3), only commercial quotas and recreational harvest limits are considered since provisions requiring specification of ABC, ACL and ACT were only recently implemented through Amendment 3. A comparison of the action alternatives to “no action” is still possible, however, since only commercial quotas and recreational harvest limits, which all the alternatives consider, are subjected to impact analysis.

Alternatives 1 and 2 include an ABC of 32.044 M lb which is 78 % of OFL (40.944 M lb) and is associated with a 40 % probability of overfishing. According to analyses consistent with the Council's risk policy (MAFMC 2011), management measures based on this ABC level will adequately ensure that overfishing does not occur (SSC report). In accordance with the FMP, the identification of ABC determines ACL which is defined in Amendment 3 as equal to ABC. Commercial and recreational ACTs defined as catch levels reduced from ACL, as needed, to account for management uncertainty, also do not differ under Alternatives 1 and 2. Based on the historic pattern of underharvest of allowable landings, 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 corresponds to a commercial TAL of 5.448 M lb and a recreational TAL of 22.247 M lb.

It is important to note that any commercial quota and recreational harvest limit envisioned in this document may be adjusted by NMFS in the 2012 final rule for bluefish. That adjustment would likely be a result of changes in the expected recreational harvest for 2012 and the effect of those changes on the transfer of landings from the recreational to the commercial fishery.

There are two RSA alternatives under consideration in this document. At the time this document was prepared (November 2011), RSA projects for 2012 had not yet been awarded. The Council approved an RSA of up to 3 % of total landings which was accounted for in the analysis of the commercial quotas and recreational harvest limits, however, the actual 2012 RSA amount will be determined by the specific RSA amount associated with the approved projects.

Table 1. Values (M lbs bluefish) associated with the three quota-setting alternatives.

Alternatives	ABC	ACL	Commercial ACT/ Recreational ACT	RSA*	Commercial Quota	Recreation al Harvest Limit
Alternative 1 (Preferred: Maximum Transfer)	32.044	32.044	5.448 / 26.597	0.848	10.185	17.234
Alternative 2 (Non- Preferred: No Transfer)	32.044	32.044	5.448 / 26.597	0.848	5.284	22.134
Alternative 3 (Non- Preferred: Status quo)	NA	NA	NA	0.105	9.375	17.813

* For Alternatives 1 and 2, assumes preferred RSA Alternative (3% of combined com/rec TAL) is implemented.
For Alternative 3, assumes status quo RSA amount is awarded

5.1.1 Alternative 1 (Preferred: Maximum Transfer)

Alternative 1 would maximize the landings to the commercial fishery as allowed under the FMP. Specifically, under this alternative a transfer of 5.052 M lb (the amount that results in a pre-RSA commercial quota equal to the 10.5 M lb limit commercial quota – see Table 2 below) from the recreational to the commercial fishery would result in a commercial quota of 10.5000 M lb and a recreational harvest limit of 17.767 M lb. Proportional reductions of the RSA allowance (847,997 lbs) results in a commercial quota of 10.185 M lb and an RHL of 17.234 M lb. State commercial shares would range from 968 lb to 3.265 M lb in 2012 (Table 3).

Table 2. Derivation of alternative bluefish management measures for 2012. All values are in lbs.

	Alternatives				
	Alt1	Alt2	Alt3		
Management Measure	Value		Basis	Value	Basis
OFL	40,944,251		per SSC	N/A	
ABC	32,044,190		per SSC	N/A	
ACL	32,044,190		= ABC	N/A	
Mgmt Uncertainty	0		per MC	N/A	
Comm Discards	0		from assessment	N/A	
Rec Discards	3,777,618		2008-2010 MRFSS avg.	N/A	
Comm ACT	5,447,512		(ACL - Mgmt Uncert) * 17%	N/A	
Rec ACT	26,596,678		(ACL - Mgmt Uncert) * 83%	N/A	
Comm TAL	5,447,512		Comm ACT - Disc	4,639,849	17% of TAL, i.e., "Init Comm Quota"
Rec TAL	22,819,060		Rec ACT - Disc	22,653,379	83% of TAL, i.e., "Init RHL"
TAL (combined)	28,266,572		Comm + Rec TAL	27,293,228	Status Quo
Transfer	5,052,488	0	By definition	4,770,803	Status Quo
pre-RSA Comm Quota	10,500,000	5,447,512	Comm TAL + transfer	9,410,652	Status Quo
pre-RSA RHL	17,766,572	22,819,060	Rec TAL - transfer	17,882,576	Status Quo
Comm RSA Deduction (3%)	315,000	163,425	3% of Comm Quota	105,000	Status Quo
Rec RSA Deduction (3%)	532,997	684,572	3% of RHL		
Final Comm Quota	10,185,000	5,284,087	Comm Quota - RSA	9,375,203	Status Quo
Final RHL	17,233,575	22,134,488	RHL - RSA	17,813,025	Status Quo

Table 3. State-by-state allocation of the 2012 commercial bluefish quota under the three quota-setting alternatives (adjusted for RSA) as well as the reported 2010 commercial landings.

State	% of Quota	Alternative 1	Alternative 2	Alternative 3	2010 Landings
ME	0.6685	68,087	35,324	62,673	148
NH	0.4145	42,217	21,903	38,860	3,079
MA	6.7167	684,096	354,916	629,704	586,847
RI	6.8081	693,405	359,746	638,273	351,242
CT	1.2663	128,973	66,912	118,718	22,771
NY	10.3851	1,057,722	548,758	973,624	837,250
NJ	14.8162	1,509,030	782,901	1,389,049	1,382,401
DE	1.8782	191,295	99,246	176,085	19,062
MD	3.0018	305,733	158,618	281,425	112,937
VA	11.8795	1,209,927	627,723	1,113,727	442,050
NC	32.0608	3,265,392	1,694,121	3,005,765	3,216,039
SC	0.0352	3,585	1,860	3,300	433
GA	0.0095	968	502	891	121
FL	10.0597	1,024,580	531,563	943,117	315,632
Total	100.0001	10,185,000	5,284,087	9,375,203	7,290,012

Source for landings data: Dealer Weighout Data, as of November 9, 2011, and South Atlantic General Canvass Data as of June 13, 2011.

5.1.2 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 5.447 M lb and a recreational harvest limit of 22.247 M lb (Table 2). Proportional reductions of the RSA allowance (847,997 lbs) results in a commercial quota of 5.284 M lb and an RHL of 22.134 M lb. State commercial shares would range from 502 lb to 1.694 M lb in 2012 (Table 3).

5.1.3 Alternative 3 (Non-Preferred: Status quo (No Action))

The status quo alternative would maintain the commercial quota (9.375 M lb) and RHL (17.813 M lb) currently in place for the bluefish fishery (Table 2). This alternative also implements status quo RSA level which is currently approved for 105,000 lb. The state commercial shares for this alternative would range from 891 lb to 3.006 M lb in 2012 (Table 3).

5.2 RSA Alternatives

5.2.1 Alternative 1 (No Research Set-Asides/No-Action)

Under this alternative, no RSA will be allowed for bluefish in 2012 and the commercial quotas and recreational harvest limits would not be adjusted downward for the RSAs when established.

5.2.2 Alternative 2 (Preferred: Specify Research Set-Asides/*Status quo*)

As recommended by the Council, this alternative would allow up to 3% of the 2012 bluefish landings be set-aside to fund projects selected under the 2012 Mid-Atlantic RSA Program. The project selection and award process for the 2012 Mid-Atlantic RSA Program has not concluded and therefore, the bluefish research quota award is not known. NMFS will return any un-awarded set-aside amount to the commercial fishery either through the 2012 bluefish specification rulemaking process or through the publication of a separate notice in the Federal Register notifying the public of a quota adjustment.

The MSA requires that interested parties be provided with an opportunity to comment on all proposed exempted fishing permits. Potential environmental impacts of this program on summer flounder, scup, black sea bass, *Illlex*, longfin, butterfish, and Atlantic mackerel are addressed in those respective specification documents. Additional consultation and analysis with respect to NEPA, ESA, MSA, and other applicable law may be necessary if the statement of work changes or additional exemptions are requested.

5.3 “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 2012 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 2011 fishing year and there are no “roll-over” provisions in the FMP. Thus, if the proposed 2012 specifications are not implemented by January 1, 2012, 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 2012 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; (3) no RSA allocated to research in 2012; and (4) 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

The Valued Ecosystem Components (VECs) affected by the alternatives include the biological components of the environment including the managed resource (bluefish) and other non-target species. The other VECs described below are habitat including EFH, endangered and protected resources, and human communities/socio-economic environment, all of which are described below.

6.1 Description of the Managed Resource

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. The commercial landings are based on Dealer Weighout Data, as of November 9, 2011, and South Atlantic General Canvass Data as of June 13, 2011; recreational landings are based on Marine Recreational Fisheries Statistical Survey (MRFSS) data. Additional information of the fisheries can be found in Council meeting materials available at: <http://www.mafmc.org>.

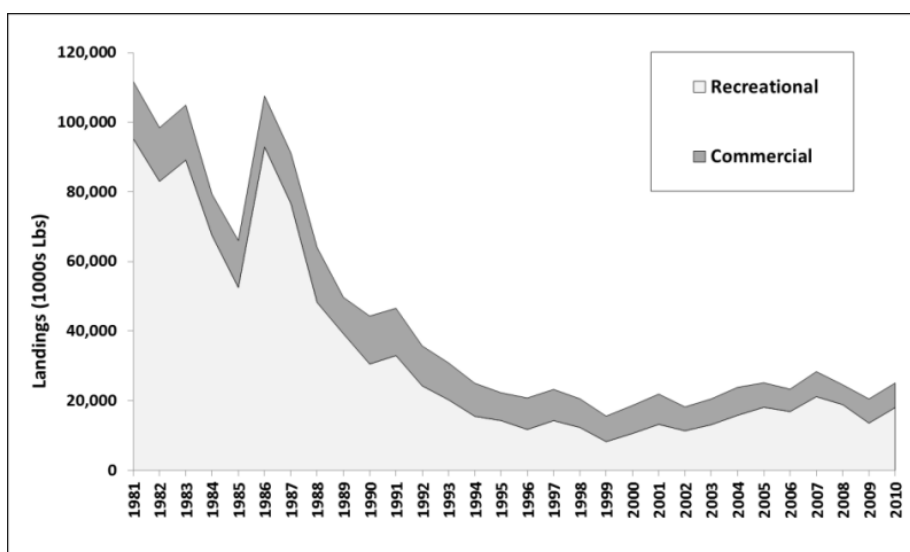


Figure 2. Bluefish commercial and recreational landings 1981-2010.

6.1.2 Characterization of the Bluefish Stock

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 presented in June 2010 (NEFSC 2011) indicated that the bluefish stock is not overfished and overfishing is not occurring based on criteria established in the most recent peer-reviewed stock assessment. The fishing mortality rate (F) was estimated to be 0.14 in 2010, below the reference point $F_{MSY} = 0.19$. Stock biomass was estimated to be 140,297 mt in 2010, about 95 % of B_{MSY} (147,051).

6.1.3 Non-Target Species

The non-target species VEC 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. Among these species, weakfish are considered to be depleted; however, natural mortality rather than fishing mortality is implicated as constraining stock size. Atlantic croaker and spiny dogfish are not overfished, nor is overfishing occurring. Bonito are unregulated and stock status is unknown. 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

An inventory on 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 inventory 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).

Specific habitats that are designated as bluefish EFH are detailed in section 6.2.2 of this EA. Bluefish are a predominantly pelagic species (NMFS 2006). Life history data show that there are only loose associations of bluefish with any particular substrate or submerged aquatic vegetation (SAV; NMFS 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).

6.2.2 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 these source documents are 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>.

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 2002-2010. Potential impacts of the proposed 2012 commercial quota are evaluated in section 7.1 of this EA.

6.3 ESA Listed Species and MMPA Protected Species

Several species protected under the Endangered Species Act (ESA) of 1973 and the Marine Mammal Protection Act of 1972 (MMPA) inhabit the area covered by the bluefish management unit. Table 4 contains the species currently listed as either threatened or endangered under ESA as well as three candidate species.

The three species, which have no history of interaction with the bluefish fishery, cusk (*Brosme brosme*), alewife (*Alosa pseudoharengus*) and blueback herring (*Alosa aestivalis*), are candidate species for listing under the ESA (Table 4). The NERO Protected Resources Division is reviewing information on the candidate species and conservation measures for those species will follow that review, if necessary. More detailed descriptions of the species in Table 4, including

their habitat, ecological relationships, life history, and current stock status are available at: http://www.nero.noaa.gov/prot_res/.

Table 4. Species currently or pending listing under the ESA that co-occur with the bluefish management unit.

Species	Common name	Scientific Name	Status
Cetaceans	Northern right whale	<i>Eubalaena glacialis</i>	Endangered
	Humpback whale	<i>Megaptera novaeangliae</i>	Endangered
	Fin whale	<i>Balaenoptera physalus</i>	Endangered
	Blue whale	<i>Balaenoptera musculus</i>	Endangered
	Sei whale	<i>Balaenoptera borealis</i>	Endangered
	Sperm whale	<i>Physeter macrocephalus</i>	Endangered
Sea Turtles	Leatherback sea turtle	<i>Dermochelys coriacea</i>	Endangered
	Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	Endangered
	Green sea turtle	<i>Chelonia mydas</i>	Endangered
	Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	Endangered
	Loggerhead sea turtle	<i>Caretta caretta</i>	Threatened
Fishes	Shortnose sturgeon	<i>Acipenser brevirostrum</i>	Endangered
	Atlantic salmon	<i>Salmo salar</i>	Endangered
	Smalltooth sawfish	<i>Pristis pectinata</i>	Endangered
	Cusk	<i>Brosme brosme</i>	Candidate*
	Atlantic sturgeon	<i>Acipenser oxyrinchus</i>	Threatened and Endangered†
	Alewife	<i>Alosa pseudoharengus</i>	Candidate*
	Blueback Herring	<i>Alosa aestivalis</i>	Candidate*

* Proposed as of the preparation of this document.

