

FEDERAL AMERICAN LOBSTER MANAGEMENT
IN THE EXCLUSIVE ECONOMIC ZONE
BASED ON MEASURES SPECIFIED IN
ADDENDA II and III to AMENDMENT 3
to the
INTERSTATE FISHERY MANAGEMENT PLAN

Draft Environmental Assessment
Initial Regulatory Impact Review and Initial Regulatory Flexibility Analysis

National Marine Fisheries Service
Northeast Region

AUGUST 2005

EXECUTIVE SUMMARY

The National Marine Fisheries Service (NMFS) announces its intent to consider revisions to the Federal lobster regulations in response to recommendations by the Atlantic States Marine Fisheries Commission (Commission) and to clarify existing regulations. This Environmental Assessment (EA) analyzes proposed American lobster (*Homarus americanus*) management measures to increase protection to American lobster broodstock throughout the stock's range recommended to NMFS by the Commission as part of the Commission's Addenda II and III to Amendment 3 of the Interstate Fishery Management Plan for American Lobster (ISFMP). The proposed broodstock management measures in certain Lobster Conservation Management Areas (LCMA) are described in detail in Section 2 of this EA. This EA also analyzes proposed measures that will clarify existing regulations.

The preferred alternatives, described in detail in Section 5, propose to: revise the Egg Per Recruit overfishing target timeline of F10 from the year 2005 to the year 2008; increase the lobster minimum legal carapace size limit from 3 1/4 inches (8.26 centimeters (cm)) to 3 3/8 inches (8.57 cm) in LCMAs 2, 3, 4, 5, and the Outer Cape; increase the rectangular lobster trap escape vent size from 1 15/16 inches x 5 3/4 inches (4.92 cm x 14.61 cm) to 2 inches x 5 3/4 inches (5.08 cm x 14.61 cm) in LCMAs 2, 3, 4, 5, and the Outer Cape; increase the circular lobster trap escape vent size from 2 7/16 inches (6.19 cm) to 2 5/8 inches (6.67 cm) in LCMAs 2, 3, 4, 5, and the Outer Cape; implement a 5 1/4 inch (13.34 cm) maximum legal carapace size on possession of female lobsters in LCMA 4, and 5 1/2 inches (13.97 cm) in LCMA 5; require mandatory V-notching of female lobsters carrying eggs in LCMA 1 and in LCMA 3 above the 42°30' North latitude line; require a zero tolerance definition of V-notched female lobsters in LCMA 1; and implement a 5 mile (8 km) overlap boundary area between LCMAs 3 and 5.

To clarify existing regulations, the preferred alternatives, propose to: allow a change in the LMCA designations of a fishing vessel with a Federal lobster permit upon sale, transfer, or within 45 days of the permit's effective date; clearly reference other laws and regulations applicable to Federal lobster permit holders; clearly prohibit hauling or possession of lobster trap gear belonging to another vessel; and, exempt lobster trap gear retrieval from provisions of the exempted fishing regulations by a substitute vessel if a Federally permitted vessel is inoperable or mechanically impaired.

Direct and indirect impacts of the proposed action are analyzed and discussed in Sections 5.1 through 5.12, and the cumulative effects of the proposed action are analyzed and discussed in Section 5.13. The analyses of the impacts of the preferred alternatives to biological, protected, and socioeconomic resources indicate that the impacts of the proposed action are not significant, and a "Finding of No Significant Impact" is justified based on these analyses in the EA.

Based on the analysis of impacts described in Section 5, the proposed broodstock management measures described in Sections 2.1 through 2.7 for selected LCMAs (revise the overfishing timeline; increase the minimum legal carapace size; increase the lobster trap escape vent size; implement a maximum legal carapace size; implement a mandatory v-notch requirement; and implement a zero tolerance v-notch definition), would positively benefit the lobster resource in Federal waters and would result in no significant impacts on the lobster resource as a whole. Proposed measures to clarify existing Federal law, described in Sections 5.6 through 5.9, would result in more understandable and enforceable Federal lobster regulations and thereby positively benefit the lobster resource and Federal lobster fishers in Federal waters and would result in no significant impacts on the lobster resource as a whole.

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LIST OF ACRONYMS

ACA	Atlantic Coastal Act (same Act as next listing)
ACFCMA	Atlantic Coastal Fishery Conservation and Management Act
ANPR	Advanced Notice of Proposed Rulemaking
ALWTRP	Atlantic Large Whale Take Reduction Plan
ASMFC	Atlantic States Marine Fisheries Commission
CCL	Curved Carapace Length
Commission	Atlantic States Marine Fisheries Commission
CL	Carapace Length
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EIS	Environmental Impact Statement
EPS	Egg Production Schedule
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FMP	Fishery Management Plan
FONSI	Finding of No Significant Impact
FSEIS	Final Supplementary Environmental Impact Statement
ISFMP	Interstate Fishery Management Plan
LCMA	Lobster Conservation Management Area
LCMT	Lobster Conservation Management Team
LIS	Long Island Sound
MAFMC	Mid-Atlantic Fishery Management Council
NAO	National Oceanic and Atmospheric Administration Administrative Order
NEFMC	New England Fishery Management Council
NEFSC	Northeast Fisheries Science Center
NEPA	National Environmental Policy Act
NOI	Notice of Intent to Prepare an Environmental Impact Statement
NMFS	National Marine Fisheries Service
OC	Outer Cape
PBR	Potential Biological Removal
SAR	Stock Assessment Report
SCCLIS	South of Cape Cod to Long Island Sound
SEFSC	Southeast Fisheries Science Center
TED	Turtle Excluder Device
TEWG	Turtle Expert Working Group

1.0 INTRODUCTION

This Environmental Assessment primarily analyzes proposed American lobster management measures recommended to NMFS by the Commission, as part of the Commission's Addenda II and III to Amendment 3. The recommended Addenda II and III measures analyzed herein involve proposed increased protections to American lobster broodstock throughout the stock's range, and proposals to clarify existing Federal lobster regulations. The purpose and need for action, the context within which this action would proceed, and the process undertaken thus far in furtherance of the action are set forth below. The fishing effort control programs recommended in Addenda II and III will be analyzed in an environmental impact statement (see Appendix 3- Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS), 70 FR 24495).

1.1 Purpose and Need

American lobster (*Homarus americanus*) is growth overfished. The Commission – the body that has the lead in management of American lobster – reports that American lobster experience high fishing mortality rates and are overfished throughout their range (US/Canada border to Cape Hatteras, NC). In March 2000, the Commission issued an American lobster stock assessment report that concluded that the resource is growth overfished. That assessment was further evaluated by an external peer review, which took place during May 8-9, 2000 (ASMFC, July 2000). The stock assessment review concluded that fishing rates are unacceptably high, recruitment overfishing is occurring, and that a precautionary approach in management of the resource is warranted to sustain future viability of the lobster fishery. The Peer Review Report provided several management recommendations on the implications of the stock assessment report (For more details see Section 4.1 - Status of the Stock).

In the absence of an annual stock assessment for American lobster, the most recent review of the three lobster stock areas is the 2003 trawl survey trend analysis. For the Gulf of Maine stock lobster relative abundance has increased and legal sized relative abundance of males and females is at, or near, time series highs. However, relative abundance of pre-recruit size classes has dropped in recent years from the high levels observed in the late 1990s. While relative abundance of legal size lobsters could continue in the short term, the consistent decline in pre-recruit lobsters increases the risk of a significant decline in future abundance of legal lobsters. For southern New England, lobster abundance is at, or close to, time series lows. There has been an observable consistent decline in pre-recruit, recruit, and legal lobster indices among surveys over the last five years. For the Georges Bank and South stock unit, lobster relative abundance has remained relatively stable and there seems to be a slight increase in relative abundance of the legal sized lobsters in the last three years. (ASMFC, May 2003).

The Commission has developed a plan to end the overfishing and has requested assistance from the Federal Government in the form of compatible Federal regulation. The Federal Government is obligated by statute to support the Commission's efforts.¹ The proposed preferred alternatives responds to the biological need to address increasing lobster mortality and to rebuild stocks, to the practical need to have uniform state and Federal regulations, and to the legal need to support the Commission plan in complementary fashion.

1.2 Legal and Historical Context

¹See Atlantic Coastal Fisheries Cooperative Management Act, 16 USC 5103(a).

American lobster are managed within the framework of the Commission. The Commission is a deliberative body comprised of representatives both from the Atlantic coastal states and the Federal Government. The Commission serves to develop fishery conservation and management strategies for certain coastal species and coordinates the efforts of the states and Federal Government toward concerted sustainable ends.

The Commission decides upon a management strategy as a collective, then forwards that strategy to the states and Federal government along with a recommendation that the states and Federal Government take action (*e.g.*, enact regulations) in furtherance of this strategy. The Atlantic Coastal Fisheries Cooperative Management Act (Atlantic Coastal Act) directs the Federal Government to support the management efforts of the Commission. Additionally, to the extent the Federal Government seeks to regulate a Commission species, those Federal regulations must be compatible with the Commission plan.²

The Commission's American lobster management strategy is not predicated upon a single measure, nor is it contained within a single document. Rather, the structure is based on facilitating ongoing adaptive management with necessary elements implemented over time. The Commission set forth the foundation of its American Lobster fishery management plan in Amendment 3 in December 1997. The Federal Government issued compatible regulations that complemented Amendment 3 in December 1999. The Amendment 3 regulations established assorted measures to directly, even if preliminarily, address overfishing (*e.g.*, trap caps and minimum gauge sizes). By creating lobster management areas and industry led lobster management teams from which would spring recommendations for future measures to end overfishing. Examples of such more specific measures were recently set forth in the following Amendment 3 addenda: measures to limit future access to LCMAs 3, 4, and 5 in Addendum I (Commission approved August 1999 - compatible Federal regulations enacted March 2003); measures to increase protection of the American lobster broodstock being analyzed in this EA recommended in Addendum II (Commission approved February 2001) and Addendum III (Commission approved February 2002); and measures to control fishing effort being analyzed in a separate rulemaking action recommended in Addendum IV (Commission approved December 2003), Addendum V (Commission approved March 2004), and Addendum VI (Commission approved February 2005), as described in the lobster NOI-EIS (see Appendix 3).

1.3 Process

The Commission's recommendations to implement the broodstock measures in Addenda II and III form the basis of the proposed action that is being analyzed in this Environmental Assessment. Although Addendum II pre-dates Addendum III, both involve protections designed to increase the abundance of broodstock and thereby increase egg production.³ Protection of broodstock is one of the overarching objectives in the Commission's lobster management plan.⁴

²The Atlantic Coastal Act also mandates that any Federal regulation for a Commission species be consistent with the ten National Standards set forth in the Magnuson-Stevens Fishery Conservation and Management Act. 16 USC 1801 *et seq.*

³Addenda II and III contain management measures designed to achieve other management objectives as well. Addendum 2 is attached to this Environmental Assessment as Appendix Document 1 and Addendum 3 is attached hereto as Appendix Document 2.

⁴ The plan's overall objectives were set forth in Amendment 3. They are as follows:
1) Protect, increase, or maintain, as appropriate, the broodstock abundance at levels that would minimize risk of stock depletion and recruitment failure;

Broodstock protective measures included in Addenda II and III are the following: increases in the minimum legal gauge size in most management areas; increases in the size of escape vents on traps in most management areas; increases in the maximum legal gauge size in two management areas, and zero tolerance and mandatory V-notching requirements in selected management areas.

In response to the Commission's Addendum II recommendations, NMFS published an advanced notice of proposed rulemaking (ANPR) in the *Federal Register* on May 24, 2001 (66 FR 28726). The agency responded to the Commission's Addendum III by filing in the *Federal Register* an ANPR along with a NOI on September 5, 2002 (67 FR 56801). This notice declared NMFS' intention to combine the Addendum II and Addendum III rulemakings because the Addenda involved similar subject matter - namely management measures designed to protect brood lobster stock. Addenda II and III, however, also contain numerous other effort control management measures, such as a trap transferability program for the Outer Cape Management Area and a mandatory so-called "choose and use" program for Lobster Conservation Management Area 3 fishers that would require qualified permit holders to permanently designate LCMA 3 when renewing Federal lobster permits each year. Because these control measures are so intimately a part of the subsequently developed Commission's Addenda IV, V, and VI, NMFS determined that those effort control programs in Addenda II and III be analyzed contemporaneously with the Addenda IV - VI measures in a forthcoming EIS. Accordingly, NMFS published its ANPR along with an NOI to address these effort control measures in a *Federal Register* notice dated May 10, 2005 (see Appendix 3). Therefore, this EA will analyze broodstock measures from Addenda II and III, and a separate analysis will evaluate the effort control measures in Addenda II - VI.

At present, most states have issued their complementary Addenda II and III regulations; the Federal Government has not. As a result, there is presently a regulatory incongruence with the Commission's American lobster plan, at least insofar as it pertains to the broodstock measures identified in Addenda II and III. Most Federal lobster permit holders also hold a state lobster license, and they must abide by the ISFMP measures by virtue of their state license, even if the same restrictions have not yet been placed on their Federal permit. The focus of the analysis of measures proposed in this action is for Federal lobster permit holders from states that have not implemented all measures in the Commission's ISFMP. Generally, the exception to state coverage of all ISFMP measures, under the Commission's ISFMP, is for states that are classified as *de minimis* states. Certain states at the southern end of the range qualify for *de minimis* status because a given state's declared annual landings, averaged over a two year period, amount to less than 40, 000 lbs (18,144 kg) of American lobster (see Appendix 4). While *de minimis* states are required to promulgate all coastwide measures contained in Section 3.1 of Amendment 3, many of the area-specific measures proposed in this EA are not required to be

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- 2) Develop flexible regional programs to control fishing effort and regulate fishing mortality rates;
 - 3) Implement uniform collection, analysis and dissemination of biological and economic information and improve understanding of the economics of harvest;
 - 4) Maintain existing social and cultural features of the industry wherever possible;
 - 5) Promote economic efficiency in harvesting and use of the resource;
 - 6) Minimize lobster injury and discard mortality associated with fishing;
 - 7) Increase understanding of biology of American lobster, improve data, improve stock assessment models; and improve cooperation between fishermen and scientists;
 - 8) Evaluate contributions of current management measures in achieving objectives of the lobster plan;
 - 9) Ensure that changes in geographic exploitation patterns do not undermine success of Commission management program;
 - 10) Optimize yield from the fishery while maintaining harvest at a sustainable level; and
 - 11) Maintain stewardship relationship between fishermen and the resource.

implemented. However, Federal lobster regulations apply to all Federal lobster permit holders, including permit holders in *de minimis* states. Approximately ten percent of current Federal lobster permit holders are from *de minimis* states or reside in states that may not have fully implemented all Commission ISFMP management measures (see section 3.3.2- Permit Data/Human Environment for additional discussion).

2.0 MANAGEMENT MEASURES AND ALTERNATIVES

Bundling of Individual Measures to Create Management Alternatives

This section of the EA discusses both the management measures (or tools) as well as the available alternatives that reasonably achieve the stated purpose and need for action. Frequently, in past documents, the terms “management measures” and “alternatives” have been used interchangeably. Certainly, for less complicated actions -- actions with a singular management objective and a limited number of discrete pathways to that objective -- a choice among management measures is, in fact, a choice among alternatives. In such circumstances, analyzing and understanding alternatives are relatively uncomplicated. Decision makers can pick, choose, mix and match management measures on an ad hoc basis because the management measures act the same, whether taken individually or in combination. In other words, the action as a whole is equal to the sum of its management parts, with the individual parts being known quantities. Therefore, in these types of actions, to analyze and understand the individual measures is to analyze and understand the available alternatives.

Fisheries management actions, however, are not always straightforward. Sometimes, the individual management measures act in synergy or antagonistically and result in an action where the whole is either greater or lesser, but certainly not equal, to the sum of its parts. In such circumstances, analysis of individual measures may not allow the decision maker to predict the interactive effects of these management measures when they are ultimately bundled together in an overarching action. A solution to this problem is to analyze these potentially interactive measures together as a bundle since that is how the measures will be potentially implemented, *i.e.*, contemporaneously. In such situations, it is the variations of the collective management measures, or bundles, that actually form the management alternatives.

Here, the present Federal rulemaking features multiple management objectives and pathways and, therefore, this document will analyze most alternatives as bundled alternatives. See Table 2.7.4 for a summary table of the broodstock management measures that were bundled into the five environmental alternatives analyzed in this document. The five bundled environmental alternatives and their associated broodstock measures are analyzed in detail in Section 5 of this document. There are also a limited number of alternatives identified that can be taken individually or in combination, and these are identified as independent alternatives. Accordingly, the first part of this section - entitled Management Measures - will set forth the feasible management measures (or tools) available for this action. Further, in order to provide context, this first part will also generally describe the issue for which the tool is designed to address. Next, the second part of this action - entitled Bundled and Independent Alternatives - will identify the bundles of feasible measures that are being analyzed in this action.

Management Measures

The following section describes the various management measures and options used to select the bundled alternatives analyzed in this EA. The preferred management measures, analyzed in detail in Section 5, propose to: revise the Egg Per Recruit overfishing target timeline

of F10 from the year 2005 to the year 2008; increase the lobster minimum legal carapace size limit from 3-1/4 inches (8.26 cm) to 3-3/8 inches (8.57 cm) in LCMA 2, 3, 4, 5, and the Outer Cape; increase the rectangular lobster trap escape vent size from 1 15/16 inches x 5 3/4 inches (4.92 cm x 14.61 cm) to 2 inches x 5 3/4 inches (5.08 cm x 14.61 cm) in LCMA 2, 3, 4, 5, and the Outer Cape; increase the circular lobster trap escape vent size from 2 7/16 inches (6.19 cm) to 2 5/8 inches (6.67 cm) in LCMA 2, 3, 4, 5, and the Outer Cape; implement a 5-1/4 inch (13.34 cm) maximum legal carapace size on possession of female lobsters in LCMA 4, and 5-1/2 inches (13.97 cm) in LCMA 5; require mandatory V-notching of female lobsters carrying eggs in LCMA 1 and in LCMA 3 above the 42°30' latitude line; require a zero tolerance definition of V-notched female lobsters in LCMA 1; and implement a 5 mile (8 km) overlap boundary area between LCMA 3 and 5.

Bundled Measure 2.1 Egg Production Schedule - Issue Overview

The American lobster resource is considered overfished when the fishing mortality rate (F) results in a reduction in estimated egg production per harvestable lobster to 10% (F10%) or less of a non-fished population. In other words, lobsters are considered overfished when harvest so reduces the amount of lobsters remaining in the water that the remaining lobsters can produce no more than 10% of the eggs that an unfished population would produce. If lobsters are overfished- *i.e.*, the remaining uncaught lobsters are so few that they can only produce as a group 10% of the number of eggs that an unfished population would collectively produce, then the present Commission lobster plan recommends that managers act to restore egg production to 10% or greater by a date certain, presently December 31, 2005.

NMFS developed the yield and egg-per-recruit model (Fogarty and Idoine, 1988) used to evaluate the effectiveness of current Lobster Conservation Management Team (LCMT) plans to meet the egg production per recruit objective of 10% or more of a non-fished population. The model has subsequently been modified to incorporate additional biological realism and evaluation of more complicated management options. In the context of lobster assessment, the model has been used to evaluate the efficacy of fishery management measures such as changes in the minimum size limit. Under a given set of regulatory measures, the model can be used to estimate the percent of maximum lifetime yield per recruit and egg production per recruit that would occur under varying levels of realized fishing mortality.

Originally, in Addendum 1, the Commission targeted a rough deadline (December 31, 2005) by which they hoped to end overfishing. In so doing, the Commission used the best available stock information, but admittedly dated information, to extrapolate out an egg production schedule - a time line with interim objectives - that would meet the targeted deadline of December 31, 2005. The Commission acknowledged, however, that the Addendum 1 schedule and target deadline would need to be adjusted in later addenda following the peer reviewed stock assessment conducted in 2000.

In 2000, scientists assessed the American lobster stock utilizing the most current biological information to evaluate the status of the current egg production per recruit for each of the three stock areas. The May 2000 updated peer-reviewed American lobster stock assessment (ASMFC Stock Assessment Peer Review Report No. 00-01) confirmed that overfishing of American lobster stocks is occurring throughout the species' range. Based upon the updated stock assessment, the Commission revised its target deadline to end overfishing by December 31, 2008, and extrapolated out a revised egg production schedule with interim objectives that would meet that revised deadline. Accordingly, the Commission, in Addendum II and its recommendations to the Federal Government, revised the schedule for increasing egg production in each of the current stock assessment areas to account for updated information on the current

status of the stock (see Appendix 1).

Option 2.1.1 : No Change in Scheduled Time Line or Target Deadline (No Action)

This option would be considered the “no action” option according to the National Environmental Policy Act. This option that would retain December 31, 2005, as the operative deadline for the egg production schedule and restoration time line in each of the management areas. Accordingly, under this option, egg production in each management area would need to meet or exceed 10% of the egg production of an unfished population, which is the overfishing definition for American lobster, by a targeted deadline of December 31, 2005. The scheduled time line in this option does not incorporate the most recent (year 2000) stock assessment information. Since landings from the EEZ account for approximately 20% of all American lobster landed in U.S. waters, a complete ban on fishing for lobster in Federal waters would be the most likely approach to achieve the targets specified in the existing egg production schedule by the end of 2005. Relative to the involved management issues and measures, it would require a complete closure of Federal waters to fishing for, possession of, or landing of American lobster.

Table 2.1.1 Original Amendment 3 Egg Production Rebuilding Schedule

Stock Area	Egg Production (Percent of Maximum)							
	Year							
	1998	1999	2000	2001	2002	2003	2004	2005
Gulf of Maine	3.25	3.25	4.375	5.5	6.625	7.75	8.875	10+
Georges Bank & South	1.68	1.68	3.07	4.46	5.85	7.24	8.63	10+
SCCLIS	2.21	2.21	3.51	4.81	6.11	7.41	8.71	10+

American Lobster ISFMP: Amendment 3.

Option 2.1.2 : Revise the Scheduled Time Line and Target Deadline as Recommended by the Commission (preferred)

This option would revise and extend the egg production schedule time line by three years, from December 31, 2005, to December 31, 2008. Accordingly, this option would restore egg production in each of the management areas to 10% or greater of the egg production of an unfished population (*i.e.*, the present overfishing definition) by December 31, 2008. This option is based upon the most recent (*i.e.*, year 2000) stock assessment, is recommended by the Commission, and is preferred.

Table 2.1.2 Updated Addendum II Egg Production Rebuilding Schedule (Commission recommended)

Stock Area	Egg Production (Percent of Maximum)							
	Year							
	2001	2002	2003	2004	2005	2006	2007	2008
Gulf of Maine	3.2	4.17	5.14	6.11	7.09	8.06	9.03	10+

Georges Bank & South	6.2	6.74	7.29	7.83	8.37	8.91	9.46	10+
SCCLIS	8.3	8.54	8.79	9.03	9.27	9.51	9.76	10+

American Lobster ISFMP: Addendum II to Amendment 3.

Table 2.1.3: Summary - Egg Production Schedule and Time Line Options

Measure 2.1	Option 2.1.1 Non-Preferred	Option 2.1.2 Preferred
Egg Production Schedule (EPS) and EPS Time Line	Do not revise EPS or EPS time line (No Action)	Revise EPS and EPS time line in all LCMAs from 2005 to 2008

Bundled Measure 2.2 Increased Minimum Gauge Size – Issue Overview

One key Addendum II broodstock management measure was to increase the minimum legal harvest size of American lobster from 3 1/4 inches to 3 3/8 inches (8.26 cm to 8.57 cm) carapace length in certain LCMAs. The carapace is the unsegmented body shell of the American lobster. Carapace length (CL) is the straight line measurement from the rear of the eye socket parallel to the center line of the carapace to the posterior edge of the carapace. Many scientists believe that many lobsters are harvested before they have had an opportunity to reproduce. Hence, increasing the minimum legal size of lobster would force fishers to throw back lobsters at the present legal minimum size, allowing those lobsters an additional season to remain in the water, mature and reproduce. Accordingly, increasing the minimum CL or minimum gauge size will protect a larger number of mature female American lobster and the broodstock and increase egg production - overfishing of American lobster is predicated on egg production levels being below 10% of the levels of an unfished population- by allowing reproduction in a sector of the population that many believe has heretofore been harvested before reaching maturity.

Addendum II includes a series of minimum gauge size increases in state and Federal waters of LCMA 2 (inshore Southern New England), LCMA 3 (offshore waters), LCMA 4 (inshore Northern Mid-Atlantic), LCMA 5 (inshore Southern Mid-Atlantic), and the Outer Cape Management Area, but not LCMA 1 (Gulf of Maine) and LCMA 6 (Long Island Sound). By approving Addendum II, the states agreed to implement annual LCMA-specific gauge increases beginning December 31, 2001. In a letter dated February 13, 2001, NMFS received a recommendation from the Commission to implement complementary Federal measures for Federal waters of LCMAs 2, 4, 5, and the Outer Cape, as well as in LCMA 3 (comprised entirely of Federal waters). Specifically, the minimum allowable harvest size of American lobster in state waters of LCMAs 2,4,5 and the Outer Cape increased 1/32 inches (0.08 cm) annually until 2004 to an ultimate minimum size of 3 3/8 inches (8.57 cm). The Commission recommends that the gauge increases in Federal waters of LCMA 2, 4, 5, and the Outer Cape, as well as in LCMA 3 increase to an ultimate minimum size of 3 3/8 inches (8.57 cm).

Option 2.2.1: No Increase in the Federal Minimum Gauge Size (No Action)

This option would retain the current Federal minimum allowable harvest size of American lobster at 3 1/4 inches (8.26 cm) across all management areas. This option would be considered the “no action” option according to the National Environmental Policy Act.

Option 2.2.2: Increase the Federal Minimum Gauge Size Immediately in Certain Management Areas as Recommended by the Commission (preferred)

This option would implement a single 1/8 inch (0.32 cm) increase in the Federal minimum allowable harvest size of American lobster in LCMAs 2, 3, 4, 5 and the Outer Cape. The increase would result in a change of the current minimum harvest size from 3 1/4 inches to 3 3/8 inches (8.26 cm to 8.57 cm). An increase in the minimum harvest size to 3 3/8 inches (8.57 cm) has been recommended by the Commission and is NMFS' preferred option.

Option 2.2.3: Increase the Federal Minimum Gauge Size Immediately and Uniformly Throughout the Range (non preferred)

This option would implement a single 1/8 inch (0.32cm) increase in the Federal minimum allowable harvest size of American lobster in all LCMAs, including LCMAs 1 and 6. The increase would result in a change of the current minimum harvest size from 3 1/4 inches to 3 3/8 inches (8.26 cm to 8.57 cm) in all LCMAs. Although the Commission recommended an increase in the Federal minimum gauge size for LCMAs 2, 3, 4, 5 and the Outer Cape, it did not for LCMAs 1 and 6. This option would result in disparate regulatory regimes in LCMAs 1 and 6 and for that reason and others, this option is non-preferred .

Option 2.2.4: Increase Federal Gauges Gradually but Uniformly In the LCMAs designated by the Commission (non preferred)

This option would implement a minimum gauge increase of 1/32 inch (0.08 cm) every year for four years in LCMAs 2, 3, 4, 5 and the Outer Cape. The increases would stop after four years upon reaching an ultimate minimum gauge size of 3 3/8 inches (8.57 cm). Although the Commission recommended gauge increases in LCMAs 2, 3, 4, 5, and the Outer Cape, it recommended the increases occurring on a different schedule. This option would result in a disparate minimum gauge size between the majority of states and Federal Government and continue disparate gauge size regulations. Accordingly, this option is non-preferred.

Table 2.2: Summary - Minimum legal harvest size Options

Measure 2.2	Option 2.2.1 Non-Preferred	Option 2.2.2 Preferred	Option 2.2.3 Non-Preferred	Option 2.2.4 Non-Preferred
Minimum Harvest Size Increase from 3 1/4" to 3 3/8" (8.26 cm to 8.57 cm)	Do not increase Minimum Harvest Size	Single Increase in Minimum Harvest Size in LMCAs 2, 3, 4, 5, & Outer Cape	Single Increase in Minimum Harvest Size in all LCMAs	Gradual Increase in Minimum Harvest size in LCMAs 2, 3, 4, 5 & Outer Cape

Bundled Measure 2.3 Lobster Trap Escape Vents - Issue Overview

Lobster trap escape vents are another management measure designed to increase egg production. Conceptually, escape vents are holes intentionally placed in the trap that are large enough to allow sublegal lobsters caught in a trap to exit, yet be small enough to prevent legal sized lobsters from escaping.

Addendum II called for an increase in the rectangular escape vent minimum size from 1 15/16 inches by 5 3/4 inches (4.92 cm by 14.61 cm) to 2 inches by 5 3/4 inches (5.08 cm by 14.61 cm). These recommendations were made to the Federal Government in a letter dated

February 13, 2001, and are consistent with and follow the Commission's recommended increase in the minimum harvest size of American lobster from the current minimum harvest size of 3 1/4 inches to 3 3/8 inches (8.26 cm to 8.57 cm). As with the increased minimum gauge size, the Commission recommended that the increase in the trap escape vent size apply only to lobster trap gear fished in state and Federal waters of LCMA 2, 3, 4, 5, and the Outer Cape Management Area, but not LCMA 1 and LCMA 6. An increase in the size of the escape vent opening by 1/16 inch (0.16 cm) by requiring at least one rectangular escape vent with an unobstructed opening not less than 2 inches by 5 3/4 inches (5.08 cm by 14.61 cm) per trap or at least two circular escape vents per trap measuring 2 5/8 inches (6.67 cm) in diameter, was evaluated by the Commission's Lobster Technical Committee and determined to provide the maximum escapement of sublegal lobsters, which is consistent with 100% retention of legal lobsters.

Option 2.3.1: No Increase in the Lobster Trap Escape Vent Size (No Action)

This option would retain the current Federal minimum allowable vent size for lobster traps across all management areas. Presently, the regulations require all lobster trap gear to have a rectangular escape vent with an unobstructed opening not less than 1 15/16 inches by 5 3/4 inches (4.92 cm by 14.61 cm) or two circular escape vents with unobstructed openings not less than 2 7/16 inches (6.19 cm) in diameter. This option would be considered the "no action" option according to the National Environmental Policy Act.

Option 2.3.2: Increase the Lobster Trap Escape Vent Size Immediately in Certain Management Areas as Recommended by the Commission (preferred)

This option would implement a single 1/16 inch (0.16cm) increase in the Federal minimum lobster trap rectangular escape vent opening of lobster traps in LCMAs 2, 3, 4, 5 and the Outer Cape. The increase would require at least one rectangular escape vent with an unobstructed opening not less than 2 inches by 5 3/4 inches (5.08 cm by 14.61 cm) per trap or at least two circular escape vents per trap measuring 2 5/8 inches (6.67 cm) in diameter. At the current time, Federal regulations require that all lobster trap gear must have a rectangular escape vent with an unobstructed opening not less than 1 15/16 inches by 5 3/4 inches (4.92 cm by 14.61 cm) or two circular escape vents with unobstructed openings not less than 2 7/16 inches (6.19 cm) in diameter. This option has been recommended by the Commission and is NMFS' preferred option.

Option 2.3.3: Increase the Lobster Trap Escape Vent Size Immediately and Uniformly in All Management Areas (non-preferred)

This option would implement a single 1/16 inch (0.16cm) increase in the Federal minimum lobster trap escape vent opening of lobster traps in all LCMAs, including LCMAs 1 and 6. The increase would require at least one rectangular escape vent with an unobstructed opening not less than 2 inches by 5 3/4 inches (5.08 cm by 14.61 cm) per trap or at least two circular escape vents per trap measuring 2 5/8 inches (6.67 cm) in diameter. Although the Commission recommended increased Federal escape vent sizes for LCMAs 2, 3, 4, 5 and the Outer Cape, it did not for LCMAs 1 and 6. This option would result in disparate regulatory regimes in LCMAs 1 and 6 and for that reason, this option is non-preferred.