† Gulf of Maine DPS is listed as threatened; New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs are listed as endangered

Description of Atlantic Sturgeon

A status review for Atlantic sturgeon was completed in 2007 which indicated that five distinct population segments (DPS) of Atlantic sturgeon exist in the United States (ASSRT 2007). On October 6, 2010, NMFS proposed listing these five DPSs of Atlantic sturgeon along the U.S. East Coast as either threatened or endangered species (75 FR 61872 and 75 FR 61904). A final listing was published on February 6, 2012 (77 FR 5880 and 75 FR 5914). The GOM DPS of Atlantic sturgeon has been listed as threatened, and the New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs of Atlantic sturgeon have been listed as endangered.

Atlantic sturgeon is an anadromous species that spawns in relatively low salinity, river environments, but spends most of its life in the marine and estuarine environments from Labrador, Canada to the Saint Johns River, Florida (Holland and Yelverton 1973, Dovel and Berggen 1983, Waldman et al. 1996, Kynard and Horgan 2002, Dadswell 2006, ASSRT 2007). Tracking and tagging studies have shown that subadult and adult Atlantic sturgeon that originate from different rivers mix within the marine environment, utilizing ocean and estuarine waters for life functions such as foraging and overwintering (Stein et al. 2004a, Dadswell 2006, ASSRT 2007, Laney et al. 2007, Dunton et al. 2010). Fishery-dependent data as well as fishery-independent data demonstrate that Atlantic sturgeon use relatively shallow inshore areas of the continental shelf; primarily waters less than 50 m (Stein et al. 2004b, ASMFC 2007, Dunton et al. 2010). The data also suggest regional differences in Atlantic sturgeon depth distribution with sturgeon observed in waters primarily less than 20 m in the Mid-Atlantic Bight and in deeper waters in the Gulf of Maine (Stein et al. 2004b, ASMFC 2007, Dunton et al. 2010). Information on population sizes for each Atlantic sturgeon DPS is very limited. Based on the best available information, NMFS has concluded that bycatch, vessel strikes, water quality and water availability, dams, lack of regulatory mechanisms for protecting the fish, and dredging are the most significant threats to Atlantic sturgeon.

Comprehensive information on current abundance of Atlantic sturgeon is lacking for all of the spawning rivers (ASSRT 2007). Based on data through 1998, an estimate of 863 spawning adults per year was developed for the Hudson River (Kahnle et al. 2007), and an estimate of 343 spawning adults per year is available for the Altamaha River, GA, based on data collected in 2004-2005 (Schueller and Peterson 2006). Data collected from the Hudson River and Altamaha River studies cannot be used to estimate the total number of adults in either subpopulation, since mature Atlantic sturgeon may not spawn every year, and it is unclear to what extent mature fish in a non-spawning condition occur on the spawning grounds. Nevertheless, since the Hudson and Altamaha Rivers are presumed to have the healthiest Atlantic sturgeon subpopulations within the United States, other U.S. subpopulations are predicted to have fewer spawning adults than either the Hudson or the Altamaha (ASSRT 2007). It is also important to note that the estimates above represent only a fraction of the total population size as spawning adults comprise only a portion of the total population (e.g., this estimate does not include subadults and early life stages).

6.3.1 Recreational Fisheries Interactions

Recreational fisheries have limited direct interaction with ESA-listed or MMPA-protected species. Anecdotal information suggests recreational anglers can potentially hook Atlantic sturgeon while fishing for striped bass, but this is likely an infrequent occurrence that does not significantly affect their survival (Damon-Randall, NMFS, Protected Resources Division, pers. comm.). Recreational fishermen are, however, a major source of debris in the marine environment (O'Hara et al. 1988). 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 often harvests mixed species, listed above (Section 6.1.3) and has been categorized under the 2012 List of Fisheries according to historic interactions with protected species (Table 5). The NMFS observer data for the period of January 2007 to November 2010 indicate no marine mammal or turtle interactions where bluefish was the species being targeted.

Table 5. Commercial Fisheries Classification based on 2012 List of Fisheries (LOF).

Fishery (Action Area)	Gears	LOF	Potential for Interactions
See section 6.4.2 for a description of the areas fished the managed resources	Mid-Atlantic Gillnet	Cat. I	bottlenose, common, and white-sided dolphins; harbor porpoise; gray, harbor and harp seals; humpback, short- and long-finned pilot, and minke whales
	Mid-Atlantic bottom trawl fishery	Cat. II	bottlenose, common, and white-sided dolphins; 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

Atlantic Sturgeon Interactions

Atlantic sturgeon are known to be captured in sink gillnet, drift gillnet, and otter trawl gear (Stein et al. 2004a, ASMFC TC 2007). Of these gear types, sink gillnet gear poses the greatest known risk of mortality for bycaught sturgeon (ASMFC TC 2007) and this is the primary gear used to harvest bluefish. Sturgeon deaths were rarely reported in the otter trawl observer dataset (ASMFC TC 2007). However, the level of mortality after release from the gear is unknown (Stein et al. 2004a). In a review of the Northeast Fishery Observer Program (NEFOP) database for the years 2001-2006, observed bycatch of Atlantic sturgeon was used to calculate bycatch rates that were then applied to commercial fishing effort to estimate overall bycatch of Atlantic sturgeon in commercial fisheries. This review indicated sturgeon bycatch occurred in statistical areas abutting the coast from Massachusetts (statistical area 514) to North Carolina (statistical area 635) (ASMFC TC 2007). Based on the available data, participants in an ASMFC bycatch

workshop concluded that sturgeon encounters tended to occur in waters less than 50 m throughout the year, although seasonal patterns exist (ASMFC TC 2007). The ASMFC analysis determined that an average of 650 Atlantic sturgeon mortalities occurred per year (during the 2001 to 2006 timeframe) in sink gillnet fisheries. Stein et al. (2004a), based on a review of the NMFS Observer Database from 1989-2000, found clinal variation in the bycatch rate of sturgeon in sink gillnet gear with lowest rates occurring off of Maine and highest rates off of North Carolina for all months of the year.

In an updated, preliminary analysis, the NEFSC was able to use data from the NEFOP database to provide updated estimates for the 2006 to 2010 timeframe. Data were limited by observer coverage to waters outside the coastal boundary (fzone>0) and north of Cape Hatteras, NC. Sturgeon included in the data set were those identified by federal observers as Atlantic sturgeon, as well as those categorized as unknown sturgeon. At this time, data were limited to information collected by the NEFOP; limited data collected in the At-Sea Monitoring Program were not included, although preliminary views suggest the incidence of sturgeon encounters was low.

The preliminary analysis apportioned the sturgeon takes to specific fishery management plans. The analysis estimates that between 2006 and 2010, there were 2,250 to 3,862 encounters per year in gillnet and trawl fisheries. The results estimated that the average annual encounter rate in the Atlantic bluefish fishery was 280, with an estimated 38 mortalities. A total of 160 encounters and 32 mortalities were attributed to the Atlantic bluefish gillnet fishery, and 120 encounters and 6 mortalities were attributed to the Atlantic bluefish trawl fishery. The estimated annual mortalities of Atlantic sturgeon in the Atlantic bluefish fishery represent approximately 11% of the total commercial fishery-related mortalities.

Injury and mortality of Atlantic sturgeon from interactions with commercial fishing gear are a factor in the recovery of the DPSs, and was a primary reason cited for the proposals to list the DPSs under the ESA. Since the Atlantic sturgeon DPSs have been listed as endangered and threatened under the ESA, the existing Section 7 consultation for the bluefish fishery has been reinitiated, and additional information will be included in the resulting Biological Opinion to describe any impacts of the fishery on Atlantic sturgeon and define any measures needed to mitigate those impacts, if necessary. During the re-initiation, the effects of the fishery on the listed DPSs will be fully examined and any bycatch reduction requirements will be addressed, as needed, based on the outcome and recommendations resulting from the re-initiation. NMFS has determined that the continued authorization of the Atlantic bluefish fishery during the consultation period, including the authorization of those fisheries to operate under the measure proposed in this action, is not likely to jeopardize the continued existence of ESA-listed species or result in the destructive or adverse modification of critical habitat.

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.

6.4.1 Commercial Fishery

In 2010, commercial vessels landed about 7.290 M lb of bluefish valued at approximately \$3.14 million. Average coastwide ex-vessel price of bluefish was \$0.43/lb in 2010, a 10 % increase from the previous year (2009 price = \$0.39/lb). The relative value of bluefish is very low among commercially landed species, approximately 0.30 % and 0.18 % of the total weight and value, respectively of all finfish and shellfish landed along the U.S. Atlantic coast in 2010. For states where bluefish were commercially landed, the contribution of bluefish to the total value of all finfish and shellfish varied by state in 2010 (Table 6). Bluefish ranged from less than 0.01 % of total commercial value in Maine to 4.47 % in North Carolina. There were no bluefish landings in Pennsylvania in 2009. 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., 2009), and it is not expected to change considerably in 2012.

Table 6. Percent contribution of bluefish to the commercial landings and value of all species combined from Maine through East Coast of Florida, 2010.

State	Pounds of Bluefish as a Percentage of all Species	Value of Bluefish as a Percentage of all Species
ME	< 0.00%	< 0.00%
NH	0.03%	0.01%
MA	0.09%	0.08%
RI	0.29%	0.24%
CT	0.15%	0.07%
NY	1.50%	1.26%
NJ	0.29%	0.33%
DE	0.31%	0.13%
MD	0.08%	0.05%
VA	0.08%	0.11%
NC	4.47%	1.41%
SC	0.00%	0.00%
GA	0.00%	0.00%
FL (East Coast)	1.09%	0.24%
Total	0.30%	0.18%

Source: Commercial Fisheries Database, as of November 9, 2011; and South Atlantic General Canvass Data as of June 13, 2011.

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 2.469 billion lb of fish and shellfish in 2009. Those landings have been

valued at approximately \$1.712 billion. Total landed value ranged from approximately \$192 thousand in Pennsylvania to \$479 million in Massachusetts. 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 1,637 commercial trips targeted bluefish (bluefish \geq 50 % of total catch) in 2010 (Table 7). Landings from directed trips (3.492 M lb) are approximately 47.9 % of coastwide commercial bluefish landings for 2010 (7.290 M lb). Gillnets accounted for 86.3 % of the directed catch while trawls, traps, and hook gear accounted for 6.0, 4.2, and 3.5 % respectively. Importantly, vessels with state issued permits only are not required to complete VTRs so total VTR landings are less than total dealer-reported landings.

Table 7. Commercial gear types associated with bluefish harvest by federally permitted vessels in 2010.

Commercial Gear Type	Trips	Landings (lbs)	Pct Total
GILL NET	1,008	3,013,277	86.29%
TRAWL, OTTER, BOTTOM	38	208,618	5.97%
POTS AND TRAPS	31	147,688	4.23%
HOOK AND LINE	553	121,859	3.49%
OTHER	7	672	0.02%
TOTAL	1,637	3,492,114	100.0%

Source: VTR Data as of June 8, 2011.

Description of the Areas Fished

The Northeast Region is divided into 46 statistical areas for Federal fisheries management (Figure 3). According to VTR data, five statistical areas collectively accounted for 65.6 % of VTR-reported landings in 2010, with each contributing greater than 5.0 % of the total (Table 8). In contrast these areas represented only 20.1 % of the trips that landed bluefish. Note that the vessel trip report database used to characterize the distribution of commercial harvest does not extend outside of the Northeast Region (i.e., south of Cape Hatteras). Additionally, vessels with state-issued permits only are not required to complete VTRs.

Table 8. Statistical areas that accounted for at least 5 % of the VTR-reported bluefish catch and/or trips in 2010 VTR data.

Statistical Area	Catch (%)	Trips (%)
635	26.66%	2.80%
612	14.88%	10.45%
636	12.40%	0.98%
614	6.41%	3.97%
615	5.21%	1.86%

Source: VTR Data as of June 8, 2011.

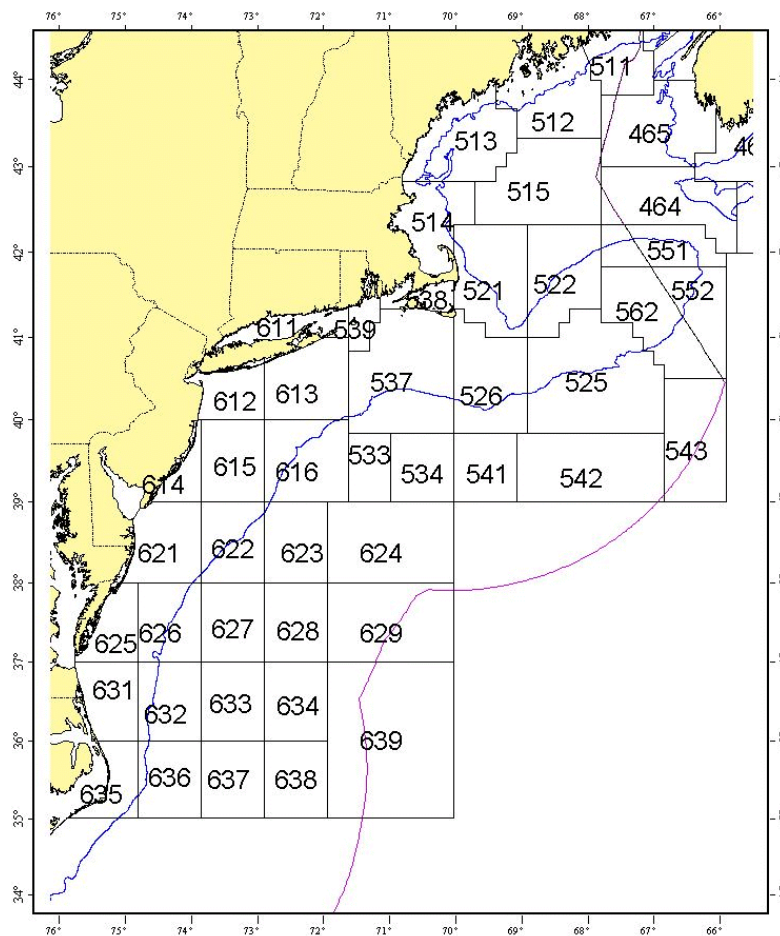


Figure 3. NMFS Northeast statistical areas.

6.4.2 Recreational Fishery

MRFSS catch data by mode indicates that approximately 52.05 % of bluefish were caught by private and rental boats between 1999 and 2010 (Table 9). In addition, 41.23 % of bluefish were caught from shore and 6.72 % from party and charter boats for the same time period (Table 9).

Table 9. The percentage (%) of bluefish caught and landed by recreational fishermen for each mode, Maine through Florida, 1999-2010.

Mode	Catch (Number A+B1+B2)	Landings (Weight A+B1)
Private/Rental	52.05%	56.45%
Shore	41.23%	23.28%
Party/Charter	6.72%	20.27%
Total	100.0%	100.0%

Source: Marine Recreational Fisheries Statistics Survey Data, November 22, 2011.

Trends in directed fishing for bluefish from 1991 to 2010 are provided in Table 10. The lowest annual estimate of directed trips was 1.3 million in 1999; the highest annual estimate of directed trips was 5.8 million trips in 1991. In 2010, anglers targeted bluefish in 1.7 million trips.

Table 10. Number of bluefish recreational fishing trips, recreational harvest limit, and recreational landings from 1991 to 2012.

Year	Number of Fishing Trips^a	Recreational Harvest Limit ('000 lb)	Recreational Landings ('000 lb)^b
1991	5,811,446	None	32,997
1992	4,261,811	None	24,275
1993	3,999,487	None	20,292
1994	3,414,337	None	15,541
1995	3,409,966	None	14,307
1996	2,523,984	None	11,746
1997	2,021,713	None	14,302
1998	1,838,525	None	12,334
1999	1,316,939	None	8,253
2000	1,526,554	25,745	10,606
2001	2,156,043	28,258	13,230
2002	1,893,640	16,365	11,371
2003	2,100,057	26,691	13,136
2004	2,178,373	21,150	15,828
2005	2,511,295	20,157	18,132
2006	2,050,409	16,473	16,752
2007	2,636,900	18,823	21,181
2008	2,210,230	20,414	18,900
2009	1,532,445	19,528	13,583
2010	1,745,312	18,631	16,166
2011	NA	17,813	NA
2012	-	17.234 ^c	-

^aEstimated number of recreational fishing trips (expanded) where the primary species targeted was bluefish, Maine – Florida's East Coast. Source: Scott Steinback, NMFS/NEFSC.

^bAtlantic coast from Maine through Florida's east coast.

^cAlternative 1 (preferred) adjusted for RSA.

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 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 11), 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 2010 dollars are \$161.31 for party/charter boat trips, \$49.02 for private/rental boat trips, and \$43.63 for shore trips.¹ 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 \$74.20 million on trip-related goods and services in 2010. Approximately \$25.21 million was spent by anglers fishing aboard private/rental boats, \$41.20

¹The 2006 estimate of expenditures by mode were adjusted to its 2010 equivalent by using the Bureau of Labor Statistics Consumer Price Index.

million by those fishing from shore, and \$7.79 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, boats, etc.). Although some of these items may be purchased with the intent of targeting/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 through Florida cannot be calculated.

Table 11. 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.

Table 12. Angler effort (number of trips) that targeted bluefish in 2010, Maine through Florida.

Mode	Total Angler Effort	Angler Effort Targeting Bluefish ^a	Percent Angler Effort Targeting Bluefish
Party/Charter	1,634,404	58,457	3.58%
Private/Rental	23,091,530	624,894	2.71%
Shore	19,231,201	1,061,961	5.52%
Total	43,957,135	1,745,312	3.97%

^aTotal 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 2010 was likely to be between \$111.30 million (\$74.20 million * 1.5) and \$148.40 million (\$74.20 million * 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 13 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 13 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 13. 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 13. Average willingness to pay for a one-day fishing trip, by state.

State	Mean 1994 (\$'s) ^a	Adjusted to 2010 (\$'s) ^b
ME	6.40	9.42
NH	0.85	1.25
MA	8.38	12.33
RI	4.23	6.22
CT	3.07	4.52
NY	21.58	31.75
NJ	14.12	20.78
DE	1.43	2.10
MD	12.09	17.97
VA	42.33	62.28

^aSource: Hicks *et al.* 1999.

^bPrices were adjusted using the Bureau of Labor Statistics Consumer Price Index.

Assuming the average willingness to pay values shown in Table 13 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 14 shows the aggregate estimated willingness to pay by state for anglers that targeted bluefish in 2010 (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 14. Aggregate willingness to pay for anglers that indicated they were targeting bluefish in 2010.

State	Total Effort Targeting Bluefish^a	Willingness to Pay (\$'s)
ME	15,595	146,905
NH	6,726	8,408
MA	273,197	3,368,519
RI	91,360	568,259
CT	189,957	858,606
NY	438,632	13,926,566
NJ	284,687	5,915,796
DE	44,746	93,967
MD	70,749	1,258,625
VA	50,880	3,168,806

^aTotal 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 15 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 \$4.55 (the 1994 value adjusted to its 2010 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 15.

Table 15. 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 2010 (\$'s) ^b
ME	3.74	5.50
NH	3.25	4.78
MA	3.09	4.55
RI	3.13	4.61
CT	3.29	4.84
NY	2.43	3.58
NJ	2.69	3.96
DE	3.00	4.41
MD	3.44	5.06
VA	2.46	3.62
All States	2.89	4.25

^aSource: Hicks *et al.* 1999.

^bPrices 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 2010 (Maine through Virginia) was \$103.91 million (total trips (24.45 million) x average per trip value (\$4.25). 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 16. Twelve ports qualified as "top bluefish ports", i.e., those ports where 100,000 pounds or more of bluefish were landed (Table 16). Wanchese, NC was by far the most important commercial bluefish port with over 2.170 M lb landed while the second most important port (Barnegat Light/Long Beach, NJ) had landings of 830,001 lb and all other ports less than 500,000 lb. The ranking of recreational fisheries landings (numbers of fish and pounds of fish) by state in 2010 is provided in Table 17.

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 16. Top ports of bluefish landings (in pounds), based on NMFS 2010 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, NC	2,170,087	36
BARNEGAT LIGHT/LONG BEACH, NJ	830,001	26
ENGELHARD, NC	374,970	16
HATTERAS, NC	364,811	17
POINT PLEASANT, NJ	269,779	39
BELFORD, NJ	254,567	17
POINT JUDITH, RI	250,852	102
CHATHAM, MA	188,850	48
MONTAUK, NY	181,513	92
GREENPORT, NY	173,843	4
HAMPTON BAYS, NY	146,934	32
PROVINCETOWN, MA	129,354	12

^aPorts with less than 3 vessels not reported for confidentiality issues.

Source: Dealer Weighout Data, as of November 9, 2011.

Table 17. MRFSS estimates of 2010 recreational harvest and total catch for bluefish.

State	Harvest (A+B1)		Catch (A+B1+B2)
	Pounds of Fish	Number of Fish	Number of Fish
ME	72,553	14,359	25,621
NH	15,926	1999	2,402
MA	2,178,348	334,080	1,229,659
RI	1,142,351	166,589	273,389
CT	2,832,816	525,551	1,268,809
NY	3,576,322	983,529	2,372,069
NJ	2,560,987	696,823	2,219,104
DE	63,883	54,866	154,877
MD	398,614	301,279	459,156
VA	473,570	377,394	901,189
NC	1,184,723	1,371,494	3,512,484
SC	363,234	443,268	781,391
GA	11,669	14,966	152,644
FL (East Coast)	1,290,842	840,786	2,450,407
Total	16,165,838	6,126,983	15,803,201

Source: Marine Recreational Fisheries Statistics Survey November 28, 2011.

6.4.4 Permit Data

Federally Permitted Vessels

NMFS/NERO Federal permit data indicate that a total of 3,019 commercial and 971 recreational (party/charter) bluefish permits were issued in 2010. Among these, 502 vessels had both commercial and party/charter bluefish permits.

A subset of federally-permitted vessels was active in 2010. Dealer reports indicate that 583 vessels with commercial (not including party charter) bluefish permits actually landed bluefish. According to VTR data, 443 party/charter vessels reported catching bluefish from Maine through North Carolina with 437 of these vessels retaining bluefish.

Dealers

Of the 622 federally permitted bluefish dealers, there were 160 dealers who actually bought bluefish in 2010. They were distributed by state as indicated in Table 18. Employment data for these specific firms are not available. In 2010, the 160 active dealers bought approximately 6.591 M lbs of bluefish for \$2.614 million. This occurred through 27,781 transactions at an average of 237 pounds, less than \$100 (\$94.09) per transaction.

. **Table 18.** Dealers reporting buying bluefish by state in 2010.

Number of Dealers	MA	NY	RI	NC	VA	NJ	FL	ME
	46	39	24	19	10	9	5	3

Note: States with less than 3 dealers reporting not reported for confidentiality issues.

Source: Dealer Weighout Data, as of Nov 9, 2011.

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7.0 ENVIRONMENTAL CONSEQUENCES OF ALTERNATIVES

This section presents an analysis of the impacts of the proposed actions (Section 5.0) on the VECs (Section 6.0). Table 19, below, is provided to re-iterate the management measures that correspond to each of the alternatives.

Table 19. Catch and landings levels for the management alternatives.

Alternatives	ABC	ACL	Commercial ACT/ Recreational ACT	RSA*	Commercial Quota	Recreational Harvest Limit
Alternative 1 (Preferred: Maximum Transfer)	32.044	32.044	5.448 / 26.597	0.831	10.185	17.234
Alternative 2 (Non- Preferred: No Transfer)	32.044	32.044	5.448 / 26.597	0.831	5.284	22.134
Alternative 3 (Non- Preferred: Status quo)	NA	NA	NA	0.105	9.375	17.813

* For Alternatives 1 and 2, assumes preferred RSA Alternative (3% of combined com/rec TAL) is implemented. For Alternative 3, assumes status quo RSA amount is awarded

In comparing the alternatives, the proposed 2012 allowable landings under each alternative are compared to the 2011 landings limits (commercial and recreational) as well as the 2010 realized landings. The relative increase or decrease under the alternatives is then expressed as a percentage (Table 20).

Table 20. Percent difference in 2012 landings limits for each alternative relative to 2011 limits and 2010 landings.

		Alternative 1 (Preferred: Maximum Transfer)	Alternative 2 (Non-Preferred: No Transfer)	Alternative 3 (Non-Preferred: Status quo)
2011	Commercial Quota	+8.6	-43.6	0.0
	Recreational Harvest Limit	-3.3	+24.3	0.0
2010	Commercial Landings	+39.7	-27.5	+28.6
	Recreational Landings	+6.6	+36.9	+10.2

Changes in landings limits can produce changes in fishing effort and interactions between fishing gear and habitat, non-target species and protected species is related to these changes in fishing effort. The direction and magnitude of the change is also dependent on other factors such as the

availability of fish to the fleet. Availability may be a function of both spatial distribution and abundance. While the magnitude of any change in effort is difficult to quantify, general expectations exist about the directionality of changes in effort in response to changes in landings limits and availability (Table 21).

Table 21. Expected changes in fishing effort that result from changes to landings limits and fish availability.

Change in quota	Fish abundance/availability		
	Decrease in availability	No change in availability	Increase in availability
Decrease in quota	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.	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.	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	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.	Fishing effort may remain the same given the quota has not changed and availability is expected to be similar.	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	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.	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.	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 mitigated 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, in 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.

For all alternatives, the availability of the bluefish resource is projected to increase in 2012 (right column in Table 21) both as a function of stock productivity and generally consistent fishing mortality through implementation of any of the proposed alternatives. In terms of the directionality of the “quota”, the limit on total landings, will either go up slightly (Alternatives 1 and 2; bottom row in Table 21) or stay the same (Alternative 3; middle row in Table 21). The effects on overall effort are expected to be null, on average, but could slightly decrease depending on specific circumstances described above. Alternative 2 presents the largest departure from status quo conditions by apportioning 83% of landings to the recreational fishery such that effort from commercial gear would have the greatest likelihood to decrease under that alternative. In general, null to decreasing effort, especially in the commercial fishery is expected to generate null to positive impacts on the affected VECs.

7.1 Biological Impacts

Biological impacts include the effects of the actions on the managed resource and non-target species. The overall catch limits under Alternatives 1 (preferred) and 2 are expressly intended to prevent overfishing and would result in corresponding positive impacts on the bluefish population. An increase in fish availability would have neutral to slightly positive effects on non-target and protected species (Table 21). Alternative 2 (no transfer) would further impose a 43.6 % decrease in the commercial quota (Table 21) compared to status quo (Alternative 3) which would likely shorten the commercial fishing season and minimize commercial effort relative to the other two alternatives. Alternative 3 (status quo) is expected to result in neutral to positive biological impacts somewhere between Alternatives 1 and 2. Biological impacts differ between the recreational and commercial fisheries as stated in Sections 6.1.3 (non-target species) and 6.3 (Protected Resources). The proportionality of total effort among the fisheries is likely to remain consistent with the status quo under Alternatives 1 and 3, while a downward shift in commercial effort and associated impacts (see above) would occur under Alternative 2. In summary, all three alternatives have impacts that range from neutral to positive, however, the greatest potential for positive biological impacts are associated with Alternative 2 (no transfer), followed by Alternative 3 (status quo), and Alternative 1 (maximum transfer) has the potential for the least positive biological impacts.

7.1.1 RSA

Under alternative 1, there would not be a set-aside for 2012, and the RSA quota amounts would not be deducted from the commercial quota and recreational harvest limit. Because all landings count against the overall quota regardless of whether or not an RSA is implemented, the biological impacts would not change if this alternative were adopted. Under this alternative, there would also be no indirect positive effects from broadening the scientific base upon which management decisions are made.

Under alternative 2, RSA quota would be awarded to selected projects and deducted from the commercial quota and recreational harvest limit. Because the RSA quota is a part of landings limits, no additional mortality would occur if this alternative were adopted. In addition, this alternative is expected to indirectly benefit the resource as selected projects will likely provide information that will improve resource science and management.