Table 2.3: Summary - Lobster Trap Escape Vent Management Options

Measure 2.3	Option 2.3.1 Non-Preferred	Option 2.3.2 Preferred	Option 2.3.3 Non-Preferred
Minimum Lobster Trap Escape Vent Size Increase	Do not increase Escape Vent Size	Increase Escape Vent Size in LMCAs 2, 3, 4, 5, & Outer Cape	Increase Escape Vent Size in all LCMAs

Bundled Measure 2.4 Mandatory V-Notching – Issue Overview

Mandatory v-notching is another management measure designed to increase egg production. V-notching is a process wherein a lobsterfisher cuts a v-shaped notch into the flipper in the tail of an egg bearing female lobster. Any subsequent lobsterfisher catching that v-notched lobster must return it to the sea. As such, v-notching is a management measure designed to specifically protect the female lobster broodstock. At present, there is no Federal requirement to cut a v-shaped notch into the flipper in the tail of an egg-bearing female lobster, although Federal regulations currently prohibit possession of female lobsters possessing a v-notch. The Commission has recommended that the Federal Government require mandatory v-notching for all Federal vessels fishing in LCMA 1 and in LCMA 3 above the 42°30' latitude line. The decision to require mandatory v-notching in LCMA 3 above the 42°30' latitude line was the result of several meetings that resulted in a mutual agreement proposed and supported by the LCMT 1 and LCMT 3, and ultimately approved by the Lobster Management Board. The two LCMTs agreed to maximize the broodstock benefits of v-notching female lobsters throughout the Gulf of Maine lobster stock assessment area, rather than limiting the requirement to LCMA 1.

Option 2.4.1: No Requirement for Mandatory V-notch (No Action)

This option would retain present Federal regulations that do not require the v-notching of egg bearing female lobsters. This option would be considered the “no action” alternative according to the National Environmental Policy Act.

Option 2.4.2: Mandatory V-notching in LCMA 1 and Above 42°30' Latitude in LCMA 3 as Recommended by the Commission (preferred)

This alternative would require all Federal lobsterfishers with LCMA 1 permits to v-notch all egg bearing lobsters. The alternative would also mandate all Federal permit holders fishing in LCMA 3 above the 42°30' latitude line to v-notch all egg bearing female lobsters. This option has been recommended by the Commission and is NMFS’ preferred option.

Option 2.4.3: Mandatory V-notching Throughout Range (non-preferred)

This option would require all Federal lobsterfishers to v-notch all egg bearing lobsters in all LCMAs. Although the Commission recommended mandatory v-notching in LCMA 1 and in LCMA 3 above the 42°30' latitude line, it did not recommend mandatory v-notching in all LCMAs. This option would result in disparate regulatory regimes in the other LCMAs, and for that reason and others, this option is non-preferred.

Table 2.4: Summary - Mandatory V-Notching Requirement

Measure 2.4	Option 2.4.1 Non-Preferred	Option 2.4.2 Preferred	Option 2.4.3 Non-Preferred
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Mandatory V-Notching in LCMA 1 and LCMA 3 Above 42°30' Latitude	Do Not Require Mandatory V-Notching in LCMA 1 and LCMA 3 Above 42°30' Latitude	Require Mandatory V-Notching for All vessels in LCMA 1 and LCMA 3 Above 42°30' Latitude	Require Mandatory V-Notching in all LCMAs
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Bundled Measure 2.5 Zero Tolerance V-Notching - Issue Overview

Zero tolerance v-notching of female lobsters relates both to the interpretation of what constitutes a v-notch and the limited latitude that the government will grant a violator possessing a v-notched lobster. Commission guidelines, as well as state and Federal regulations, prohibit the harvesting of v-notched lobsters. Prior to Addendum III, however, the ISFMP provided only one definition of what constituted a v-notched lobster, *i.e.*, the Commission defined “v-notch” as being a straight-sided cut, without setal hairs, at least 1/4 inch (0.64 cm) in depth and tapering to a point. In contrast, lobsterfishers from Maine had long considered a v-shaped notch to be a cut ‘of any size’ in the flipper next to and to the right of the center flipper, and Maine state regulations prohibited possession based on that definition. Maine argued that its definition ensured protection of female lobsters beyond the first molt, since after the first molt, possessors of v-notched lobsters in the Gulf of Maine often argued that a clearly v-notched lobster was legally caught because it had a v-notch of less than 1/4 inch (0.64 cm) or that the cut was not obviously straight sided. The Commission, in Addendum III, supported and approved recommendations by the LCMA 1 LCMT in the Gulf of Maine stock area that sought to define “v-notch” as being a v-shaped notch of any size in the flipper next to and to the right of the center flipper as viewed from the rear of the female lobster. The Commission recommended that the Federal regulations be amended consistent therewith.

Option 2.5.1: Retain Current Definition of a V-notched Lobster (No Action)

This option would retain the present Federal definition of a v-notch. Under current Federal regulations, a v-notch means a straight-sided triangular cut, without setal hairs, at least 1/4 inch (0.64 cm) in depth and tapering to a point. This option would be considered the “no action” option according to the National Environmental Policy Act.

Option 2.5.2: Adopt a Zero Tolerance Definition of a V-Notched Lobster in Management Area 1 as Recommended by the Commission (preferred)

This option would amend the Federal definition of a v-notched lobster to mean a v-shaped notch of any size in the flipper next to and to the right of the center flipper as viewed from the rear of the female lobster in all of LCMA 1. This option has been recommended for implementation by the Commission in all of LCMA 1. In addition to the so-called zero tolerance v-notch definition in all of LCMA 1, Federal regulations would retain the current definition of a v-notched lobster in all other LCMAs (LCMAs 2, 3, 4, 5, 6, the Outer Cape), as being a straight-sided cut, without setal hairs, at least 1/4 inch (0.64 cm) in depth and tapering to a point.

Option 2.5.3: Adopt a Zero Tolerance Definition of a V-Notched Lobster Throughout the Range (non-preferred)

This option would replace the current Federal definition of a v-notch lobster and replace it with a zero tolerance definition of a v-notched lobster to mean a v-shaped notch of any size in the flipper next to and to the right of the center flipper as viewed from the rear of the female lobster. This option would retain the Federal regulatory prohibition of possession of a v-notched

lobster in all LCMAs. This option would result in disparate regulatory regimes if state and Federal v-notch regulations differ within a single LCMA, and for that reason and others, this option is non-preferred.

Table 2.5: Summary - Zero Tolerance Definition of V-Notching

Measure 2.5	Option 2.5.1 Non-Preferred	Option 2.5.2 Preferred	Option 2.5.3 Non-Preferred
Zero Tolerance Definition of V-Notching	No Action - Do not Implement Zero Tolerance Definition of V-Notching in LCMA 1	Implement Zero Tolerance Definition in LCMA 1	Implement Zero Tolerance Definition of V-Notching in all LCMAs

Bundled Measure 2.6 Maximum Gauge Size – Issue Overview

Another management measure designed to protect lobster broodstock is the implementation of a maximum harvest size for lobster. Many scientists believe that lobster can be a long-lived species, up to and over 50 years of age, and can achieve weights of 40 pounds (18 kilograms) or more. It is further believed by many scientists that bigger lobsters are more successful breeders and produce more eggs. For that reason, maximum size gauge restrictions on lobster can improve egg production by prohibiting harvest of the bigger, and potentially, better breeding lobsters, forcing their return to the sea and allowing further reproduction. In Amendment 3, the Commission set a 5 inch (12.7 cm) maximum gauge size on all male and female lobsters caught in LCMA 1. The Amendment 3 recommendations have already been incorporated into Federal law. The Commission, in Addendum III, called for a 5-1/4 inch (13.34 cm) maximum gauge size on all female lobsters harvested in LCMA 4, a 5-1/2 inch (13.97 cm) maximum gauge size on all female lobsters harvested in LCMA 5, and requested that the Federal Government implement regulations consistent therewith.

Option 2.6.1: Add No New Maximum Gauge Size Requirements (No Action)

This option would retain the present Federal regulations for which there is no maximum harvestable size limit for lobster in LCMA 4 and LCMA 5. This option would be considered the “no action” option according to the National Environmental Policy Act.

Option 2.6.2: Set a 5 1/4 inch (13.34 cm) Maximum Gauge Size for Female Lobsters in Management Area 4 and a 5 1/2 inch (13.97 cm) Maximum Gauge Size for Female Lobsters in Management Area 5 as Recommended by the Commission (preferred).

This option would amend the Federal regulations to set a maximum size restriction for female lobster in LCMA 4 and LCMA 5. This option would prohibit the possession of a female lobster with a carapace size in excess of 5 1/4 inches (13.34cm) in LCMA 4 and would prohibit the possession of a female lobster with a carapace size in excess of 5 1/2 inches (13.97cm) in LCMA 5. This option has been recommended by the Commission and is NMFS’ preferred option.

Option 2.6.3: Set a maximum Gauge Size in All Management Areas (non-preferred)

This option would establish a Federal maximum gauge size for female lobsters in all LCMAs. Although the Commission recommended a maximum gauge size on female lobsters in LCMA 4 and LCMA 5, it did not so recommend for LCMAs 2, 3, 6, and the Outer Cape, and

LCMA 1 already has a maximum gauge size on male and female lobsters of 5 inches (12.7 cm). This option would result in disparate regulatory regimes if state and Federal maximum gauge size regulations differ in the LCMAs, and for that reason and others (see Section 5.5 - Alternatives Analysis), this option is non-preferred.

Table 2.6: Summary - LCMA 4 and LCMA 5 Maximum Gauge Size for Female Lobsters

Measure 2.6	Option 2.6.1 Non-Preferred	Option 2.6.2 Preferred	Option 2.6.3 Non-Preferred
LCMA 4 and LCMA 5 Maximum Gauge Size for Female Lobsters	Continue existing requirements - do not implement a maximum gauge size in LCMA 4 and LCMA 5	Implement a 5 1/4 inch (13.34 cm) maximum gauge size in LCMA 4 and Implement a 5-1/2 inch (13.97 cm) maximum gauge size in LCMA 5	Implement a maximum gauge size in all LCMAs

Bundled Measure 2.7 Area 3/5 Overlap – Issue Overview

Lobster management in the southern end of the range is complicated by a number of factors, including distinct seasonality, limited abundance of lobsters, reliance on multiple mixed fisheries, and the similarity between finfish traps and fishing methods used to harvest American lobster. With the approval of Addendum I and the establishment of a historical participation based limited entry program for continued access to LCMA 3, those lobsterfishers in LCMA 5 fishing near the boundary with LCMA 3 were disadvantaged. Specifically, a requirement to document annual lobster landings in excess of 25,000 lbs to qualify for continued access to LCMA 3 was deemed problematic for LCMA 5 lobster fishers, because resource availability is variable at the southern end of the range. Following discussions between the LCMTs 3 and 5 to address these issues, the Commission, in Addendum III, proposed a five-mile (8 kilometers (km)) overlapping boundary zone between LCMAs 3 and 5 and recommended that the Federal Government implement regulations consistent therewith. The coordinates are as follows:

Table 2.7.1 Overlap Zone Boundary:

Point	Current Coordinates Latitude (°N)/Longitude (°W)		Proposed Overlap Coordinates Latitude (°N)/Longitude (°W)	
V	39° 50'	73° 01'	39° 50'	72° 55'
X	38° 39.5'	73° 40'	38° 38.2'	73° 33.8'
Y	38° 12'	73° 55'	38° 10.4'	73° 49'
Z	37° 12'	74° 44'	37° 10.6'	74° 38'
ZA	35° 34'	74° 51'	35° 31.9'	74° 45.5'
ZB	35° 14.5'	75° 31'	35° 14.5'	75° 19.3'

From point V, current coordinates extending out to new overlap coordinates, back to point ZB.
See Appendix 6 for a chart illustrating overlap zone boundary.

Option 2.7.1: Retain Current Boundaries of LCMAs 3 and 5 (No Action)

This option would retain the current Federal boundaries of LCMAs 3 and 5. There would be no overlap. This option would be considered the “no action” option according to the National Environmental Policy Act.

Option 2.7.2: Amend Federal Regulations to Create an Overlapping Boundary Between Management Area 3 and Management Area 5 as Recommended by the Commission (preferred)

This option would revise the Federal regulations to create a five-mile (8 km) overlapping boundary between LCMA 3 and 5 (see chart - Appendix 6). This option is recommended by the Commission, and is preferred by NMFS.

Table 2.7.2 Summary: Overlap Boundary Between LCMA 3 and LCMA 5

Measure 2.7	Option 2.7.1 Non-Preferred	Option 2.7.2 Preferred
5 Mile (8 km) Overlap Boundary Between LCMA 3 and LCMA 5	No Action - Do Not Implement an Overlap Boundary Between LCMA 3 and LCMA 5	Implement a Five-Mile Overlap Boundary Between LCMA 3 and LCMA 5

Table 2.7.3: SUMMARY OF OPTIONS USED FOR BUNDLED MANAGEMENT ALTERNATIVES

Measure 2.1	Option 2.1.1 Non-Preferred	Option 2.1.2 Preferred		
Egg Production Schedule (EPS) and EPS Time Line	Do not revise EPS or EPS time line (No Action)	Revise EPS and EPS time line in all LCMAs from 2005 to 2008		
Measure 2.2	Option 2.2.1 Non-Preferred	Option 2.2.2 Preferred	Option 2.2.3 Non-Preferred	Option 2.2.4 Non-Preferred
Minimum Harvest Size Increase from 3 1/4" to 3 3/8"	Do not increase Minimum Harvest Size	Single Increase in Minimum Harvest Size in LMCAs 2, 3, 4, 5, & Outer Cape	Single Increase in Minimum Harvest Size in all LCMAs	Gradual Increase in Minimum Harvest size in LCMAs 2, 3, 4, 5 & Outer Cape
Measure 2.3	Option 2.3.1 Non-Preferred	Option 2.3.2 Preferred	Option 2.3.3 Non-Preferred	
Minimum Lobster Trap Escape Vent Size Increase	Do not increase Escape Vent Size	Increase Escape Vent Size in LMCAs 2, 3, 4, 5, & Outer Cape	Increase Escape Vent Size in all LCMAs	
Measure 2.4	Option 2.4.1 Non-Preferred	Option 2.4.2 Preferred	Option 2.4.3 Non-Preferred	
Mandatory V-Notching in LCMA 1 and LCMA 3 Above 42/30' Latitude	Do Not Require Mandatory V-Notching in LCMA 1 and LCMA 3 Above 42/30' Latitude	Require Mandatory V-Notching for All vessels in LCMA 1 and LCMA 3 Above 42/30' Latitude	Require Mandatory V-Notching in all LCMAs	
Measure 2.5	Option 2.5.1 Non-Preferred	Option 2.5.2 Preferred	Option 2.5.3 Non-Preferred	
Zero Tolerance Definition of V-Notching	Do not Implement Zero Tolerance Definition of V-Notching in LCMA 1	Implement Zero Tolerance Definition in LCMA 1	Implement Zero Tolerance Definition of V-Notching in all LCMAs	
Measure 2.6	Option 2.6.1 Non-Preferred	Option 2.6.2 Preferred	Option 2.6.3 Non-Preferred	
LCMA 4 and LCMA 5 Maximum Gauge Size for Female Lobsters	Do not implement a maximum gauge size in LCMA 4 and LCMA 5	Implement a 5-1/4 inch (13.34 cm) maximum gauge size in LCMA 4 and Implement a 5-1/2 inch (13.97 cm) maximum gauge size in LCMA 5	Implement a maximum gauge size in all LCMAs	
Measure 2.7	Option 2.7.1 Non-Preferred	Option 2.7.2 Preferred		
5 Mile (8 km) Overlap Boundary Between LCMA 3 and LCMA 5	Do Not Implement an Overlap Boundary Between LCMA 3 and LCMA 5	Implement a Five-Mile Overlap Boundary Between LCMA 3 and LCMA 5		

SUMMARY OF BUNDLED ALTERNATIVES UNDER CONSIDERATION

Because many management measures interact with each other, alternatives must be defined so the impacts of the actions being considered can be evaluated and understood. The following matrix provides a quick reference to the measures that are being considered for each bundled alternative in this action.

TABLE 2.7.4: SUMMARY OF ALTERNATIVES USING BUNDLED MANAGEMENT OPTIONS

MEASURE	ALTERNATIVES				
	Alternative 1 - No Action	Alternative 2 - Modified No Action	Alternative 3 - ASMFC Schedule	Alternative 4 - Preferred	Alternative 5 - Environmental
Measure 2.1: Egg Production Schedule (EPS) and EPS Time Line	2.1.1: Do not revise EPS or EPS time line	2.1.2: Revise EPS and EPS time line in all LCMAs	2.1.2: Revise EPS and EPS time line in all LCMAs	2.1.2: Revise EPS and EPS time line in all LCMAs	2.1.2: Revise EPS and EPS time line in all LCMAs
Measure 2.2: Minimum Harvest Size Increase from 3 1/4" to 3 3/8"	2.2.1: Do not increase Minimum Harvest Size	2.2.1: Do not increase Minimum Harvest Size	2.2.4: Increase Minimum Harvest Size Over 4-Years in LCMAs 2, 3, 4, 5, & Outer Cape	2.2.2: Immediately increase Minimum Harvest Size in LCMAs 2, 3, 4, 5, & Outer Cape	2.2.3: Immediately increase Minimum Harvest Size in all LCMAs
Measure 2.3: Minimum Lobster Trap Escape Vent Size Increase	2.3.1: Do not increase Escape Vent Size	2.3.1: Do not increase Escape Vent Size	2.3.2: Increase Escape Vent Size in LCMAs 2, 3, 4, 5, & Outer Cape	2.3.2: Increase Escape Vent Size in LCMAs 2, 3, 4, 5, & Outer Cape	2.3.3: Increase Escape Vent Size in all LCMAs
Measure 2.4: Mandatory V-Notching in LCMA 1 and LCMA 3 Above 42/30' Latitude	2.4.1: Do Not Require Mandatory V-Notching in LCMA 1 and LCMA 3 Above 42/30' Latitude	2.4.1: Do Not Require Mandatory V-Notching in LCMA 1 and LCMA 3 Above 42/30' Latitude	2.4.2: Require Mandatory V-Notching in LCMA 1 and LCMA 3 Above 42/30' Latitude	2.4.2: Require Mandatory V-Notching in LCMA 1 and LCMA 3 Above 42/30' Latitude	2.4.3: Require Mandatory V-Notching in all LCMAs
Measure 2.5: Zero Tolerance Definition of V-Notching	2.5.1: Do Not Implement Zero Tolerance Definition of V-Notching	2.5.1: Do Not Implement Zero Tolerance Definition of V-Notching	2.5.2: Implement Zero Tolerance Definition of V-Notching in LCMA 1	2.5.2: Implement Zero Tolerance Definition of V-Notching in LCMA 1	2.5.3: Implement Zero Tolerance Definition of V-Notching in all LCMAs
Measure 2.6: LCMA 4 and LCMA 5 Maximum Gauge Size	2.6.1: Do Not Implement a Maximum Gauge Size in LCMA 4 and LCMA 5	2.6.1: Do Not Implement a Maximum Gauge Size in LCMA 4 and LCMA 5	2.6.2: Implement a 5-1/4 inch (13.34 cm) maximum gauge size in LCMA 4 and Implement a 5-1/2 inch (13.97 cm) maximum gauge size in LCMA 5	2.6.2: Implement a 5-1/4 inch (13.34 cm) maximum gauge size in LCMA 4 and Implement a 5-1/2 inch (13.97 cm) maximum gauge size in LCMA 5	2.6.3: Implement a 5-1/4 inch (13.34 cm) maximum gauge size in all LCMAs
Measure 2.7: Overlap Boundary Between LCMA 3 and LCMA 5	2.7.1: Do Not Implement an Overlap Boundary Between LCMA 3 and LCMA 5	2.7.1: Do Not Implement an Overlap Boundary Between LCMA 3 and LCMA 5	2.7.2: Implement a Five-Mile Overlap Boundary Between LCMA 3 and LCMA 5	2.7.2: Implement a Five-Mile Overlap Boundary Between LCMA 3 and LCMA 5	2.7.2: Implement a Five-Mile Overlap Boundary Between LCMA 3 and LCMA 5

Independent Measures

Unlike Measures 2.1 - 2.7 that are analyzed in “bundled” configurations of alternatives based on the interaction of the related component measures, the following measures: Measure 2.8; Measure 2.9; and Measure 2.10; are referred in this analysis as ‘independent’ measures. While the management options comprising each bundled alternative interact with each other in a concerted way and can be evaluated most effectively as a bundle rather than for each component

separately, the independent measures do not interact with each other in a concerted way, and analyzing bundled alternatives containing various combinations of Measures 2.8 -2.10 is not an effective approach to analyze their environmental impacts. These measures attempt to clarify existing regulations and proposed to: allow a change in the LCMA designations upon sale of a fishing vessel with a Federal lobster permit; clearly prohibit hauling or possession of lobster trap gear belonging to another vessel; and, exempt lobster trap gear retrieval from provisions of the exempted fishing regulations by a substitute vessel if a Federally permitted vessel is inoperable or mechanically impaired.

Independent Measure 2.8 Area Designation Change Upon Sale of Vessel and Permit – Issue Overview

Current Federal regulations at Part 697.4(a)(7)(iv) prohibit a permit owner from changing the permit’s lobster management area designations during the fishing year. In other words, lobsterfishers have yearly flexibility to designate new or different LCMAs when they renew their annual permit, but upon making that designation, fishers are bound by that choice for the remainder of the fishing year. This measure was designed in large part to close a potential regulatory loophole. That is, Federal regulations at 697.4(a)(7)(v) mandate that permits with multiple LCMA designations must abide by “...the most restrictive management measures in effect for any one of the specified areas, regardless of the area being fished, for the entire fishing year.” Individuals, however, could circumvent this most restrictive provision if they were allowed to drop or add LCMA permit designations if management measures within a certain management area became more or less restrictive during the year.

Although the restriction on changing LCMA designations was designed to prevent speculative add/drop fishing practices, it was not intended to apply to vessel sales and transfers or unintended errors in category selection noted upon issuance or renewal of a vessel permit. The regulation specifically allows a change in permit LCMA designation for a replacement vessel. The term “replacement vessel,” however, could be interpreted narrowly as pertaining to a vessel that replaces a former vessel for reasons other than the sale of that former vessel (e.g., the former vessel being permanently or temporarily decommissioned due to damage or engine trouble, etc.). Accordingly, the present regulatory text has confused some lobster fishers as to their ability to re-designate LCMAs upon the sale and receipt of a new vessel and permit. Furthermore, the existing regulatory text could be interpreted narrowly to prevent a LCMA correction to either a new vessel application or permit renewal, if an error occurs in the permitting process. This change would allow a re-designation of the LCMA category upon sale or transfer of a vessel with a lobster permit. This change would allow permit holders, upon initial receipt of a new or renewed permit, one opportunity to request a change in the permit LCMA category if requested within 45 days of the effective date of the vessel’s permit. If such a request is not received within 45 days of the effective date of the vessel’s permit, the vessel owner may not request a change in the permit category for the duration of the fishing year. Provision for one opportunity to change categories, if requested within 45 days, will bring lobster permitting procedures in line with existing procedures currently in place for other Northeast vessel permit practices.

Option 2.8.1: Do not Allow Area Designation Change of a Vessel Permit upon Sale, Transfer, or within 45 Days of the Permit’s Effective Date (No-Action)

This option would retain the present Federal regulations that prohibit re-designation of permit LCMAs in all circumstances except for replacement vessels. This Option would be

considered the “no action” alternative according to the National Environmental Policy Act.

Option 2.8.2: Amend Regulations to Allow Re-Designation upon Sale, Transfer, or within 45 Days of the Permit’s Effective Date (preferred)

This option would clarify the existing regulations to specifically allow a lobsterfisher to re-designate LCMAs on a newly purchased permit, a transferred permit, or within 45 days of the effective date of the vessel permit. This Option is similar to the No Action Alternative insofar as agency policy on this issue will remain the same, but the added clarity of this Option may alleviate some confusion in the industry. Accordingly, Option 2.8.2 is NMFS’ preferred alternative.

Independent Measure 2.9 Reference Other Applicable Law - Issue Overview

This issue, like the issues and Options set forth above in Section 2.8, involves already existing Federal regulations that could be stated more succinctly. Presently, lobster regulations are issued under the Atlantic Coastal Act in Title 50 of the Code of Federal Regulations, Part 697 - Atlantic Coastal Fisheries Cooperative Management. Federal lobster permits, however, are also held subject to conditions contained in acts other than the Atlantic Coastal Act and regulatory parts other than Part 697. Although there are clear links in Part 697 to these other conditions, the pathway could be stated more plainly. For example, lobster permit conditions are stated in and through the regulation at 50 CFR 697.4(b) - Vessel Permits and Trap Tags: Conditions. According to 697.4(b), a Federal lobster permit is held conditionally, subject to the permit holder abiding by all state and local laws, as well as “... the requirements of this part,” which itself is regulatory parlance for “subject to the requirements of Title 50 of the Code of Federal Regulations, Part 697 - Atlantic Coastal Fisheries Cooperative Management.”⁵ Included in “this part” (i.e. Part 697) is Section 697.3 - Relation to Other Federal and State Laws. Within Section 697.3 is reference to and incorporation of Sections 307 through 311 of the Magnuson-Stevens Act, which generally relate to enforcement. Also within Section 697.3 is a statement incorporating by reference 50 CFR Part 600.705-Relation to Other Laws, which sets forth other pertinent Federal laws that Federal lobster permit holders must abide by, including those regulations in Part 229 - Authorization For Commercial Fisheries Under the Marine Mammal Protection Act of 1972. Still further, within Part 229 are lobster restrictions pertaining to gear, time and area that are designed to benefit marine mammals. Thus, gear, time and area restrictions are conditions of a Federal lobster permit held under 697.4(b), although it requires multiple steps to make the connection and could be written in more direct fashion.

Option 2.9.1: Retain Existing ‘By Reference’ Language (No-Action)

⁵ The regulation states: Vessel owners who apply for a Federal limited access American lobster permit under this section must agree, as a condition of the permit, that the vessel and vessel’s fishing, catch, and pertinent gear (without regard to whether such fishing occurs in the EEZ or landward of the EEZ, and without regard to where such fish or gear are possessed, taken, or landed) are subject to all requirements of this part. The vessel and all such fishing, catch, and gear shall remain subject to all applicable state or local requirements. If a requirement of this part and a management measure required by state or local law differ, any vessel owner permitted to fish in the EEZ must comply with the more restrictive requirement. 50 CFR 697.4(b).

This option would retain the present Federal regulations that set forth a permit's conditions through the Section 697.4(b) incorporation by reference of other "...requirements of this part." This option would be considered the "no action" alternative according to the National Environmental Policy Act.

Option 2.9.2: Reference Other Regulatory Requirements and Conditions (preferred)

This option would clarify the existing regulations to more directly reference lobster permit conditions that exist outside of Part 697. The agency would amend Section 697.4(b)-Conditions to include a direct statement that lobster permit holders are subject to the laws and regulations administered by NOAA, including the Endangered Species Act, the Marine Mammal Protection Act and the gear, time and area restrictions thereunder, as well as the enforcement provisions of the Magnuson Stevens Act. The agency would also amend Section 697.7-Prohibitions to track the newly added text in Section 697.4(b)-Conditions. This option is similar to the No Action Alternative insofar as it neither creates nor dissolves present requirements, obligations or procedures. However, the more direct text of Option 2.9.2 will likely create better understanding and realization among permit holders of the conditions attendant to their permit. Accordingly, Option 2.9.2 is NMFS' preferred alternative.

Independent Measure 2.10 Specific Reference to Already Existing Trap Hauling and Possession Limits - Issue Overview

This issue involves another regulatory clarification of an already existing rule. Specifically, Federal regulations at 50 CFR 697.7(c)(1)(viii) generally prohibit permit holders from possessing or hauling improperly identified lobster trap gear.⁶ According to Federal regulations at 50 CFR 697.21, lobster trap gear is improperly identified if the trap is not properly tagged to identify the vessel possessing or hauling it. To put it more directly, which is what the preferred option seeks to do, a vessel may only possess or haul its own gear and not gear tagged to another. Other lobster regulations also address this gear possession/hauling prohibition but again do so in similarly circuitous, even if clear, fashion. For example, 50 CFR 697.7(1)(c)(vii) prohibits hauling and possession of traps above a permit holder's trap limit, and 50 CFR 697.7(c)(xii) prohibits possession of a lobster trap tag issued to another vessel. Accordingly, hauling and possession of another vessel's lobster gear is presently prohibited but stating that prohibition more directly might reduce the perception of confusion on the issue.

Option 2.10.1: Retain Existing Trap Gear Hauling and Possession Regulations (No-Action)

This option would retain the present Federal regulations that prohibit a permit holder from hauling and possessing another's lobster gear, albeit stated in less direct and specific fashion. This Option would be considered the "no action" alternative according to the National Environmental Policy Act.

Option 2.10.2: Amend Regulations to More Directly Prohibit the Hauling and Possession of Another's Gear (preferred)

⁶The regulation states that a permit holder may not "...[p]ossess, deploy, haul, harvest lobster from, or carry aboard a vessel any trap gear that does not satisfy the requirements on gear identification and marking, escape vents, ghost panel and maximum trap size specified in §697.21 unless such gear has been rendered unfishable, or unless exempted pursuant to §697.26."

This option would clarify the existing regulations to more directly state the present prohibition against the hauling and possession of another's lobster trap gear. This Option is similar to the No Action Alternative insofar as the regulated action is prohibited in either event, but the added clarity of Option 2.10.2 may alleviate some confusion in the industry. Accordingly, Option 2.10.2 is NMFS' preferred alternative.

Independent Measure 2.11 Exempt Gear Retrieval from Exempted Fishing Regulations to Authorize a Substitute Vessel to Haul Ashore Lobster Trap Gear under Certain Conditions

Federal lobster regulations, specified at §697.22 - Exempted fishing, allow the Regional Administrator to exempt any person or vessel from Federal lobster regulations for the conduct of exempted fishing beneficial to the management of the American lobster, weakfish, Atlantic striped bass, Atlantic sturgeon, or horseshoe crab resources or fisheries, pursuant to the provisions of §600.745. Administratively, the exempted fishing procedures may require up to sixty days to complete and may include: an environmental assessment to evaluate the impacts of the proposed activity; notification in the Federal Register, including a minimum 14-day comment period; and additional requirements that may significantly delay the ability of a Federal permit holder to retrieve lobster traps if the Federal vessel is inoperable or mechanically-impaired.

NMFS proposes a modification to this part to allow the Regional Administrator for the Northeast Region, or the Director of the Office of Sustainable Fisheries, as appropriate, to authorize a substitute vessel to haul ashore the lobster trap gear of an inoperable or mechanically-impaired federally permitted lobster vessel without having to engage in the exempted fishing process outlined at 50 CFR 600.745 - Exempted fishing. This revision would allow NMFS to more expeditiously address pressing needs than is currently provided in the regulations.

Option 2.11.1 Retain Existing Provisions on Exempted Fishing and Gear Retrieval (no action)

This option, the No Action alternative, would retain the existing wording specified in 50 CFR 697.22 - Exempted fishing. This Option would require the owner of vessel requesting authorization to use a substitute vessel to haul ashore the lobster trap gear of an inoperable or mechanically-impaired federally permitted lobster vessel to follow the exempted fishing process outlined at 50 CFR 600.745 - Exempted fishing.

Option 2.11.2 Exempt Gear Retrieval from Exempted Fishing Regulations (preferred)

This option, the preferred alternative, would modify existing exempted fishing regulations to allow the Regional Administrator for the Northeast Region, or the Director of the Office of Sustainable Fisheries, as appropriate, to authorize a substitute vessel to haul ashore the lobster trap gear of an inoperable or mechanically-impaired federally permitted lobster vessel without having to engage in the exempted fishing process. This revision would allow NMFS to more expeditiously address urgent needs than is currently provided in the regulations.

Table 2.11.1 SUMMARY OF INDEPENDENT MEASURES AND OPTIONS

	No Action Alternative	Preferred Alternative
Measure 2.8 - Area Designation Change	Option 2.8.1 - Do Not Change Area Designation Regulations	Option 2.8.2 - Allow Area Designation Change
Measure 2.9 - Reference Other Applicable Laws	Option 2.9.1 - Do Not Reference Other Applicable Laws	Option 2.9.2 - Allow Reference Other Applicable Laws
Measure 2.10 - Prohibit Hauling Of Another's Traps	Option 2.10.1 - Do Not Clarify Prohibition on Hauling Of Another's Traps	Option 2.10.2 - Clarify Prohibition on Hauling Of Another's Traps
Measure 2.11 - Allow Substitute Vessel to Haul Gear	Option 2.11.1 - Do Not Allow Substitute Vessel to Haul Gear	Option 2.11.2 - Allow Substitute Vessel to Haul Gear

MANAGEMENT ACTIONS CONSIDERED BUT REJECTED AT THIS TIME

The following sections, Section 2.12 - 2.15, contain management actions that NMFS is not proposing to adopt for Federal lobster permit holders at this time, including: implementation of a limited entry and trap transferability program for the Outer Cape LCMA; a mandatory requirement to elect LCMA 3 if qualified; a mandatory vessel logbook reporting requirement; and, imposition of restrictions on vessel upgrades. Sections 2.12 - 2.15, describe the specific management actions and NMFS issues and areas of concern with these management actions. In addition, NMFS announced its intention to address several of these management actions in an ANPR/NOI to evaluate fishing effort control - see Appendix 3 - NMFS ANPR/NOI (70 FR 24495).