Vessels harvesting research quota in support of approved research projects would be issued an exempted fishery permit (EFP) authorizing them to exceed Federal possession limits and to fish during Federal quota closures. These exemptions are necessary to allow project investigators to recover research expenses as well as adequately compensate fishing industry participants harvesting research quota. Vessels harvesting research quota would operate within all other regulations, unless otherwise exempted through a separate EFP. Because commercial quota closures or recreational harvest limits may or may not occur during a given fishing year, exemption from these closures will have no additional environmental impact. Exemption from possession limits could result in compensation fishing where vessels alter their normal fishing behavior; such as extending tow duration or fishing longer than they otherwise would for example. However, this slight alteration in fishing behavior is expected to have negligible impacts beyond that of the vessels operating within the full suite of fishery regulations.

Research activities would not result in additional fishing effort. Research vessels would require an EFP as needed. If not exempted, vessels must follow all other regulations for non-target species. Exemption from bluefish closures would also be needed to ensure the survey is not disrupted if federal waters are closed to possession during the study period.

7.2 Habitat Impacts

Habitat impacts in this fishery are primarily associated with bottom trawling since gillnets and hook-and-line, the other gear types used, are not associated with adverse impacts to habitat. Because there is no significant directed trawl fishery for bluefish (Table 7), bottom trawling activity is likely related to availability and value of other species. This means slight changes in trawling activity could occur unrelated to whether the bluefish quota is increased (Alternative 1), decreased (Alternative 2) or held constant (Alternative 3). 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, 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 MSFCMA.

7.2.1 RSA

Because all bluefish landings count against the overall quota regardless of whether or not an RSA is implemented, neither alternative is expected to change the level of bluefish fishing effort. In addition, the manner in which this fishery operates is not expected to change or be redistributed by gear under either alternative.

Although under Alternative 2 exemptions would be issued that would exempt vessels from possession limits and quota closures, there would be no additional impact on habitat because the RSA quota is part of, and not in addition to the overall recreational and commercial landings limits. Therefore, each of these alternatives will likely result in minimal adverse effects of fishing 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 6.2 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) and Harbor Porpoise Take Reduction Plan (HPTRP). These plans contain measures designed to reduce interactions/impacts associated with fishing gears. Interaction between endangered / protected resources and bluefish fishing gear is also affected by species' abundances.

As described above in Section 7.1, bluefish availability is expected to increase in 2012 such that fishing effort either remains constant or decreases. Although not known with precision, a decrease in fishing effort is expected to have effects on these species that are neutral to slightly positive, when compared to existing impacts (Table 21). Alternative 2 includes a substantial decrease in commercial effort and is expected to result in neutral to positive impacts on ESA-listed and MMPA protected species (Table 21). Alternative 3 (status quo) is identical to the 2011 quota and is expected to result in impacts on ESA listed and MMPA protected species that range from neutral to positive (Table 21). The potential for impacts on protected resources is generally restricted to the commercial fishery which uses gear which can directly interact with these species, although as stated in Section 6.3, aside from Atlantic sturgeon (see below), there have been no observed commercial interactions with protected resources in recent years. Recreational fishery interactions remain speculative to non-existent.

In summary, none of these alternatives is expected to affect ESA listed and MMPA protected species in any manner not considered in a prior consultation on this fishery and will have no adverse impacts on protected resources, relative to 2011.

7.3.1 Impacts to Atlantic Sturgeon

On February 6, 2012, NMFS listed the Gulf of Maine distinct population segment (DPS) of Atlantic sturgeon as threatened, and listed the New York Bight, Chesapeake Bay, Carolina, and South Atlantic DPSs of Atlantic sturgeon as endangered (77 FR 5880 and 75 FR 5914). This

action considered whether the Atlantic bluefish fishery, including implementation of the proposed action, is likely to jeopardize Atlantic sturgeon DPSs, as they were proposed to be listed, and concluded that it is not. While it is possible there may be interactions between Atlantic sturgeon and gear used in the Atlantic bluefish fishery, the number of interactions that will occur during the limited duration of this action is not likely to cause an appreciable reduction in survival and recovery. This is supported by updated bycatch estimates based upon NEFOP data (2006-2010).

Atlantic sturgeon are known to be captured in sink gillnet, drift gillnet, and otter trawl gear. Of these gear types, sink gillnet gear poses the greatest known risk of mortality for bycaught sturgeon. Sturgeon deaths were rarely reported in the otter trawl observer dataset. Based on observer data, discard mortality in gillnets (except monkfish gillnets) is estimated to be 20%, while mortality in otter trawls is only 5%. In an updated, preliminary analysis, the Northeast Fisheries Science Center (NEFSC) was able to use data from the NEFOP database to provide updated estimates for the 2006 to 2010 timeframe. Data were limited by observer coverage to waters outside the coastal boundary ($fzone > 0$) and north of Cape Hatteras, NC. Sturgeon included in the data set were those identified by Federal observers as Atlantic sturgeon, as well as those categorized as unknown sturgeon. At this time, data were limited to information collected by the NEFOP; limited data collected in the At-Sea Monitoring Program were not included, although preliminary views suggest the incidence of sturgeon encounters was low.

The preliminary analysis apportioned the sturgeon takes to specific gears. The analysis estimates that between 2006 and 2010, there were 2,250 to 3,862 encounters per year in gillnet and trawl fisheries (average = 3,118). Approximately 1,570 sturgeon per year were caught in sink gillnets (~364 mortalities), and 1,548 sturgeon per year were caught in otter trawls (~77 mortalities). Under Alternative 1, the preferred alternative, the recreational harvest limit is 16.679 M lb after RSA reductions. Because the Atlantic bluefish fishery is primarily a recreational fishery, the recreational harvest limit represents 62% of the total allowable landings for the overall Atlantic bluefish fishery. Hook and line gear is preferred gear for the recreational fishery; interactions with Atlantic sturgeon and this gear type are infrequent and post-release survival is likely very high. Therefore, recreational bluefish fishery management measures are expected to have negligible impacts on Atlantic sturgeon.

As described in Section 6.4.1, in 2010, there were approximately 1,637 commercial trips that targeted bluefish. Landings from directed trips (3.492 M lb) were approximately 47.9% of coastwide commercial bluefish landings (7.290 M lb). Gillnets accounted for 86.3% of the directed catch (1,008 trips) while trawl gear accounted for 6.0% (38 trips). Because there are so few bluefish otter trawl trips, and sturgeon mortality in otter trawls is so low, there is likely to be negligible impacts on Atlantic sturgeon from bluefish trawl trips. Impacts of the bluefish fishery on sturgeon are therefore primarily limited to gillnet trips. However, directed bluefish gillnet trips represent only a small proportion of all gillnet trips in the region. Most gillnet trips can be attributed to other fisheries including monkfish, groundfish, spiny dogfish, or mixed-fishery trips that are not targeting bluefish. Therefore, Atlantic sturgeon mortalities from directed bluefish gillnet trips is likely to be low compared to these other fisheries.

Alternative 1 maximizes landings to the commercial fishery with a commercial quota of 10.185 M lb after RSA reductions, which represents 38% of total allowable landings for the overall Atlantic bluefish fishery. The commercial quota of 10.185 M lb would be a 9% increase from the 2011 commercial quota. However, in recent years the commercial bluefish fishery has only landed 52-61% of its quota. Despite the increase in commercial quota, this alternative is not expected to increase fishing effort or change the spatial and/or temporal distribution of current fishing effort because there is no change in demand in the bluefish market. The bluefish fishery is not constrained by its quota, so quota increases do not appear to equate to increased landings or effort. Because the majority of trips that land bluefish are from mixed-species fisheries or trips targeting other species, these trips are not likely to be affected by bluefish quota increases. These trips would still occur under Alternative 1, but they may be able to retain more bluefish than would otherwise have to be discarded. Because there is no evidence to suggest that the market for bluefish would support a substantial increase in landings, therefore a 9% increase in quota would not necessarily equate to a proportional increase in fishing effort, and increase negative impacts on Atlantic sturgeon.

Under Alternative 2 and Alternative 3 the commercial quota would be reduced or remain the same. As noted above, landings of bluefish have not been constrained coastwide by the quota in recent years. Therefore, maintaining the same, quota is not expected to have any effect on fishing effort. Lowering the quota by 43.6% as in Alternative 2, however, would be expected to lower commercial fishing effort. It can be concluded that none of the alternatives in this action are expected to result in any additional negative impacts on Atlantic sturgeon.

Formal consultation on the Atlantic bluefish fishery was reinitiated on February 9, 2012. NMFS has determined that there will not be any irreversible or irretrievable commitment of resources under section 7(d) of the ESA during the consultation period that would have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternative measures. NMFS has also determined that the continued operation of the Atlantic bluefish fishery during the consultation period, including the operation of those fisheries under the measures proposed in this action, is not likely to jeopardize the continued existence of ESA-listed species or result in the destructive or adverse modification of critical habitat.

Given the limited scope and timing of this action, the relatively low impact of the directed bluefish fishery on Atlantic sturgeon mortality, and the fact that quota increases are not expected to increase effort, the magnitude of interactions during the 2012 fishing year is not likely to result in significant negative impacts on this species. Since Atlantic sturgeon DPSs have been listed, the formal consultations were reinitiated as required for the Atlantic bluefish fishery, and additional evaluation will be included to describe any impacts of the fisheries on Atlantic sturgeon and define any measures needed to mitigate those impacts, if necessary. It is anticipated that any measures, terms and conditions included in an updated Biological Opinion will further reduce impacts to the species. It is expected that the completion of the Biological Opinion will occur in mid-2012.

7.3.2 RSA

Because all bluefish landings count against the overall quota regardless of whether or not an RSA is implemented, neither alternative is expected to change the level of bluefish fishing effort. In addition, the manner in which this fishery is operated is not expected to change or be redistributed by gear under either alternative.

Although under Alternative 2 exemptions would be issued that would exempt vessels from possession limits and quota closures, there would be no additional impact on habitat because the RSA quota is part of, and not in addition to the overall recreational and commercial landings limits. Such exemptions would not be expected to have any effect on ESA listed and MMPA protected species.

7.4 Socioeconomic Impacts

A description of the bluefish alternatives are presented in section 5.0 and summarized at the beginning of section 7.0 (Table 19).

As a result of the potential increase in commercial landings under preferred Alternative 1, it is expected that small positive economic impacts on the bluefish fishery are likely to occur, when compared to 2011. Each state's commercial allocation will increase under these adjusted commercial quotas (Table 3). Overall, the projected increase in landings in 2012 under alternative 1 will likely result in a revenue increase relative to the status quo alternative. New quotas alone have relatively limited social impacts. The changes in social structure and cultural fabric that may have occurred under implementation of limited access are already largely in place. The major impact of quota increases is on profitability. Only where there are significant reductions in net revenues or in the ability to meet costs are adverse social impacts likely. This would not be expected under Alternative 1 since the quota is not expected to constrain commercial landings given recent market trends.

While the proposed recreational harvest limit under preferred alternative 1 is slightly lower than the limit implemented in 2011, the projected recreational landings for 2012 (16.216 M lb) are below the proposed limit under this alternative (17.234 M lb), and as such, the proposed recreational limit under Alternative 1 is not expected to constrain recreational landings in 2012. Alternative 1 is likely to result in decreased recreational satisfaction when compared to the status quo; however, as indicated above, Alternative 1 is expected to constraint recreational landings in 2012. It is expected that positive social and economic impacts will continue to be realized in the long-term, as the stock continues to be exploited at sustainable levels. The possession limit would remain at 15 fish for all three alternatives evaluated. The proposed landings limit (commercial and recreational) under Alternative 1 is consistent with the ABC recommendations of the SSC and is therefore constitutes the best scientific information available for prevent overfishing.

Stable or increased landings from one year to the next are desirable from an industry perspective. Increased fishing opportunity provides fishermen, processors, party/charter boat operators, equipment and bait suppliers with increase income potential. The derivation of the commercial

quota and recreational harvest limit for Alternative 1 as well as the other alternatives is described in detail in sections 4.1 and 5.0 of the EA.

Non-preferred Alternative 2 contains the smallest commercial quota. As a result of the lower bluefish commercial quota (44 %), negative economic impacts on the bluefish fishery are likely to occur, relative to Alternative 3 (status quo). However, it is possible that given the potential decrease in bluefish landings, price for this species may increase if all other factors are held constant. If this occurs, an increase in the price for bluefish may mitigate some of the revenue reductions associated with lower quantities of bluefish availability under Alternative 2.

The projected recreational landings for 2012 (16.216 M lb) are below the proposed limit under Alternative 2 (22.134 M lb), and as such, the proposed recreational limit under this alternative is not expected to constrain recreational landings in 2012. Alternative 2 is likely to provide a larger level of recreational satisfaction in 2012 when compared to Alternatives 3 (status quo) and Preferred Alternative 1. The proposed landings limit (commercial and recreational) under Alternative 1 is consistent with the ABC recommendations of the SSC and is therefore based on the best scientific information available and is intended to prevent overfishing.

For Alternative 3, the overall 2012 commercial quota and recreational harvest limit are identical to the limits implemented in 2011 and would maintain consistent commercial and recreational fishing opportunities when compared to 2011. Given that the overall potential change in commercial quota associated with this alternative when compared to 2011 is almost nil; it is expected that no adverse economic and social impacts will occur when compared to 2011. In addition, given the estimated recreational landings for 2011, the recreational harvest limit under this alternative is expected to constrain recreational landings in 2012. Because this alternative would maintain status quo management measure, it is associated with null (neither positive nor negative) socioeconomic impacts.

Overall, when comparing across all three alternatives, Alternative 1 (preferred, max transfer) would result in the greatest positive social and economic impacts on the bluefish commercial fishery when compared to Alternative 3 (status quo), while alternative 2 (no transfer) would result in the greatest negative social and economic impacts. The proposed recreational harvest limit across all there alternatives is expected to constraint recreational landings in 2012 given the projected recreational bluefish landings for that year. However, it is likely that Alternative 2 would provide greater recreational satisfaction when compared to both Alternatives 3 (status quo) and 2.

7.4.1 RSA

Under non-preferred RSA Alternative 1, there will be no RSA deducted from the combined commercial and recreational landings levels for bluefish. Therefore, the initial commercial quotas and recreational harvest limits for this species do not need to be adjusted downward as would be done under a situation when an RSA is established. In fisheries where the entire quota is taken and the fishery is prematurely closed (i.e., the quota is constraining), the economic and social costs of the program are shared among the non-RSA participants in the fishery. That is,

each participant in a fishery that utilizes a resource that is limited by the annual quota relinquishes a share of the amount of quota retained in the RSA quota. Since no RSA is implemented under this alternative, there are no direct economic or social costs as described above. Under non-preferred RSA Alternative 1, the collaborative efforts among the public, research institutions, and government in broadening the scientific base upon which management decisions are made will cease. In addition, the Nation will not receive the benefit derived from data or other information about these fisheries for management or stock assessment purposes.

Under preferred RSA Alternative 2, RSAs for bluefish would be specified. Under the RSA program, successful applicants receive a share of the annual quota for the purpose of conducting scientific research. However, as described above, the economic and social costs of the program are shared among the non-RSA participants in the fishery. The evaluation of the socioeconomic impacts of the commercial quotas presented above was based on adjusted commercial quotas that account for the RSA proposed under preferred RSA Alternative 2.

The Council recommended research set-aside quotas of 3 % of the overall combined commercial and recreational landings levels for bluefish for 2012. The research set aside quantities associated with each alternative evaluated in this document are shown in Table 22.

NMFS dealer data and NMFS general canvass data from North Carolina were used to derive the ex-vessel prices for bluefish from Maine through East Coast of Florida. Assuming the 2010 ex-vessel price (\$0.43/lb), the 2012 RSA for the commercial component of the fishery could be worth as much as \$135,450, \$70,273, and \$15,622 under the evaluated bluefish Alternatives 1, 2, and 3, respectively.

Table 22. Pounds of RSA under each alternative evaluated.

Alternative	Research Set-Aside	Commercial RSA	Recreational RSA
Alternative 1 (Preferred: Maximum Transfer)	847,997	315,000	532,997
Alternative 2 (Non-Preferred: No Transfer)	847,997	163,425	684,572
Alternative 3 (Non-Preferred: Status quo)	105,000	36,331	68,669

As such, on a per vessel basis, the commercial RSA could result in a potential decrease in bluefish revenues of approximately \$61, \$31, and \$7 under Alternatives 1, 2, and 3, respectively, per vessel assuming all active vessels in 2010 (approximately 2,232 vessels).

The adjusted commercial quotas analyzed in section 7.4 accounts for the RSAs (as described in section 5.0). If RSAs are not used, the landings would be included in the overall landings levels for each fishery. As such, the estimated economic impacts would be smaller than those estimated under each alternative discussed in sections 7.4.

Given the substantial decrease in the commercial quota in 2012 relative to 2011 under Alternative 2 (no transfer), the cost of any premature closure of the fishery (pounds of bluefish allocated for set-aside) would be shared among the non-RSA participants in the fishery. In addition, it is possible that the vessels that will be used by researchers will not be vessels that have traditionally fished for this species. As such, permit holders that land this species during a period where the quota has been reached and the fishery closed could be disadvantaged. The impacts of the RSAs for other species are addressed in their respective species specifications packages.

Changes in the recreational harvest limit due to the RSA would be nil; the recreational limit under all there alternatives would change (i.e., reduction) by 3 % as a consequence of the RSA. For the most part, it is not anticipated that the RSA would affect angler satisfaction or recreational demand for bluefish. Given the projected recreational landings for 2012, none of the recreational harvest limits under the three evaluated alternatives are expected to constraint recreational landings in 2012.

It is important to stress that the RSA amount used to evaluate the alternatives presented in this document is the maximum RSA allowed (3 % of the TAL) to support collaborative research projects among the public, research institutions, and NMFS. The actual RSA for fishing year 2012 will depend on the specific amounts requested by the approved research projects. NMFS will adjust quotas based on updated information on RSA, overages and/or transfers as part of the final rule that implements the 2012 specifications when the data are more complete.

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 years (2014) into the future. This period was chosen 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 section 7.1 through 7.4. Table 23 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 resources, 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 23. 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 and gear requirements	Indirect Positive Reduced effort levels and gear requirements	Indirect Positive Reduced effort levels and gear requirements	Indirect Positive Benefited domestic businesses
P, Pr 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, RFF Omnibus Amendment ACLs/AMs Implemented	Establish ACLs and AMs for all three plan species	Potentially Indirect Positive Pending full analysis	Potentially Indirect Positive Pending full analysis	Potentially Indirect Positive Pending full analysis	Potentially Indirect Positive Pending full analysis	Potentially Indirect Positive Pending full analysis
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 23 (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 23 (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

7.5.5.1 Managed Resources

Those past, present, and reasonably foreseeable future actions, whose effects may impact the managed resources and the direction of those potential impacts, are summarized in Table 23. The indirectly negative actions described in Table 23 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 24, will result in additional indirect positive effects on the managed resources through actions which reduce and monitor bycatch, protect habitat, and protect ecosystem services on which bluefish productivity depends. The 2012 fishing year will be the first year of implementation for an Amendment which requires specification of ACLs/AMs and catch accountability. 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 bluefish 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 24).

Table 24. 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		Potentially 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
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 23. The effects of indirectly negative actions described in Table 23 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 25, 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 25).

Table 25. 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		Potentially 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
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 23. The direct and indirect negative actions described in Table 23 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, and have implemented gear requirements, which may reduce habitat impacts. As required under these FMP actions, EFH and HAPCs were designated for the managed resources. It is anticipated that the future management actions, described in Table 26, 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 26).

Table 26. 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		Potentially 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
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 23. The indirectly negative actions described in Table 23 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 Biological Opinion to mitigate harm to Atlantic sturgeon. Further, the encounter rates and mortalities for Atlantic sturgeon that have been calculated as part of the preliminary analysis of NEFOP data (as discussed in Sec 6.3.2) include encounters and mortalities by the bluefish fishery. It is likely that rates of encounters and mortalities by the bluefish fishery will not increase from the approval of this action.

Past fishery management actions taken through the FMP and annual specification process have had a positive cumulative effect on ESA listed and MMPA protected species through the reduction of fishing effort (potential interactions) and implementation of gear requirements. It is anticipated that the future management actions, specifically those recommended by the ALWTRT and the development of strategies for sea turtle conservation described in Table 27, 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 27).

Table 27. 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		Potentially 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
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 23. The indirectly negative actions described in Table 23 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 28, 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 positive 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 28).

Table 28. 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 ACL/AMs implemented		Potentially 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
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 29).

Table 29. Magnitude and significance of the cumulative effects; the additive and synergistic effects of the preferred action, as well as past, present, and future actions.

VEC	Status in 2011	Net Impact of P, Pr, and RFF Actions	Impact of the Preferred Action	Significant Cumulative Effects
Managed Resource	Complex and variable (Section 6.1)	Positive (Sections 7.5.4 and 7.5.5.1)	Neutral to positive (Sections 7.1)	None
Non-target Species	Complex and variable (Section 6.1)	Positive (Sections 7.5.4 and 7.5.5.2)	Slight negative to slight positive (Sections 7.1)	None
Habitat	Complex and variable (Section 6.2)	Neutral to positive (Sections 7.5.4 and 7.5.5.3)	Slight negative to slight positive (Sections 7.2)	None
Protected Resources	Complex and variable (Section 6.3)	Positive (Sections 7.5.4 and 7.5.5.4)	Slight negative to slight positive (Sections 7.3)	None
Human Communities	Complex and variable (Section 6.4)	Positive (Sections 7.5.4 and 7.5.5.5)	Negative (highly uncertain) to short-term Positive (Sections 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 (CEQ) 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 quota specification for this

species is consistent with the FMP objectives. 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 MSFCMA 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 public 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). Further, as discussed in Section 7.3.1, the small increase in fishing effort of the proposed action and the overall low effort in the commercial bluefish fishery, the proposed action is not expected to result in adverse impacts to the recently listed Atlantic sturgeon DPSs.

An updated Biological Opinion for the bluefish fishery must be completed to fully evaluate the impacts of the fishery on Atlantic sturgeon, and will detail any necessary measures, terms, and conditions to reduce the impact of the fishery on Atlantic sturgeon populations. 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. It has been determined that fishing activities conducted under this action will have no adverse impacts on endangered or threatened species, marine mammals, or their critical habitat.

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 proposed annual commercial quota, recreational harvest limit, and RSA for the 2012 bluefish fishery. None of the 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. The proposed action merely revises the proposed annual commercial quota, recreational harvest limit, and RSA for the 2012 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 proposed annual commercial quota, recreational harvest limit, and RSA for the 2012 bluefish fishery. The bluefish fishery is not known to be prosecuted in any

unique areas such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas. Therefore, the proposed action is not expected to have a substantial impact on any of these 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 proposed annual commercial quota, recreational harvest limit, and RSA for the 2012 bluefish fishery. None of the 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 the proposed annual commercial quota, recreational harvest limit, and RSA for the 2012 bluefish fishery. The bluefish fishery is not known to be prosecuted in any areas that might affect districts, sites, highways, structures, or objects listed in, or eligible for listing in, the National Register of Historic Places or cause the loss or destruction of significant scientific, cultural or historical resources. Therefore, the proposed action is not expected to affect any of these areas.

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

This action proposes a commercial quota, recreational harvest limit, and RSA for the 2012 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 proposed action merely revises the proposed annual commercial quota, recreational harvest limit, and RSA for the 2012 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.

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?

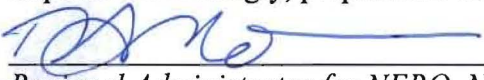
This proposed action merely revises the proposed annual commercial quota, recreational harvest limit, and RSA for the 2012 bluefish fishery. None of the specifications are expected to alter fishing methods or activities such that they threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment. In fact, the proposed measures have been found to be consistent with other applicable laws.

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?

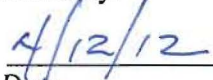
The impacts of the preferred alternatives on the biological, physical, and human components of the environment are described in section 7.0 of the EA. The cumulative effects of the proposed action on target and non-target species are detailed in section 7.5 of the EA. None of the proposed specifications 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 annual quotas based on the overfishing definitions contained in the FMP are expected to generate positive impacts overall, but the implementation of the proposed 2012 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 2012 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.



ACTING Regional Administrator for NERO, 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.

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 consultations on 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 and MC meetings held on July 28-29, 2011 in Baltimore, MD and during the MAFMC meeting held on August 16-18, 2011 in Wilmington, DE. 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 (Data Quality Act)

Utility of Information Product

This action proposes annual commercial quotas and recreational harvest limits in 2012 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, NERO, 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 NERO 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 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.

The overall coast-wide adjusted commercial bluefish quota for 2012 under preferred Alternative 1 is higher (i.e., 9 %) than the adjusted bluefish commercial quota for 2011 and approximately 40 % above the commercial landings for 2010. This commercial quota would allow fishermen higher fishing opportunities for bluefish in 2012 compared to the 2011 adjusted quota. The NMFS Quota Report as of the week ending November 16, 2011 indicates that overall bluefish commercial landings are within the overall commercial quota for 2011 (47 % of the quota landed). Therefore, the 2012 overall quota was not adjusted for overages. Given the potential for fishing opportunities in 2012 when compared to 2011, and commercial landings compared to the adjusted commercial quotas implemented in recent years, it is expected that overall ex-vessel revenues from bluefish will remain about the same in 2012 when compared to 2011 as a consequence of the proposed adjusted commercial quota if market conditions remain relatively stable.

Under Alternative 1, the bluefish 2012 adjusted recreational harvest limit would be 17.234 M lb. This limit would be approximately 7 % above the recreational landings for 2011 (16.166 M lb) and 3 % below the limit implemented for 2011 (17.813 M lb). The possession limit would remain at 15 fish. The proposed adjusted recreational harvest limit under preferred Alternative 1 is slightly higher (6 %) than the projected recreational landings for 2012 (16.216 M lb). It is important to stress that the RSA amount used to evaluate the alternatives presented in this document is the maximum RSA allowed (3 % of the TAL) to support collaborative research projects among the public, research institutions, and NMFS. The actual RSA for fishing year 2012 will depend on the specific amounts requested by the approved research projects. NMFS will adjust quotas based on updated information on RSA, overages and/or transfers as part of the final rule that implements the 2012 specifications when the data are more complete. Furthermore, it is possible that updates of recreational landings projections completed by NMFS during rulemaking (and when more data are available, e.g., following wave 5 of the MRFSS data) could result in transfers different from those presented in this specifications package.

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 will provide similar commercial and recreational fishing opportunities when compared to 2011. 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 2012 specifications for fishing for bluefish.

8.10.1 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 a 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.

8.10.1.1 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.

8.10.1.2 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.

8.10.1.3 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.

8.10.1.4 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.

8.10.1.5 Conflict with Other Federal Rules

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

8.10.1.6 Analysis of Economic Impacts

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

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 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. A brief description of each alternative is presented below for reference purposes.

The Small Business Administration (SBA) defines a small business in the commercial fishing and recreational fishing activity, as a firm with receipts (gross revenues) of up to \$4.0 and \$6.5 million, respectively. This rule could affect any vessel that fish for bluefish in Federal or state waters. The final measures regarding the 2012 quotas could affect any vessel holding an active Federal permit for bluefish as well as vessels that fish for this species in state waters.

An active participant in the commercial sector was defined as being any vessel that reported having landed one or more pounds of bluefish the dealer data during calendar year 2010. This data covers activity by unique vessels. Of the active vessels reported in 2010, 718 known vessels landed bluefish from Maine through North Carolina. The dealer data does not cover vessel activity in the South Atlantic. The dealer data indicate that 45 federally permitted vessels landed bluefish in North Carolina in 2010. However, the North Carolina landings data for bluefish may be incomplete in this data system. South Atlantic Trip Ticket Report data indicate that 732 vessels landed bluefish in North Carolina in 2010 (Stephanie McInerney, NC Division of Marine Fisheries, pers. comm., 2011). Some of these vessels may be included among the 45 vessels identified as landing bluefish in the dealer data. As such, double counting is possible. In addition, up to 827 vessels may have landed bluefish in Florida's east coast in 2010 (Steve Brown, Fla Fish and Wildlife Conservation Commission, pers. comm., 2011). Bluefish landings in Georgia and South Carolina were almost nil in 2010, representing a negligible proportion of the total bluefish landings along the Atlantic coast; as such, it was assumed that no vessel activity for those two states took place in 2010. In addition, it was estimated that in recent years approximately 2,063 party/charter vessels may have been active and/or caught bluefish.