2.12 Outer Cape Limited Entry / Trap Transferability

In Addendum III to the ISFMP in Section 2.1.7. (see Appendix 2), the Commission proposed limiting fishing access to the Outer Cape LCMA, allocating traps to qualifiers and then reducing the numbers allocated, and finally allowing traps to be transferred among those individuals who qualify for access. The plan is both interesting and novel. Many of the details necessary to implement the plan measures by diverse regulatory agencies may allow for latitude in interpretation, perhaps due to its novelty. The majority of lobstermen fishing in the Outer Cape LCMA reside in Massachusetts, and Massachusetts struggled to implement the plan.⁷ The Massachusetts Division of Marine Fisheries held multiple public hearings in 2002 and 2003 and presented alternatives for Massachusetts license holders electing to fish in LCMA 1 and 2, in addition to the Outer Cape LCMA. Ultimately, Massachusetts submitted and received Commission concurrence to implement a conservation equivalent effort control program for the state waters of the Outer Cape LCMA that varied from the plan specified by the Commission in Addendum II.

⁷The Outer Cape LCMA is the only LCMA in which a single state (Massachusetts) does not share its near shore jurisdiction with any other state.

Central to the Outer Cape LCMA plan is the transferability of allocated traps. Trap transferability relates to fishers being allocated a specific number of traps, but then being able to transfer and reapportion that allocation among themselves. Trap transferability is born out of the concept of Individual Fishing Quotas and would be categorized as a Dedicated Access Program as the United States Commission on Ocean Policy has recently defined the term in its report to Congress. The U.S. Commission on Ocean Policy's report identified the potential value of Dedicated Access Programs, but acknowledged that many issues still needed resolution. The Ocean Policy Commission recommended that "Congress should direct the National Marine Fisheries Service (NMFS) to issue national guidelines for dedicated access privileges that allow for regional flexibility in implementation" and further identified six specific issues that such guidelines should address.⁸

The Outer Cape LCMA plan does not address many of the Dedicated Access Program issues identified by the U.S. Commission on Ocean Policy for at least one obvious reason – namely, that the LCMA plan predates the Ocean Policy Commission's report by over two years. Nevertheless, the Commission did subsequently approve a more detailed Dedicated Access (Trap Transferability) Program for LCMA 3 in Addenda IV and V. LCMA 3 is further along in the potential Dedicated Access Program process by virtue of already limiting access and establishing maximum trap allocations in Addendum I, for which compatible Federal regulations were promulgated in March 2003. Additionally, Addendum IV included effort control measures developed by the LCMT for LCMA 2, including a potential Dedicated Access Program. Following approval of Addendum IV, the Commission established a Trap Transferability Subcommittee in 2004 to bring the involved regulatory agencies together to establish an effective multi-jurisdictional implementation protocol and to help resolve transferability coordination issues. The work of the sub-committee and working group is ongoing, but at present, neither body has reached consensus on how to address Dedicated Access (Trap Transferability) Program issues nor have the bodies made any final recommendations to the Commission's Lobster Board.

After an initial review, the Trap Transferability Subcommittee concluded that key components of the Addendum IV effort control plan for LCMA 2 prevented its implementation by all regulatory agencies. In May 2004, the subcommittee recommended to the Lobster Board that the LCMA 2 effort control measures be delayed until all regulatory agencies are able to implement the effort control measures specified in Addendum IV. After further analysis of the impacts of the effort control measures, the subcommittee concluded the measures, as specified in

⁸Those six issues are as follows:

- 1) specify the biological, social, and economic goals of the plan; recipient groups designated for the initial quota shares; and data collection protocols;
- 2) provide for periodic reviews of the plan to determine progress in meeting goals;
- 3) assign quota shares for a limited period of time to reduce confusion concerning public ownership of living marine resources, allow managers flexibility to manage fisheries adaptively, and provide stability to fishermen for investment decisions;
- 4) mandate fees for exclusive access based on a percentage of quota shares held. These user fees should be used to support ecosystem based management. Fee waivers, reductions or phase-in schedules should be allowed until a fishery is declared recovered or fishermen's profits increase.
- 5) include measures, such as community-based quota shares or quota share ownership caps, to lessen the potential harm to fishing communities during the transition to dedicated access privileges; and
- 6) hold a referendum among the permitted commercial fishermen after adequate public discussion and close consultation with all affected stakeholders, to ensure acceptance of a dedicated access plan prior to regional Fishery Management Council approval.

Preliminary Report of the U.S. Commission on Ocean Policy - Governor's Draft, April 2004. Chapter 19, page 235.

Addendum IV, would not effectively achieve the objectives to cap fishing effort in LCMA 2. Therefore, in August 2004, the Commission Lobster Board directed development of draft Addendum VI, with the intent to withdraw the LCMA 2 effort control plan contained in Addendum IV. In addition, the Commission directed the LCMA 2 LCMT and jurisdictions with LCMA 2 permit holders to develop a new effort control plan that would cap effort at or near current levels. In February 2005, the Lobster Board approved Addendum VI which retracted the LCMA 2 effort control plan contained in Addendum IV. Discussions within the LCMA 2 LCMT are ongoing at this time to develop a modified effort control plan to more effectively cap effort at or near current levels.

Accordingly, NMFS is presented with the following: an Outer Cape LCMA plan that is lacking, albeit understandably, in detail relative to the analysis on some issues and recommendations from the U.S. Commission on Ocean Policy that may lead to future Federal standards on Dedicated Access Programs; work by the Fishery Commission's Lobster Board Transferability Subcommittee and coordination working group that is in its infancy and for which there is as yet no uniform Commission policy; and finally, more detailed (and subsequently developed) LCMA 2 and 3 Dedicated Access Programs for which prudence dictates a holistic contemporaneous analysis with the Outer Cape LCMA Dedicated Access Program. As a result, NMFS has decided to act upon the Commission's Outer Cape LCMA plan, the effort control program for LCMA 2 and 3 and the potential for similar programs in other LCMA 2s in an EIS currently underway (see Appendix 3 - ANPR-NOI Effort Control, 70 FR 24495) where the Dedicated Access Program issue may more fully be developed and analyzed within the larger context of lobster fishery Dedicated Access Programs, including programs recommended by the Commission.

2.13 LCMA 3 "Choose and Use"

The Commission in Addendum III set forth a management measure specific to LCMA 3 entitled "Choose and Use." Under current Federal lobster regulations, permit holders have considerable freedom of choice in designating fishing areas when they renew their permit each year. Although a person cannot choose LCMA 3, 4, or 5 without having first qualified into those areas, presently most of the LCMA 3s are open access to any person with a Federal lobster permit. However, there are no LCMA 3s that a permit holder must choose when renewing a Federal lobster permit. The Commission's recommended Choose and Use plan, however, would require changes in the present Federal regulations.

Choose and Use would obligate LCMA 3 permit holders to designate (*i.e.*, "choose") LCMA 3 on their Federal permits when renewing Federal permits each year. To the extent a qualified permit holder did not choose LCMA 3, then that permit holder would be barred from designating LCMA 3 on his or her permit in future years, although the permit would still retain its LCMA 3 qualification and if sold, the subsequent owner would then be able to restart the LCMA 3 Choose and Use process. As with all Federal permit holders, those fishers designating multiple LCMA 3s on their permit must abide by the most restrictive regulations among the LCMA 3s.

The juxtaposition of the Federal "Most Restrictive" regulation and the proposed Choose and Use plan could present a significant conundrum for some lobsterfishers. For example, permit holders who fish a limited number of traps seasonally in LCMA 3 but who fish predominantly in other LCMA 3s may have qualified for access to LCMA 3 with a modest trap allocation. Such a permit holder, however, might not seek to designate LCMA 3 on his or her permit lest they be bound to fish the more restrictive trap cap allocated to LCMA 3. Yet if that

person did not choose to designate LCMA 3 on the permit, then the Choose and Use plan would preclude their designation of LCMA 3 at any time in the future.

The Commission sought to resolve this dilemma by approving a measure in Addendum IV that would waive application of the Most Restrictive rule insofar as it related to the number of lobster traps allocated below a maximum cap. Accordingly, NMFS has determined it prudent to reserve analysis and decision on the proposed LCMA 3 Choose and Use plan and to consider it contemporaneously with the Most Restrictive rule waiver for trap allocations that has been approved and recommended in Addendum IV. Thus, this measure will not be considered or analyzed here at this time, but will be analyzed in future rulemaking (see NMFS Effort Control ANPR-NOI, Appendix 3).

2.14 Mandatory Reporting

Mandatory reporting relates to the requirement of fishers to report catch data to the government. Presently, all Federal Northeast Multispecies permit holders must report their entire catch to the Federal Government, be it species covered under the Multispecies permit⁹, or species covered under other permits, such as a Federal lobster permit. In Addendum II, the Commission called for all Federal LCMA 3 permit holders to report their catch to the Federal Government in a manner similar to that required of Northeast Multispecies permit holders (and several other Federal limited access permits). The Commission recommended that the Federal Government implement regulations consistent therewith. The current mandatory reporting requirements for Federal limited access permit holders were developed to accommodate traditional finfish harvest from mobile gear vessels and is burdensome for traditional trap gear fishermen. At this time, several pilot programs have been completed or are underway with the intent to develop a reporting platform tailored for lobstermen and potentially to report their catch data from multiple fishing trips at one time rather than on a daily trip by trip basis. This measure will be considered and analyzed at such time that a recommended reporting platform becomes available for implementation.

2.15 Vessel Upgrade Limits

The Commission in Addendum III set forth management measures specific to LCMA 5 that would limit a permit holder's ability to upgrade his or her vessel. Specifically, Addendum III limits a permit holder's ability to upgrade an LCMA 5 vessel to a 10% increase in length and a 20% increase in horsepower. Addendum III provided no further detail on the measure. The Commission ultimately included the LCMA 5 vessel upgrade limitations as a recommended management measure to the Federal Government. However, the vessel upgrade limitations have not been implemented by state jurisdictions. Specifically, New Jersey requested, and the Commission Lobster Board approved, an exemption for New Jersey state license holders from this LCMA 5 requirement. Also, state lobster license holders residing in the Commission *de minimis* states adjacent to and south of New Jersey, including Maryland, Delaware, Virginia, and North Carolina are exempt from the ISFMP requirement to implement the vessel upgrade restriction. In Technical Addendum #1, dated July 18, 2002, the Commission withdrew section 2.1.1.3 Vessel Upgrade Limit from the requirements for LCMA 5. The LCMA 2 effort control

⁹Species covered under a Northeast Multispecies permit include American plaice, Atlantic cod, Atlantic halibut, haddock, ocean pout, offshore hake, pollock, redfish, red hake, silver hake, white hake, windowpane flounder, witch flounder and yellowtail flounder. 50 CFR 648.2

plan in Addendum IV (that was withdrawn in Addendum VI), included measures that would limit a permit holder's ability to upgrade his or her vessel. Addendum IV had proposed limits to a permit holder's ability to upgrade an LCMA 2 vessel to a 15 percent increase in length. Addendum IV provides no further detail on the measure.

NMFS has previously considered vessel upgrade restrictions in the lobster fishery. Most recently, in its rulemaking based upon Addendum I, NMFS considered but rejected vessel upgrade limitations in LCMA 3.¹⁰ At that time, NMFS concluded that the upgrade restrictions would be unnecessarily costly and burdensome to fishers because existing baseline vessel characteristics on many vessels are likely undocumented. The analysis further stated that vessel upgrade limitations may pose safety constraints and offered no obvious conservation benefits to the resource.

NMFS' reasoning in its Addendum I rulemaking analysis is equally relevant to this present rulemaking. Lobster trap vessels are generally small – *e.g.*, the average length is 39 ft (11.9 m) -- and as such, the specifications of many vessels are not documented with the U.S. Coast Guard. Therefore, information on length and horsepower may not be readily available, thereby necessitating a marine survey to establish legal vessel specifications, which would add a financial burden on vessel owners. The potential cost to hire a marine surveyor or naval architect to verify existing baseline vessel characteristics can range from \$150 to \$600, with associated costs increasing with vessel size, and would result in added delays for vessel replacement and transfers, if implemented. NMFS does not consider the burden justified given that vessel upgrade limitations offer no obvious conservation benefit to the resource, and certainly the Commission's recommendation indicates no nexus between the restriction and the egg production measures that constitute Addenda II and III or a connection to overall Fishery Management Plan goals. Accordingly, NMFS has determined it prudent to reject vessel upgrade restrictions at this time.

3.0 DESCRIPTION OF AFFECTED ENVIRONMENT

Introduction

A summary is provided of the affected environment in this EA. More complete information is provided in the FEIS for Federal Lobster Management in the Exclusive Economic Zone (NMFS 1999).

3.1 Description of the Physical Environment

The physical environment of the American lobster is the same as summarized in Section V of the FEIS (NMFS 1999) and the 2000 lobster stock assessment report (ASMFC 2000).

The American lobster is distributed throughout the Northwest Atlantic Ocean from Newfoundland to Cape Hatteras, North Carolina (ASMFC 2000). Juvenile and adult American lobsters occupy a wide variety of benthic habitats from the intertidal zone to depths of 700 meters. They are most abundant in relatively shallow coastal waters. Shelter is a critical habitat requirement for lobsters.

The following description of lobster habitats in the Northeast region of the U.S. (Maine to North Carolina) is based primarily on a report prepared by Lincoln (1998) from a variety of

¹⁰Final Supplemental Environmental Impact Statement - Federal Lobster Management in the Exclusive Economic Zone, National Marine Fisheries Service, October 30, 2002 - pages 15-16, 186-187.

primary source documents. This information has been supplemented by the addition of some more recent research results. Table 3.1 summarizes information on lobster densities by habitat type. Unless otherwise noted, the information noted below was originally provided by Cooper and Uzmann (1980).

Inshore Lobster Habitats

Estuaries

Mud base with burrows – These occur primarily in harbors and quiet estuaries with low current speeds. Lobster shelters are formed from excavations in soft substrate. This is an important habitat for juveniles, and densities can be very high, reaching 20 animals per square meter.

Rock, cobble and gravel – Juveniles and adolescents have been reported on shallow bottom with gravel and gravely sand substrates in the Great Bay Estuary, NH, on gravel/cobble substrates in outer Penobscot Bay, ME (Steneck and Wilson 1998), and in rocky habitats in Narragansett Bay, RI (Lawton and Lavalli 1995). Densities in Penobscot Bay exceeded 0.5 juveniles and 0.75 adolescents/m². According to unpublished information cited by Lincoln (1998), juvenile lobsters in Great Bay prefer shallow bottoms with gravely sand substrates.

Rock/shell – Adult lobsters in the Great Bay Estuary utilize sand and gravel habitats in the channels but seem to prefer a rock/shell habitat more characteristic of the high temperature, low salinity regimes of the central bay.

Salt marshes/peat

Lobster shelters are formed from excavations cut into peat. Reefs form from blocks of salt marsh peat that break and fall into adjacent marsh creeks and channels and seem to provide moderate protection for small lobsters from predators (Barshaw and Lavalli 1988). Densities are high (up to 5.7/m²).

Kelp beds

Kelp beds in New England consist primarily of *Laminaria longicruris* and *L. saccharina*. Lobsters were attracted to transplanted kelp beds at a nearshore study site in the mid-coast region of Maine, reaching densities that were almost ten times greater than in nearby control areas (Bologna and Steneck 1993). Lobsters did not burrow into the sediment but sought shelter beneath the kelp. Only large kelp (> 50 cm in length) was observed sheltering lobsters and was used in the transplant experiments.

Eelgrass

Lobsters have been associated with eelgrass beds in the lower portion of the Great Bay Estuary in New Hampshire (Short et al. 2001). Eighty percent of the lobsters collected from eelgrass beds were adolescents. Average density was 0.1/m², greater than reported by Barshaw and Lavalli (1988). In mesocosm experiments, Short et al. reported that lobsters showed a clear preference for eelgrass over bare mud. This research showed that adolescent lobsters burrow in eelgrass beds, utilize eelgrass as an overwintering habitat, and prefer eelgrass to bare mud.

Intertidal Zone

Research in Maine has demonstrated the presence of early settlement, postlarval, and juvenile lobsters in the lower intertidal zone (Cowan 1999). Two distinct size classes were consistently present: 3-15 mm CL and 16-40 mm CL. Monthly mean densities during a five-

year period ranged from 0-8.6 individuals/m² at 0.4 m below mean low water. Preliminary results indicate that areas of the lower intertidal zone serve as nursery grounds for juvenile lobster.

Inshore Rock Types

Sand base with rock – This is the most common inshore rock type in depths > 40 m. It consists of sandy substrate overlain by flattened rocks, cobbles, and boulders. Lobsters are associated with abundant sponges, Jonah and rock crabs. Shelters are formed by excavating sand under a rock to form U-shaped, shallow tunnels. Densities of sub-adult lobsters are fairly high (Table 3.1).

Boulders overlaying sand – This habitat type is relatively rare in inshore New England waters. Compared to other inshore rocky habitats, densities are low (Table 3.1).

Cobbles – Lobsters occupy shelters of varying size in the spaces among rocks, pebbles, and boulders. Densities as high as 16 lobsters/m² have been observed, making this the most densely populated inshore rock habitat for lobsters in New England.

Bedrock base with rock and boulder overlay – This rock type is relatively common inshore from low tide to depths of 15-45 m. Shelters are formed by rock overhangs or crevices. Encrusting coralline algae and attached organisms such as anemones, sponges, and mollusks cover exposed surfaces. Green sea urchins and starfish are common. Cunner, tautog, sculpin, sea raven, and redfish are the most abundant fish. Lobster densities are low (Table 3.1).

Mud-shell/rock substrate – This habitat type is usually found where sediment discharge is low and shells make up the majority of the bottom. It is best described off Rhode Island. Densities are low.

Offshore Lobster Habitats

Sand base with rocks – Although common inshore (see above), this habitat is rather restricted in the offshore region except along the north flank of Georges Bank.

Clay base with burrows and depressions – This habitat is common on the outer continental shelf and slope. Lobsters excavate burrows up to 1.5 m long. There are also large, bowl-like depressions that range in size from 1 to 5 m in diameter and may shelter several lobsters at a time. Minimum densities of 0.001 lobsters/m² have been observed in summer (Table 3.1).

Mud-clay base with anemones – This is a common habitat for lobsters on the outer shelf or upper slope. Forests of mud anemones (*Cerianthus borealis*) may reach densities of 3 or 4 per square meter. Depressions serve as shelter for relatively small lobsters at minimum densities of 0.001/m² (Table 3.1).

Mud base with burrows – This habitat occurs offshore mainly in the deep basins, in depths up to 250 m. This environment is extremely common offshore. Lobsters occupy this habitat, but no density estimates are available.

Submarine Canyons

There are more than 15 submarine canyons that cut into the shelf edge on the south side of Georges Bank. These canyons were first surveyed in the 1930s, but they were not fully explored until manned submersibles were used extensively in the 1980s. Detailed information on canyon habitats for American lobster are available primarily for Oceanographer Canyon but

is generally applicable to other major canyons on Georges Bank. These canyons present a diverse group of habitat types. Concentrations of adolescents and adult lobsters are substantially greater in submarine canyons than in nearby areas that are occupied mostly by adults (Cooper et al. 1987). The following information on lobster habitats is extracted from Cooper and Uzman (1980) and Cooper et al. (1987).

Canyon rim and walls – Sediments consist of sand or semi-consolidated silt with less than 5% overlay of gravel. The bottom is relatively featureless. Burrowing mud anemones are common. Lobster densities are low (Table 3.1).

Canyon walls – Sediments consist of gravelly sand, sand, or semi-consolidated silt with more than 5% gravel. The bottom is relatively featureless. Burrowing mud anemones are common, as are Jonah crabs, ocean pout, starfish, rosefish, and squirrel hake. Lobster densities are a little greater than in substrates that contain less gravel (see above).

Rim and head of canyons at base of walls – Sand or semi-consolidated silt substrate is overlain by siltstone outcrops and talus up to boulder size. The bottom is very rough and is eroded by animals and current scouring. Lobsters are associated with rock anemones, Jonah crabs, ocean pout, tilefish, starfish, conger eels, and white hake. Densities are highly variable but reach up to 0.13 lobsters/m² (Table 3.1).

Pueblo villages – This habitat type exists in the clay canyon walls and extends from the heads of canyons to middle canyon walls. It is heavily burrowed and excavated. Slopes range from 5 to 70 degrees, but are generally >20 and <50 degrees. Juvenile and adult lobsters and associated fauna create borings up to 1.5 m in width, 1 m in height, and 2 m or more in depth. Lobsters are associated with Jonah crabs, tilefish, hermit crabs, ocean pout, starfish, and conger eels. This habitat may well contain the greatest densities of lobsters found offshore.

Table 3.1. American Lobster Habitats and Densities

Habitat	Lobster Densities (nos/square meter)	Lobster Sizes (carapace length = CL)	Source
ESTUARIES			
Mud base with burrows	Up to 20	Small juveniles	Cooper & Uzmann 1980
	< 0.01	Adults	Cooper & Uzmann 1980
Rock, cobble & gravel	> 0.5	Juveniles	Steneck & Wilson 1998
	> 0.75	Adolescents	Steneck & Wilson 1998
Rock/shell			
PEAT	Up to 5.7		Barshaw & Lavalli 1988
KELP BEDS	1.2-1.68	Adolescents (51-61 mm)	Bologna & Steneck 1993
EEL GRASS	< 0.04	Juveniles and adolescents	Barshaw & Lavalli 1988
	0.1	80% adolescents	Short et al. 2001
INTERTIDAL ZONE	0-8.6	Juveniles and adolescents	D. Cowan 1999
INSHORE ROCK TYPES			
Sand base with rock	3.2	Avg 40 mm	Cooper & Uzmann 1980
Boulders overlaying sand	0.09-0.13		Cooper & Uzmann 1980
Cobbles	Up to 16		Cooper & Uzmann 1980
Bedrock base with rock and boulder overlay	0.1-0.3		Cooper & Uzmann 1980
Mud-shell/rock substrate	0.15		Cooper & Uzmann 1980
OFFSHORE			
Sand base with rock	Not available	Not available	
Clay base with burrows and depressions	Minimum 0.001		Cooper & Uzmann 1980
Mud-clay base with anemones	Minimum 0.001	50-80 mm in depressions	Cooper & Uzmann 1980
SUBMARINE CANYONS			
Canyon rim and walls	0-0.0002	Adolescents and adults	Cooper et al. 1987
Canyon walls	Up to 0.001	Adolescents and adults	Cooper et al. 1987
Rim and head of canyons and at base of walls	0.0005-0.126	Adolescents and adults	Cooper et al. 1987
Pueblo villages	0.0005-0.126	Adolescents and adults	Cooper et al. 1987

Note: For this table, Juvenile lobsters are < 40 mm CL; adolescents 40-70 mm CL; adults >70 mm CL.

3.2 Description of Protected Resources

There are numerous species which inhabit the environment within the management unit of American lobster that are afforded protection under the Endangered Species Act of 1973 (ESA; i.e., for those designated as threatened or endangered) and/or the Marine Mammal Protection Act of 1972 (MMPA). Fourteen are classified as endangered or threatened under the ESA, while the remainder are protected by the provisions of the MMPA. The following list of species, protected either by the ESA, the MMPA, or the Migratory Bird Act of 1918, may be found in the environment utilized by American lobster:

Cetaceans

<u>Species</u>	<u>Status</u>
Northern right whale (<i>Eubalaena glacialis</i>)	Endangered
Humpback whale (<i>Megaptera novaeangliae</i>)	Endangered
Fin whale (<i>Balaenoptera physalus</i>)	Endangered
Sei whale (<i>Balaenoptera borealis</i>)	Endangered
Blue whale (<i>Balaenoptera musculus</i>)	Endangered

Sperm whale (<i>Physeter macrocephalus</i>)	Endangered
Minke whale (<i>Balaenoptera acutorostrata</i>)	Protected
Beaked whale (<i>Ziphius and Mesoplodon spp.</i>)	Protected
Risso's dolphin (<i>Grampus griseus</i>)	Protected
Pilot whale (<i>Globicephala spp.</i>)	Protected
White-sided dolphin (<i>Lagenorhynchus acutus</i>)	Protected
Common dolphin (<i>Delphinus delphis</i>)	Protected
Spotted and striped dolphins (<i>Stenella spp.</i>)	Protected
Bottlenose dolphin (<i>Tursiops truncatus</i>)	Protected

Sea Turtles

<u>Species</u>	<u>Status</u>
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

Fish

<u>Species</u>	<u>Status</u>
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	Endangered
Atlantic salmon (<i>Salmo salar</i>)	Endangered

Birds

<u>Species</u>	<u>Status</u>
Roseate tern (<i>Sterna dougallii dougallii</i>)	Endangered
Piping plover (<i>Charadrius melodus</i>)	Endangered

Critical Habitat Designations

<u>Species</u>	<u>Area</u>
Right whale	Cape Cod Bay

According to the October 31, 2002, Biological Opinion for Federal Lobster Management in the Exclusive Economic Zone, the following protected species are known to interact with lobster trap/pot fishing gear: right whale, humpback whale, fin whale, sei whale, sperm whale, leatherback sea turtle, and loggerhead sea turtle. Descriptions of species listed as endangered or threatened that inhabit the management unit of the Plan and are known to interact with the lobster trap/pot fishery are presented below.

North Atlantic Right Whale

Right whales have occurred historically in all the world's oceans from temperate to subarctic latitudes. NMFS recognizes two major species of right whales: Northern Hemisphere and Southern Hemisphere. NMFS further recognizes two extant stocks in the North Atlantic: eastern and western (Waring *et al.* 2002). A third stock may have existed in the central Atlantic (migrating from east of Greenland to the Azores or Bermuda), but this stock seems to be extinct (Perry *et al.* 1999).

The north Atlantic right whale has the greatest risk of extinction among all of the large whales in the world's oceans. The scarcity of right whales is the result of an 800-year history of

whaling that continued into the 1960s (Klumov 1962). Historical records indicate that right whales were subject to commercial whaling in the North Atlantic as early as 1059. Between the 11th and 17th centuries, an estimated 25,000-40,000 right whales may have been harvested. The size of the western north Atlantic right whale population at the termination of whaling is unknown, but the stock was recognized as seriously depleted as early as 1750. However, right whales continued to be taken in shore-based operations or opportunistically by whalers in search of other species as late as the 1920s. By the time the species was internationally protected in 1935, there may have been fewer than 100 western north Atlantic right whales in the western Atlantic (Hain 1975; Reeves *et al.* 1992; Waring *et al.* 2002).

NMFS designated right whale critical habitat on June 3, 1994, (59 FR 28793) to help protect important right whale foraging and calving areas within the U.S. These include the waters of Cape Cod Bay and the Great South Channel off the coast of Massachusetts and waters off the coasts of southern Georgia and northern Florida. In 1993, Canada's Department of Fisheries declared two conservation areas for right whales; one in the Grand Manan Basin in the lower Bay of Fundy and a second in Roseway Basin between Browns and Baccaro Banks.

The northern right whale was listed as endangered throughout its range on June 2, 1970, under the ESA. The current population is considered to be at a low level, and the species remains designated as endangered (Waring *et al.* 2002). A recovery plan has been published and currently is in effect (NMFS 1991). This is a strategic stock because the average annual fishery-related mortality and serious injury from all fisheries exceeds the Potential Biological Removal (PBR).

The western North Atlantic population of right whales was estimated to be 291 individuals in 1998 (Waring *et al.* 2002). The best available information makes it reasonable to conclude that the current death rate exceeds the birth rate in the western North Atlantic right whale population. The nearly complete reproductive failure in this population from 1993 to 1995 and again in 1998 and 1999 suggests that this pattern has continued for almost a decade, though the 2000/2001 season seems the most promising in the past five years in terms of calves born. Because no population can sustain a high death rate and low birth rate indefinitely, this combination places the North Atlantic right whale population at high risk of extinction. Coupled with an increasing calving interval and the relatively large number of young right whales (0-4 years) and adults that are killed by human-related factors, the likelihood of extinction is great. The recent increase in births gives rise to optimism; however, these young animals must be provided with protection so that they can mature and contribute to future generations in order to be a factor in stabilizing the population.

Right whales may be adversely affected by habitat degradation, habitat exclusion, acoustic trauma, harassment, or reduction in prey resources due to trophic effects resulting from a variety of activities, including the operation of commercial fisheries. However, the major known sources of anthropogenic mortality and injury of right whales clearly are ship strikes and entanglement in commercial fishing gear. Waring *et al.* (2002) give a detailed description of the annual human related mortalities of right whales.

Humpback Whale

The humpback whale was listed as endangered throughout its range on June 2, 1970. This species is the fourth most numerically depleted large cetacean worldwide. Humpback whales calve and mate in the West Indies and migrate to feeding areas in the northwestern Atlantic during the summer months. Six separate feeding areas are utilized in northern waters after their return (Waring *et al.* 2002). Only one of these feeding areas, the GOM, lies within U.S. waters and is within the action area of this fishery. Most of the humpbacks that forage in the GOM visit Stellwagen Bank and the waters of Massachusetts and Cape Cod bays. Sightings

are most frequent from mid-March through November between 41° N and 43° N from the Great South Channel north along the outside of Cape Cod to Stellwagen Bank and Jeffreys Ledge (CeTAP 1982), and sightings peak in May and August. Small numbers of individuals may be present in this area year-round. They feed on a number of species of small schooling fishes, particularly sand lance and Atlantic herring, by targeting fish schools and filtering large amounts of water for their associated prey. Humpback whales have also been observed feeding on krill (Wynne and Schwartz 1999).

New information has recently become available on the status and trends of the humpback whale population in the North Atlantic. Although current and maximum net productivity rates are unknown at this time, the population is apparently increasing. It has not yet been determined whether this increase is uniform across all six feeding stocks (Waring *et al.* 2002). For example, the overall rate of increase has been estimated at 9.0% (CV=0.25) by Katona and Beard (1990), while a 6.5% rate was reported for the Gulf of Maine by Barlow and Clapham (1997) using data through 1991. The rate reported by Barlow and Clapham (1997) may roughly approximate the rate of increase for the portion of the population within the action area.

The minimum population estimate is the lower limit of the two-tailed 60% confidence interval of the lognormally distributed best abundance estimate. This is equivalent to the 20th percentile of the log-normal distribution as specified by Wade and Angliss (1997). The best estimate of abundance for Gulf of Maine humpback whales is 902 (CV=0.41). The minimum population estimate for this stock is 647 (Waring *et al.* 2002).

Potential Biological Removal (PBR) is the product of minimum population size, one-half the maximum productivity rate, and a “recovery” factor (MMPA Sec. 3. 16 U.S.C. 1362; Wade and Angliss 1997). The minimum population size is 647. The maximum productivity rate is the default value of 0.04. The “recovery” factor, which accounts for endangered, depleted, threatened stocks, or stocks of unknown status relative to optimum sustainable population, is assumed to be 0.10 because this stock is listed as an endangered species under the ESA. PBR for the Gulf of Maine humpback whale stock is 1.3 whales (Waring *et al.* 2002).

The major known sources of anthropogenic mortality and injury of humpback whales include entanglement in commercial fishing gear and ship strikes. Based on photographs of the caudal peduncle of humpback whales, Robbins and Mattila (2001) estimated that at least 48% - and possibly as many as 78% - of animals in the Gulf of Maine exhibit scarring caused by entanglement. Several whales have apparently been entangled on more than one occasion. These estimates are based on sightings of free-swimming animals that initially survive the encounter. Because some whales may drown immediately, the actual number of interactions may be greater. In addition, the actual number of species-gear interactions is contingent on the intensity of observations from aerial and ship surveys.

For the period 1996 through 2000, the total of estimated human-caused mortality and serious injury to the Gulf of Maine humpback whale stock is estimated as 3.0 per year (USA waters, 2.4; Canadian waters, 0.6). This average is derived from two components: 1) incidental fishery interaction records, 2.8 (USA waters, 2.2; Canadian waters, 0.6); and 2) records of vessel collisions, 0.2 (USA waters, 0.2; Canadian waters, 0). There were additional humpback mortalities and serious injuries that occurred in the southeastern and Mid-Atlantic states that could not be confirmed as involving members of the Gulf of Maine stock (Waring *et al.* 2002). These records represent an additional minimum annual average of 1.6 human-caused mortalities and serious injuries to humpbacks over the time period, of which 1.0 per year is attributable to incidental fishery interactions, and 0.6 per year is attributable to vessel collisions (Waring *et al.* 2002).

Humpback whales may also be adversely affected by habitat degradation, habitat exclusion, acoustic trauma, harassment, or reduction in prey resources due to trophic effects resulting from a variety of activities including the operation of commercial fisheries.