Not all landings and revenues reported through the dealer data can be attributed to a specific vessel. Vessels with no Federal permits are not subject to any Federal reporting requirements with which to corroborate the dealer reports. Similarly, dealers that buy exclusively from state water only vessels and have no Federal permits are also not subject to Federal reporting requirements. Thus, it is possible that some vessel activity cannot be tracked with the landings and revenue data that are available. Thus, these vessels cannot be included in the threshold analysis, unless each state was to report individual vessel activity through some additional reporting system - which currently does not exist. This problem has two consequences for performing threshold analyses. First, the stated number of entities subject to the regulation is a lower bound estimate. Second, the portion of activity by these uncounted vessels may cause the estimated economic impacts to be over- or underestimated.

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 vessel costs and revenues. However, in the absence of cost data for individual vessels engaged in this fishery, changes in gross revenues are used as a proxy for profitability. Where quantitative data were not available, qualitative analyses were conducted.

Procedurally, the economic effects of the commercial quota alternatives were estimated as follows. First, the Northeast dealer data were queried to identify all vessels that landed at least one or more pounds of bluefish in calendar year 2010 in the North Atlantic region. Note that the States of Connecticut and Delaware report canvas (summary) data to NMFS, so landings and revenues by individual vessels cannot be included. Thus, vessels that land exclusively in those states cannot be analyzed. Vessels that land in these, plus other states, are analyzed - but landings and revenues represent only that portion of business conducted in states other than Connecticut and Delaware. It is presumed that the impacts on vessels that cannot be identified will be similar to the participating vessels that are analyzed herein. Recent South Atlantic Trip Ticket Report data was also used to identify the vessels that landed bluefish in North Carolina and Florida's east coast.

The second step was to estimate total revenues from all species landed by each vessel during calendar year 2010. This estimate provides the base from which subsequent quota changes and their associated effects on vessel revenues were compared. Since 2010 is the last full year from which data are available (partial year data could miss seasonal fisheries), it was chosen as the base year for the analysis. That is, partial landings data for 2011 were not used in this analysis because the year is not complete. Since the South Atlantic Trip Ticket Report data system does not provide information at the trip level, averages were used to describe the contribution of bluefish to total landings and values for those entities. As such, steps 3 and 4 below were conducted for averages for vessels under the South Atlantic Trip Ticket Report data.

The third step was to deduct or add, as appropriate, the expected change in vessel revenues (associated with the potential landings associated with the 2012 adjusted quota compared to the 2010 landings). As indicated above, the NMFS Quota Report as of the week ending November 16, 2011 indicated that bluefish commercial landings were well within the 2011 coast-wide quota (47 % of quota landed). It is anticipated that the commercial quota will not be exceeded in 2011. Therefore, the 2011 commercial quotas in this document do not include an adjustment for overages.

The fourth step was to compare the estimated 2012 revenues from all species to the base year for every vessel due to the proposed quota changes. For each quota alternative a summary table was constructed that report the results of the threshold analysis. These results were further summarized by home state as defined by permit application data when applicable.

The threshold analysis just described is intended to identify impacted vessels 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 vessels in these fisheries readily fall within the definition of small business. Therefore, there are no disproportionality issues.

To further characterize the potential impacts on indirectly impacted entities and the larger communities within which owners of impacted vessels reside, selected county profiles are typically constructed. Each profile is based on impacts under the most restrictive possible alternative. The most restrictive alternative is chosen (Alternative 2) to identify impacted counties because it would identify the maximum number possible and thus include the broadest possible range of counties in the analysis. The following criteria was employed to derive the range of counties profiled: the number of vessels with revenue losses exceeding 5 % per county was either greater than 4, or all vessels with losses exceeding 5 % in a given state were from the same home county. It is expected that this system will allow for a county profile that may include a wide range of potentially affected areas.

8.10.2 Description of Quota-Setting and RSA Alternatives

All quota alternatives considered in this analysis are based on various commercial harvest levels for bluefish (a high, medium, and low level of harvest). Table 3 shows the commercial quotas under the three alternatives evaluated in this analysis and their state-by-state distribution. Table 30 shows the percentage change of the 2012 allowable commercial landings (adjusted for RSA) relative to the 2010 landings. Note that the overall changes in commercial fishing opportunity in 2012 compared to 2010 landings are 40% higher, 28 lower, and 29 % higher for Alternatives 1 (Preferred), 2, and 3 (status quo), respectively. Under Alternative 1, all states show increase fishing opportunity in 2012 when compared to 2011 landings. While the overall coastwide reduction in fishing opportunity in 2012 compared to 2010 landings under Alternative 2 is 28 % lower, some states would incur in a larger percentage reduction in bluefish landings in 2012 (>28 %; Massachusetts, New York, New Jersey, and North Carolina) due to the fact those states landed a substantially higher amount of bluefish in 2010 compared to their originally allocated commercial quotas that year. Lastly, although most states show similar directional changes in fishing opportunities as the overall change in fishing opportunity in 2012 compared to 2010 landings under quota Alternative 3, the state of North Carolina shows a reduction in fishing opportunity.

Quota Alternatives 1 and 2 comprise combined landings of 28.267 M lb and Alternative 3 comprises 27.293 M lb. A complete description of the derivation of the 2012 landings limits is presented in sections 4.1 and 5.0 of the EA. Under Alternative 1 (preferred), the adjusted commercial quota and recreational harvest limit for 2012 are 10.185 and 17.234 M lb, respectively. Under non-preferred Alternative 2, the adjusted commercial quota and recreational harvest limit for 2012 are 5.284 and 22.134 M lb, respectively. Under non-preferred Alternative 3 (Status Quo/No Action), the adjusted commercial quota and recreational harvest limit for 2012 are 9.375 and 17.813 M lb, respectively. Even though Alternative 1 represents an increase in

landings limits when compared to the status quo, it is consistent with the recommendations of the Council's Science and Statistical Committee (SSC). Alternative 3 may be more restrictive than necessary given the advice of the SSC.

Table 30. Percentage changes associated with allowable commercial landings for various quota alternatives in 2012 (adjusted quota for RSA) relative to 2010 landings by state.

State	Alternative 1	Alternative 2	Alternative 3
ME	45905%	23768%	42247%
NH	1271%	611%	1162%
MA	17%	-40%	7%
RI	97%	2%	82%
CT	466%	194%	421%
NY	26%	-34%	16%
NJ	9%	-43%	0%
DE	904%	421%	824%
MD	171%	40%	149%
VA	174%	42%	152%
NC	2%	-47%	-7%
SC	728%	330%	662%
GA	700%	315%	636%
FL	225%	68%	199%
Total	40%	-28%	29%

Research Set-Aside

Under RSA Alternative 1, no RSA will be implemented for bluefish in 2012 (Table 2. Under preferred RSA Alternative 2 (status quo) the Council has recommended that 3 % of the 2012 bluefish combined commercial and recreational landings levels will be set-aside to fund projects selected under the 2012 Mid-Atlantic RSA Program.

8.10.3 Analyses of Impacts of Alternatives

For the purpose of analysis under the following alternatives, several assumptions were made. Participation and revenue changes noted in this analysis were made using the Northeast dealer

and South Atlantic Trip Ticket Report data. That is all vessels that landed at least one or more pounds bluefish in calendar year 2010 were identified. Total revenues from all species landed by each vessel during calendar year 2010 were estimated using the dealer data. Since the dealer data only provides information from Maine through North Carolina, Trip Ticket Report data was also used to assess potential average revenues from all species landed from North Carolina through Florida during calendar year 2010. These estimates provided the base from which to compare the effects of the 2012 adjusted quotas compared to the 2010 landings and associated potential changes in revenues.

Under Alternatives 1 and 3, the proposed overall bluefish quotas for 2012 would allow fishermen to land approximately 2.895 and 2.085 M lb more of bluefish compared to 2010 landings, respectively. Under Alternative 1, all states show a commercial 2012 quota that is higher than the 2010 landings. While the overall coastwide commercial quota for 2012 is higher than the bluefish landings for 2010 under Alternative 2, some states are projected to have a lower 2012 bluefish quota when compared to 2010 landings because these states landed a substantially higher amount of bluefish in 2010 compared to their originally allocated commercial quotas that year. Unless market conditions change substantially in year 2012 in those states that are projected to have a larger 2012 bluefish quota when compared to 2010 landings, commercial bluefish fishermen would likely have bluefish landings close to the 2010 landings. There is no indication that the market environment for commercially caught bluefish in those states will change considerably in year 2012. As such, for states that show a 2012 quota allocation greater than their 2010 landings, it is assumed that 2012 landings would be equal to the 2010 landings. However, for states that show a 2012 quota allocation smaller than their 2010 landings, the 2012 allocation is considered for analysis purposes.

It is most likely that the percent of revenue reduction for impacted vessels varied considerably based on permits it held (i.e., based on the fisheries in which it was able to participate) and species it landed. Diversity in the fleet, perhaps, helps to balance loss in one fishery with revenue generated from other fisheries. For example, if 90 % of a vessel's revenue was derived from bluefish in the base year, then a small decrease in the bluefish quota or landings level would be expected to have a large proportional reduction in the revenue of that vessel compared to one that only generates 10 % of its revenue from bluefish. Lastly, it is important to keep in mind that while the analyses based on landings for federally-permitted vessels only (dealer data), those vessels may be permitted to, and frequently do, fish in state waters for a species of fish for which it does not hold a Federal permit.

Bluefish comprised 0.18 % and 0.30 % of the total ex-vessel value and pounds, respectively of all finfish and shellfish species landed along the Atlantic coast of the U.S. in 2010. For states where bluefish were commercially landed, the contribution of bluefish to the total value of all finfish and shellfish varied by state in 2010 (Table 6). Bluefish ranged from < 0.01 % of total commercial value in Maine, South Carolina, and Georgia to 4.47 % in North Carolina. There were no bluefish landings in Pennsylvania in 2010. Relative to total landings value, bluefish were most important in North Carolina and New York, contributing the largest percentage of ex-vessel value of all commercial landings in those states. This contribution did not changed

considerably from the previous complete fishing year (i.e., 2009), and it is not expected to change considerably in 2012.

8.10.3.1 Alternative 1 (Preferred)

This alternative specifies a commercial quota of 10.185 M lb and recreational landing limit of 17.234 M lb for bluefish. Under this scenario, the bluefish specifications would result in an aggregate of approximately 40 and 7 % increase, respectively, in allowable commercial landings and recreational harvest limit relative to the 2010 landings (Tables 6 and 27).

8.10.3.1.1 Commercial Impacts

The results of the threshold analysis are presented in Table 31. The analysis of the harvest levels under this alternative indicate that across all vessel classes, a total of 713 vessels were projected to incur in similar revenue relative to 2010. In addition, no revenue reduction is expected for vessels that land bluefish in North Carolina and Florida as a consequence of the proposed 2012 quota compared to 2010 landings in those states.

Table 31. Threshold analysis of revenues for participating vessels under Alternative 1 (preferred alternative), based on dealer data.

Quota Alternative 1 (Preferred; Maximum Transfer)		No Change in Revenue (number)	Number of Impacted Vessels by Reduction Percentile (%)						
Total Vessels	Number of Vessels Impacted by \geq 5% Reduction		<5	5-9	10-19	20-29	30-39	40-49	≥ 50
718	0	718	0	0	0	0	0	0	0

Impacts of the quotas provisions were examined relative to a vessel's home state as reported on the vessel's permit application (Table 31). "Home state" indicates the state where a vessel is based and primarily ported, and is presumed to reflect where the costs and benefits of management actions return. However, home state is self-reported at the time an individual applies for a federal permit and may not necessarily indicate where the vessel subsequently conducts most of its activity. The number of vessels with the same revenue in 2012 when compared to 2010 landings by home state ranged from 3 vessels in Delaware to 161 vessels in Massachusetts. The changes described above are based on the potential changes in landings associated with the 2012 quotas versus 2010 landings.

Table 32. Review of revenue impacts under quota Alternative 1 (preferred alternative), by home port state, based on dealer data.

State	Participating Vessels	Number of Vessels Impacted $\geq 5\%$	No Change in Revenue (number)	Number of Impacted Vessels by Reduction Percentile (%)						
				<5	5-9	10-19	20-29	30-39	40-49	≥ 50
CT	11	0	11	0	0	0	0	0	0	0
DE	3	0	3	0	0	0	0	0	0	0
MA	161	0	161	0	0	0	0	0	0	0
MD	10	0	10	0	0	0	0	0	0	0
ME	7	0	7	0	0	0	0	0	0	0
NC	69	0	69	0	0	0	0	0	0	0
NH	13	0	13	0	0	0	0	0	0	0
NJ	80	0	80	0	0	0	0	0	0	0
NY	128	0	128	0	0	0	0	0	0	0
RI	93	0	93	0	0	0	0	0	0	0
VA	22	0	22	0	0	0	0	0	0	0
OTHER ^a	4	0	4	0	0	0	0	0	0	0
NOT KNOWN ^b	117	0	117	0	0	0	0	0	0	0
Total	718	0	718	0	0	0	0	0	0	0

^aStates with fewer than 3 vessels were aggregated.

^bVessels have shown landings of bluefish in 2010, but do not hold any commercial Federal permits in 2010. These vessels may be fishing exclusively in state waters fisheries for bluefish, and landings are indicated because of reporting requirements for their other Federal permits or they do not hold a Federal permit to participate in these fisheries any longer.

8.10.3.1.2 Recreational Impacts

Under Alternative 1, the bluefish 2012 recreational harvest limit would be 17.234 M lb. This limit would be approximately 7% higher than the recreational landings for 2010 (16.166 M lb) and 3% lower than the recreational harvest limit for 2011 (17.813 M lb). Assuming recreational landings for 2012 of 16.216 M lb, the proposed adjusted recreational harvest limit under this alternative is 6 % higher than the projected recreational landings for 2012. 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 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 2010 were 7.48, 16.96, and 19.51

million, respectively. Of the total number of fishing trips for all modes combined in the North Atlantic, Mid-Atlantic, and South-Atlantic regions, approximately 0.32 million (4.2 %), 0.87 million (5.1 %), and 0.45 million trips (2.3 %) 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 through Florida (i.e., total effort targeting bluefish by party/charter mode) in 2010 was approximately 58 thousand (Table 12).

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 adjusted recreational harvest limit for 2012 and recreational landings in recent years, it is possible that given the proposed recreational harvest limits under Alternatives 1-3, the demand for party/charter boat trips may not be negatively impacted. 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. The recreational impacts under Alternative 2 and 3 are expected to be similar to the recreational impacts under this alternative. As Alternatives 2 and 3 propose recreational harvest limits for 2012 (22.134 and 17.813 M lb, respectively) that are higher than the projected recreational landings for 2012.

8.10.3.1.3 Other Impacts

Effects of research set-aside quota

A detailed discussion regarding the socioeconomic impacts of the RSA for bluefish is presented in section 7.4.1. The social and economic impacts of this research should be minimal. The commercial set-aside could be worth as much as \$135,450 based on 2010 prices. Assuming an equal reduction among all active vessels (i.e., 2,232 commercial vessels that landed bluefish in 2010), this may mean a reduction of \$61 per individual vessel. It is also possible that the vessels used by researchers to conduct the research are vessels that have not traditionally fished for this species. As such, some minimal distributive effects may result as permit holders that would have landed this species could be disadvantaged. If RSAs are not used, the landings would be included in the overall landings levels for each fishery, and then the estimated economic impacts would be smaller than those estimated in threshold analyses presented in this section. The maximum 3 % RSA was used to assess potential impacts; however the actual RSA may be less than 3 %. As such, the monetary worth of the RSA for this species is associated with the upper limit of impacts.

The actual RSA for fishing year 2012 will depend on the specific amounts requested by the approved research projects. NMFS will adjust quotas based on updated information on RSA, overages and/or transfers as part of the final rule that implements the 2012 specifications when the data are more complete.

8.10.3.2 Alternative 2 (Non-Preferred)

This alternative specifies a commercial quota of 5.284 M lb and recreational landing limit of 22.134 M lb for bluefish. Under this scenario, the bluefish specifications would result in an aggregate of approximately 28 % decrease and 37 % increase, respectively, in allowable commercial landings and recreational harvest limit relative to the 2010 landings (Table 20).

Even though the overall commercial allocation for 2012 is lower than the 2010 landings, when this allocation is distributed to the states, all states except Massachusetts, New York, New Jersey, and North Carolina show a 2012 quota level which is higher than their 2010 landings (Table 30). Therefore, landings in these states (Massachusetts, New York, New Jersey, and North Carolina) will be constrained by the 2012 quota when compared to landings in 2010.

8.10.3.2.1 Commercial Impacts

The results of the threshold analysis from dealer data are reported in Table 33. A total of 62 vessels were projected to incur revenue losses of 5 % or more. More specifically, 17 vessels were projected to incur in revenue losses of 5-9%, 20 vessels of 10-19%, 7 vessels of 20-29%, 11 vessels of 30-39%, and 7 vessels of 40-49%. In addition, 464 vessels were projected to incur in revenue losses of less than 5% and 62 vessels were projected to have no change in revenue relative to 2010.

Table 33. Threshold analysis of revenues for participating vessels under non-preferred Alternative 2 quota, based on dealer data.

Quota Alternative 2 (Non-preferred; No Transfer)		No Change in Revenue (number)	Number of Impacted Vessels by Reduction Percentile (%)						
Total Vessels	Number of Vessels Impacted by \geq 5% Reduction		<5	5-9	10-19	20-29	30-39	40-49	≥ 50
718	62	192	464	17	20	7	11	7	0

Impacts of the quota provision were examined relative to a vessel's home state as reported on the vessel's permit application (Table 34). The number of vessels with revenue reduction of less than 5% by home state ranged from 1 in Delaware to 145 in Massachusetts. The number of vessels with revenue reduction of 5% or more ranged from 8 in Massachusetts to 18 in New Jersey. Seven states (Connecticut, Delaware, Maryland, Maine, New Hampshire, Rhode Island, and Virginia) had no vessels impacted with revenue reduction $\geq 5\%$. The larger number of impacted vessels with revenue reduction of 5% or more in New Jersey, New York, North Carolina, and Massachusetts may be due to a relatively higher dependence on bluefish.

By virtue of holding a valid federal permit for bluefish a vessel is subject to any regulations that are promulgated under the FMP. From this perspective, these vessels are subject to any quota

specification whether or not they actually choose to engage in the bluefish fishery. The decision to engage in any given fishery during a given time period is subject to numerous considerations from temporary suspension of fishing due to illness or vessel construction or repair to merely a reasoned decision to pursue other fisheries. Given the limited access nature of the fisheries, a vessel may wish to continue to hold a permit to preserve the opportunity to engage in the fishery when circumstance allows.

Table 34. Review of revenue impacts under non-preferred Alternative 2 quota, by home port state, based on dealer data.

State	Participating Vessels	Number of Vessels Impacted ≥5%	No Change in Revenue (number)	Number of Impacted Vessels by Reduction Percentile (%)						
				<5	5-9	10-19	20-29	30-39	40-49	≥50
CT	11	0	7	4	0	0	0	0	0	0
DE	3	0	2	1	0	0	0	0	0	0
MA	161	8	8	145	1	2	1	4	0	0
MD	10	0	10	0	0	0	0	0	0	0
ME	7	0	4	3	0	0	0	0	0	0
NC	69	10	10	49	3	6	1	0	0	0
NH	13	0	9	4	0	0	0	0	0	0
NJ	80	18	0	62	1	7	4	1	5	0
NY	128	13	1	114	7	3	1	1	1	0
RI	93	0	86	7	0	0	0	0	0	0
VA	22	0	17	5	0	0	0	0	0	0
OTHER ^a	4	2	0	2	0	0	0	1	1	0
NOT KNOWN ^b	117	11	38	68	5	2	0	4	0	0
Total	718	62	192	464	17	20	7	11	7	0

^aStates with fewer than 3 vessels were aggregated.

^bVessels have shown landings of bluefish in 2010, but do not hold any commercial Federal permits in 2010. These vessels may be fishing exclusively in state waters fisheries for bluefish, and landings are indicated because of reporting requirements for their other Federal permits or they do not hold a Federal permit to participate in these fisheries any longer.

Given the number of vessels projected to incur large revenue reduction, Council staff further examined the level of ex-vessel revenues for the impacted vessel to assess further impacts. For example, according to dealer data, it was estimated that 18 % of the vessels (3 out of 17 vessels) projected to incur revenue reductions of 5-9 % had total gross sales (all possible species combined not just bluefish in 2010) of \$1,000 or less and 59 % (10 vessels) had total gross sales of \$10,000 or less; 5 % of the vessels (1 out of 20 vessels) projected to incur revenue reductions of 10-19 % had total gross sales of \$1,000 or less and 15 % (3 vessels) had total gross sales of \$10,000 or less; 29 % of the vessels (2 out of 7 vessels) projected to incur revenue reductions of 20-29 % had total gross sales of \$1,000 or less and 43 % (3 vessels) had total gross sales of \$10,000 or less; 82 % of the vessels (9 out of 11 vessels) projected to incur revenue reductions of 30-39 % had total gross sales of \$1,000 or less and 100 % (11 vessels) had total gross sales of \$10,000 or less; and 86 % of the vessels (6 out of 7 vessels) projected to incur revenue reductions of 40-49 % had total gross sales of \$1,000 or less and 100 % (7 vessels) had total gross sales of \$10,000 or less.

While the analysis presented above indicates that in relative terms a large number of vessels (62) are likely to be impacted with revenue reductions of more than 5 % or more, 34 % of these vessels (21 vessels) had gross sales of \$1,000 or less and 55 % of the impacted vessels (34 vessels) had gross sales of \$10,000 or less, thus likely indicating that the dependence on fishing for some of these vessels is very small.

Of the 62 vessels projected to have revenue reductions of $\geq 5\%$, 51 are identified as holders of Federal permit (Table 34). It is possible that the remaining 11 vessels that do not show having any Federal permits in 2010 have opted for fishing in state waters only and as such, did not renew Federal permits in 2010, or have ceased business. Many of these vessels hold permits in various fisheries (Table 35) -- especially commercial permits for tilefish, monkfish, dogfish, squid/mackerel/butterfish, multispecies, and skates. As a result, they have access to some alternative fisheries, although some like multi-species are already under heavy regulation and are likely to have increasingly stringent catch limits in the near future.

Table 35. Federal permits held by the 51 vessels (holding any Federal fishing permit in 2010) projected to have revenue reductions of more than 5% under non-preferred Alternative 2 quota.

	Northeast Region Permit Status		Number of Vessels	% of Permitted Vessels
Commercial	Multispecies	Limited Access	4	8
	Multispecies	Open Access	27	53
	Lobster, Non-trap	Limited Access	2	4
	Lobster, Non-trap	Limited Access	2	4
	Surfclam/Ocean quahog	Open Access	2	4
	Tilefish	All Comm.	37	73
	Summer Flounder	Limited Access	3	6
	Scup	Limited Access	12	24
	Black Sea Bass	Limited Access	16	31
	Bluefish	Open Access	42	82
	Squid/Mackerel/Butterfish	Limited Access	1	2
	Squid/Mackerel/Butterfish	Open Access	31	61
	Dogfish	Open Access	36	71
	Monkfish	Limited Access	11	22
	Monkfish	Open Access	26	51
	Skate	Open Access	31	61
	Atl. Deep-Sea Red Crab	Open Access	10	20
Recreational (Party/Charter)	Summer Flounder	Open Access	18	35
	Scup	Open Access	14	27
	Black Sea Bass	Open Access	18	35
	Squid/Mackerel/Butterfish	Open Access	13	25
	Bluefish	Open Access	19	37
	Tilefish	Open Access	11	22

All of the impacted vessels (revenue reduction of $\geq 5\%$) with Federal permits have home ports in New York and New Jersey and their principal ports of landings are also mainly located in those states (Table 36). Although the bluefish quota is allocated to the individual states, vessels are not necessarily constrained to land in their home state. It is useful, therefore, to examine the degree to which vessels from different states make it a practice to land in states other than their home state. Table 36 indicates that all of these vessels are likely to land in their home port state. This information is important because impacts will occur both in the community of residence and in the community where the vessel's catch is landed and sold. The average length of these vessels by principal port ranges from 29 feet (MA vessels) to 48 feet (New Jersey vessels; Table 36). Larger vessels often have more options than smaller vessels, due to increased range and more deck space for alternative gear configurations. This can help them to respond to cuts in quota in particular states. They also, however, need larger volumes of product to remain profitable.

Table 36. Descriptive information for the 51 vessels (holding any Federal fishing permit in 2010) projected to have revenue reductions of more than 5% under non-preferred Alternative 2 quota. Based on 2010 descriptive data from NMFS permit files.

	MA	NC	NJ	NY	OTHER
# Permits by Home Port State	8	10	18	13	2
# Permits by Principal Port State	9	10	21	11	-
# Permits by Mailing Address State	8	10	21	11	1
Avg. Length in Feet by Principal Port	29	42	48	31	-
Avg. GRT by Principal Port	9	15	35	10	-
Avg. Vessel Horsepower by Principal Port	289	485	773	302	-
% of Vessels where Home Port State = Principal Port State	100	100	86	91	-

As indicated above, vessels showing revenue reductions in the $\geq 5\%$ range are concentrated in New York, New Jersey, and North Carolina. Within these states, the most impacted county (largest number of impacted vessels) are Ocean in New Jersey; Suffolk in New York, and Dare in North Carolina (Table 37).

Table 37. Distribution of the 51 vessels (holding any Federal fishing permit in 2010) projected to have revenue reductions of more than 5% under non-preferred Alternative 2 quota. Distribution by state, county, and home port, from 2010 NMFS permit files - home

State	County	Home Port	Number of Vessels
Massachusetts	Barnstable	Other	6
New Jersey	Ocean	Barnegat Light	12
		Pt. Pleasant	4
		Other	1
North Carolina	Dare	Manteo	3
		Wanchese	3
		Other	2
New York	New York	New York	3
	Suffolk	Montauk	5
		Other	5

Other counties with impacted vessels were: Hyde (NC); Dukes and Plymouth (MA); Philadelphia (PA).

The threshold analysis presented in Table 33 is based on Northeast dealer data and represents potential impacts on vessels participating in the fishery on the North Atlantic region. In order to further assess the impacts of the commercial 2012 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 732 vessels (219 vessels ≤ 18 ft; 411 vessels between 19-38 ft; and 102 vessels ≥ 39 ft) landed bluefish in North Carolina in 2010. On average, these vessels generated 19.88% of their total ex-vessel revenue from bluefish landings. By vessel size, the contribution of bluefish to total revenue for these vessels was 5.85% for vessel ≤ 18 ft; 19.03% for vessels 19-38 ft; and 22.65% for vessels ≥ 39 ft. Under this alternative, landings are projected to decrease as a consequence of the 2012 allocation when compared to 2010 landings by approximately 47% in North Carolina (Table 30). On average, reduction in revenues due to the potential decrease in landings associated with the 2012 quota compared to the 2010 landings are expected to be approximately 10.35% for fishermen that land bluefish in that state. No revenue reduction is expected for vessels that land bluefish in Florida as a consequence of the proposed 2012 quota compared to 2010 landings in that state (Table 30).

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 2012, then the number of affected entities described in this threshold analysis could potentially decrease, thus decreasing economic burden. Given that under this alternative the overall commercial quota in 2012 is lower than the 2011 quota and the 2010 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.

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 vessels, 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 2012 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 for some states.