Fin Whale

Fin whales inhabit a wide range of latitudes between 20-75°N and 20-75°S (Perry *et al.* 1999). Fin whales spend the summer feeding in the relatively high latitudes of both hemispheres, particularly along the cold eastern boundary currents in the North Atlantic and North Pacific oceans and in Antarctic waters (IWC 1992). Most migrate seasonally from relatively high-latitude Arctic and Antarctic feeding areas in the summer to relatively low-latitude breeding and calving areas in the winter (Perry *et al.* 1999).

Various estimates have been provided to describe the current status of fin whales in western North Atlantic waters. Based on the catch history and trends in Catch Per Unit Effort, an estimate of 3,590 to 6,300 fin whales was obtained for the entire western North Atlantic (Perry *et al.* 1999). Hain *et al.* (1992) estimated that about 5,000 fin whales inhabit the Northeastern United States continental shelf waters. The latest (Waring *et al.* 2002) SAR gives a best estimate of abundance for fin whales of 2,814 (CV = 0.21). The minimum population estimate for the western North Atlantic fin whale is 2,362. This is currently an underestimate, as too little is known about population structure, and the estimate is derived from surveys over a limited portion of the western North Atlantic. There is also not enough information to estimate population trends. NMFS has designated one stock of fin whale for U.S. waters of the North Atlantic (Waring *et al.* 2002) where the species is commonly found from Cape Hatteras northward.

The major known sources of anthropogenic mortality and injury of fin whales include ship strikes and entanglement in commercial fishing gear. However, many of the reports of mortality cannot be attributed to a particular source. Of 18 fin whale mortality records collected between 1991 and 1995, four were associated with vessel interactions, although the proximal cause of mortality was not known. The following injury/mortality events are those reported from 1996 to the present for which source was determined. These numbers should be viewed as absolute minimum numbers; the total number of mortalities and injuries cannot be estimated but is believed to be greater since it is unlikely that all carcasses will be observed. In general, known mortalities of fin whales are less than those recorded for right and humpback whales. This may be due in part to the more offshore distribution of fin whales where they are either less likely to encounter entangling gear or are less likely to be noticed when gear entanglements or vessel strikes do occur.

Fin whales may also be adversely affected by habitat degradation, habitat exclusion, acoustic trauma, harassment, or reduction in prey resources due to trophic effects resulting from a variety of activities including the operation of commercial fisheries. The fin whale was listed as endangered throughout its range on June 2, 1970, under the ESA.

Sei Whale

Sei whales are a widespread species in the world's temperate, subpolar and subtropical and even tropical marine waters. However, they seem to be more restricted to temperate waters than other balaenopterids (Perry *et al.* 1999). The IWC recognized three stocks in the North Atlantic based on past whaling operations as opposed to biological information: (1) Nova Scotia; (2) Iceland Denmark Strait; and (3) Northeast Atlantic (Perry *et al.* 1999). Mitchell and Chapman (1977) suggested that the sei whale population in the western North Atlantic consists of two stocks, a Nova Scotian Shelf stock and a Labrador Sea stock. The Nova Scotian Shelf stock includes the continental shelf waters of the northeastern United States and extends

northeastward to south of Newfoundland. The IWC boundaries for this stock are from the U.S. east coast to Cape Breton, Nova Scotia and east to longitude 42°W (Waring *et al.* 2002). This is the only sei whale stock within the action area.

Sei whales winter in warm temperate or subtropical waters and summer in more northern latitudes. In the northern Atlantic, most births occur in November and December when the whales are on the wintering grounds. Conception is believed to occur in December and January. Gestation lasts for 12 months, and the calf is weaned at 6-9 months when the whales are on the summer feeding grounds (NMFS 1998a). Sei whales reach sexual maturity at 5-15 years of age. The calving interval is believed to be 2-3 years (Perry *et al.* 1999).

Sei whales occur in deep water throughout their range, typically over the continental slope or in basins situated between banks (Draft Recovery Plan, NMFS 1998a). In the northwest Atlantic, the whales travel along the eastern Canadian coast in autumn, June and July on their way to and from the Gulf of Maine and Georges Bank where they occur in winter and spring. Within the action area, the sei whale is most common on Georges Bank and into the Gulf of Maine/Bay of Fundy region during spring and summer, primarily in deeper waters. Individuals may range as far south as North Carolina. It is important to note that sei whales are known for inhabiting an area for weeks at a time then disappearing for years or even decades; this has been observed all over the world, including in the southwestern GOM in 1986. The basis for this phenomenon is not clear.

There are insufficient data to determine trends of the sei whale population. Because there are no abundance estimates within the last 10 years, a minimum population estimate cannot be determined for NMFS' management purposes (Waring *et al.* 2002). Abundance surveys are problematic not only because this species is difficult to distinguish from the fin whale but more significant is that too little is known of the sei whale's distribution, population structure and patterns of movement; thus, survey design and data interpretation are very difficult.

Few instances of injury or mortality of sei whales due to entanglement or vessel strikes have been recorded in U.S. waters. Entanglement is not known to impact this species in the U.S. Atlantic, possibly because sei whales typically inhabit waters farther offshore than most commercial fishing operations, or perhaps entanglements do occur but are less likely to be observed. A small number of ship strikes of this species have been recorded. The most recent documented incident occurred in 1994 when a carcass was brought in on the bow of a container ship in Charlestown, Massachusetts. Other impacts noted above for other baleen whales may also occur. Due to the deep-water distribution of this species, interactions that do occur are less likely to be observed or reported than those involving right, humpback, and fin whales that often frequent areas within the continental shelf (Waring *et al.* 2002).

Sperm Whale

Sperm whales inhabit all ocean basins, from equatorial waters to the polar regions (Perry *et al.* 1999). In the western North Atlantic, they range from Greenland to the Gulf of Mexico and the Caribbean. The sperm whales that occur in the western North Atlantic are believed to represent only a portion of the total stock (Blaylock *et al.* 1995). Total numbers of sperm whales off the USA or Canadian Atlantic coast are unknown, although eight estimates from selected regions of the habitat do exist for select time periods. The best estimate of abundance for the North Atlantic stock of sperm whales is 4,702 (CV=0.36) (Waring *et al.* 2002). The minimum population estimate for the western North Atlantic sperm whale is 3,505 (CV=0.36). Sperm whales present in the Gulf of Mexico are considered by some researchers to be endemic and represent a separate stock from whales in other portions of the North Atlantic. However, NMFS currently uses the IWC stock structure guidance, which recognizes one stock for the entire North Atlantic (Waring *et al.* 2002).

Sperm whales generally occur in waters greater than 180 meters in depth. While they may be encountered almost anywhere on the high seas, their distribution shows a preference for continental margins, sea mounts, and areas of upwelling, where food is abundant (Leatherwood and Reeves 1983). Sperm whales in both hemispheres migrate to higher latitudes in the summer for feeding and return to lower latitude waters in the winter where mating and calving occur. Mature males typically range to much higher latitudes than mature females and immature animals but return to the lower latitudes in the winter to breed (Perry *et al.* 1999). Waring *et al.* (1993) suggest sperm whale distribution is closely correlated with the Gulf Stream edge. Like swordfish, which feed on similar prey, sperm whales migrate to higher latitudes during summer months, when they are concentrated east and northeast of Cape Hatteras. In the U.S. EEZ, sperm whales occur on the continental shelf edge, over the continental slope, and into the mid-ocean regions (Waring *et al.* 1993) and are distributed in a distinct seasonal cycle; concentrated east-northeast of Cape Hatteras in winter and shifting northward in spring when whales are found throughout the Mid-Atlantic Bight. Distribution extends farther northward to areas north of Georges Bank and the Northeast Channel region in summer and then south of New England in fall, back to the Mid-Atlantic Bight (Waring *et al.* 2002).

Few instances of injury or mortality of sperm whales due to human impacts have been recorded in U.S. waters. Because of their generally more offshore distribution and their benthic feeding habits, sperm whales are less subject to entanglement than are right or humpback whales. Documented takes primarily involve offshore fisheries such as the offshore lobster pot fishery and pelagic driftnet and pelagic longline fisheries. The NMFS Sea Sampling program recorded three entanglements (in 1989, 1990, and 1995) of sperm whales in the swordfish drift gillnet fishery prior to permanent closure of the fishery in January 1999. All three animals were injured, found alive, and released. However, at least one was still carrying gear. Opportunistic reports of sperm whale entanglements for the years 1993-1997 include three records involving offshore lobster pot gear, heavy monofilament line, and fine mesh gillnet, respectively, from an unknown source. Sperm whales may also interact opportunistically with fishing gear. Observers aboard Alaska sablefish and Pacific halibut longline vessels have documented sperm whales feeding on longline caught fish in the Gulf of Alaska (Perry *et al.* 1999). Behavior similar to that observed in the Alaskan longline fishery has also been documented during longline operations off South America where sperm whales have become entangled in longline gear, have been observed feeding on fish caught in the gear, and have been reported following longline vessels for days (Perry *et al.* 1999).

Sperm whales are also struck by ships. In May 1994, a ship-struck sperm whale was observed south of Nova Scotia (Waring *et al.* 2002). A sperm whale was also seriously injured as a result of a ship strike in May 2000 in the western Atlantic. Due to the offshore distribution of this species, interactions that do occur are less likely to be reported than those involving right, humpback, and fin whales that more often occur in nearshore areas. Other impacts noted above for baleen whales may also occur.

Due to their offshore distribution, sperm whales tend to strand less often than, for example, right whales and humpbacks. Preliminary data for 2000 indicate that of ten sperm whales reported to the stranding network (nine dead and one injured), there was one possible fishery interaction, one ship strike (wounded with bleeding gash on side) and eight animals for which no signs of entanglement or injury were sighted or reported. No sperm whales have stranded or been reported to the stranding network as of February 2001.

Loggerhead Sea Turtle

Loggerheads commonly occur throughout the inner continental shelf from Florida through Cape Cod, Massachusetts although their presence varies with the seasons due to changes in water temperature (Braun and Epperly 1996; Epperly *et al.* 1995a, Epperly *et al.* 1995b;

Shoop and Kenney 1992). Aerial surveys of loggerhead turtles north of Cape Hatteras indicate that they are most common in waters from 22 to 49 meters deep although they range from the beach to waters beyond the continental shelf (Shoop and Kenney 1992). The presence of loggerhead turtles in an area is also influenced by water temperature. Loggerheads have been observed in waters with surface temperatures of 7-30° C, but water temperatures of $\geq 11^{\circ}$ C are favorable to sea turtles (Epperly *et al.* 1995b; Shoop and Kenney 1992). Loggerhead sea turtles occur year round in offshore waters off of North Carolina where water temperature is influenced by the Gulf Stream. As coastal water temperatures warm in the spring, loggerheads begin to migrate to North Carolina inshore waters (*e.g.*, Pamlico and Core Sounds) and also move up the coast (Braun-McNeill and Epperly 2004; Epperly *et al.* 1995a; Epperly *et al.* 1995b; Epperly *et al.* 1995c), occurring in Virginia foraging areas as early as April and on the most northern foraging grounds in the Gulf of Maine in June. The trend is reversed in the fall as water temperatures cool. The large majority leave the Gulf of Maine by mid-September but some may remain in Mid-Atlantic and Northeast areas until late Fall. By December loggerheads have migrated from inshore North Carolina waters and more northern coastal waters to waters offshore of North Carolina, particularly off of Cape Hatteras, and waters farther south where the influence of the Gulf Stream provides temperatures favorable to sea turtles (Epperly *et al.* 1995b; Shoop and Kenney 1992).

In the western Atlantic, most loggerhead sea turtles nest from North Carolina to Florida and along the Gulf coast of Florida. As described above, there are at least five western Atlantic subpopulations, divided geographically as follows: (1) a northern nesting subpopulation, occurring from North Carolina to northeast Florida at about 29° N; (2) a south Florida nesting subpopulation, occurring from 29° N on the east coast to Sarasota on the west coast; (3) a Florida Panhandle nesting subpopulation, occurring at Eglin Air Force Base and the beaches near Panama City, Florida; (4) a Yucatán nesting subpopulation, occurring on the eastern Yucatán Peninsula, Mexico (Márquez 1990; TEWG 2000); and (5) a Dry Tortugas nesting subpopulation, occurring in the islands of the Dry Tortugas, near Key West, Florida (NMFS SEFSC 2001). Cohorts from three of these, the south Florida, Yucatán, and northern subpopulations, are known to occur within the action area of this fishery (Bowen *et al.* 2004; Rankin-Baransky *et al.* 2001), and there is genetics evidence that cohorts from the other two also likely occur (Bass *et al.* in press; Bowen *et al.* 2004). The fidelity of nesting females to their nesting beach is the reason these subpopulations can be differentiated from one another. This nesting beach fidelity will make recolonization of nesting beaches with sea turtles from other subpopulations unlikely. In addition, a recent study by Bowen *et al.* (2004) lends support to the hypothesis that juvenile loggerhead sea turtles also exhibit homing behavior with respect to using foraging areas in the vicinity of their nesting beach. Therefore, coastal hazards that affect declining nesting populations may also affect the next generation of turtles when they are feeding in nearby habitats (Bowen *et al.* 2004).

Mating takes place in late March-early June, and eggs are laid throughout the summer, with a mean clutch size of 100-126 eggs in the southeastern United States. Individual females nest multiple times during a nesting season, with a mean of 4.1 nests/individual (Murphy and Hopkins 1984). Nesting migrations for an individual female loggerhead are usually on an interval of 2-3 years but may vary from 1-7 years (Dodd 1988).

A number of stock assessments (TEWG 1998; 2000; NMFS SEFSC 2001; Heppell *et al.* 2003) have examined the stock status of loggerheads in the waters of the United States, but have been unable to develop any reliable estimates of absolute population size. Due to the difficulty of conducting comprehensive population surveys away from nesting beaches, nesting beach survey data are used to index the status and trends of loggerheads (USFWS and NMFS 2003).

Between 1989 and 1998, the total number of nests laid along the U.S. Atlantic and Gulf coasts ranged from 53,014 to 92,182 annually with a mean of 73,751 (TEWG 2000). The south Florida nesting group is the largest known loggerhead nesting assemblage in the Atlantic and one of only two loggerhead nesting assemblages worldwide that has greater than 10,000 females nesting per year (USFWS and NMFS 2003; USFWS Fact Sheet). Annual nesting totals have ranged from 48,531 - 83,442 annually over the past decade (USFWS and NMFS 2003). South Florida nests make up the majority (90.7%) of all loggerhead nests counted along the U.S. Atlantic and Gulf coasts during the period 1989-1998. The northern subpopulation is the second largest loggerhead nesting assemblage within the United States but is much smaller than the south Florida nesting group. Of the total number of nests counted along the U.S. Atlantic and Gulf coasts during the period 1989-1998, 8.5% were attributed to the northern subpopulation. The number of nests for this subpopulation has ranged from 4,370 - 7,887 for the period 1989-1998, for an average of approximately 1,524 nesting females per year (USFWS and NMFS 2003). The remaining three subpopulations (the Dry Tortugas, Florida Panhandle, and Yucatán) are much smaller subpopulations. Annual nesting totals for the Florida Panhandle subpopulation ranged from 113-1,285 nests for the period 1989-2002 (USFWS and NMFS 2003). The Yucatán nesting group was reported to have had 1,052 nests in 1998 (TEWG 2000). Nest counts for the Dry Tortugas subpopulation ranged from 168-270 during the 9-year period from 1995-2003.

Sea turtle biologists are cautiously watching nest counts for the subpopulations. Nest counts seem to be down for the past five years. Loggerheads do exhibit a cyclical pattern to nesting such that in some years nest counts are high while in others they are low (*e.g.*, not all mature females nest in a year). Natural events, such as the hurricane season of 2004, can also destroy many nests, thereby influencing nesting trends since a majority of the nests are destroyed in any particular year. Therefore, it is unknown at this time whether the nest counts over the past five years represent an actual decline in the loggerhead subpopulations or not. In addition, since nest counts are a reflection of only one sex and age class in the subpopulation (mature females), using nesting trend data to make conclusions about the status of the entire subpopulation requires making certain assumptions. Such assumptions are that the current impacts to mature females are experienced to the same degree among all age classes regardless of sex, and/or that the impacts that led to the current abundance of nesting females are affecting the current immature females to the same extent. While there is no current evidence to support or refute these assumptions, multiple management actions have been implemented in the United States that either directly or indirectly address the known sources of mortality for loggerhead sea turtles (*e.g.*, fishery interactions, power plant entrainment, destruction of nesting beaches, etc.).

One of the difficulties associated with using loggerhead nesting trend data as an indicator of subpopulation status is the late age to maturity for loggerhead sea turtles. Past literature gave an estimated age at maturity for loggerhead sea turtles of 21-35 years (Frazer and Ehrhart 1985; Frazer *et al.* 1994) with the benthic immature stage lasting at least 10-25 years. New data from tag returns, strandings, and nesting surveys suggested estimated ages of maturity ranging from 20-38 years and the benthic immature stage lasting from 14-32 years (NMFS SEFSC 2001). Caution must still be exercised, however, when defining the benthic immature stage. Like other sea turtles, loggerhead hatchlings enter the pelagic environment upon leaving the nesting beach. It had previously been thought that after approximately 7-12 years in the pelagic environment, immature loggerheads entered the benthic environment and undertook seasonal north and south migrations along the coast. However, the use of pelagic and benthic environments by loggerhead sea turtles is now suspected of being much more complex (Witzell 2002). Loggerheads may remain in the pelagic environment for longer periods of time or move back and forth between the pelagic and benthic environments (Witzell 2002). Captures of sea turtles in the U.S. pelagic longline fishery have shown that large loggerhead sea turtles (mature and/or immature) routinely inhabit offshore habitats during non-winter months in the northwest North Atlantic Ocean (Witzell 2002; 1999). It has been suggested that some of these turtles might be

associated with warm water fronts and eddies and might form offshore feeding aggregations in areas of high productivity (Witzell 2002; 1999).

In 2001, NMFS (SEFSC) reviewed and updated the stock assessment for loggerhead sea turtles of the western Atlantic (NMFS SEFSC 2001). The assessment reviewed and updated information on nesting abundance and trends, estimation of vital rates (including age to maturity), evaluation of genetic relationships between populations, and evaluation of available data on other anthropogenic effects on these populations since the TEWG reports (1998; 2000).

Natural and anthropogenic effects to loggerhead sea turtles

The diversity of a sea turtle's life history leaves them susceptible to many natural and human impacts, including impacts while they are on land, in the benthic environment, and in the pelagic environment. Hurricanes are particularly destructive to sea turtle nests. Sand accretion and rainfall that result from these storms as well as wave action can appreciably reduce hatchling success. For example, in 1992, all of the eggs over a 90-mile length of coastal Florida were destroyed by storm surges on beaches that were closest to the eye of Hurricane Andrew (Milton *et al.* 1994). Early reports suggest that extensive loggerhead nest destruction has occurred in Florida and other southern states in 2004 due to damage from multiple hurricanes and storm events. Other sources of natural mortality include cold stunning and biotoxin exposure.

Anthropogenic factors that impact hatchlings and adult female turtles on land, or the success of nesting and hatching include: beach erosion, beach armoring and nourishment; artificial lighting; beach cleaning; increased human presence; recreational beach equipment; beach driving; coastal construction and fishing piers; exotic dune and beach vegetation; and poaching. An increased human presence at some nesting beaches or close to nesting beaches has led to secondary threats such as the introduction of exotic fire ants, feral hogs, dogs and an increased presence of native species (*e.g.*, raccoons, armadillos, and opossums), which raid and feed on turtle eggs. Although sea turtle nesting beaches are protected along large expanses of the northwest Atlantic coast (in areas like Merritt Island, Archie Carr, and Hobe Sound National Wildlife Refuges), other areas along these coasts have limited or no protection. Sea turtle nesting and hatching success on unprotected high density east Florida nesting beaches from Indian River to Broward County are affected by all of the above threats.

Sea turtles, including loggerhead sea turtles, are affected by a completely different set of anthropogenic threats in the marine environment. These include oil and gas exploration, coastal development, and transportation; marine pollution; underwater explosions; hopper dredging, offshore artificial lighting; power plant entrainment and/or impingement; entanglement in debris; ingestion of marine debris; marina and dock construction and operation; boat collisions; poaching, and fishery interactions.

In the pelagic environment, loggerheads are exposed to a series of longline fisheries that include the U.S. Atlantic tuna and swordfish longline fisheries, a Japanese longline fleet, a Chinese longline fleet, an Azorean longline fleet, a Spanish longline fleet, and various fleets in the Mediterranean Sea (Aguilar *et al.* 1995; Bolten *et al.* 1994; Crouse 1999). Globally, the number of loggerhead sea turtles captured in pelagic longline fisheries is significant (Lewison *et al.* 2004). NMFS continues to work with pelagic longline fishers on gear modifications to help minimize turtle interactions with longline gear.

In the benthic environment in waters off the coastal U.S., loggerheads are exposed to a suite of fisheries in Federal and state waters including trawl, purse seine, hook and line, gillnet, pound net, longline, and trap fisheries. Perhaps the most well documented U.S. fishery with respect to interactions with sea turtles, including loggerheads, is the U.S. shrimp fishery. NMFS continues to address the effects of this fishery on loggerheads as well as other sea turtle species.

Turtle Excluder Devices have proven to be effective at excluding Kemp's ridley sea turtles and some age classes of loggerhead and green sea turtles from shrimp trawls. However, it was apparent that TEDs were not effective at excluding large benthic immature and sexually mature loggerheads (as well as large greens) from shrimp trawls (Epperly and Teas 2002). Therefore, on February 21, 2003, NMFS issued a final rule that required increasing the size of TED escape openings to allow larger loggerheads (and green sea turtles) to escape from shrimp trawl gear. As a result of the new rules, annual loggerhead mortality from capture in shrimp trawls is expected to decline from 62,294 to 3,947 turtles (Epperly *et al.* 2002).

Power plants can also pose a danger of injury and mortality for benthic loggerheads. In Florida, thousands of sea turtles have been entrained in the St. Lucie Nuclear Power Plant's intake canal over the past couple of decades (Bresette *et al.* 2003). From May 1976 - November 2001, 7,795 sea turtles were captured in the intake canal (Bresette *et al.* 2003). Approximately 57% of these were loggerheads (Bresette *et al.* 2003). Procedures are in place to capture the entrained turtles and release them. This has helped to keep mortality below 1% since 1990 (Bresette *et al.* 2003). The Oyster Creek Nuclear Generating Station in New Jersey is also known to capture sea turtles, although the numbers are far less than those observed at St. Lucie, FL. As is the case at St. Lucie, procedures are in place for checking for the presence of sea turtles and rescuing sea turtles that are found within the intake canals.

Leatherback Sea Turtle

Evidence from tag returns and strandings in the western Atlantic suggests that adult leatherback sea turtles engage in routine migrations between boreal, temperate and tropical waters (NMFS and USFWS 1992). A 1979 aerial survey of the outer Continental Shelf from Cape Hatteras, North Carolina to Cape Sable, Nova Scotia showed leatherbacks to be present throughout the area with the most numerous sightings made from the Gulf of Maine south to Long Island. Leatherbacks were sighted in water depths ranging from 1-4151 m but 84.4% of sightings were in waters less than 180 m (Shoop and Kenney 1992). Leatherbacks were sighted in waters within a sea surface temperature range similar to that observed for loggerheads; from 7-27.2 ° C (Shoop and Kenney 1992). However, leatherbacks seem to have a greater tolerance for colder waters in comparison to loggerhead sea turtles since more leatherbacks were found at the lower temperatures as compared to loggerheads (Shoop and Kenney 1992). This aerial survey estimated the leatherback population for the northeastern U.S. at approximately 300-600 animals (from near Nova Scotia, Canada to Cape Hatteras, North Carolina). However, this estimate was based on turtles visible at the surface and does not include those that were below the surface out of view. Therefore, it likely underestimates the leatherback population for the northeastern U.S. Estimates of leatherback abundance of 1,052 turtles (C.V.= 0.38) and 1,174 turtles (C.V.= 0.52) were obtained from surveys conducted from Virginia to the Gulf of St. Lawrence in 1995 and 1998, respectively (Palka 2000). However, since these estimates were also based on sightings of leatherbacks at the surface, the author considered the estimates to be negatively biased and the true abundance of leatherbacks may be 4.27 times the estimates (Palka 2000).

The largest leatherback rookery in the western Atlantic remains along the northern coast of South America in French Guiana and Suriname. More than half the present world leatherback population is estimated to be nesting on the beaches in and close to the Marowijne River Estuary in Suriname and French Guiana (Hilterman and Goverse 2004). Nest numbers in Suriname have shown an increase, and the long-term trend for the Suriname and French Guiana nesting group seems to show an increase (Hilterman and Goverse 2004). In 2001, the number of nests for Suriname and French Guiana combined was 60,000, one of the greatest numbers observed for this region in 35 years (Hilterman and Goverse 2004). Studies by Girondot *et al.* (in review) also suggest that the trend for the Suriname-French Guiana nesting population over the last 36 years is stable or slightly increasing.

Leatherbacks are also a long lived species (> 30 years). They mature at a younger age than loggerhead turtles, with an estimated age at sexual maturity of about 13-14 years for females with 9 years reported as a likely minimum (Zug and Parham 1996) and 19 years as a likely maximum (NMFS SEFSC 2001). In the U.S. and Caribbean, female leatherbacks nest from March through July. They nest frequently (up to 7 nests per year) during a nesting season and nest about every 2-3 years. During each nesting, they produce 100 eggs or more in each clutch and thus, can produce 700 eggs or more per nesting season (Schultz 1975). However, a significant portion (up to approximately 30%) of the eggs can be infertile. Thus, the actual proportion of eggs that can result in hatchlings is less than this seasonal estimate. As is the case with other sea turtle species, leatherback hatchlings enter the water soon after hatching. Based on a review of all sightings of leatherback sea turtles of <145 cm curved carapace length (CCL), Eckert (1999) found that leatherback juveniles remain in waters warmer than 26°C until they exceed 100 cm CCL.

Leatherbacks are captured and killed in many kinds of fishing gear and interact with fisheries in U.S. state and Federal waters as well as in international waters. Poaching is a problem and affects leatherbacks that occur in U.S. waters. Leatherbacks are predominantly a pelagic species and feed on jellyfish (*i.e.*, *Stomolophus*, *Chryaora*, and *Aurelia* (Rebel 1974)) and tunicates (salps, pyrosomas). Leatherbacks may come into shallow waters if there is an abundance of jellyfish nearshore. For example, leatherbacks occur annually in Cape Cod Bay and Vineyard and Nantucket sounds during the summer and fall months. Leatherbacks also seem to be more susceptible to death or injury from ingesting marine debris than other turtle species due to their pelagic existence and the tendency of floating debris to concentrate in convergence zones that adults and juveniles use for feeding areas and migratory routes (Lutcavage *et al.* 1997; Shoop and Kenney 1992). It has been suggested that leatherbacks may not be able to distinguish between prey items and plastic debris (Mrosovsky 1981). Balazs (1985) speculated that the object may resemble a food item by its shape, color, size or even movement as it drifts about and induce a feeding response in leatherbacks.

3.3 Description of the Human Environment

3.3.1 Port and Community Description

The principal ports of commercial importance are described in detail in the most recent FSEIS (67 FR 68128, November 8, 2002), and only summary information is provided here. While there has been no systematic, comprehensive community-based survey of the American lobster fishery in the U.S., there have been a limited number of studies, primarily in Maine, that provide general assessments of social, cultural, and economic conditions to the community level. But, in most lobster fishing areas, there is no such community level information available. Briefly, lobster fishing does require knowledge and skills of fishing grounds and the life and migration cycles of the lobster fishery in the area. Development of distinct community groupings, by tradition and fishing effort, are usually dictated by lobster resource availability and frequently create fishing territories that are informally protected and acknowledged by other lobstermen operating from the same or neighboring harbors. Kinship often takes on an important function among lobster fishing families as does control on the sharing of fisheries knowledge among participants. Generally, community dependency on lobster fishing decreases from north to south. While participants from Downeast (northern) and mid-coast Maine are highly dependent on lobster, lobstermen from lower Maine, Massachusetts and Rhode Island are proportionately less reliant on lobster compared to other fisheries. South of Rhode Island, lobster fishermen represent a progressively smaller component of local ports, as dependency on multiple fisheries increases.

3.3.2 Permit Data/Human Environment

During fishing year 2004, through February 14, 2005, a total of 3,145 limited access lobster permits were issued to Northeast region permitted vessels. For the purposes of this analysis, the mailing address is used to identify state of origin for Federal lobster permits. Table 3.3.2.1 summarizes permit holders by state.

Table 3.3.2.1 Number of Federal Lobster Permits by State - 2004

State	# of Permits	State	# of Permits
Maine	1,385	Delaware	13
New Hampshire	107	Virginia	47
Massachusetts	920	North Carolina	39
Rhode Island	275	Pennsylvania	4
New York	108	Florida	5
Connecticut	39	Louisiana	1
New Jersey	187	Alabama	1
Maryland	13	Alaska	1

Of the permit holders identified in Table 3.3.2.1, 2,508 vessels selected traps as the primary gear used to harvest lobster. Of the 2,508 vessels, 369 vessels elected trap and non-trap categories on their 2004 lobster permit. Approximately 638 vessels held only a non-trap permit, and approximately 98% of these vessels held at least one other limited access Federal fisheries permit that required mandatory reporting. Based on vessel logbook data analyzed in Section 5 of this EA, approximately 91% of lobster are landed by trap vessels, and approximately 9% are landed by non-trap gear (Section 5.1.2.). For lobster trap landings, 40% were harvested from the EEZ and 60% were harvested within 3 miles of shore. By contrast, non-trap vessels harvested approximately 59% of lobsters from the EEZ, and 41% from within state waters.

Federal regulations require Federal lobster permit holders to abide by the most restrictive measures (Federal or State) no matter where they fish, and in fact most States have already implemented most of the required elements of Addenda II and III. The impacts of the proposed measures in this EA would primarily be associated with approximately 251 Federal permit holders (approximately 10 % of Federal lobster permit holders) that unload lobsters in one of the Commission *de minimis* states of DE, VA, MD, and NC, and Maine permit holders fishing outside of LCMA 1 and landing in Maine. Under the Commission ISFMP, certain states at the southern end of the range qualify for *de minimis* status because a given state's declared annual landings, averaged over a two year period, amount to less than 40,000 lbs (18,144 kg) of American lobster. While *de minimis* states are required to promulgate all coastwide measures contained in Section 3.1 of Amendment 3, many of the area-specific measures proposed in this EA are not required to be implemented (see Section 1.3 - Action - Process, and Attachment 4 for *de minimis* state discussion) by permit holders landing in *de minimis* states. Therefore, Federal permit holders landing in states that have not implemented the broodstock measures identified in this action are not currently bound by these specific Addenda II and III measures. In addition, in the Mid-Atlantic region, the harvest of lobsters is primarily as a bycatch in the various finfish trap fisheries, primarily the directed black sea bass trap fishery. Dual black sea bass and lobster permit holders fishing in LCMA 5, including many of the impacted vessels in this analysis, can

participate in an Area 5 Waiver program that limits participants to 100 lobsters per day, up to a maximum of 500 lobsters for trips of 5 or more days (see Appendix 5). In addition to the trip limits, under the Area 5 Waiver program, Federal black sea bass permit holders are still bound by trap gear regulations that benefit the lobster resource, including escape vent requirements, ghost panel requirements on all traps, and gear marking requirements as specified in 50 CFR Part 648.

As many as 90%, perhaps more, of Federal lobster permit holders would be obliged to follow the Commission's broodstock protection measures with or without corresponding Federal action. But, concurrent Federal action would ensure coverage of the remaining 10%. The number of permitted vessels that actually fish is not known. Further, these vessels were identified based on the LCMAs that were selected on their FY2004 permit application, which may or may not reflect where they actually fish. For example, even though 67 Maine vessels indicated that they intended to fish in some LCMA other than LCMA 1 (the LCMA directly adjacent to the Maine coastline), does not mean that they actually do so. In fact, it is probable that most of these Maine vessels fish for lobster predominantly in LCMA 1, and would be fishing under conditions consistent with LCMA 1 rules. Similarly, all of the vessels where a discrepancy was found based on v-notch regulations were vessels that listed LCMA 3 on their FY2004 permit application. The majority of these vessels were from states other than Maine or New Hampshire. That is, most vessels from all other states are unlikely to fish for lobster in LCMA 3 north of 42° 30' and would not be subject to mandatory v-notch or zero tolerance.

For reasons indicated above, the majority of the 251 vessels that may fish in the EEZ under less restrictive conditions than that recommended by the ASMFC are actually unlikely to do so. That is, the majority of Maine vessels are likely to fish in LCMA 1, and the majority of vessels permitted to fish in LCMA 3 fish south of 42° 30'. In effect, this means that even in the absence of Federal action the conservation objectives of the ISFMP will not be compromised since state action has brought the overwhelming majority of Federally permitted lobster vessels into compliance with ASMFC recommendations. Consequently, economic benefits from a fully rebuilt resource would be preserved provided the continued gap between state and Federal regulations does not result in a significant change in effort distribution.

For additional information on the human environment see the most recent FSEIS (67 FR 68128, November 8, 2002).

4.0 DESCRIPTION OF THE AMERICAN LOBSTER FISHERY

4.1 Status of the Stock

The U.S. American lobster resource occurs in continental shelf waters from Maine to North Carolina. Landings have increased steadily since the early 1970s and fishing effort is intense and increasing throughout the range of the species. About 80 percent of the landings are reportedly harvested from state waters (within 3 miles of shore). As fishing effort has increased, the traditional inshore trap fishery has expanded to nearshore Federal waters (3-20 miles from shore). There is also a deepwater fishery for lobster that occurs farther from shore and includes the canyon areas along the edge of the continental shelf. American lobster are primarily harvested by traps, approximately 2-3 percent of landings are reportedly taken by mobile fishing gear, including trawls, dredges, and gillnets (Lobster FSEIS, March 2003).

The U.S. lobster resource is broken into three stock units as defined in previous assessments: the Gulf of Maine, Georges Bank and Southern New England Outer Shelf, and South of Cape Cod to Long Island Sound stock areas.

A stock assessment conducted by state and Federal scientists during June 1996 concluded that American lobster was growth overfished, overfishing is continuing, and there was a high risk of a sharp decline in abundance throughout the species' range (NMFS, July 1996). In 2000, the Commission conducted an updated stock assessment (ASMFC, March 2000a). Under the ISFMP, the Commission's overfishing definition is the basis for management actions in order to protect lobster stocks and provide for sustained harvest over the long term. If any stock is determined to be overfished, management actions are required. The stock assessment was completed in March 2000 and supported previous assessments that fishing effort is intense and increasing throughout the range of the resource. The 2000 stock assessment noted that all three stock areas are growth overfished, overfishing is occurring, and the resource is overfished according to the overfishing definition in the ISFMP. Growth overfishing means that the maximum yield is not produced because of high fishing mortality rates on smaller lobsters. The stock assessment did, however, report that all three stocks are not recruitment overfished. Recruitment overfishing means that the number of new lobsters available to the fishery each year is reduced by high fishing mortality rates.

An external peer review of that assessment by stock assessment experts was held during May 8-9, 2000 (ASMFC, 2000b). The results of the 2000 Peer Review supported the conclusions of the stock assessment and determined that additional regulatory restrictions are necessary. The Peer Review Panel (Panel) noted that abundance has shown increasing trends in all stock areas in recent years, and recruitment has also been high and increasing or stable for all three stock areas since 1994. The Panel believes that favorable environmental/ecological conditions have resulted in high survival rates for early life history stages and possibly higher growth rates for all stages. It is unknown why recruitment has been favorable, but factors such as increased water temperature, improved environmental/ecological conditions generally, broadscale shifts in climatic conditions as indicated by the North Atlantic anomaly, and low abundance in groundfish stocks may all have contributed. Despite trends in recruitment and abundance, the Panel was concerned about the condition of the lobsters stocks for the following reasons: high fishing mortality rates; truncated length-frequency, strong reliance on the first molt group above legal size (the fishery is dependent on recruitment); shifts in the spatial distribution of effort; localized problems in Massachusetts Bay evident in the stock assessment; and a major lobster mortality event in Long Island Sound subsequent to the assessment.

The Panel went beyond the initial stock assessment determinations and noted that, while the resource is not currently recruitment overfished, recruitment overfishing is occurring. Overfishing is a rate of removal that is too high and, if continued, the removals would not be sustainable. While recruitment overfishing seems to have been occurring for some time, fortuitous strong recruitment has maintained the stock biomass. The Panel cautioned that while strong recruitment could continue in the short term, it is unrealistic to expect it will do so indefinitely, and under current conditions in some segments of the fishery, the risk of significant recruitment declines is unacceptably great. All three stock areas show evidence of truncated length-frequency distributions and a greater reliance on the first molt group above the legal minimum size. Since most egg production is from recruits and the first molt group above minimum legal size, a decline in recruitment will lead to a decline in egg production. The Panel noted that a shift in fishing effort from inshore to offshore areas has occurred in several of the stock areas. Further increases in offshore fishing effort may influence inshore abundance levels due to the possible dependence of inshore areas on offshore egg production. It is also clear that the pool of large lobsters (more prevalent in the offshore areas) cannot indefinitely maintain adequate egg production unless young lobsters are allowed to grow to sizes above the first molt group.

Therefore, the Panel cautioned that a precautionary approach is recommended to guard against significant stock declines and reduce the risk of future recruitment failure. The Panel suggested several management options to improve the status of the resource: reduce fishing

mortality - reduce fishing effort, increase the minimum size, establish spatial closed areas, and increase the escape vent size. Actions identified in this environmental assessment address the Panel's recommendations to implement measures associated with egg production through increases in the minimum size, the maximum size, and the escape vents. Other Panel recommendations will be addressed by future Federal rulemaking to implement measures to reduce fishing mortality through effort controls (See Appendix 3 - Effort Control ANPR/ NOI, 70 FR 24495).

In the absence of an annual stock assessment for American lobster, the most recent review of the three lobster stock areas is a 2003 trawl survey trend analysis. While some states were unable to provide trawl survey updates for 2003, in the absence of a yearly assessment, trends derived from trawl surveys can provide a useful indicator of stock status. All three lobster stock areas were surveyed in 2003. General indications are that resource conditions have not improved since the last stock assessment in 2000. There has been an observable consistent decline in pre-recruit and fully-recruited lobster indices among surveys over the last five years. For pre-recruit lobsters, those lobsters within one-half inch (1.2 cm) of the current Federal legal minimum carapace size of 3-1/4 inches (8.26 cm), the mean number per tow generally declined throughout all stock areas for both sexes. In fact, several inshore surveys noted that in the Gulf of Maine and Southern New England both fully-recruited and pre-recruit indices were well below the 20 year time series means and were at or near time series lows for both male and female lobsters. At the same time, for the Gulf of Maine stock, legal-sized relative abundance of males and females are at or near time series highs. For the Georges Bank & South stock unit, lobster relative abundance has remained relatively stable, and there seems to be a slight increase in relative abundance of the legal-sized lobsters in the last 3 years. While relative abundance of legal size lobsters could continue in the short term, the consistent decline in pre-recruit lobsters increases the risk of a significant decline in future abundance of legal lobsters. According to the best information available, measures as described in this proposed regulatory action are intended to improve the status of the resource by allowing more young lobsters to grow to sizes above the first molt group as recommended by the Panel (ASMFC, May 2003).

4.2 Stock Characteristics and Ecological Relationships

The information in this section was summarized from Section 2.0 - Life History of the American Lobster Stock Assessment Report for Peer Review, March 2000.

The American lobster, *Homarus americanus*, is distributed throughout the Northwest Atlantic from the Strait of Belle Isle, Newfoundland to Cape Hatteras, North Carolina from mean low water to depths of 700 meters (Cooper and Uzmann 1980, Lawton and Lavalli 1995). Lobsters are most abundant in relatively shallow coastal zones. Population densities ranging from one to ten per square meter have been reported in Maine for some areas west of Penobscot Bay in boulder and cobble substrates (Wahle and Steneck 1991, Steneck and Wilson 1998, Palma et al. 1999). Lobster densities are less east of Penobscot Bay and in the far southwestern Gulf of Maine. Cooper et al. (1987) reported that deep water population densities were one to two orders of magnitude less than those found in coastal zones. Catch rates of legal sized lobsters were higher in inshore southern New England, intermediate in the Gulf of Maine, and lowest on Georges Bank and the offshore southern New England waters. Lobsters are known to aggregate in offshore canyons on the southern edge of the continental shelf in much higher concentrations where they can not be caught in bottom trawls; thus, catch rates on Georges Bank and the outer shelf do not reflect the actual population densities.

The American lobster is a long-lived species known to reach more than 40 pounds (18 kg) in body weight (Wolff 1978). The age of lobsters is unknown because all hard parts are shed and replaced at molting, leaving no accreting material for age determinations. Traditionally,

scientists estimate the age of lobsters based on size, per-molt growth increments and molt frequencies. Based on this kind of information, Cooper and Uzmann (1980) estimated that the American lobster may live to be 100 years old. Recent information from European lobster, *H. gammarus* (Addison, 1999), indicated a large variation in age at size with seven year classes making up the 85-95 mm size class. Predicted sizes at age were significantly below those estimated from tagging studies, and large animals approached 70 years in age.

Size at maturity is related to summer water temperatures, high temperatures enhance maturation at small sizes. Early maturity occurs in relatively warm water locations in the Gulf of St. Lawrence and inshore southern New England, while in the deeper offshore waters off the northeastern U.S. and in the Bay of Fundy, maturation occurs at larger sizes (Krouse 1973; Aiken and Waddy 1980; Van Engel 1980; Campbell and Robinson 1983; Fogarty and Idoine 1988; Estrella and McKiernan 1989). The relationship between water temperature and size at onset of sexual maturity implies that significant climate change may affect size at maturity.

Lobsters typically form a brief pair bond for mating. Female lobsters can mate at any molt stage, but their receptivity peaks immediately after molting (Dunham and Skinner-Jabobs 1978; Waddy and Aiken 1990). Mating takes place within 24 hours of molting and usually within 30 minutes (Talbot and Helluy 1995). Hatching and release of larvae occur after a 9-12 month period of development while eggs are still attached to the female (Talbot and Helluy 1995). Seasonal timing of egg extrusion and larval hatching is somewhat variable among areas and may also vary due to seasonal weather patterns. Overall, hatching tends to occur over a four month period from May through September, occurring earlier and over a longer period in the southern part of the range (Ennis 1997).

Smaller lobsters molt more often than larger ones; however, larger females (>120 mm CL) can spawn twice between molts, making their relative fecundity greater than females within one molt of legal size (Waddy et al. 1995). Larger lobsters produce eggs with a greater energy content, and thus may produce larvae with higher survival rates (Attard and Hudon 1987). Prelarvae are released by the female over the course of several days. For the first three molt stages (15-30 days), larvae remain planktonic. During settlement, fourth stage post larvae exhibit strong habitat selection behavior and seek small shelter-providing substrates, with the greatest abundance of newly settled lobsters occurring in cobble beds (Wahle and Steneck 1991; Cobb and Wahle 1994; Palma et al. 1999).

During their first year on the sea bottom, lobsters move little and can be found within a meter of where they settled (Wahle 1992; Palma et al. 1999). They do not usually emerge from their shelters until reaching about 25 mm CL (Wahle 1992; Cobb and Wahle 1994). As they grow, their daily and annual ranges of movement increase. Adolescent phase lobsters are found on a variety of bottom types, usually characterized by an abundance of potential shelters. By the time lobsters reach sexual maturity, the annual range of lobster averages just over 32 km (Campbell and Stacko 1985; Campbell 1986). In general, mature legal lobsters are more abundant offshore and in deeper water (Harding and Trites 1989). However, large sexually mature lobsters are capable of traversing great distances and show at least three different migration behaviors: those that do not migrate; seasonal migrators; and long distance migrators.

The natural mortality rate in post settlement lobster is generally considered to be low because they are a long-lived species that produce fairly small egg clutches, carry their eggs for months until they hatch, and are not very vulnerable to predation, especially as they get bigger. The dominant source of natural mortality includes predation, disease, and extreme environmental conditions. Predation pressures seem related to size and habitat. The presence of shelter greatly reduces predation mortality (Cobb et al. 1986; Richards 1992). Mortality due to predation decreases as the lobster grows (Wahle 1992). The effects of disease can be as profound as predation or exploitation (Anderson and Hart 1979; Hart 1990). A number of animals parasitize

lobsters, including protozoa, helminths, and copepods. Aiken and Waddy (1986) and Sherburne and Bean (1991) reported a cyclical infestation of the ciliate *Mugardia* spp. in lobsters. Eggs are subject to high mortalities by a nemertean worm, *Pseudocarcinonemertes homari*. The best known disease, which leads to the development of gaffkemia, a fatal infection (Stewart 1980), is caused by the bacteria *Aerococcus viridans*.

Shell disease is believed to be the result of opportunistic microorganisms exploiting an injury or poor physiological state of the lobster (Getchell 1989). Ovigerous female lobsters display the highest rate of infection and carapace damage because they molt less frequently and therefore have older shells. There has been a recent increase in the incidence of shell disease in the southern New England area. The consequences of shell disease on natural mortality are not known. The recent increase in shell disease may also be an indication of stresses in the lobster populations.

The adult American lobster is the largest mobile benthic invertebrate in the North Atlantic. Its size and large claws make it an important predator. Adult lobsters are omnivorous, feeding largely on crabs, molluscs, polychaetes, sea urchins, and sea stars (Ennis 1973; Carter and Steele 1982a, b; Weiss 1970). Live fish and macroalgae are also part of the natural diet. Lobsters are opportunistic feeders so their diet varies regionally. In areas where lobster traps are numerous, bait is a very important component of the diet. Lobster larvae and postlarvae eat zooplankton during their first year (Lavalli 1988). Copepods and decapod larvae are common prey items but cladocerans, fish eggs, nematodes, and diatoms have been noted.

Lobsters are preyed upon by a variety of bottom inhabiting species, including teleost fish, sharks, rays, skates, octopuses, and crabs (Phillips and Sastry 1980). Larvae are subject to predation in the water column, and postlarvae are vulnerable to mud crabs, cunner, and an array of other bottom-feeding finfish species after settlement. However, once post-larvae are established in shelter, they are thought to be relatively safe from fish predators (Wahle and Steneck 1992) but not necessarily invertebrates, such as burrowing crabs (Lavalli and Barshaw 1986). Mud crabs are abundant throughout the northeast as are green crabs and rock crabs, which are also suspected predators on post-larvae. When not in their burrows, the foraging early benthic phase and larger juvenile lobsters are prey to sculpin, cunner, tautog, black sea bass, and sea raven (Cooper and Uzmann 1980). Atlantic cod, wolffish, goosefish, tilefish, and several species of shark consume lobsters up to 100 mm CL (Cooper and Uzmann 1977; Herrick 1909). With the recovery of the striped bass resource, reports of substantial predation of sublegal lobster by striped bass have been reported. While settling lobsters suffer extraordinary high predation rates, and pre-recruits and fully recruited lobsters are subject to predation when foraging, larger lobsters may be immune to predation.

Lobsters and crabs compete for space and food (Richards et al. 1983; Cobb et al. 1986; Richards and Cobb 1986). These studies show competition between lobsters and crabs caused a redistribution of individuals. Lobsters that lost space to their competitors also showed an increased mortality. Intraspecific competition among lobsters is well known (O'Neill and Cobb 1979). Large body size and claw size is particularly important in determining competitive dominance among lobsters selecting shelters. When local population densities increase, larger lobsters diffuse to habitats where total population densities are lower (Steneck 1989; Lawton and Lavalli 1995). Mortalities that result from aggression between lobsters may not represent predation but do represent an additional source of natural mortality.

4.3 Economic and Social Environment

The operational characteristics of the U.S. lobster fishery have changed significantly in recent decades. While joint State-Federal measures have recently capped and then reduced maximum trap limits and the maximum size of lobster traps, increases in trap numbers and the

areal extent of the fishery occurred in many lobster management areas in the past thirty years. In conjunction with greater numbers of traps, a change from wood to wire gear and an increase in trap size have made for more durable and efficient traps. Total traps in U.S. waters have increased over three-fold since the late 1960s, and an associated increase in soak time per trap has also occurred. Fishing power has been improved through changes in vessel and gear technology. Each of these factors affect catch rates and overall yield from the fishery. During this thirty year period, landings have increased at a similar rate. Lobsters are heavily fished, the fishery is greatly dependent on an increasing percentage of smaller animals in the catch as survival to larger sizes is diminished. For more information on the history of the commercial lobster fishery, see Historical Information - Section 5.1 of the American Lobster Stock Assessment Report for Peer Review, ASMFC, March 2000.

On December 6, 1999, NMFS issued a Final Rule (64 FR 68228) that transferred its Federal lobster fishery regulations from the more federally-oriented fishery management councils created under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (50 CFR Part 649) to the state-oriented Atlantic Coastal Act (50 CFR Part 697). The logic of the decision was straightforward: since approximately 80% of the fishery for American lobster occurs in state waters, Federal action alone could no longer ensure that the Federal FMP under the New England Fishery Management Council process, which covered only Federal waters, was consistent with National Standard 1 of the Magnuson-Stevens Act, which requires implementation of conservation and management measures to prevent overfishing.

Amendment 3 to the Commission ISFMP established the seven LCMAs, and encouraged industry participation with the establishment of the Lobster Conservation Management Teams (LCMTs) for each LCMA. The LCMTs, with the support of state agencies, were encouraged to develop a management program that suits the needs of the area while meeting targets established in the ISFMP. The commercial lobster trap fishery is primarily regulated through a limited entry program, trap limits, minimum and/or maximum gauge size limits, and trap gear conservation measures, such as escape vent and ghost panels requirements for each trap (See Table 5.4 - Summary of Current State and Federal Regulations). The commercial lobster non-trap fishery is restricted to a maximum limit of 100 lobsters per day, up to a maximum of 500 lobsters per trip of five or more days.

The economic aspects of the American lobster fishery and principal ports of commercial importance are described in detail in the most recent FSEIS (67 FR 68128, November 8, 2002), and only summary information is provided here. The Lobster fishery is the most valuable fishery in the northeastern U.S. During fishing year 2003, a total of 3,217 Federal limited access lobster permits was issued to Northeast region permitted vessels. Based on NMFS dealer data, which include state summary data, the value of the commercial landings of lobster from 1994 - 2003 has averaged \$265 million, ranging from \$207 million in 1994 to \$329 million in 1999. The EEZ has been estimated to account for about 20% of all domestic landings of American Lobster. In calendar year 2003, total landings were 71.7 million pounds valued at \$284.8 million. This means that the EEZ would have accounted for approximately 14.3 million pounds valued at nearly \$57 million. This value may be underestimated since EEZ landings tend to be comprised of larger, more valuable lobsters. While the precise number of vessels fishing in the EEZ is unknown due to a lack of mandatory reporting, it is estimated that between 18-46 percent (361-1500) of Federal permit holders using trap gear participate in the EEZ fishery (see Section 9.0 - IRFA for more information). For the non-trap sector, based on 2003 Federal permit data, there were a total of 657 vessels that held only a non-trap permit. Only one-third of the non-trap vessels reported landing lobsters, valued at approximately \$3 million (see Section 5.2.2 - Non-trap Gear Impacts in this document for additional information).

Lobsters are landed throughout the year in New England, while landings are concentrated in the warmer months in the Mid-Atlantic region. The majority of lobsters is sold to the live

lobster industry, and an extensive network of storage facilities or pounds are used to hold live lobsters so that markets can be regularly supplied. There is an extensive cross-border trade with Canada to ensure a consistent domestic supply and to supply the export markets. Imports of live lobster from Canada accounted for 50 million pounds (22,524 mt) valued at \$288 million dollars in 2003. U.S. exports of live lobster to Canada accounted for 38 million pounds (17,087 mt) valued at \$152 million dollars in 2003. In 2003, the most important U.S. export markets outside of Canada for live American lobsters were: Italy - 6.5 million lbs (2,956 mt); Spain - 5.3 million lbs (2,404 mt); France - 4.5 million lbs (2,050 mt); South Korea - 1.1 million lbs (505 mt); and Japan - 864 thousand lbs (392 mt). In recent years, the development of new freezing processes have significantly improved consumer acceptance of whole frozen lobster. Demand for a shelf stable product by the restaurant trade represents a small but growing market that has allowed consumers in the interior of the country to have access to whole lobsters. While expansion of domestic production of whole frozen lobster continues to increase, Canadian supplies account for a majority. In 2003, total U.S. imports of frozen lobster, including lobster in shell, from Canada accounted for 17.8 million pounds (8,086 mt) valued at \$211 million dollars.

4.4 Description of the Areas Fished

See Section 3.1 - Description of the Physical Environment for a complete description of the inshore and offshore lobster habitat and see Appendix 7 for a chart of the seven lobster management areas.

Major coastal concentrations of lobster are in the Gulf of Maine, while major offshore concentrations are on the outer edge of the Continental Shelf along the eastern part of Georges Bank extending down to the edge of the Continental Shelf off the State of Delaware. In 2003, Maine led in U.S. lobster landings for the 22nd consecutive year with 54 million pounds (24,501 mt) valued at \$202 million, a decrease of 6.7 million pounds (3,040 mt) compared to 2002. Massachusetts, the second leading producer, had landings of 11.4 million pounds (5,172 mt) valued at \$52 million, a decrease of 1.5 million pounds (681 mt) compared to 2002. Together, Maine and Massachusetts accounted for 91 percent of the total U.S. domestic landings of American lobster. In contrast, the following Mid-Atlantic states landed less than 40,000 pounds (18 mt) of lobster in 2003: Maryland; Delaware; Virginia; and North Carolina. Overall, 72 million pounds (32,668 mt) of American lobster were landed in 2003 valued at \$285.6 million, compared with 92.3 million pounds (41,878 mt) landed in 2002, valued at \$293.3 million. The average ex-vessel price per pound was \$3.97 in 2003, compared with \$3.56 in 2002.

Federal limited access lobster permit holders are required to elect one or more lobster management area if they intend to fish for lobster with traps, while non-trap permit holders must indicate if they intend to fish for lobster as a commercial non-trap vessel or as a non-trap charter/party vessel. Generally, Federal permit holders may elect multiple trap management areas, as well as non-trap permit categories. However, based on regulations implemented in March 2003 (67 FR 14902), permit holders may only elect LCMAs 3, 4, and/or 5, if they have submitted a historic participation application prior to July 31, 2003, or applied prior to December 31, 2003 and have subsequently received an affirmative written notice of Final Determination for eligibility in LCMAs 3, 4, and/or 5. Federal permit holders may elect management areas where they do not intend to fish. But, Federal lobster permits are required to abide by the most restrictive measures for the management areas elected no matter where they fish, as well as any more restrictive state regulations.

One year prior to the implementation of historic participation regulations issued in March 2003 (67 FR 14902), approximately one thousand vessels with Federal limited access lobster permits elected to fish up to 1,800 traps per vessel in LCMA 3. Approximately two hundred vessels submitted applications for continued access to fish with lobster traps in LCMA 3. As of December 31, 2004, 116 vessels have qualified to fish individual allocations averaging 1,750

traps per vessel. In 2002, approximately two hundred and fifty vessels with Federal limited access lobster permits elected to fish up to 800 traps per vessel in LCMAs 4 and 5. As of December 31, 2004, 67 vessels have qualified to fish individual allocations averaging 1,074 traps per vessel in LCMA 4, while 36 vessels have qualified to fish individual allocations averaging 822 traps per vessel in LCMA 5.

5.0 ENVIRONMENTAL CONSEQUENCES - ANALYSIS OF IMPACTS

5.1 Alternative 1: Do Not Change Egg Production Schedule: No Action Alternative - (Non-preferred)

This alternative would make no changes to the existing egg production schedule (Option 2.1.1). Nor would this alternative implement any of the broodstock protection measures recommended by the Commission (e.g. gauge increases, vent increases, etc.). Therefore, under this alternative, all lobster stock areas must achieve the egg production schedule target of F10% by 2005, which is the deadline that was established years ago in Addendum 1.

According to the last stock assessment, all three lobster stock areas are growth overfished, overfishing is occurring, and the resource is overfished according to the overfishing definition in the ISFMP (see Section 4.1 - Status of the Stock). Since landings from the EEZ account for approximately 20% of all American lobster landed in U.S. waters, a comparatively small figure, the Federal Government would need to take drastic action in order to meet the 2005 rebuilding schedule, such as a complete ban on fishing for lobster in Federal waters to achieve the targets specified in the existing egg production schedule. However, even a complete ban on fishing for lobster in Federal waters would not achieve those rebuilding targets by the end of 2005.

The Commission, of course, did not recommend to NMFS that the Federal Government close the EEZ to lobster fishing. In fact, such an action would certainly be, to put it mildly, incompatible with the present Commission Plan. As such, the "No Action" alternative does not meet the Purpose and Need of this rulemaking (See Section 1.1 Action - Purpose and Need) and could be dismissed with minimal analysis. NMFS, however, provides further analysis of this alternative below because, despite the alternative being infeasible, its mere presence in the document provides useful perspective that might otherwise assist the agency in the analysis of the more realistic alternatives that follow.

5.1.1 Biological Impacts

A closure to fishing for, possession of, or landing of American lobster from Federal waters would have a number of direct and indirect effects on the lobster resource. Biological impacts would be positive to the lobster resource in the EEZ, and generally negative to the inshore lobster resource. Quantifying these impacts is complicated by a lack of mandatory reporting by lobster vessels, and the discussion below provides primarily a qualitative assessment of the potential impacts of an EEZ closure to lobster fishing.

An expansion of the overall offshore lobster biomass would likely result from the elimination of directed fishing mortality on the offshore resource. Lobsters would continue to be taken as bycatch and discarded in other EEZ mobile and fixed gear fisheries. However, assuming relatively high survivability of discarded lobsters that are immediately returned to the sea unharmed, negative impacts would be minimized. With directed fishing mortality eliminated, the overall size distribution of lobsters will broaden, and there would likely be an increase in abundance of larger mature lobsters. A broad size distribution of animals can more

effectively mitigate the impacts on the resource if environmental conditions change or the stock experiences an unexpected mortality event. Since eggs produced by larger female lobsters have a greater probability of survival than eggs produced by newly matured female lobsters, there may be an increase in overall larval abundance as the size distribution of larger lobsters expands (Attard and Hudon 1987).

An expansion of the offshore biomass may indirectly benefit the inshore lobster population's overall larval abundance, due in part to the lobster's complex reproductive lifecycle and prevailing ocean currents. When female lobsters release their mature eggs into the water column, the eggs hatch and the small, newly hatched lobster larvae drift with the ocean currents on the surface during their initial pelagic phase of life. After going through several molts to allow the pelagic larvae to grow as they drift with the ocean currents, they ultimately settle to the bottom (see Section 4.1 - Status of the Stock). The strong predominant northern movement of oceanic currents along the east coast, called the Gulf Stream, along with a generally counterclockwise movement of currents within the Gulf of Maine, does result in an inshore movement of ocean currents. The inshore lobster population may benefit, if an increase in the broodstock of offshore lobsters increases the number of lobster larvae drifting on ocean currents and potentially settling to the bottom in coastal waters.

A closure of Federal waters would, however, remove concentrations of fixed gear from productive offshore lobster grounds, especially along the Continental Shelf or, as will be discussed below, shift effort to inshore waters. With a reduction in fixed gear, mobile gear vessels may increase effort for other species in areas that had previously been unavailable due to concentrations of fixed gear. Lobsters are more likely to be injured when harvested by mobile gear vessels, with loss of one or both claws being the most common injury. An increase in mobile gear effort in areas where fixed gear has been removed would increase the likelihood of increased lobster bycatch by mobile gear, and potentially result in an increase in lobsters with injuries, i.e. with one or both claws missing. Although lost claws can be regenerated over time, lobsters would become more susceptible to predation, since their primary defense mechanism, in addition to shelter, is their claws. In addition to loss of claws, lobsters caught by mobile gear are more likely to be at least temporarily weakened during their time of captivity in the mobile gear and may be more susceptible to predation when returned to the water.

With a closure of Federal waters, fishing effort on lobsters within state waters is likely to significantly increase as displaced offshore lobstermen shift their fishing effort to state waters. An increase in directed fishing effort in state waters will negatively impact the coastal lobster resource in several ways. Saturation of coastal waters with lobster trap gear will likely increase the number of times a sub-legal lobster is caught and returned to the sea, exposing the animal to increased handling injuries, such as the loss of its claw(s), and increased predation by other marine species as the sub-legal lobsters are returned to the sea and settle back to the ocean bottom. The majority of lobsters landed are within one molt of the minimum legal size, further increasing the dependency of the industry on newly recruited animals (i.e., those lobsters that have just grown into legal size). In addition, berried female lobsters of legal size that are v-notched and female lobsters that exceed a certain maximum legal carapace size are protected from harvest in many lobster management areas, but legal-sized male lobsters are offered no such legal protection. With the lack of legal protection from harvest, as lobster fishing effort increases in coastal areas, male lobsters will be more likely to be harvested as soon as they reach the minimum legal size, potentially resulting in fewer mature males available to mate. Since lobsters show a tendency to mate with similar sized lobsters of the opposite sex, a reduction in larger, more mature unprotected male lobsters may adversely impact the inshore population's reproductive capabilities. In addition, lobsters are most abundant in relatively shallow coastal waters, and an increase in the quantity of lobster trap gear in contact with the coastal bottom habitat may impact lobster shelter habitat; a critical requirement for lobsters.

5.1.2 Socioeconomic Impacts

A closure of Federal waters to fishing for, possession of, or landing of American lobster would directly affect lobster vessel owners and their crew and would have broad impacts on lobster markets and coastal communities. A closure would also have a number of indirect effects that may exacerbate gear crowding in state waters and the ability to control fishing effort to achieve the objectives of the ISFMP. Quantifying these impacts is complicated by the lack of mandatory reporting for lobster vessels. This data problem makes it difficult to ascertain how many vessels fish for lobster at all, and of those, how many actually fish lobster within the U.S. EEZ. Nevertheless, the discussion below provides a qualitative discussion of the potential impacts of an EEZ closure to lobster fishing and provides a limited quantitative assessment of vessel level impacts based on the sub-population of lobster vessels that hold Federal permits in some other fishery that does require mandatory reporting.

Potential Aggregate Impacts

Based on NMFS dealer data, which include state summary data, the EEZ has been estimated to account for about 20% of all domestic landings of American Lobster. Total landings were 71.7 million pounds (32,523 mt) valued at \$284.8 million in calendar year 2003. This means that the EEZ would have accounted for approximately 14.3 million pounds (6,486 mt) valued at nearly \$57 million. This value may be underestimated since EEZ landings tends to be comprised of larger, more valuable lobsters. The removal of 20% of the domestic lobster supply at a time when landings from Long Island Sound, Southern New England and the Mid-Atlantic have been declining would cause significant disruptions in lobster markets from wholesalers to final consumers. At a minimum, lobster prices may be expected to increase, which could result in reduced profit margins (i.e. only a portion of a price increase is likely to be able to be passed on to consumers) for lobster distributors and retailers (restaurants, fish markets, grocery stores, etc.) and a loss in consumers surplus. This supply reduction may also make U.S. lobsters less price competitive in international markets for U.S. exporters.

In addition to these market level impacts, several indirect effects may be likely. As noted above, the reduction in lobster supplies may be expected to result in an increase in lobster prices. This price increase would initially make remaining vessels more profitable which would, in turn, attract more effort. Displaced lobster trap vessels may also be expected to try to make up for their losses by setting traps in State waters that were formerly fished in the EEZ leading to increased gear conflicts and greater trap saturation. As more gear is set to compete for a fixed quantity of available legal-size lobsters, average catches may be expected to decline, and individual profitability may also decline.

Although the impacts on the lobster industry and the associated market channels would be anticipated to be negative, removal of lobster trap gear from the EEZ would have some beneficial effects. Reduced lobster gear would reduce overall gear conflicts in Federal waters. The removal of all vertical lines would reduce the entanglement risk to marine turtles, whales (right whales in particular), and other marine mammals in the EEZ. The economic value of right whale protection is not known in any precise way, but a number of studies have demonstrated that people hold economic values for endangered species (see for example, Loomis and Larson (1994)). However, an expansion of the already high concentration of lobster trap gear in coastal waters, especially along the state/Federal EEZ boundary line, might create a floating wall of vertical lines, and increase the probability of marine mammal interactions also.

Estimated Impacts on Lobster Vessels

The relative ability of vessels fishing for lobster to overcome the financial loss of their EEZ business income will vary with the degree of reliance on lobster in general and how much

of their lobster business is conducted in the EEZ. The lack of mandatory reporting makes addressing these questions difficult. However, lobster vessels that also hold another Northeast region permit that does require mandatory reporting must report all of their activity no matter where they fish or for what they fish. During fishing year 2003, a total of 3,217 limited access lobster permits was issued to Northeast region permitted vessels. Of these vessels, about 62% (1994) also were issued at least one permit that required mandatory reporting. Note that almost half of the lobster vessels subject to mandatory reporting held a non-trap gear permit.