8.10.3.2.2 Recreational Impacts

The recreational impacts described under Alternative 1 above (section 8.11.3.1.2) also apply here.

8.10.3.2.3 Other Impacts

Effects of research set-aside quota

A detailed discussion regarding the socioeconomic impacts of the RSA for bluefish is presented in section 7.4.1.

The impacts of this non-quota management measure described in Alternative 1 above (see section 8.11.3.1.3) also apply here. However, under this alternative, the commercial RSA component for bluefish could be worth as much as \$70,273 or \$31 per individual vessel.

8.10.3.3 Alternative 3 (Non-Preferred; Status Quo)

This scenario specifies a commercial quota of 9.375 M lb and recreational landing limit of 17.813 M lb for bluefish. These limits are identical to the limits specified in 2011. Under this scenario, the bluefish specifications would result in an aggregate of approximately 29 % and 10 % increase, respectively, in allowable commercial landings and recreational harvest limit relative to the 2010 landings (Table 30).

Even though the overall commercial allocation for 2012 is higher than the 2010 landings, when this allocation is distributed to the states, all states except North Carolina show a 2012 quota

level which is higher than their 2010 landings (Table 30). Therefore, landings in that state (North Carolina) will be constrained by the 2012 (7 % lower) quota when compared to landings in 2010.

8.10.3.3.1 Commercial Impacts

The results of the threshold analysis are presented in Table 38. A total of 74 vessels were projected to incur revenue losses of less than 5% and 644 vessels were projected to have no change in revenue relative to 2010. No vessels were projected to incur in revenue losses of 5% or more. In addition, no revenue reduction is expected for vessels that land bluefish in North Carolina and Florida as a consequence of the proposed 2012 quota compared to 2010 landings in those states.

Table 38. Threshold analysis of revenues for participating vessels under Alternative 3 (status quo), based on dealer data.

Quota Alternative 3 (Non-Preferred; Status Quo)		No Change in Revenue (number)	Number of Impacted Vessels by Reduction Percentile (%)						
Total Vessels	Number of Vessels Impacted by \geq 5% Reduction		<5	5-9	10-19	20-29	30-39	40-49	≥ 50
718	0	644	74	0	0	0	0	0	0

Impacts of the quotas provisions were examined relative to a vessel's home state as reported on the vessel's permit application (Table 39). The number of vessels with revenue reduction of less than 5% by home state ranged from 1 in both Massachusetts and New York to 55 in North Carolina. The changes described above are based on the potential changes in landings associated with the 2012 quotas versus 2010 landings.

Table 39. Review of revenue impacts under quota Alternative 3 (status quo), by home port state, based on dealer data.

State	Participating Vessels	Number of Vessels Impacted $\geq 5\%$	No Change in Revenue (number)	Number of Impacted Vessels by Reduction Percentile (%)						
				<5	5-9	10-19	20-29	30-39	40-49	≥ 50
CT	11	0	0	0	0	0	0	0	0	0
DE	3	0	3	0	0	0	0	0	0	0
MA	161	0	160	1	0	0	0	0	0	0
MD	10	0	10	0	0	0	0	0	0	0
ME	7	0	7	0	0	0	0	0	0	0
NC	69	0	14	55	0	0	0	0	0	0
NH	13	0	13	0	0	0	0	0	0	0
NJ	80	0	74	6	0	0	0	0	0	0
NY	128	0	127	1	0	0	0	0	0	0
RI	93	0	93	0	0	0	0	0	0	0
VA	22	0	19	3	0	0	0	0	0	0
OTHER ^a	4	0	4	0	0	0	0	0	0	0
NOT KNOWN ^b	117	0	109	8	0	0	0	0	0	0
Total	718	0	644	74	0	0	0	0	0	0

^aStates with fewer than 3 vessels were aggregated.

^bVessels have shown landings of bluefish in 2010, but do not hold any commercial Federal permits in 2010. These vessels may be fishing exclusively in state waters fisheries for bluefish, and landings are indicated because of reporting requirements for their other Federal permits or they do not hold a Federal permit to participate in these fisheries any longer.

As indicated before, 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 2012, then the number of affected entities described in this threshold analysis could potentially decrease, thus decreasing economic burden. Given that under this alternative the overall commercial quota in 2012 is higher than the 2010 landings, the amount of bluefish that could potentially be transferred among states would be high thus potentially allowing for less economic relief.

8.10.3.3.2 Recreational Impacts

The recreational impacts described under Alternative 1 above (section 8.11.3.1.2) also apply here.

8.10.3.3.3 Other Impacts

Effects of research set-aside quota

A detailed discussion regarding the socioeconomic impacts of the RSA for bluefish is presented in section 7.4.1.

The impacts of this non-quota management measure described in Alternative 1 above (see section 8.11.3.1.3) also apply here. However, under this alternative, the commercial RSA component for bluefish could be worth as much as \$15,622 or \$7 per individual vessel.

8.10.4 Summary of Impacts

Alternative 1 (Preferred)

In sum, under this alternative, the allocation to the commercial and recreational fisheries is approximately 40 and 7 % higher for 2012 when compared to 2010 landings, respectively.

Commercial harvest under this scenario would result in no revenue change relative to 2010 for vessels that reported landings of bluefish in 2010.

The recreational harvest limit for 2012 is slightly lower (3 %) than in 2011 and higher (7 %) than the recreational landings for 2010. Furthermore, the proposed limit under this alternative as well as the other two alternative s analyzed in this document are higher than the projected recreational landings for 2012. It is not anticipated that these measures will result in decrease in the demand for party/charter boat trips or affect angler participation in a negative manner.

The social and economic impacts of RSAs should be minimal. The RSAs are, conceptually, available for commercial vessels to participate in research, as well as for other vessels. Also, the RSAs are expected to yield important long-term benefits associated with improved data upon which to base management decisions.

The bluefish landings levels under this alternative are consistent with the ABC recommendations of the SSC and are therefore based on the best scientific information available and are intended to prevent overfishing. This alternative is projected to minimize the negative economic impacts upon small entities when compared to quota Alternatives 2 and 3.

Alternative 2 (Non-Preferred)

In sum, under this alternative, the allocation to the commercial and recreational fisheries is approximately 28 % lower and 37 % higher for 2012 when compared to 2010 landings, respectively. The proposed commercial quota under this alternative is the lowest quota level among the three alternatives evaluated.

Under this alternative, according to dealer data, a total of 62 of the 718 commercial vessels reporting landings of bluefish in 2010 were projected to incur revenue losses in the 5% or more. Furthermore, 464 vessels were projected to incur in revenue losses of less than 5% and 192 vessels would incur in no revenue change relative to 2010. A closer look to the overall vessel activity of the 62 vessels projected to incur in revenue losses of 5% or more indicate that 34 % of these vessels (21 out of 62 vessels) had gross sales of \$1,000 or less and 55 % (34 vessels) had gross sales of \$10,000 or less; thus likely indicating that the dependence on fishing for some of these vessels is very small. Furthermore, according to South Atlantic Trip Report, on average, reduction in revenues due to the potential decrease in landings associated with the 2012 quota compared to the 2010 landings are expected to be approximately 10.35 % for fishermen that land bluefish in North Carolina. No revenue reduction is expected for vessels that land bluefish in Florida.

This alternative is not expected to affect angler satisfaction nor expected to result in landings in excess of the recreational harvest limit.

The commercial losses associated with this alternative are the largest among all alternatives evaluated. The Council rejected this alternative because it would yield lower commercial fishing opportunities amongst all the evaluated alternatives due to absence of quota transfer under this alternative.

Under Alternative 2 the states of Massachusetts, New York, New Jersey, and North Carolina show a potential decrease in landings when the 2012 quota is compared to the 2010 landings (Table 30). If commercial quotas not adjusted for RSA are considered, the potential decrease in landings associated with the 2012 quotas compared to the 2010 landings would change by less than 3 % for those states. In other words, the additional amount of bluefish available in non-research participants in those states under Alternative 2 would be approximately 105,000 lb. The social and economic impacts of RSAs should be minimal. The RSAs are, conceptually, available for commercial vessels to participate in research, as well as for other vessels. Also, the RSAs are expected to yield important long-term benefits associated with improved data upon which to base management decisions.

Across all alternatives, it is expected that this alternative would produce negative socioeconomic impacts when compared to Alternatives 1 and 2.

Alternative 3 (Non-Preferred; Status Quo)

In sum, under this alternative, the allocation to the commercial and recreational fisheries is approximately 29 and 10 % higher for 2012 when compared to 2010 landings, respectively.

Under this alternative, according to dealer data, a total of 74 of the 718 commercial vessels reporting landings in 2010 were projected to incur revenue losses of less than 5 % and 644 would incur in no revenue change relative to 2010. No revenue reduction is expected for vessels that land bluefish in North Carolina and Florida as a consequence of the proposed 2012 quota compared to 2010 landings in those states.

This alternative is not expected to affect angler satisfaction nor expected to result in landings in excess of the recreational harvest limit. The commercial losses associated with this alternative are lower than under Alternative 2.

There should be no adverse economic or social impacts associated with the RSA. The RSAs are expected to yield important long-term benefits associated with improved data upon which to base management decisions.

It is important to stress that discussion for all three alternatives presented above are merely potential changes, i.e., based on available data and assumptions made in order to conduct this analysis. Actual changes in revenue will likely vary. This variation would occur for several reasons, including impacts undetermined for unidentifiable vessels. In addition, if quota allocations were to be transferred from a state or states that do not land their entire bluefish quota allocation for 2012 to states that are constrained by the 2012 allocation, then the number of affected entities described in this threshold analysis could potentially decrease, thus decreasing economic burden. In addition, other reductions in 2012 (i.e., overages) that were not accounted for here could also affect the evaluation conducted in this document.

8.10.5 Other Impacts

County Impacts

To further characterize the potential impacts on indirectly impacted entities and the larger communities where owners of impacted vessels reside, selected county profiles are typically constructed. Each profile is based on impacts under the most restrictive quota scenario because it would identify the maximum number possible and thus include the broadest possible range of counties in the analysis. The following criteria was employed to derive the range of counties profiled: a) the number of vessels with revenue losses exceeding 5 % per county was either greater than 4, or b) all vessels with losses exceeding 5 % in a given state were from the same home county. It is expected that this system will allow for a county profile that may include a wide range of potentially affected areas.

Counties are typically selected as the unit of observation because a variety of secondary economic and demographic statistical data were available from several different sources. Limited data are available for place names (i.e., by town or city name) but in most instances reporting is too aggregated or is not reported due to confidentiality requirements. Reported statistics include demographic statistics, employment, and wages.

Based on these criteria, a total of 4 counties were identified to be impacted in 2012: Barnstable, MA; Ocean, NJ; Dare, NC; and Suffolk, NY. Counties not included in this analysis (e.g., Duke and Hyde, NC; New York, NY; and Plymouth and Duke, MA) did not meet the criteria specified, i.e., there were less than 4 impacted vessels per county, or all impacted vessels in a state were not home ported within the same county. The target counties were identified

based on the county associated with the vessels homeport as listed in the owner's 2010 permit application.

Table 40 details population sizes, employment, personal income, and the contribution of commercial fishing and sea food processing to total personal income for selected counties. Counties presented correspond to the counties identified as impacted due to the management measures evaluated (i.e., as described in the above paragraph). Data presented in Table 40 were obtained from data bases supplied by the Minnesota IMPLAN Group for the calendar year 2001.

Of the counties identified, the percentage of total personal income derived from commercial fishing sales and from seafood processing was less than 1 % for all counties. These data indicate that each of the identified counties in Table 40 is not substantially dependent upon sales of commercial fishing products to sustain the county economies. Population in these counties ranged from 31 thousand in Dare County to 1.4 million in Suffolk County. 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>.

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Table 40. Counties identified as having ≥ 4 commercial vessels showing revenue reductions of 5 % or more as a consequence of quota scenario 2 evaluated in this document (sections 8.11.2 and 8.11.5).

State	County ^a	Population ^b	Employment ^c	Total Personal Income ^d (million of \$'s)	Commercial Fishing Employment	Percent of Personal Income Derived From Comm. Fishing	Fresh and Frozen Seafood Processing Employment	Percent of Personal Income derived From Seafood Processing
MA	Barnstable	226,809	132,491	8,159.31	793	.08%	0	.0008%
NJ	Ocean	527,207	187,627	15,742.25	166	.04%	0	0%
NY	Suffolk	1,438,973	752,834	52,116.44	1,111	.01%	0	0%
NC	Dare	31,168	25,453	830.10	77	.08%	17	.01%

* = < 10 observations.

a = Data obtained from the Minnesota IMPLAN Group, Inc., IMPLAN System (data and software), 1725 Tower Drive West, Suite 140, Stillwater, MN 55082, www.implan.com, 2001.

b = Year-round population.

c = Includes both full-time and part-time workers.

d = Includes employee compensation (wage and salary payments and benefits paid by employers) and proprietary income (payments received by self-employed individuals as income).

Source: Scott Steinback (NEFSC).

Note: The PA module was not available to conduct the county profile for that state. However, it is expected that overall commercial fishing employment; percent of personal income derived from commercial fishing; fresh and frozen seafood processing employment percent of personal; and income derived from seafood processing are expected to be low and not higher than the highest values presented in this table due to the small amount of marine commercial fishing activity in that state.

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 2012 (beginning January 1, 2012). In accordance with the bluefish FMP, the purpose of this action is to ensure that overfishing does not occur in FY2012 and that stock biomass does not decline below the overfished threshold.

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. Approximately 6.0 % of the bluefish landed in 2010 were caught in bottom trawls while 86.3 % were caught by gillnet. The proposed 2012 commercial quota could increase landings of bluefish by as much as 39.7 % 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 2010 only reached 66 % of the 2010 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. 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 MSFCMA.

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11.0 LIST OF AGENCIES AND PERSONS CONSULTED

In preparing this specifications document, the Council consulted with NMFS NERO, the states of Maine through Florida (through their membership on either the Mid-Atlantic Fishery Management Council and/or the Atlantic States Marine Fisheries Commission), and the U.S. Fish and Wildlife Service.

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