To estimate potential economic impacts of an EEZ closure to lobster fishing, all vessel trip reports (VTR) were queried for lobster landings. All records with a valid latitude-longitude coordinate were retained and plotted using ArcView GIS software. Trip records were retained that were outside the three-mile limit within the Northeast region (Cape Hatteras to the South and the Hague Line to the North). This process is likely to result in an underestimate of activity attributable to the EEZ due to differences in VTR and dealer reporting and due to the reliability and accuracy of available location information. Keeping these caveats in mind, there were a total of 930 vessels that reported lobster landings using either trap or non-trap gear during calendar year 2003. These vessels had reported landings of 9.8 million pounds (4445 mt) of which 8.9 million (4037 mt) or 91% were landed using lobster traps and 0.9 million (408 mt) or 9% were landed using non-trap gear. For the lobster trap landings, 40% were landed on trips within the U.S. EEZ, and 60% were landed on trips inside the three-mile limit. By contrast, the relative share between EEZ and State waters landings for non-trap gear was reversed with 59% coming from the EEZ and 41% from within State waters.

The vessel-level effects of an EEZ closure were estimated as follows. First, annual average prices by species were calculated from NMFS dealer reports. Second, these prices were merged with the VTR records to estimate total trip revenue for lobster and all other species. Third, the estimated trip revenue was summed across all trips for each of the 930 vessels that landed lobster to obtain an estimate of total fishing revenue for calendar year 2003. Fourth, revenues from any trips that landed lobster using trap gear in the EEZ were assumed to be zero. For non-trap gear in the EEZ, only lobster revenue was deducted from total trip revenue since it was assumed that the gear would not be prohibited but possession of lobster would be. Revenues obtained from any trip taken inside the three mile limit were assumed to remain unchanged. These adjustments to the 2003 baseline provide an estimate of fishing revenue under an EEZ closure to lobster fishing scenario.

Estimated fishing revenue for the baseline condition (calendar year 2003) was \$162.2 million while estimated fishing revenue for the closure scenario was \$145 million for a total loss of \$17.2. million. These estimated losses only include vessels that are subject to mandatory reporting, which means that the total losses would be expected to be greater (perhaps much greater) if all affected lobster vessels could be included. However, the purpose of this analysis is to estimate expected revenue losses at the vessel-level not to estimate aggregate impacts.

Of the 930 vessels included in the analysis, 645 were estimated to incur some loss of fishing revenue while the remaining 285 would incur no loss in fishing revenue (i.e. 100% of reported lobster fishing income came from trips taken in state waters). For the 645 vessels with a loss in revenue, the average loss was \$26.7 thousand. However, many of these vessels were estimated to lose substantially more than the overall average while others were estimated to lose much less. For example, the average estimated loss for the 370 vessels that would lose 10-percent or less of their fishing income was \$4.8 thousand while the average loss for vessels that would lose from 75 to 100-percent of fishing income was estimated to be \$79 thousand (Table 5.1).

The majority of vessels that was estimated to incur some loss in revenue was from Massachusetts (303); nearly three times as many as from any other state (Table 5.2). Overall,

more than three-quarters of all adversely affected vessels were from only three states; Massachusetts, Rhode Island, and Maine. Relative to the total number of vessels from each state, New Jersey had the largest proportion (38%) of vessels that were estimated to lose at least 75% of total fishing income. Other states where the proportion of vessels with this level of estimated revenue loss were Maine (32%), New York (29%), and Rhode Island (27%).

Four length categories based on quartiles of the distribution of vessels included in the analysis were formed to determine whether an EEZ closure to lobster fishing would have differential impacts based on vessel size (Table 5.3). Overall there were more vessels between 42 and 65 feet that were adversely affected than in any other length category. However, even though fewer vessels below 37 feet were estimated to be affected, this size category had the largest proportion of vessels that would incur revenue losses of between 75 and 100%. By contrast, the number of affected vessels 65 feet and above was 35% greater than the smallest size category but 86% of these larger vessels was estimated to incur revenue losses of no more than 10%.

Economic Summary

The full economic effects of an EEZ closure to fishing for, or possession of, American lobster cannot be precisely estimated. A significant number of lobster vessels are not subject to mandatory reporting, and less than half of those that must report were found to have reported landing lobster through a VTR during calendar year 2003. Nevertheless, the loss in lobster fishing revenue could be as high as \$57 million although this estimate is uncertain at best. Additional economic effects would include, but are not limited to, disruption of domestic and international lobster markets, a loss in consumer surplus, potential gear conflicts and increased gear saturation inside the three mile limit and disruption of social networks in coastal communities.

Average revenue losses for vessels fishing for lobster in the EEZ were estimated to be \$26.7 thousand. Losses for individual vessels range considerably from less than \$1 thousand to more than \$100 thousand depending on scale of operation and dependence on lobster. Even these estimates are uncertain since data are lacking for the portion of the lobster fleet that would be most affected (i.e. vessels that hold only a Federal lobster permit which are not subject to mandatory reporting).

While a removal of all lobster trap gear from the EEZ would have an adverse economic impact on lobster vessels, the lobster industry, lobster distribution networks, and lobster consumers, this action might reduce the entanglement risk for large whales (including right whales) and other protected species in the EEZ. The economic value of such a reduction in entanglement risk may or may not exceed the economic costs to the lobster fishery. The immediately following Section 5.1.3 will discuss the impacts of this alternative on protected resources.

Table 5.1. Estimated Average Loss in Fishing Revenue by Loss Category

	Number of Vessels	Average Revenue Loss (\$1,000's)
Loss <= 10-Percent	370	4.8
10 < Loss <= 25-Percent	54	18.0
25 < Loss <= 50-Percent	43	28.6
50 < Loss <= 75-Percent	41	58.2
75 < Loss <= 100-Percent	137	79.0

Table 5.2. Number of Vessels by Home Port State by Revenue Loss Category^a

Home Port State	<= 10%	10% < Loss <= 25%	25% < Loss <= 50%	50% < Loss <= 75%	75% < Loss <= 100%	Total Vessels
ME + NH	52	12	15	17	34	130
MA + RI + CT	253	32	24	20	59	400
Other States	62	13	4	5	30	112

a - Total vessels do not sum to 645 due to missing home port data

Table 5.3. Number of Vessels by Length Class by Revenue Loss Category^a

Length Class	<= 10%	10% < Loss <= 25%	25% < Loss <= 50%	50% < Loss <= 75%	75% < Loss <= 100%	Total Vessels
Length < 37	52	16	9	15	42	134
37 <= Length < 42	45	14	16	14	31	120
42 <= Length < 65	115	13	17	10	49	204
65 <= Length	156	9	<3	<3	13	181

a Total vessels does not sum to 645 due to missing length data

5.1.3 Protected Resources Impacts

On balance, a complete closure of Federal waters to fishing for, possession of, or landing of American lobster might have positive effects on protected resources in Federal waters. Under Federal lobster regulations, any trap capable of catching lobster that is fished by a Federal lobster permit holder is considered a lobster trap. Therefore, a ban on fishing for lobster in the EEZ would likely prevent Federal lobster permit holders from shifting trap fishing effort to other shellfish or finfish species. A ban on lobster trap gear in Federal waters would eliminate the potential risk to marine mammals and endangered species of entanglement in vertical lines, buoys, and ground lines used by lobster fishermen (see Section 3.2 - Description of Protected Resources for additional discussion of marine mammal entanglements).

The resulting inshore shift of fishing effort to coastal waters by displaced Federal lobstermen would further concentrate the amount of trap gear in coastal waters and create the potential for a saturated ‘wall of lobster trap gear’ where the boundary of state and Federal waters meet. This concentration of lobster trap gear would increase the potential risk to marine mammals and endangered species of becoming entangled in vertical lines, buoys, and ground lines used by coastal lobster fishermen. Due to the expected concentration of trap gear in state waters, lobstermen may be forced to reduce the number of traps per string to avoid setting gear over other trap strings nearby. Since each trap string requires one or more vertical lines and associated surface buoys, reducing the number of traps per string would result in an increase in vertical lines, buoys, and ground lines, thereby increasing the risk to entanglement. While it is impossible to estimate the increase in vertical lines with any degree of accuracy, it is common industry practice to set 1-4 traps per string in coastal waters, while offshore lobstermen may set anywhere from 25-50 traps per string in offshore waters. As noted, Federal waters would be closed to lobster fishing, while state waters would remain open. With potential crowding of productive state waters inshore lobster grounds and increased gear conflicts, it is likely that there would be increased pressure to risk non-compliance and attempt to set lobster gear in the closed Federal waters. Therefore, the Federal closure would increase the enforcement burden and costs associated with monitoring compliance in Federal waters as well as increase the risk to protected species of entanglement in lobster trap/pot gear.

5.2 Alternative 2: Change Egg Production Schedule Only: Modified No Action (Non-preferred)

This alternative would change the existing egg production schedule to the egg production schedule recommended by the Commission, but make none of the other broodstock protection measures recommended by the Commission. That is, the egg production deadline would be changed to 2008 (Option 2.1.2) but NMFS would make no other changes to existing Federal lobster management regulations. At present, most states have issued their complementary Addenda II and III regulations; the Federal Government has not (see Section 1.3 - Action - Process, and Attachment 4 for *de minimis* state discussion). This alternative is similar to Alternative 1, in that this alternative would rely on enforcement of measures by the states rather than by the Federal Government. However, unlike Alternative 1, the egg production schedule would be changed from 2005 to 2008 and this action would likely prevent a closure of Federal waters to fishing for lobster as described in Section 5.1. This alternative is also similar to Alternative 3 in practical effect: Since the majority of states have implemented the proposed measures and because Federal permit holders are bound by more restrictive state regulations, the vast majority of Federal permit holders would have to implement these measures anyway by virtue of their more restrictive state permit.

Relative to the involved management issues and measures, it would:

- Measure 2.1 - Option 2.1.2: change the existing egg production schedule and deadline;
- Measure 2.2 - Option 2.2.1: not increase the minimum lobster gauge size;
- Measure 2.3 - Option 2.3.1: not increase the lobster trap escape vent size;
- Measure 2.4 - Option 2.4.1: not mandate the V-notching of lobster;
- Measure 2.5 - Option 2.5.1: not change the definition of v-notch;
- Measure 2.6 - Option 2.6.1: not add new maximum gauge sizes in Areas 4 and 5; and
- Measure 2.7 - Option 2.7.1: not create an overlap in the boundaries between Areas 3 and 5.

5.2.1 Biological Impacts

Federal regulations require Federal lobster permit holders to abide by the most restrictive measures (Federal or State) no matter where they fish, and in fact most States have already implemented most of the required elements of Addenda II and III (see Table 5.5). Therefore, taking no action on the regulatory measures listed above would still leave a significant majority of lobster vessels subject to more restrictive measures than current Federal regulations require.

Overall, existing state regulations will continue to benefit the rebuilding of the lobster resource to meet the ISFMP objective with minimal impact to the resource if compatible Federal regulations for Alternative 2 measures are not promulgated. The biological impacts of inconsistent State-Federal regulations would primarily be associated with two categories totaling approximately 251 Federal permit holders: 1) Federal permit holders that unload lobsters in one of the Commission *de minimis* states of DE, VA, MD, and NC; and 2) Maine permit holders fishing outside of LCMA 1 and landing in Maine (see Table 5.5 and text in Section 5.2.2). Under the Commission ISFMP, *de minimis* states are exempt from certain ISFMP requirements (see Section 1.3 - Action - Process, and Attachment 4 for additional *de minimis* state discussion). Therefore, these Federal permit holders would not be bound by the more restrictive area-specific state lobster regulations under Addenda II and III.

While this group of Federal permit holders is not currently bound by the majority of the proposed measures in Alternative 2, the biological impacts of their noncompliance are not likely to be significant because relatively little lobster is landed by these permit holders. Based on their ability to qualify for *de minimis* status under the Commission ISFMP, the *de minimis* states land minimal quantities of lobster, and these states are located at the southern end of the range of the American lobster. In addition, in the Mid-Atlantic region, the harvest of lobsters is primarily as a bycatch in the various finfish trap fisheries, primarily the directed black sea bass trap fishery. In fact, existing Federal mitigation measures for finfish trap fishermen have been implemented that clearly support the bycatch nature of the lobster trap fishery in the Mid-Atlantic. Dual black sea bass and lobster permit holders, including many of the impacted vessels in this analysis, can participate in an Area 5 Waiver program that limits participants to 100 lobsters per day, up to a maximum of 500 lobsters for trips of 5 or more days (see Appendix 5). In addition to the trip limits, under the Area 5 Waiver program, Federal black sea bass permit holders are still bound by trap gear regulations that benefit the lobster resource, including escape vent requirements, ghost panel requirements on all traps, and gear marking requirements as specified in 50 CFR Part 648.

While the lack of Addenda II and III management measures at the state level is limited to a few jurisdictions, the lack of either state or Federal regulations associated with the required elements of Addenda II and III addressed in Alternative 2 would allow relatively few Federal permit holders to harvest lobsters that would otherwise be protected. The lack of either state or Federal measures, as proposed in Alternative 2, may have a small negative, yet unquantifiable, impact on the status of the stock overall and potentially result in more restrictive measures throughout the range of the impacted stock component. In addition, this alternative would result in inconsistencies between state and Federal regulations that would create impediments to the effective State-Federal enforcement of measures deemed necessary for the rebuilding of the lobster resource under the ISFMP. Alternative 2 would continue the existing situation that allows a limited number of Federal lobster permit holders, currently not impacted under State regulations, to avoid compliance with all recommended measures in Addenda II and III deemed necessary to ensure the lobster resource is protected throughout its range.

As is the case with Alternatives 3-5, the biological benefits of the broodstock measures assume little or no increase in effective fishing effort. Effective fishing effort may increase under various circumstances, such as when trap gear is hauled more frequently, or when lobstermen currently fishing below existing trap limits increase the amount of trap gear in the water. While fishing effort is constrained to historic participants in LCMA 3, 4, and 5 (see Section 4.4 for additional information), an increase in effective fishing effort by impacted participants in other LCMA may reduce the biological benefits of the broodstock measures.

5.2.2 Socioeconomic Impacts

Due to the fact that Federal lobster permit holders are required to abide by the most restrictive measures (Federal or State) no matter where they fish and the fact that states have already implemented nearly all of the required elements of Addenda II and III, taking no action on the regulatory measures listed above would still leave a significant majority of lobster vessels subject to more restrictive measures than current Federal regulations require. A list of these state measures is provided in Table 5.4. Note that the regulations reported in Table 5.4 include only those measures considered in Alternative 2, and it is not an exhaustive list of all state regulations. In some cases, state regulations do not specify separate requirements for different LCMA (Maine, Connecticut, and most of the *de minimus* states). In the case of Connecticut, the state has informed the Commission Lobster Board that the state's area-specific lobster regulations, while not codified in detail, are referred to and enforceable 'by reference'. In other words, the State of Connecticut does not clearly outline in its state regulations many of the various area-specific broodstock measures analyzed in this EA, but instead it refers to the

Commission ISFMP for detailed requirements of the area-specific measures. Assuming a worst-case scenario for enforcement of the proposed measures at the state level, the analysis in this EA assumed the Connecticut measures that are referred to and enforceable 'by reference' to the Commission ISFMP are not effectively enforceable on Federal permit holders. (Since the Commission is aware of the use of 'by reference' provisions, this assumption is refutable). The other states included in Table 5.4 (New Hampshire, Massachusetts, and Rhode Island) have regulations that differ by LCMA. For example, under Alternative 2, a Maine vessel would be subject to mandatory v-notch in Maine state waters and in any other LCMA. However, a Connecticut vessel that fishes in LCMA 1 would not be subject to mandatory v-notch because Connecticut has no specific LCMA 1 v-notch requirement. Of course, this discontinuity between state and Federal regulations would only exist if a Connecticut vessel had an LCMA 1 endorsement and actually fished there.

Table 5.4. Summary of Current Federal and State Regulations

	ME	NH	MA	RI	CT	NY	NJ	DE	MD	VA	NC
Minimum Gauge											
State	3 1/4	3 1/4	3 1/4	3 3/8	3 1/4	3 3/8	3 3/8	3 5/16	3 3/8	3 3/8 ^b	3 3/8 ^b
LMA 1			3 1/4	3 1/4							
LMA 2		3 3/8	3 3/8	3 3/8							
LMA 3		3 3/8	3 3/8	3 3/8							
LMAOC		3 3/8	3 3/8	3 3/8							
LMA 4		3 3/8		3 3/8		3 3/8					
LMA 5		3 3/8		3 3/8							
LMA 6		3 3/8		3 9/32		3 1/4					
Vent Size^a											
State	1	1	1	3	1	2	2	1	3	4	1
LMA 1			1	1							
LMA 2			2	3							
LMA 3			2	3							
LMAOC			2	3							
LMA 4				2		2					
LMA 5				2							
LMA 6				1							
Mandatory V-Notch											
State	Required	Required							Prohibited		
LMA 1			Required	Required							
Zero Tolerance											
State	Required	Required									
LMA 1			Required	Required							
Maximum Gauge											
State	5	5		5	5	5 1/4		5	5 1/2	5 1/2 ^b	5 1/2 ^b
LMA 1	5	5	5	5	5	5	5	5	5	5	5
LMA 4				5 1/4		5 1/4	5 1/4				
LMA 5				5 1/2			5 1/2				
LMA 6											

a: Codes for vent size are as follows: 1 = 1 15/16" by 5 3/4" rectangular or 2 circular 2 7/16" circular, 2 = 2" by 5 3/4" rectangular or 2 circular 2 1/2" circular, 3 = 2" by 5 3/4" rectangular or 2 circular 2 5/8" circular, 4 = Black sea bass escape vent 2 3/8" circular or 2" square, or 1 3/8" by 5 3/4" rectangular.

b: Virginia and North Carolina regulations based on planned changes according to 2004 compliance reports submitted to ASMFC.

Note: the regulations reported in Table 5.4 include only those measures considered in this regulatory action and is not an exhaustive list of all state regulations.

In addition to the Connecticut example, there are a number of different ways in which discrepancies between state and Federal regulations could arise depending in which state a vessel is licensed and which LCMAs were selected on the vessel's Federal permit. To evaluate the potential magnitude of the problem, FY2004 permit data was queried to identify which permit combinations were held by each vessel indicating a trap gear endorsement. For purposes of analysis, it was assumed that the mailing address state was the same as that for the vessel's state license. That is, under Alternative 2 each vessel would be subject to the more restrictive measure as specified in Table 5.4.

Out of a total of 2,407 Federal permit holders using trap gear, at least 2,156 permit holders would have to follow the Commission recommended measures under their state permit even if NMFS chose Alternative 2 and did not implement all Commission recommended measures. However, a discrepancy between state regulations and the Commission recommended Federal regulations might exist for a total of 251 (10.4%) vessels (Table 5.5). For example, Alternative 2 would create a discrepancy for 67 Maine lobster vessels on the minimum gauge and vent size increase measures given that the 3 1/4 inches (8.26 cm) present Federal minimum gauge size limit and the vent size would be inconsistent with Commission recommendations for at least one LCMA selected by these vessels. Similarly, a majority of Connecticut and Delaware vessels would be inconsistent with ASMFC recommendations as the minimum gauge of 3 1/4 inches (8.26 cm) in these two states differs from the recommended size of 3 3/8 inches (8.57 cm) in all areas where vessels from these states are likely to fish for lobster. Note that totals in columns 3 to 8 of Table 5 denote the total number of vessels where a discrepancy would exist between state and Commission-recommended Federal regulations. These column totals cannot be added as more than one discrepancy may exist for a single vessel.

Table 5.5. Summary of Total Vessels, Total Affected Vessels and Regulatory Discrepancy by State*

Mailing Address State	Total Vessels	Total Affected Vessels	Minimum Size	Escape Vent	Mandatory V-notch	Zero Tolerance	Area 4 Maximum Size	Area 5 Maximum Size
ME	1277	67	67	67	0	0	0	0
NH	84	22	0	22	0	0	0	0
MA	629	34	2	2	32	32	2	2
RI	210	40	0	0	38	38	2	2
CT	27	21	20	20	10	10	1	1
NY	65	16	0	0	16	16	0	0
NJ	89	31	0	0	31	31	0	0
DE	11	11	10	10	2	2	9	9
MD	6	0	0	0	0	0	0	0
VA	5	5	0	5	2	2	3	3
NC	4	4	0	3	3	3	0	0
Total	2,407	251	99	129	134	134	17	17

* FY04 Federal lobster permit holders electing to fish with traps.

A discrepancy in mandatory v-notch and zero tolerance between Commission-recommended Federal regulations and state regulations would exist for 134 lobster vessels; the majority of which were from Massachusetts, Rhode Island, and New Jersey. This discrepancy arises because although both Massachusetts and Rhode Island have mandatory v-notch and zero tolerance for LCMA 1, a review of state regulations indicates that neither state seems to have implemented a mandatory v-notch requirement for LCMA 3 above 42° 30'. Compared to either the minimum size/vent or v-notch requirements, only a small number of vessels (at most 17) would be subject to a maximum size for either LCMA 4 or 5 that would differ from the Commission recommendation.

Table 5.5 indicates a maximum potential number of vessels that would not be subject to the Commission broodstock protection measures under Alternative 2. The actual number of

vessels on the water, however, is likely to be far less. That is, some of the 251 permits are unused or dormant, and reflect what fisheries managers term as “latent effort.” In other words, the permit is renewed, but its holder does not actively engage in the lobster fishery, or does not fish in all of the areas designated on the permit. Accordingly, the impacts seen on paper are likely greater than the actual impacts that occur on the water. For example, even though the 67 Maine vessels indicated on their Federal permit that they intended to fish in some LCMA other than LCMA 1, it does not necessarily follow that they actually do so. In fact, it is probable that most of these Maine vessels fish for lobster predominantly in LCMA 1 and would be fishing under conditions consistent with LCMA 1 rules, and Commission recommendations. Similarly, all of the vessels where a discrepancy was found based on v-notch regulations were vessels that listed LCMA 3 on their FY2004 permit application. The majority of these vessels were from states other than Maine or New Hampshire. That is, most vessels from all other states are unlikely to fish for lobster in LCMA 3 north of 42° 30' and would not be subject to mandatory v-notch or zero tolerance.

For reasons indicated above, the majority of the 251 vessels that may fish in the EEZ under less restrictive conditions than that recommended by the Commission are actually unlikely to do so. That is, the majority of Maine vessels are likely to fish in LCMA 1, and the majority of vessels identified in Table 5.5 permitted to fish in LCMA 3 fish south of 42° 30'. In effect, this means that even in the absence of Federal action the conservation objectives of the ISFMP will not be compromised since state action has brought the overwhelming majority of Federally permitted lobster vessels into compliance with Commission recommendations. Consequently, economic benefits from a fully rebuilt resource would be preserved provided the continued gap between state and Federal regulations does not result in a significant change in effort distribution.

The potential for a State-Federal gap in lobster regulations to provide an economic incentive to change fishing patterns is likely to be quite limited. Most states already have implemented more restrictive measures so vessels cannot simply seek out less restrictive measures by obtaining a lobster permit from another state due to limited access programs in most states. This means that the primary vehicle for changing fishing patterns would be through a change in LCMA designation on the Federal permit, which would not be possible until FY2005 at the earliest. However, given historic participation programs that have already been implemented in LCMAs 3, 4, and 5, and depressed resource conditions in LCMA 2, the only area that may attract effort would be LCMA 1. Given state regulations already implemented in all of the Gulf of Maine states as well as Rhode Island, New York, New Jersey and most of the *de minimus* states, such a change in fishing patterns solely to take advantage of less restrictive measures is quite limited. Further, the practical reality of changing fishing locations in a highly territorial fishery would also limit the extent to which vessels would be able to switch from one area to another.

Non-Trap Gear Impacts

Vessels that fish exclusively with non-trap gear are typically subject to landings or possession laws according to where they land lobster. This means that non-trap vessels would be able to fish for and retain lobster in the EEZ but would not be able land 3 1/4" lobsters in any state that currently had a 3 3/8 inch minimum size. Based on 2003 permit data, there were a total of 637 vessels with Federal lobster permits selected only the non-trap permit category. Approximately 98 % of these vessels held at least one other Federal fisheries permit that required mandatory reporting, so existing dealer records should provide a reliable estimate of fishing activity.

According to dealer records for calendar year 2003, 569 of the 637 permitted non-trap vessels reported seafood landings that totaled approximately \$260 million (Table 5.6). But the

reported \$260 million in landings reflected the value of all species caught, including, but not limited to, lobster. In fact, the vast majority of reported landings related to species other than lobster. Specifically, of the 569 reporting vessels 380 (roughly two-thirds) did not report landing lobster. Lobster landings for the remaining 189 vessels were valued at just over \$3 million, with the majority (87 %) being landed in Massachusetts. This means that the vast majority of Federal permit holders would have to abide by the Commission’s recommended gauge increases, even under the Alternative 2 option of no corresponding Federal increase, because every other state has increased their minimum size to 3 3/8 inches (8.57 cm). The State of New Hampshire is the sole exception, but non-trap landings there amount to 0.3 % of the total non-trap landings (See Table 5.6). The realized impact on non-trap vessels is difficult to assess since the size composition of the commercial catch is not known. However, lobsters caught with non-trap gear tend to be larger, on average, with a greater percentage of the catch having a carapace length in excess of both the 3 1/4 inch (8.26 cm) and 3 3/8 inch (8.57 cm) gauge size, so the impact on this gear sector may be relatively small. Further, since lobster revenue averages less than 4 % of total fishing income, the realized impact would be limited.

Table 5.6. Summary of Landed Value by Federal Lobster Non-Trap Vessels in 2003 by State of Landings

Landing State	Value of All Species (\$)	Lobster Value (\$)
Connecticut	1,384	0
Maine	10,188,286	0
Maryland	476,382	196
Massachusetts	142,428,955	2,609,076
New Hampshire	1,516,139	7,973
New Jersey	38,086,737	6,883
New York	7,975,711	15,444
North Carolina	4,185,206	0
Rhode Island	17,226,008	372,438
Virginia	37,164,789	0
Total	259,249,597	3,012,010

5.2.3 Protected Resources Impacts

Primarily, the measures in this proposed action are lobster broodstock protection measures that are not directly related to marine mammal issues involving vertical lines or ground lines used with lobster trap gear. All Federal lobster permit holders are currently bound by existing Federal measures in place to protect marine mammals and protected species, including gear configuration requirements, and that situation will not change under this alternative, or any of the feasible alternatives set forth in this document.

Federal lobster permit holders must abide by the most restrictive measures (Federal or state) no matter where they fish. Since most states have already implemented nearly all of the required elements of Addenda II and III, taking no action on the regulatory measures listed above would have little overall effect since a significant majority of Federal lobster vessels subject to more restrictive State lobster management measures already in place. Accordingly, the majority of the vessels that may fish in the EEZ under less restrictive lobster management measures in Alternative 2 are actually unlikely or unable to do so. The economic benefits from a fully rebuilt resource would be preserved provided the continued gap between state and Federal regulations does not result in a significant change in effort distribution. For reasons indicated in Section 5.2.2, the potential for a State-Federal gap in lobster regulations to provide an economic incentive to change fishing patterns is likely to be quite limited. Historic participation programs have already been implemented in several LCMAs, and difficulties of changing fishing locations in a highly territorial fishery all limit the extent to which vessels would be able to switch from one area to another. Although the direct impacts of these proposed lobster broodstock protection measures on marine mammals and protected resources would not be significant, discrepancies

between State-Federal regulations may complicate effective State-Federal enforcement of the suite of lobster management measures and potentially impact enforcement of other measures, including those designed to address protected resources and marine mammals.

The Modified No Action alternative - Alternative 2, would be more beneficial to protected resources than Alternative 1 - an EEZ closure, or Alternative 5 - the environmental alternative (discussed later in this EA), on the limited issue of effort shift, since Alternative 2 is unlikely to result in a shift of fishing effort to the state waters inshore fishery and the resulting possibility of a dense concentration or wall of lobster gear along the boundary of State and Federal waters. Alternative 3 - a phased in implementation of proposed measures (also discussed later in this EA), similar to Alternatives 1, 2, and 5, would create inconsistencies between state and Federal regulations that could decrease effective State-Federal enforcement of management measures, potentially including measures to benefit protected resources. Alternative 4 - the preferred alternative (also discussed later in this EA), would immediately implement the broodstock measures and ensure consistency between State and Federal regulations and, as a result, would be least likely to result in an effort shift scenario that might impact protected resources.

5.3 Alternative 3: The Commission Alternative (Non-preferred)

This alternative would adopt all feasible measures recommended by the Commission without modification. Relative to the involved management issues and measures, it would:

- Measure 2.1 - Option 2.1.2: Revise the scheduled time line and target deadline on the existing egg production schedule;
- Measure 2.2 - Option 2.2.4: Increase minimum gauge size in certain management areas over four years;
- Measure 2.3 - Option 2.3.2: Increase trap escape vent size in certain management areas;
- Measure 2.4 - Option 2.4.2: Mandate V-notching in Area 1 and above 42°30' Latitude in Area 3;
- Measure 2.5 - Option 2.5.2: Adopt a zero tolerance definition of v-notch in Area 1;
- Measure 2.6 - Option 2.6.2: Add new maximum gauge size in Areas 4 and 5; and
- Measure 2.7 - Option 2.7.2: Create an overlap in the boundaries between Areas 3 and 5.

5.3.1 Biological Impacts

The Commission alternative - Alternative 3, would implement the proposed broodstock management measures on the incremental implementation schedule initially approved when the Commission voted on Addenda II and III in 2001 and 2002. These Area-specific management measures were approved by the Commission to ensure each LCMA is able to achieve the F10 egg production objectives of the ISFMP, while taking into account the socio-economic impact on industry participants. One mitigation approach involved Measure 2.2; the measure to increase the minimum gauge size in LCMAs 2, 3, 4, 5, and the Outer Cape. In Addenda II and III, the gauge increase is phased in over a period of four years. As previously discussed (see Section 1.0 - Introduction), most states have already implemented the required elements of Addenda II and III, and, in effect, this means that Federal action, as proposed in Alternative 3, would not compromise the conservation objectives of the ISFMP, since state action has brought the overwhelming majority of federally permitted lobster vessels into compliance with Commission recommendations. As noted previously in Section 5.2.1, the biological benefits of the proposed broodstock measures assume little or no increase in effective fishing effort. An increase in effective fishing effort by impacted participants may reduce the biological benefits of the broodstock measures by some unquantifiable level.

As was explained in Section 5.2.2, however, there exists a small subset of Federal permit holders - i.e., a number likely to be less than 251 - that might not be subject to the Commission recommended measures by virtue of more restrictive state regulations. Alternative 3's four year phase-in of Federal regulations would allow a limited number of Federal lobster permit holders to delay by four years compliance with lobster broodstock measures in Addenda II and III that are deemed necessary to ensure the lobster resource is protected throughout its range. Implementation of Federal measures on the same incremental implementation schedule initially approved when the Commission voted on Addenda II and III in 2001 and 2002 would also continue problematic enforcement and jurisdictional coordination issues that are associated with inconsistent State-Federal regulations. Accordingly, although Alternative 3 is technically the Commission's alternative, due to the passage of time, it likely no longer represents the Commission's preference.

5.3.2 Socioeconomic Impacts

Alternative 3 would implement the Commission-recommended measures but would do so according to the original Addenda II and III schedule, which, due to the passage of time, is now dated. Like Alternative 2 - the Modified No Action alternative, this alternative would continue to leave a gap between state and Federal lobster regulations in the EEZ, at least until the four year implementation schedule has been completed. For this reason, the anticipated economic effects would be similar to that of Alternative 2 (see Section 5.2.2). Specifically, for the duration of the implementation schedule about 10% of federally permitted trap vessels would be subject to less restrictive measures. However, as discussed in Section 5.2.2 - Socioeconomic Impacts, the majority of the vessels that may fish in the EEZ under less restrictive measures than recommended by the Commission are actually unlikely to do so due to the territoriality of the lobster trap fishery and the difficulties in shifting effort due to restrictive state licensing programs. Additionally, phasing in the minimum gauge increase as an economic mitigation measure may be less effective for the limited number of impacted Federal permit holders. As discussed in Sections 5.2.1. and 5.2.2, the majority of these permit holders reside at the southern end of the range of the resource where Federal permit holders are not as economically reliant solely on lobster. Impacted Federal permit holders from Maine fishing in the EEZ are more likely to be economically reliant on lobster and benefit from a phased minimum gauge increase. However, EEZ landings tend to be comprised of larger, more valuable lobsters (Section 5.1.2), thereby providing alternative impact mitigation to the limited number of Maine permit holders actually fishing beyond LCMA 1 in an area subject to a minimum gauge size increase. This also means that the economic costs and benefits of Alternative 3 would have been realized through implementation of lobster regulations by the states and taking action to implement complementary regulations in the EEZ would have no added economic burden.

The proposed increase in the minimum gauge size in selected LCMAs, as specified in Alternative 3, is not expected to impact the trade of live lobsters of foreign origin. The import of live lobsters is guided by the dictates set forth in Section 307(J) of the Magnuson Stevens Act, 16 USC 1857(J). That provision, also referred to as the "Mitchell Act", restricts the trade of live lobster smaller than the current Federal minimum size, which is presently 3 1/4 inches (8.26 cm). Alternative 3 proposes to incrementally increase the Federal minimum gauge size in selected LCMAs, however, Federal regulations would continue to maintain the current Federal minimum size of 3 1/4 inches (8.26 cm) in LCMAs, including LCMA 1, the LCMA adjacent to Canada. Since state and Federal compliance of the minimum gauge size would not discriminate between products of domestic and foreign origin, and enforcement would apply evenhandedly to domestic and foreign caught lobsters, the impact to international trade in live lobster due to this measure is not expected to be significant.

The proposed increase in the minimum lobster trap escape vent size in selected LCMAs, as specified in Alternative 3, is not expected to significantly impact lobster trap fishermen that

also fish for black sea bass with traps. Although the legal minimum black sea bass escape vent size is smaller than the lobster escape vent size, dual lobster/black sea bass permit holders are bound by the more restrictive lobster escape vent requirement. However, impacts have been mitigated for dual lobster/black sea bass permit holders in LCMA 5 because participants can elect in to an Area 5 Waiver program that allows participants to fish under black sea bass escape vent requirements, but limits participants to 100 lobsters per day, up to a maximum of 500 lobsters for trips of 5 or more days (see Section 3.3.2 and Appendix 5). While dual lobster/black sea bass permit holders fishing north of LCMA 5 would be bound by the larger lobster escape vent size, the economic costs and benefits of Alternative 3 would likely have been realized through implementation of lobster regulations by the states and taking action to implement complementary regulations in the EEZ would have no added economic burden.

5.3.3 Protected Resources Impacts

As noted previously, the lobster broodstock measures in this proposed action do not directly impact marine mammal or protected resources and do not change existing regulations for vertical lines or ground lines used with lobster trap gear. All Federal lobster permit holders continue to be bound by all existing Federal measures in place to protect marine mammals and protected species, including gear configuration requirements, and that situation will not change under this alternative. The phased implementation of the measures as proposed in Alternative 3 is not expected to result in a shift in fishing patterns that may negatively impact marine mammals or protected resources (see Section 5.2.2.). The potential for a shift in historic fishing effort upon implementation of a proposed 5-mile (8 km) overlap between LCMAs 3 and 5 (Option 2.7.2), would also be unlikely to occur. Since August 1, 2003, access to LCMAs 3, 4, and 5 has been limited to qualified lobster permit holders with documented historic participation in these LCMAs, as implemented by Federal rulemaking in March 2003 (68 FR 14902). Under this limited access program, trap fishing effort is also capped in LCMAs 4 and 5 and is being capped and reduced in LCMA 3 (See Section 5.7 - Cumulative Impacts Assessment for additional discussion on historic participation measures for LCMAs 3, 4, and 5). However, similar to Alternative 2 - the Modified No Action alternative, inconsistent State-Federal regulations resulting from the four-year phase-in of the minimum size increase would complicate coordination of inter-jurisdictional management and create fishery enforcement issues that may adversely impact protected resources.

5.4 Alternative 4: The Modified Commission Alternative (Preferred)

This alternative is similar to Alternative 3, but with one change: Alternative 4 would increase the minimum gauge sizes immediately instead of phasing in the increases over four years.

This alternative would implement all bundled measures according to the 'preferred' measures in Section 2.

- Measure 2.1 - Option 2.1.2: Revise the scheduled time line and target deadline on the existing egg production schedule;
- Measure 2.2 - Option 2.2.2: Immediately increase minimum gauge size in certain management areas;
- Measure 2.3 - Option 2.3.2: Immediately increase trap escape vent size in certain management areas;
- Measure 2.4 - Option 2.4.2: Mandate V-notching in Area 1 and above 42/30' Latitude in Area 3;
- Measure 2.5 - Option 2.5.2: Adopt a zero tolerance definition of v-notch in LCMA 1;

- Measure 2.6 - Option 2.6.2: Add new maximum gauge sizes in Areas 4 and 5;
and
Measure 2.7 - Option 2.7.2: Create an overlap in the boundaries between Areas
3 and 5.

5.4.1 Biological Impacts

The lobster broodstock protection measures in Alternative 4 - the preferred alternative, are identified as necessary to ensure each LCMA is able to meet the revised F10 egg production objectives identified in the lobster ISFMP, with the goal to rebuild the lobster resource. While Alternative 1 - a closure of the EEZ to the harvest of lobster might arguably provide the most benefit to the offshore lobster resource, and Alternative 5 - the environmental alternative might maximize the conservation benefit using the Commission's proposed regulatory measures (or tools), neither alternative satisfies the stated Purpose and Need for action (see Section 1.0 - Introduction). Further Alternative 2 - the modified no action alternative, and Alternative 3 - the Commission alternative, are similar in practical effect, but both might result in state/Federal collaborative difficulties and both fail to satisfy the spirit of the Commission's recommendations. Only Alternative 4 would implement compatible Federal regulations that are based on the objectives specified in the ISFMP and comply with the management objectives in the Atlantic Coastal Act (see Section 1.0 - Introduction).

Although currently in place for the majority of Federal lobster permit holders, the immediate implementation of a 1/8 inch (0.32 cm) increase in the minimum legal gauge size in LCMAs 2, 3, 4, 5, and the Outer Cape to 3 3/8 inches (8.57 cm) would immediately provide more resource protection to broodstock lobster, than the phased-in approach described in Alternative 3 - the Commission alternative. Uniform State-Federal compliance of a larger minimum legal gauge size would protect more female lobsters and ensure more female lobsters reach maturity, although as has been described in Section 5.2, this additional protection is thought to be minimal because most lobster fishers are already obligated to the gauge increase by virtue of state regulation. A small, unquantified level of resource benefits would occur when a larger legal minimum size requirement is implemented for a limited number of Federal permit holders (251 vessels or 10.4%) that are not currently bound by state regulations for the Addenda II and III measures in this action (see Section 5.2.2 and Table 5.5). The escape vent increase described in Option 2.3.2 complements the proposed 1/8 inch (0.32 cm) increase in the minimum gauge size in the LCMAs where a minimum size gauge increase is proposed (see description of each measure in Section 2). Similar to the minimum gauge size increase, there would be biological benefits with the implementation of a larger trap escape vent - Measure 2.3 (1/16 inch (0.16 cm)) intended to allow sublegal lobsters to escape the trap. Similarly, as discussed in Section 2, implementation of zero tolerance v-notching - Measure 2.5, mandatory v-notching of female lobsters - Measure 2.4, and a maximum legal gauge size - Measure 2.6, as proposed in Alternative 4, would provide an unquantified level of biological benefits and complement the inter-jurisdictional management of the American lobster resource. The potential for a shift in historic fishing effort upon implementation of a proposed 5-mile overlap between LCMAs 3 and 5 - Measure 2.7 would be unlikely to occur because, as will be discussed in Section 5.7 - Cumulative Impacts, since August 1, 2003, access to LCMAs 3, 4, and 5 have been limited to historic participants. Under this historic participation limited access program, fishing effort is also capped in LCMAs 4 and 5 and is capped and being reduced in LCMA 3.

In summation, the lobster stocks would clearly benefit from the broodstock protection measures outlined in Alternative 4. As has been discussed in Section 5.2, however, much of the beneficial impact has already occurred without Federal action because the states have largely implemented the measures as requirements of its permit holders. Still, a small number of Federal permit holders - a number less than 251 - are not potentially covered by these state regulations,

and to the extent they actually fish for and land lobster, Alternative 4 would provide the missing coverage in a manner most consistent, and with the least risk, to the overall Commission ISFMP. However, as noted in Section 5.2.1, the biological benefits of the proposed broodstock measures assume little or no increase in effective fishing effort. An increase in effective fishing effort by impacted participants may reduce the biological benefits of the broodstock measures by some unquantifiable level.

5.4.2 Socioeconomic Impacts

Only the preferred alternative - Alternative 4, immediately brings Federal regulations into conformance with most state regulations that have been adopted to date. This means that Alternative 4 would not result in any additional economic burden for the majority of lobster vessels. Relative to existing state regulations (see Table 5.4), Alternative 4 would have the following implications.

Minimum Gauge - The proposed minimum gauge of 3 3/8 inches (8.57 cm) in LCMAs 2, 3, 4, 5, and Outer Cape (OC) would have no impact on vessels from New Hampshire, Rhode Island, New York, New Jersey, Maryland, Virginia, or North Carolina, as each of these states has already implemented a 3 3/8 inch (8.57 cm) gauge. Massachusetts has implemented a 3 3/8 inch (8.57 cm) gauge for LCMAs 2, 3, and the OC but has not done so for either LCMAs 4 or 5. As a practical matter, this potential gap between Massachusetts and proposed Federal regulations is insignificant as only 2 vessels were found to have listed either LCMA 4 or 5 exclusively on their FY2004 permit application, and thus these fishers are bound by the increased gauge size by virtue of their more restrictive LCMA 2 designation. By contrast, vessels from either Maine or Connecticut that listed any LCMA other than LCMA 1 would be required to abide by the larger 3 3/8 inch (8.57 cm) gauge no matter where they fished. This would affect all but one of the 27 Connecticut vessels identified in Table 5.5, but would affect at the most only 67 of the 1,277 Federally permitted vessels from Maine. However, as noted in Section 5.2.2, while Connecticut does not clearly outline the larger gauge size requirement specified in Alternative 4, the state contends that it has addressed these requirements in regulations ‘by reference’ to the Commission ISFMP requirements. As noted previously, it is not known how many Maine vessels actually fish somewhere outside of LCMA 1, but any that do would be able to drop all but their LCMA 1 designations to fish under the LCMA 1 gauge of 3 1/4 inch (8.26 cm). This option would also be available to Connecticut vessels but is not likely to be practical for geographical reasons. The minimum gauge size would also affect non-trap vessels, but this impact is likely to be no different than that described for Alternative 2, since lobsters landed by non-trap vessels fishing in the EEZ tend to be larger on average than lobsters taken from state waters.

The proposed increase in the minimum gauge size in selected LCMAs, as specified in Alternative 4, is not expected to disproportionately impact the trade of live lobsters of foreign origin. As previously noted in Section 5.3.2 - Biological Impacts, the Mitchell Act (Section 307(J) of the Magnuson Stevens Act, 16 USC 1857(J)) restricts the trade of live lobster smaller than the current Federal minimum size, presently 3 1/4 inches (8.26 cm). Alternative 4 proposes to immediately increase the Federal minimum gauge size in selected LCMAs, however, Federal regulations would continue to maintain the current Federal minimum size of 3 1/4 inches (8.26 cm) in certain LCMAs, including LCMA 1, the LCMA adjacent to Canada. Therefore, the current minimum size restriction on live lobster imports would not change, and the impact on international trade in live lobster due to this measure is not expected to be significant.

The import of live lobsters is guided by the dictates set forth in Section 307(J) of the Magnuson Stevens Act, 16 USC 1857(J). That provision, also referred to as the “ Act”, restricts the trade of live lobster smaller than the current Federal minimum size, which is presently 3 1/4 inches (8.26 cm).

Escape Vent - Only Maryland has implemented the precise escape vent specifications that would be implemented in Alternative 4 for LCMAs 2, 3, 4, 5, and the OC. Both Maine and New Hampshire require escape vents consistent with LCMA 1 requirements but make no specifications for any other area. As long as a permit holder from either of these two states only selects LCMA 1, that individual would be unaffected by Alternative 4. The remaining vessels (67 from Maine and 22 from New Hampshire) would be required to replace any non-conforming trap escape vents with that specified for Alternative 4.

Massachusetts regulations are consistent with that of Alternative 4 with respect to the rectangular escape vents, but the circular vent size (2 ½ inches or 6.59 cm) is smaller than the proposed Federal size (2 5/8 inches or 6.67 cm). It is not known how many traps fished by Massachusetts vessels use rectangular or circular escape vents. While vessels that also fish for black sea bass or scup using trap gear may be more likely to use circular escape vents, the majority of Massachusetts vessels target lobster and are expected to use rectangular escape vents. Note that according to its annual compliance report provided to the Commission (March 1, 2004), Massachusetts expects to have complementary vent size regulations in place by the beginning of the 2005 fishing season in accordance with Addendum IV. Specifically, Addendum IV prescribes a schedule of minimum sizes and complementary escape vent sizes which would bring Massachusetts' regulations up to the 2 5/8 inches (6.67 cm) circular escape vent size considered in Alternative 4. Therefore, any costs associated with changing circular escape vents would have to be borne by Massachusetts vessels with or without Federal action.

Rhode Island regulations already conform to the Alternative 4 rectangular and circular escape vent sizes for LCMAs 1, 2, 3, and the OC, but like Massachusetts, the circular escape vent size for LCMAs 4 and 5 are smaller than what would be required under Alternative 4. Based on data for FY2004, no Rhode Island vessel selected only LCMA 4 or 5 on its Federal permit application. Given the requirement to abide by the most restrictive measure, every Rhode Island vessel would be required to already be using 2 5/8 inch (6.67 cm) circular escape vents. This means that Alternative 4 would not impose any additional costs on Rhode Island vessels than what the State already requires.

Both Connecticut and Delaware currently require escape vents sizes (rectangular or circular) that are smaller than specified under Alternative 4. Unless vessels from each of these states fished exclusively in state waters or in LCMA 1, they would all (27 from Connecticut and 11 from Delaware) be required to replace escape vents under Alternative 4. However, as noted in Section 5.2.2, while Connecticut does not clearly outline the larger escape vent requirement specified in Alternative 4, the state contends that it has addressed these requirements in regulations 'by reference' to the Commission ISFMP requirements.

New York and New Jersey have implemented rectangular escape vent size specifications that would be consistent with Alternative 4, but Alternative 4 circular escape vent size would be larger than current state regulations. As noted for Massachusetts vessels, it is not known how many New Jersey or New York vessels use circular escape vents in their traps. Vessels from these two states are more likely to target scup or black sea bass so a larger percentage of traps would require modification to install conforming escape vents as compared to Massachusetts. In addition to the one-time cost of replacing circular escape vents, these vessels may also incur a loss in fishing income from scup or black sea bass. Note that New Jersey informed the Commission in February 2005 that New Jersey expects to have complementary vent size regulations in place by the beginning of the 2005 fishing season in accordance with Addendum IV. Therefore, similar to the situation in Massachusetts, any costs associated with changing circular escape vents would have to be borne by New Jersey vessels with or without Federal action.

Neither Virginia nor North Carolina, as *de minimis* states under the Commission ISFMP (see Section 1.3 - Action - Process, and Appendix 4 for *de minimis* state discussion), have set escape vent sizes based on that required by the ISFMP for lobster. In each case, escape vents specifications are set in terms of black sea bass traps since most vessels in these states primarily target black sea bass and retain lobster as a bycatch. A total of nine vessels listed a Virginia or a North Carolina mailing address on their 2004 permit application. It is not known how many traps are fished by these permit holders, but the escape vents for all of their gear would need to be replaced to come into compliance with Alternative 4. As noted above, the cost of doing so would be the material and time costs associated with replacing escape vents in addition to any lost income from black sea bass. However, following a request from the Commission, NMFS implemented an Area 5 Waiver program in 2001 (65 FR 14500). Dual black sea bass and lobster permit holders, including impacted vessels in this analysis, can participate in an Area 5 Waiver program that limits participants to 100 lobsters per day, up to a maximum of 500 lobsters for trips of 5 or more days (see Appendix 5). In addition to the trip limits, under the Area 5 Waiver program, Federal black sea bass permit holders are still bound by trap gear regulations that benefit the lobster resource, including escape vent requirements, ghost panel requirements on all traps, and gear marking requirements as specified in 50 CFR Part 648.

Mandatory V-Notch and Zero Tolerance - Each of the Gulf of Maine states have implemented a mandatory v-notch rule and a zero tolerance definition for a v-notch. Of these states, Maine and New Hampshire vessels would be subject to these rules no matter where they fish. Massachusetts' regulations only require mandatory v-notch and zero tolerance for LCMA 1. Alternative 4 would implement mandatory v-notch for LCMA 1 and for LCMA 3 north of 42° 30' and a zero tolerance v-notch definition in LCMA 1.

Alternative 4 could affect every vessel that selects LCMA 3 on their Federal lobster permit; a total of 127 vessels for fishing year (FY) 2004. However, since most vessels possessing LCMA 3 in FY2004 are out of ports south of 42° 30' latitude, the majority of these permit holders are likely to fish south of 42° 30', particularly vessels from states from Rhode Island southward. Further, LCMA 3 vessels holding either a Maine or New Hampshire permit would not be affected by Alternative 4 since they would be subject to the v-notch requirements of their respective states. This leaves only Massachusetts vessels (38 in FY2004) that may fish traps in the affected area. This number is further reduced because many of the vessels selecting to fish in LCMA 3 have designated LCMA 1 and would be bound to the Commission measures even in the absence of Federal action. Due to a lack of mandatory reporting, it is not possible to determine how many, if any, of these vessels set lobster gear in LCMA 3 above 42° 30', but, since only a limited number of Federal permit holders would be impacted, the social and economic impact are likely to be minimal. To the extent that affected vessels do fish in this area, they would have the option to comply with the v-notch requirements or would be able to move any affected gear southward.

Maximum Size in LCMAs 4 and 5 - Only a relatively small number of vessels would be affected by the Alternative 4 maximum gauge sizes for LCMA 4 or 5 since the majority of states have already implemented consistent or more restrictive maximum sizes. Further, Federal regulations already restrict any vessel that has selected LCMA 1 on its Federal lobster permit to a 5 inch (12.7 cm) maximum size. Vessels from Connecticut and Delaware would be most likely to be affected since neither state has enacted a maximum size and very few have selected LCMA 1 on their Federal permit. Maryland, Virginia, and North Carolina have all enacted a maximum gauge of 5 ½ inches (13.97 cm), but none of these states has implemented a regulation that would be in conformance with the more restrictive LCMA 4 maximum size. The economic impact on Federal lobster permit holders fishing with traps of a change in maximum gauge is likely to be negligible as the quantity of lobsters above the proposed maximum size in the exploitable population in LCMA 4 or 5 is relatively low. Further, vessels that fish with traps in these areas typically do not depend solely on lobster for their fishing income. However, an unknown

number of recreational scuba divers, operating from recreational fishing vessels or charter/party vessels, would be affected by the maximum gauge sizes for LCMA 4 or 5 proposed in Alternative 4. Since scuba divers are known to target so called ‘trophy lobsters’, those lobsters that are of above average size for the area, the imposition of a maximum size would restrict possession of larger lobsters by scuba divers fishing in Federal waters, in addition to other traditional lobster trap gear. However, LCMA 4 and 5 are at the southern end of the range of American lobster, and the quantity of available large lobsters above 5 1/4 inches (13.34 cm) accessible to divers is likely to be limited. For this reason, the proposed maximum gauge sizes in LCMA 4 and 5 would be expected to have a negligible impact both in terms of total landings and on profitability of vessels and individuals that harvest lobster in LCMA 4 or 5.

5.4.3 Protected Resources Impacts

Similar to the other alternatives, the Alternative 4 measures in this proposed action do not specifically address marine mammal or protected resource issues and do not change existing regulations for vertical lines or ground lines used with lobster trap gear. All Federal lobster permit holders continue to be bound by all existing Federal measures in place to protect marine mammals and protected species, including gear configuration requirements, and that situation will not change under this alternative. Similar to Alternatives 3 and 5, the immediate implementation of the measures as proposed in Alternative 4, including the proposed 5-mile overlap between LCMA 3 and 5, is not expected to result in a shift in fishing patterns that may negatively impact marine mammals or protected resources (see Section 5.2.3 and Section 5.3.3). However, unlike Alternatives 1, 2, 3, and 5, this alternative would result in consistent State-Federal regulations that would facilitate coordination of inter-jurisdictional management, reduce unnecessary fishery enforcement issues, and comply with the intent of the Atlantic Coastal Act (see Section 1.0 - Introduction).

5.5 Alternative 5: The Environmental Alternative (Non-preferred)

This alternative would implement the proposed broodstock measures throughout the range of the resource in all LCMA 3s, and could be argued to be the most environmentally positive alternative to maximize environmental benefits for American lobster.

- Measure 2.1 - Option 2.1.2: Revise the scheduled time line and target deadline on the existing egg production schedule;
- Measure 2.2 - Option 2.2.3: Immediately increase minimum gauge size in all management areas;
- Measure 2.3 - Option 2.3.3: Immediately increase lobster escape vent size in all management areas;
- Measure 2.4 - Option 2.4.3: Mandate V-notching in all management areas;
- Measure 2.5 - Option 2.5.3: Adopt a zero tolerance definition of v-notch in all management areas;
- Measure 2.6 - Option 2.6.3: Add new maximum gauge size in all management areas; and
- Measure 2.7 - Option 2.7.2: Create an overlap in the boundaries between Areas 3 and 5.

5.5.1 Biological Impacts

Alternative 5 would implement, for all Federal lobster permit holders throughout the range of the resource, the most restrictive Commission lobster broodstock measures in Addenda II and III with the intended goal to maximize environmental benefits for American lobster and

increase the likelihood that the objectives of the ISFMP would be met within the required timeframe. Implementation of a minimum legal gauge of 3 3/8 inches (8.57 cm) combined with a maximum legal gauge size of 5 1/4 inches (13.34 cm) throughout the range of the resource would provide increased protection and ensure that a greater segment of the reproductive population is protected from harvest. In addition, a complementary increase in the escape vent size of 1/16 inch (0.16 cm) and mandatory v-notching of egg bearing lobsters combined with zero tolerance v-notch enforcement would ensure maximum protection to all American lobsters taken from the EEZ or harvested by Federal permit holders.

However, industry may respond to Alternative 5 in a similar manner to discussions of the possible response by the fishing industry to a complete closure of the EEZ described in Alternative 1 (see Section 5.1.1). Industry reaction to the most restrictive measures in Alternative 5 may encourage industry to drop their Federal lobster permit, shift effort into state waters and result in negative impacts to the coastal lobster resource. Currently, Commission measures that are implemented by state regulation are area-specific, e.g. lobstermen in one area may be bound by an increased minimum legal gauge size, while participants from another LCMA may be bound by lower trap limits. Under the Commission ISFMP process, measures vary by LCMA, but when taken in their entirety, these area-specific measures are intended to end overfishing and rebuild the lobster resource throughout the range of the resource. However, the uniform Federal implementation of the most restrictive area-specific measures throughout the range of the resource, while potentially maximizing the environmental benefits to the resource in the EEZ, at least in the short term, would concurrently result in greater impacts to a larger number of Federal lobster permit holders. While Federal implementation of the measures in Alternative 2, 3, or 4, would likely impact 10 percent of Federal permit holders, approximately 2,300 Federal Federal permit holders will be bound by the more restrictive minimum gauge and complementary escape vent measures than are currently impacted under existing state or Federal regulations (see Section 5.5.2.). Alternative 5 - the environmental alternative, is the most beneficial alternative for the lobster resource and would provide more protection to the lobster resource than any of the other alternatives identified in this EA, at least in the short term. However, the likely reactionary response to the Federal Government unilaterally implementing measures in excess of the Commission ISFMP could ultimately lead to a certain degree of instability in the long-term.

The coastal lobster resource would experience an increase in effort if an unknown component of impacted Federal permit holders relinquish their lobster permit and choose to operate under less restrictive state regulations (see Section 5.1.1). Fishing behavior is more likely to change for a majority of impacted Federal permit holders, given the scope of the potential economic impacts. Since LCMA 1 accounts for the majority of landings, the greatest impact would be on LCMA 1 participants because they would be required to comply with an immediate minimum gauge increase of 1/8 inch (0.32 cm) and be required to install larger escape vents (see costs to the lobster industry - Section 5.5.2). Since Federal lobster permit holders fishing in LCMA 1 are economically dependent on lobster sales for their livelihood and few possess other Federal fishery permits, trap fishing effort inshore may increase as effort shifts to coastal waters to avoid more restrictive Federal regulations.

5.5.2 Socioeconomic Impacts

The Commission recommended measures would implement a variety of conservation measures that would vary by LCMA. Alternative 5 would implement a suite of management measures that would represent the most restrictive of the Commission recommendations, but these measures would be implemented throughout the range of the resource. This alternative would have the largest beneficial biological impact in the EEZ, at least in the short term, and, if significant effort shift did not occur, would provide the highest likelihood that the conservation objectives of the ISFMP would be met within the required time. As such, Alternative 5 would

also provide greater assurance that the economic benefits of a rebuilt lobster resource would be realized. However, Alternative 5 would also impose significant costs on the lobster industry. These costs would include a short-term reduction in yield associated with an increase in the size limit to 3 3/8 inches (8.57 cm), larger escape vents, mandatory v-notch, and a maximum size throughout the range as well as a one-time cost of replacing escape vents in all non-conforming traps. Whether the forgone revenue in the short-term would be recovered over the longer term is not known. Further, the difference in the distribution of these impacts is not known but may be more pronounced in LCMA 1 since that area is currently at a 3 1/4 inches (8.26 cm) and all other areas already have a 3 3/8 inch (8.57 cm) minimum gauge size. The impact on LCMA 1 participants would also be greater because they would be required to install larger escape vents while participants in all other areas have already installed the larger escape vents. As has been stated immediately above in Section 5.5.1, more lobster is harvested from LCMA 1 than from all other LCMA's combined.

Compared to current regulations (see Table 5.4), a total of 2,291 Federal lobster permit holders would be affected by Alternative 5 (Table 5.7); over half of which would be from Maine and almost 25 % would be Massachusetts vessels. As noted above, the majority of vessels (nearly 80%) would be affected by an increase in the minimum size to 3 3/8 inches (8.57 cm) and an increase in the escape vent size throughout the range. A quantitative estimate of foregone revenue is not possible, but a crude estimate of the potential number of escape vents that would need to be changed was developed as follows. First, trap tag data for 2003 was used to estimate the average number of traps that may be fished by Federal permit holders in Maine (725), New Hampshire (687) and Massachusetts (722). This estimate was then multiplied by the number of affected vessels in each state from Table 5.7 to obtain an estimate of total traps (1.3 million) and the estimated material and time cost (approximately \$1.40 per trap - Lobster FEIS, 1999). Given these values, the total cost of replacing all escape vents would be \$1.8 million or just over \$1,000 per vessel.

Table 5.7. Summary of Total Vessels, Total Affected Vessels for Alternative 5

Mailing Address State	Total Vessels	Total Affected Vessels	Minimum Size	Escape Vent	Mandatory V-notch	Zero Tolerance	Area 4 Maximum Size	Area 5 Maximum Size
ME	1277	1280	1270	1270	0	0	0	0
NH	84	84	72	72	0	0	0	0
MA	629	540	446	447	273	273	273	273
RI	210	180	0	0	207	207	207	207
CT	27	27	17	17	26	26	26	26
NY	65	65	0	0	64	64	57	57
NJ	89	89	0	0	87	87	58	58
DE	11	11	1	1	10	10	10	10
MD	6	6	0	0	6	6	6	6
VA	5	5	0	1	5	5	5	5
NC	4	4	0	3	3	3	3	3
Totals	2407	2291	1806	1811	681	681	645	645

The proposed increase in the minimum gauge size in all LCMA's, as specified in Alternative 5, is likely to negatively impact the trade of live lobsters of foreign origin. As noted previously, the Mitchell Act (Section 307(J) of the Magnuson Stevens Act, 16 USC 1857(J)) restricts the trade of live lobster smaller than the current Federal minimum size, presently 3 1/4 inches (8.26 cm). Unlike Alternatives 3 or 4, Alternative 5 proposes to increase the Federal minimum gauge size throughout the range of the resource, rather than in selected LCMA's. Proposed Federal regulations would result in an increase in the current Federal minimum size of 3 1/4 inches (8.26 cm) to 3 3/8 inches (8.57 cm) in all LCMA's, including LCMA 1, the LCMA adjacent to Canada. It is conceivable that the 1/8 inch (0.32 cm) increase in the minimum size could have significant negative impacts on foreign suppliers of live lobster, especially Canadian

suppliers, to the U.S. and result in disparate minimum sizes between the Federal regulations and the Commission ISFMP. In 2003, imports of live lobster from Canada accounted for 50 million pounds (22,524 mt) valued at \$288 million.

Finally, as mentioned above, Alternative 5 would result in regulatory inconsistencies between the Federal government and state governments. The inconsistencies could have a markedly negative impact on enforcement of state and Federal broodstock protection measures and could likely subvert the effectiveness of the Commission's lobster ISFMP. Accordingly, Alternative 5 is likely infeasible given the Atlantic Coastal Act's mandate that the Federal Government support the Commission and that Federal regulations be compatible with Commission plans.

5.5.3 Protected Resources Impacts

Impacts to marine mammals and protected resources are similar to those described in Alternative 1 - the closing of the EEZ and include increased risk of entanglements with certain large whales and turtles if trap gear is concentrated in crowded coastal waters and the issues associated with inconsistent State-Federal management of the resource, including enforcement of conservation measures (see Section 3.2 and Section 5.1.3) or perhaps even an overall increase in effort if existing Federal permit holders sell their Federal vessel permit, but keep their state lobster license and continue fishing in state waters. Compared to Alternative 2 - the Modified No Action alternative, Alternative 5 would have more severe adverse impacts on protected resources if a majority of impacted Federal permit holders relinquish their lobster permits and choose to operate under less restrictive state regulations. Similar to Alternative 1 (see Section 5.1.3), a shift in trap fishing effort to state waters would create a dense concentration of vertical lines and significantly increase the risk of entanglement to protected resources. The dense concentration of trap gear competing for productive lobster grounds would likely encourage industry to reduce the number of traps per string to decrease the likelihood of gear entanglement (setting gear over another string of traps) and further increase entanglement risks. Competition for limited productive grounds may encourage setting gear in Federal waters or encourage non-compliance of the proposed measures that may redirect state and/or Federal enforcement efforts away from measures designed to benefit protected resources.

5.6 - 5.9 Independent Alternatives

These alternatives are not closely interrelated. As was previously discussed in Sections 2.8 - 2.11, the impacts associated with the independent measures should remain a set quantity regardless of whether these measures are packaged with other measures. As a result, these independent measures will not be analyzed as part of the bundled group of the broodstock protection measures.

Accordingly, the EA will analyze these independent measures as follows: first, the document will briefly outline each measure with its preferred and non-preferred alternatives (for a more detailed explanation of each measure, see Sections 2.8 - 2.11); and second, the document will analyze the biological impacts of the measures (Section 5.10), the socio-economic impacts of the measures (Section 5.11), and the measures impacts on protected resources (Section 5.12).

Independent Measure 5.6	Modification to Allow Area Designation Correction, or Allow Changes Upon Sale of Vessel and Permit
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This measure was originally presented in this EA in Section 2 as Independent Measure 2.8. This measure would modify 50 CFR 697.4(a)(7)(iv) - Vessel permits and trap tags, to

clarify permit transfer requirements to allow a change to a vessel's lobster trap area designation(s) on the Federal limited access lobster permit when the vessel and permit are sold. It would also allow a permit holder to change an area designation if an obvious error was made when renewing a vessel permit. Currently, the regulations prohibit changes in Area designations during the course of the Federal permit year unless the permit has been issued to a vessel that is a replacement vessel for another qualified vessel.

The current Federal lobster regulation reads as follows:

50 CFR 697.4(a)(7)(iv) - Once a vessel has been issued a lobster management area designation certificate or limited access American lobster permit specifying the lobster EEZ management areas in which the vessel may fish, no changes to the EEZ management areas specified may be made for such vessel for the remainder of the fishing year unless such vessel becomes a replacement vessel for another qualified vessel.

Alternative 5.6.1 Do Not Allow Area Designation Change Upon Sale of Vessel and Permit or within 45 Days of the Permit's Effective Date (no action)

This alternative was discussed previously in Section 2.8.1 of this EA. This Alternative would make no change to the existing Federal regulations. A vessel with a Federal lobster limited access permit is permitted to fish for lobster in Federal waters, subject to regulations specified at CFR 697. Current Federal lobster permit regulations, specified at 697.4(a)(3), clearly allow for transfer of the fishing and permit history, and management area designation, when required of a vessel, whenever it is bought, sold or otherwise transferred, unless there is a written agreement, signed by the transferor/seller and transferee/buyer, or other credible written evidence, verifying that the transferor/seller is retaining the vessel's fishing and permit history, and management area designation, for the purposes of replacing the vessel. While current Federal lobster limited access permit regulations allow permits to transfer under 697.4(a)(3), Federal regulations are unclear on transfers to second parties unless the permitted vessel becomes a replacement vessel for another qualified vessel. Alternative 5.6.1 - the No Action alternative, would make no changes to existing Federal regulations associated with vessel transfers to second party buyers or if errors were made when applying for a new permit or upon renewal.

Alternative 5.6.2 Amend Regulations to Allow Area Re-Designation Upon Sale, Transfer, or within 45 Days of the Permit's Effective Date (preferred)

This alternative was discussed previously in Section 2.8.2 of this EA. To ensure Federal lobster limited access permit regulations specified at 697.4(a)(3) and 697.4(a)(7)(iv) are consistent upon transfer of a vessel and permit, proposed modifications to regulations would allow a change to a vessel's lobster trap area designations on the Federal limited access lobster permit, subject to limited access provisions in CFR 697.4, when the vessel and permit are sold to a second party transferee/buyer. Modifications to 697.4(a)(7)(iv) would clarify Federal lobster regulations to allow Area re-designations upon transfer to a second party buyer and would be more readily understood from an enforcement perspective and by the owner(s) of a vessel with a Federal limited access permit. This change would allow permit holders, upon initial receipt of a new or renewed permit, one opportunity to request a change in the permit LCMA category if requested within 45 days of the effective date of the vessel's permit. If such a request is not received within 45 days of the effective date of the vessel's permit, the vessel owner may not request a change in the permit category for the duration of the fishing year. Provision for one opportunity to change categories, if requested within 45 days, will bring lobster permitting procedures in line with existing procedures currently in place for other Northeast vessel permit practices.

Independent Measure 5.7 Reference Other Applicable Law

This measure was discussed previously in Section 2.9 of this EA. This issue, like the issues and alternatives set forth above in Independent Alternative 5.6.1, involves already existing Federal regulations that could be stated more succinctly. Federal lobster permits, are subject to conditions contained in acts other than the Atlantic Coastal Act and regulatory parts other than Part 697. Although there are clear links in Part 697 to these other conditions, the pathway could be stated more plainly. Multiple steps be required to make the connection between lobster regulations and other regulatory requirements and these connections could be written in more direct fashion.

Alternative 5.7.1 Retain Existing ‘By Reference’ Language (No-Action)

This alternative was discussed previously in Section 2.9.1 of this EA. This alternative would retain the present Federal regulations that set forth a permit’s conditions through the Section 697.4(b) incorporation by reference of other “...requirements of this part.”

Alternative 5.7.2: Reference Other Regulatory Requirements and Conditions (preferred)

This alternative was discussed previously in Section 2.9.2 of this EA. This alternative would clarify the existing regulations to more directly reference lobster permit conditions that exist outside of Part 697. The agency would amend Section 697.4(b)-Conditions to include a direct statement that lobster permit holders are subject to the laws and regulations administered by NOAA, including the Endangered Species Act, the Marine Mammal Protection Act and the gear, time and area restrictions thereunder, as well as the enforcement provisions of the Magnuson Stevens Act. The agency would also amend Section 697.7-Prohibitions, to track the newly added text in Section 697.4(b)-Conditions. This alternative is similar to the No Action Alternative insofar as it neither creates nor dissolves present requirements, obligations or procedures. However, the more direct text will likely create better understanding and realization among permit holders of the conditions attendant to their permit. Accordingly, this is NMFS’ preferred alternative.

Independent Measure 5.8 Modification of 50 CFR 697.7(c)(1)(viii) to more directly specify that Federal lobster permit holders are prohibited from hauling or possessing lobster trap gear belonging to another vessel.

This measure was discussed previously in Section 2.10 of this EA. Amendment 3 to the Commission ISFMP clearly specifies in Section 3.3 that state and Federal regulations would ‘establish a limit on the number [of] lobster traps per vessel’. The preferred alternative would, in addition to specifying per vessel trap limits at 50 CFR 697.19, clarify Federal lobster prohibitions specified at 50 CFR 697.7(c)(1) -Prohibitions.

Alternative 5.8.1 Retain Already Existing Trap Hauling and Possession Limitations (no action)

This alternative was discussed previously in Section 2.10.1 of this EA. As noted above, existing Federal regulations do specify limits on the number of lobster traps per vessel at 50 CFR 697.19 - Trap limits and trap tag requirements for vessels fishing with lobster traps. While Federal regulations at §697.19 clearly establish per vessel trap limits, and prohibit hauling or possessing lobster trap gear belonging to another vessel, existing Federal lobster prohibitions at 50 CFR 697.7 are less clear on this issue. Current Federal lobster prohibitions, while clearly

addressing the intent of the Commission ISFMP and Federal lobster trap limit requirements, indirectly reference per vessel trap limits as specified in four lobster prohibitions as follows:

§697.7(c)(1)(vii) Possess, deploy, fish with, haul, harvest lobster from, or carry aboard a vessel trap gear in excess of the trap limits specified in § 697.19 unless exempted pursuant to §697.26;

§697.7(c)(1)(viii) Possess, deploy, haul, harvest lobster from, or carry aboard a vessel any trap gear that does not satisfy the requirements on gear identification and marking, escape vents, ghost panel and maximum trap size specified in §697.21, unless such gear has been rendered unfishable, or unless exempted pursuant to §697.26;

§697.7(c)(1)(ix) - Possess, deploy, haul, harvest lobster from, or carry aboard a vessel any trap gear not tagged in accordance with the requirements in §697.19, unless such gear has been rendered unfishable, or unless exempted pursuant to §697.26.; and,

§697.7(c)(1)(xii) - Beginning May 1, 2000, possess a lobster trap tag, tag a lobster trap with, or use, a lobster trap tag that has been reported lost, missing, destroyed, or issued to another vessel.

Alternative 5.8.1, the no action alternative, would continue existing prohibitions and make no modifications to lobster prohibitions specified at 50 CFR 697.7(c)(1) to more directly specify that Federal lobster permit holders are prohibited from hauling or possessing lobster trap gear belonging to another vessel.

Alternative 5.8.2 Amend Regulations to More Directly Prohibit the Hauling and Possession of Another's Gear (preferred)

This alternative was discussed previously in Section 2.10.2 of this EA. Alternative 5.8.2, the preferred alternative, would modify Federal lobster regulations, specified at 50 CFR 697.7(c)(1)(viii), to more directly specify that Federal lobster permit holders are prohibited from hauling or possessing lobster trap gear belonging to another vessel.

Independent Measure 5.9 Modification of Wording for Exempted Fishing to Authorize a Substitute Vessel to Haul Ashore Lobster Trap Gear under Certain Conditions

This measure was discussed previously in Section 2.11 of this EA. Federal lobster regulations, specified at §697.22, allow the Regional Administrator to exempt any person or vessel from Federal lobster regulations for the conduct of exempted fishing beneficial to the management of the American lobster, weakfish, Atlantic striped bass, Atlantic sturgeon, or horseshoe crab resources or fisheries, pursuant to the provisions of §600.745.

The current Federal lobster regulation reads as follows:

§697.22 Exempted fishing. The Regional Administrator may exempt any person or vessel from the requirements of this part for the conduct of exempted fishing beneficial to the management of the American lobster, weakfish, Atlantic striped bass, Atlantic sturgeon, or horseshoe crab resource or fishery, pursuant to the provisions of §600.745 of this chapter.

(a) The Regional Administrator may not grant such exemption unless it is determined that the purpose, design, and administration of the exemption is consistent with the objectives of any applicable stock rebuilding program, the provisions of the ACFCMA,

the Magnuson-Stevens Act, and other applicable law, and that granting the exemption will not:

(1) Have a detrimental effect on the American lobster, Atlantic striped bass, weakfish, Atlantic sturgeon, or horseshoe crab resources or fisheries; or

(2) Create significant enforcement problems.

(b) Each vessel participating in any exempted fishing activity is subject to all provisions of this part, except those explicitly relating to the purpose and nature of the exemption. The exemption will be specified in a letter issued by the Regional Administrator to each vessel participating in the exempted activity. This letter must be carried aboard the vessel seeking the benefit of such exemption. Exempted fishing activity shall be authorized pursuant to and consistent with §600.745 of this chapter.

NMFS proposes a modification to this part, §697.22, to allow the Regional Administrator for the Northeast Region, or the Director of the Office of Sustainable Fisheries, as appropriate, to authorize a substitute vessel to haul ashore the lobster trap gear of an inoperable or mechanically-impaired federally permitted lobster vessel without having to engage in the exempted fishing process outlined at 50 CFR 600.745 - Exempted fishing. This revision would allow NMFS to more expeditiously address pressing needs than is currently provided in the regulations.

Alternative 5.9.1 Retain Existing Provisions on Exempted Fishing and Gear Retrieval (no action)

This alternative was discussed previously in Section 2.11.1 of this EA. Alternative 5.9.1, the no action alternative, would retain the existing wording specified in 50 CFR 697.22 - Exempted fishing. This alternative would require the owner of vessel requesting authorization to use a substitute vessel to haul ashore the lobster trap gear of an inoperable or mechanically-impaired federally permitted lobster vessel to follow the exempted fishing process outlined at 50 CFR 600.745.

Alternative 5.9.2 Amend Regulations to Clearly Exempt Gear Retrieval from Exempted Fishing Regulations (preferred)

This alternative was discussed previously in Section 2.11.2 of this EA. Alternative 5.9.2, the preferred alternative, would modify existing exempted fishing regulations to allow the Regional Administrator for the Northeast Region, or the Director of the Office of Sustainable Fisheries, as appropriate, to authorize a substitute vessel to haul ashore the lobster trap gear of an inoperable or mechanically-impaired federally permitted lobster vessel without having to engage in the exempted fishing process. This revision would allow NMFS to more expeditiously address urgent needs than is currently provided in the regulations.

5.10 Biological Impacts of Independent Alternatives

Alternative 5.6.2, the preferred alternative, would allow Area re-designation upon transfer of a vessel and permit to a second party buyer. As such, it is not a biological measure and is unlikely to result in any change to current biological impacts. Federal lobster permit holders, as previously described in this EA, are unlikely to shift fishing effort due to existing constraints on permit transfers and the territoriality of the lobster fishery. The preferred Area re-designation alternative may provide an unspecified level of increased benefits to the lobster resource throughout its range, compared to the no action Alternative 5.6.1, to the extent that the change results in more understandable and enforceable Federal lobster permit regulations.

Alternative 5.7.2, the preferred alternative, would specify in Federal lobster regulations, a direct statement that Federal lobster permit holders are subject to other applicable laws and regulations administered by NOAA, including the Endangered Species Act, the Marine Mammal Protection Act. This clarification would provide positive biological benefits, since permit holders would be more clearly informed of all applicable Federal marine resource regulations under NOAA administration, eliminating confusion and enhancing enforcement.

Alternative 5.8.2, the preferred alternative, would modify Federal lobster prohibitions to more directly specify that Federal lobster permit holders are prohibited from hauling or possessing lobster trap gear belonging to another vessel. As outlined in Section 5.8, this modification would not change the law, but instead clarify existing Federal trap regulations. As such, it may provide an unspecified level of increased benefits to the lobster resource throughout its range, compared to the no action alternative, Alternative 5.8.1, to the extent that the change results in more understandable and enforceable if Federal lobster permit regulations.

Alternative 5.9.2, the preferred alternative, would modify existing exempted fishing regulations to expeditiously authorize a substitute vessel to haul ashore the lobster trap gear of an inoperable or mechanically-impaired federally permitted lobster vessel without having to engage in the exempted fishing process, specified at 50 CFR 697.22. In contrast, Alternative 5.9.1, the no action alternative requires up to 60 days to complete the exempted fishing evaluation requirements and would delay the ability of a vessel owner to retrieve unattended gear. Unattended trap gear left in the water may continue to attract and retain legal as well as sublegal lobster. Since lobsters are cannibalistic, the delayed retrieval of unattended gear may increase lobster mortality, thereby providing less benefit to the lobster resource than Alternative 5.9.2, the preferred alternative.

5.11 Socioeconomic Impacts of Independent Alternatives

The independent alternatives described in Sections 5.6 - 5.9 of this EA are primarily intended to clarify existing regulations so that they are more readily understood from an enforcement and/or an individual vessel perspective. In effect, none of the actions specified would change existing policy or the regulatory purpose or need and would not, therefore, have any measurable economic or social impacts. For example, Alternative 5.6.2, which would amend the regulations to clarify the exemption from the prohibition on LCMA designation when a vessel is transferred, would add no added economic burden on the part of an individual lobster vessel or the NMFS. Compared to Alternative 5.6.1, the no action alternative, the preferred alternative merely makes it clearer to vessel owners what they may be able to do when they acquire a new vessel or permit. Similarly, Alternative 5.7.2 simply changes the regulations so that they more succinctly and more obviously state already existing permit obligations. This clarification would impose no additional economic or social burden on lobster permit holders. The preferred alternative regarding clarification of regulations regarding hauling or possession of gear that has been issued to another permit holder, Alternative 5.8.2, does not change existing prohibitions and would have no economic or social impact on Federal lobster vessels. Alternative 5.9.2, the preferred alternative, would allow the vessel owner to retrieve trap gear in a timely manner that may otherwise be lost to adverse weather conditions or other mobile gear operating in the same area. Again, this preferred alternative would merely set forth in clear regulation, already existing agency policy.

5.12 Protected Resources Impacts of Independent Alternatives

As has been stated in Sections 5.10 and 5.11, the intent of the independent alternatives described in Sections 5.6 - 5.9 of this EA are primarily to clarify existing regulations currently in

place for Federal lobster limited access permit holders. Alternative 5.6.2, the preferred alternative, to allow Area re-designation upon transfer of a vessel and permit to a second party buyer, is unlikely to result in any change to current impacts on marine mammals and protected species. Federal lobster permit holders, as previously described in this EA, are unlikely to shift fishing effort due to existing constraints on permit transfers. Alternative 5.6.2, the preferred area re-designation alternative, may provide an unspecified level of increased protection to marine mammals and protected species throughout the range of the lobster resource, compared to the no action alternative (Alternative 5.6.1), if Federal lobster permit regulations would be more easily understood from an enforcement perspective and by owners of a vessel and Federal lobster permit. Alternative 5.7.2, the preferred alternative to clarify existing enforcement measures and clearly reference other regulations, may provide an unspecified level of increased protection to marine mammals and protected species throughout the range of the lobster resource, compared to the no action Alternative 5.7.1, if Federal lobster permit regulations would be more easily understood from an enforcement perspective and by owners of a vessel and Federal lobster permit. Alternative 5.8.2, the preferred alternative to more clearly specify that permit holders are prohibited from hauling or possessing lobster trap gear belonging to another vessel, may provide an unspecified level of increased protection to marine mammals and protected species throughout the range of the lobster resource, compared to the no action Alternative 5.8.1, since the clarification would be more easily understood from an enforcement perspective and by owners of a vessel and Federal lobster permit. Alternative 5.9.2, the preferred alternative, would allow a permit holder to use another vessel to remove unattended gear. Since current MMPA requirements prohibit leaving fixed gear in the water for longer than 30 days, Alternative 5.9.2 would allow permit holders to retrieve their trap gear more expeditiously. Therefore, Alternative 5.9.2 would provide more benefits to protected resources than Alternative 5.9.1, the no action alternative, by avoiding the potential for up to a 60-day administrative delay imposed by exempted fishing requirements.

5.13 Cumulative Impacts Assessment

A cumulative impact analysis is required by the Council on Environmental Quality's (CEQ) regulations for implementation of the National Environmental Policy Act (NEPA). Cumulative effects are defined under NEPA as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other action (40 CFR Section 1508.7)." The following remarks address significance of the expected cumulative impacts as they relate to Federal permit holders in the lobster fishery. Cumulative impacts are described in the lobster SFEIS (67 FR 68128) announced in the Federal Register on November 8, 2002. The lobster FSEIS provided extensive analytical review of impacts on the lobster resource, marine mammals, sea turtles, other protected resources, the fishing industry, impacted constituents, and other interested parties.

State and Federal Fishery Management Actions

The cumulative impacts of past, present, and future Federal fishery management actions (including the lobster broodstock measures proposed in this document) should generally be positive. Although past fishery management actions to conserve and protect fisheries resources may have been more timely, the mandates of NEPA and the Atlantic Coastal Act as currently amended by the Sustainable Fisheries Act, require the management actions be taken only after consideration of impacts to the biological, physical, economic, and social dimensions of the human environment. It is, therefore, expected that under the current management regime, the totality of Federal fisheries management impacts to the environment will, in general, contribute toward improving the human environment. The focus of the assessment of past, present and

future impacts in this EA addresses revisions to Federal lobster regulations in response to lobster broodstock measures recommended by the Commission.

Active participation of industry involvement through the Commission management process since 1997, has generally helped mitigate the adverse cumulative impacts of past, present and future state and Federal lobster management regulations. Prior to 1978, lobster management varied by state and was unregulated in Federal waters. The first Federal lobster fishery management plan (FMP) was developed in 1978 with industry, state and Federal participation. The FMP was then forwarded directly to the appropriate states, as well as to the newly created New England Fishery Management Council (NEFMC) and Mid-Atlantic Fishery Management Council (MAFMC), in 1976 by the Magnuson-Stevens Act. The Councils reviewed the FMP and, pursuant to the Magnuson-Stevens Act, formally referred the plan to the Federal government with a recommendation for adoption. The Federal Government adopted the FMP as a rule in 1983. Despite having a Federal FMP, uniformity of regulation remained a problem in the lobster fishery, and by 1983, some states still had not implemented the recommended minimum carapace length and others had not implemented the plan's recommended escape vent requirement. The NEFMC continued to manage lobster in the EEZ and amended the Federal FMP five times through the mid-1990s. Noteworthy during this period was the establishment of a 'control date' in the Federal lobster fishery by the NEFMC. A Federal Register notice was published on March 25, 1991, (56 FR 12366) that subsequently established that date as a qualification date to determine eligibility for future access to the Federal lobster fishery that limits the number of participants in the Federal lobster fishery (59 FR 31938).

In the meantime, Congress enacted the Atlantic Coastal Act in 1993. The Atlantic Coastal Act contemplated transition of lobster management from the more federally-oriented fishery management councils created under the Magnuson-Stevens Act to the state oriented Commission. The logic of the decision is straightforward: Since approximately 80% of the fishery for American lobster occurs in state waters, the Federal FMP objectives of maintaining a sustainable fishery and preventing overfishing of the resource could not be achieved effectively by Federal action alone. NMFS could no longer ensure that the Federal FMP, which covered only Federal waters, was consistent with National Standard 1 of the Magnuson-Stevens Act, which requires implementation of conservation and management measures to prevent overfishing. In December 1997, the Commission issued Amendment 3, and later, on December 6, 1999, when NMFS issued a Final Rule (64 FR 68228) that transferred its Federal lobster fishery regulations from the Magnuson-Stevens Act (50 CFR Part 649) to the Atlantic Coastal Act (50 CFR Part 697), implemented new regulations. These new regulations included: extension of the moratorium on new entrants into the EEZ fishery; designation of lobster management areas; near-shore and off-shore area trap limits; a 5-inch maximum carapace size in the Gulf of Maine; trap size restrictions; a trap escape vent size increase; trap tag requirements; and annual specification of additional management measures necessary to end overfishing and rebuild American lobster stocks. The regulations issued in that Federal Final Rule were designed in keeping with the new regulatory standard of state primacy as set forth in the Atlantic Coastal Act: 1) that the regulations be consistent with the National Standards set forth in the Magnuson-Stevens Act; and 2) that the regulations be compatible with the Commission's Lobster ISFMP.

Cumulative lobster regulatory impacts are mitigated under the Commission Lobster ISFMP most effectively through the LCMTs and Area-specific management programs. With active industry input in the development of local Area management programs through the Commission LCMT process, measures are more likely to be accepted and appropriate for the Area than a coastwide measure without local support. The flexibility of the Commission adaptive management program through the use of conservation equivalent measures by the Commission can be used to effectively implement resource conservation measures that most

effectively mitigate the cumulative impacts on impacted participants. On February 11, 2000, the Commission addressed mitigation measures for dual permit holders under the ISFMP and also recommended that dual black sea bass and lobster permit holders fishing with black sea bass pots in Lobster Management Area 5 be exempted from Atlantic Coastal Act trap gear requirements. NMFS published a Final Rule, to complement Commission mitigation measures for dual Federal permit holders, in the Federal Register March 13, 2001 (66 FR 14500). This regulatory action exempts black sea bass fishers who concurrently hold limited access lobster and limited access black sea bass permits from the more restrictive gear requirements in the lobster regulations when fishing in LCMA 5 if they elect to be restricted to the non-trap lobster allowance while targeting black sea bass in LCMA 5. This regulation also clarifies that lobster trap regulations do not affect trap gear requirements for fishermen who do not possess a Federal limited access American lobster permit. The intent of these regulations is to relieve restrictions on fishers that were unintended, without compromising lobster conservation goals.

NMFS published a lobster Final Rule in the Federal Register on March 27, 2003 (68 FR 14902) amending regulations, in response to the following recommendations made by the Commission: control fishing effort as determined by historical participation in the American lobster trap fisheries conducted in LCMAs 3, 4, and 5; implement a conservation equivalency trap limits for owners of vessels in possession of a Federal lobster permit (permit holders) fishing in New Hampshire state waters; and clarify lobster management area boundaries in Massachusetts waters. NMFS included in this final rule a mechanism for Federal consideration of future Commission requests to implement conservation equivalent measures and a technical amendment to the regulations clarifying that Federal lobster permit holders must attach federally approved lobster trap tags to all lobster traps fished in any portion of any management area (whether in state or Federal waters). Implementation of the LCMAs 3, 4, and 5 fishing effort control program is reducing the eligible number of lobster permit holders and maximum trap allocations. As of December 31, 2004, less than two hundred vessels are eligible to set a maximum of 2,493 traps per vessel in LCMA 3, with individual vessel allocations averaging 1,750 traps per vessel. Maximum potential trap fishing effort in LCMA 3 has decreased from approximately one thousand vessels eligible to fish up to 1.8 million traps in 2002 to less than two hundred vessels eligible to set a maximum of 200,000 traps. The eligibility review process for LCMA 3 is ongoing, and the total number of vessels and overall trap numbers are expected to decrease further. As of December 31, 2004, less than one hundred vessels are eligible to set a maximum of 1,440 traps per vessel in LCMA 4, with individual vessel allocations averaging 1,074 traps per vessel. Maximum potential trap fishing effort in LCMA 4 has decreased from approximately two hundred fifty vessels eligible to fish up to 200,000 traps in 2002 to less than one hundred vessels eligible to set a maximum of 144,000 traps. The eligibility review process for LCMA 4 is ongoing, and the total number of vessels and overall trap numbers are expected to decrease further. As of December 31, 2004, less than sixty vessels are eligible to set a maximum of 1,440 traps per vessel in LCMA 5, with individual vessel allocations averaging 822 traps per vessel. Maximum potential trap fishing effort in LCMA 5 has decreased from approximately two hundred vessels eligible to fish up to 160,000 traps in 2002 to less than sixty vessels eligible to set a maximum of 52,000 traps. The eligibility review process for LCMA 5 is ongoing, and the total number of vessels and overall trap numbers are expected to decrease further.

As described in Section 1.2. - Action - Legal and Historical Context, the Commission ISFMP process has primary responsibility for lobster management strategy, with the majority of lobster landings being taken from state waters. The proposed Federal regulations in Alternative 5.4 - the preferred alternative, would complement similar, already existing state regulations, and information in this document identifies the cumulative impacts of past and present state lobster management measures on Federal permit holders. As noted in Section 5.2.2 - Table 5.5, a review of existing state management measures indicates a maximum of 251 vessels (10.4%) of a total of 2,407 Federal permit holders fishing with traps are not currently impacted at the state

level by the identified ISFMP broodstock measures in Addenda II and III. In addition, the preferred alternative would primarily impact lobster permit holders at the southern end of the range of American lobster. These impacted permit holders are more likely to hold Federal permits for several fisheries (Section 5.5.2 - Table 5.7).

The lobster fishery does face future regulatory actions to address the overfished status of the resource throughout its range. As discussed in Section 1.0 - Introduction, additional effort control measures for several lobster management areas are identified in Addenda II-VI to Amendment 3 to the Commission ISFMP. In addition, a lobster stock assessment is underway and, based on the outcome of the assessment, additional broodstock and effort control management measures may be deemed necessary as specified in Addendum III (see Appendix 2). Some of the new measures need only be implemented if it is determined in subsequent years that a particular management area is not on target to achieve the egg production goals of the ISFMP. Subsequent to the next lobster stock assessment in 2005, it is anticipated that the Commission, in a collaborative partnership with NMFS, the states, and impacted participants, will reassess the need for the broodstock and effort control provisions of Addendum III identified as 'if necessary' in Addendum III.

The cumulative impact of the preferred alternatives with other management measures in place for other state and Federal fisheries could to be pronounced for some Federal permit holders impacted, and vice-versa. That is, because many lobster fishermen in the southern portion of the lobster's range also fish for other species, including scup and black sea bass, species abundance and/or restrictive regulations in any one fishery could drive fishing effort into another fishery. For example, permit holders at the southern end of the range of the lobster resource are more likely to hold Federal fishing permits for other fisheries. Of the Federal fisheries managed at the southern end of the range of lobster, management actions affecting the scup and black sea bass trap fisheries are most likely to impact the lobster trap fishery to some degree by potentially forcing scup and black sea bass fishermen to rely, by some unknown increased amount, on the lobster fishery to make up for lost income in the other fisheries. Of course, increased scup and black sea bass availability could similarly create an incentive for these fishers to rely less heavily on lobster. The scup and black sea bass fishery has been relatively stable in recent years and there is presently no immediate biological or regulatory impetus in those fisheries that would significantly or predictably alter the present equilibrium.

As noted previously in this document, NMFS has taken measures to mitigate the impacts of the lobster fishery on fishers who fish in multiple fisheries. Federal lobster permit holders that also fish for black sea bass with traps at the southern end of the range may fish with traps under the Area 5 Waiver Program and be exempted from certain lobster gear regulations, including lobster trap limits and lobster trap escape vent requirements (66 FR 14500). NMFS modified black sea bass trap escape vent regulations in the Summer Flounder, Scup and Black Sea Bass FMP via a final rule (66 FR 66348), dated December 26, 2001. Dual Federal black sea bass and lobster permit holders impacted by the measures in this document were impacted by the increase in the minimum size of a black sea bass trap escape vent. Under current regulations, as specified at 50 CFR Part 648.144(b)(2), all black sea bass traps or pots must have an escape vent placed in a lower corner of the parlor portion of the pot or trap that complies with one of the following minimum sizes: 1.375 inches (3.49 cm) by 5.75 inches (14.61 cm); or a circular vent 2.375 inches (6.03 cm) in diameter; or a square vent with sides of 2 inches (5.08 cm), inside measure; however, black sea bass traps constructed of wooden lathes may have instead an escape vent constructed by leaving a space of at least 1.375 inches (3.49 cm) between one set of lathes in the parlor portion of the trap. These dimensions for escape vents and lathe spacing may be adjusted pursuant to the procedures in 50 CFR Part 648.140. In any event, for the reasons stated in Section 5 of this document, NMFS believes that lobster fishers have already implemented the measures set forth in Alternative 4, the preferred alternative, and as a result, the cumulative

impacts of this action's preferred alternative on these scup and black sea bass fisheries are not significant.

Lobster management actions have the potential for cumulative impacts if combined with management measures in place for other state and Federal fisheries and associated with the protection of marine mammals, sea turtles, and protected resources. A thorough discussion of the potential past, present, and future cumulative impacts on the lobster fishery of listed marine mammals, sea turtles, and protected resources management actions was provided in the previously published lobster FSEIS (67 FR 68128). Information is provided here to review and update the discussion of potential cumulative impacts of MMPA and/or ESA listed species, marine mammals or sea turtles actions. Further, to reduce incidental mortality and serious injury to certain large whales to meet the goals of the MMPA and ESA, NMFS proposes additional regulations for Federal lobster permit holders currently covered by the ALWTRP, and regulates new fisheries, including mixed species trap/pot fisheries and gillnet fisheries. The cumulative impacts of preferred alternatives are identified in the MMPA DEIS (70 FR 9306), dated February 25, 2005.

New England lobster operations represent the most significant affected fishery identified in the MMPA DEIS for a number of indicators, including numbers of vessels, total employment, and quantity of lobster landings. Because lobstering is a prominent component of local economies in Maine and other New England states, the potential for impacts within these communities is significant. For reasons discussed in Section 5.2.2, many vessels from the New England states affected by the preferred alternative in this document are unlikely to fish beyond LCMA 1, and affected vessels seem to be few in number due to the existing limited access programs in LCMA 3, 4, and 5 and various state license regulations. As discussed in this section, vessels fishing at the southern end of the lobster's range are likely to hold other Federal fishing permits, including black sea bass using traps. These Federal permit holders would be impacted under proposed measures in the MMPA DEIS, including regulations proposed for new fisheries. However, as stated above, and in Section 5, NMFS believes that lobster fishers have already implemented the measures set forth in the Alternative 4, the preferred alternative. Therefore, this action's preferred alternative, when combined with other past, present, and reasonably foreseeable actions described in this assessment, would not result in significant cumulative impacts.

Cumulative effects to the physical and biological dimensions of the environment may come from non-fishing activities. Non-fishing activities, in this sense, relate to habitat loss from human interaction and alteration or natural disturbances. These activities are widespread and may have localized impacts to habitat such as accretion of sediments from at-sea disposal areas, oil and mineral resource exploration, and significant storm events. NMFS reviews these types of effects during the review process 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 the 'waters of the United States' and includes both riverine and marine habitats.

Certain non-fishing activities are known to impact the lobster fishery. Mineral exploration and beach sand replenishment activities are more frequent at the southern end of the range of the American lobster. Federal permit holders from the southern end of the range would be more likely to be impacted by the preferred alternative and these non-fishing sediment based activities. Water quality issues are known to impact the lobster fishery throughout its range. Adverse resource impacts could result from such non-fishing activities as land-based runoff of toxic materials, petroleum products, or from pesticides or fertilizer after significant storm events. Water treatment plants, primarily near large urban areas, introduce variable levels of chlorine byproducts into the marine environment that may adversely impact lobster. While cumulative effects to the environment may come from non-fishing activities, a database which could

facilitate physical and biological habitat covered by American lobster is not available at this time. The development of a habitat and effects database would accelerate the cumulative effects environmental review process and outline areas of increased disturbance.

There were significant impacts to the lobster fishery when large amounts of oil spilled from the vessel *North Cape* on January 19, 1996, and spread throughout many estuaries and inshore and offshore areas of RI. An estimated 2.92 million lobsters washed up on RI beaches, and were collected from Point Judith to Charlestown Beach, RI, between January 21 and February 2, 1996. The majority of the stranded lobsters were under 40 millimeters in carapace length. Based on the best available data, approximately 9 million lobsters were killed by the spill. Roughly 82 percent of the lobsters were in their first or second year of life. As part of the oil spill mitigation settlement to address biological impacts on the lobster resource, several programs designed to enhance the lobster population in LCMA 2 are underway, including a broodstock enhancement program that involves compensation to lobstermen for restocking and v-notching an estimated 1.248 million adult legal female lobsters throughout LCMA 2 (NMFS et al., 1999).

There were significant impacts to the lobster fishery when a lobster resource disaster occurred in Long Island Sound in 1999. As described in the lobster SFEIS (67 FR 68128), dated November 8, 2002, a number of fishing operations in Long Island Sound reported hauling traps containing a large number of American lobsters, which died soon after capture and transport to tanks or other holding areas. This event occurred entirely in New York and Connecticut state jurisdictional waters of Long Island Sound. There is no specific estimate of the actual lobster mortality levels during this event, although some have reported more than half of the lobsters hauled in commercial and state survey gear were affected. In late 1999, the Secretary of Commerce declared a fishery resource disaster, pursuant to Section 312 (a) of the Magnuson-Stevens Act. Congress approved an emergency appropriation, administered through NOAA, and on July 13, 2000, President Clinton signed the Military Construction Appropriations Act for FY 2001 (P.L. 106-246), which approved \$13.9 million to address the commercial failure of the Long Island Sound lobster fishery. An additional \$1 million in research funds were contributed by the State of Connecticut Bonding Commission to be administered through the Connecticut Department of Environmental Protection Long Island Sound Research Fund. The intent of the research program is to study the impacts and possible causes of the failure, which will provide information to not only understand the lobster resource disaster but also hopefully to prevent future failure of the LIS lobster fishery. Other less dramatic lobster die-offs have been reported off Long Island in recent years, sometimes attributed to *Gaffkemia* and shell disease (see Section 4.2 - Stock Characteristics and Ecological Relationships). Given these various occurrences, a systematic environmental source of pollution cannot be eliminated as at least being a contributing factor to episodic lobster die-offs.

The Long Island Sound fishery resource disaster in 1999 resulted in significant financial loss in the bi-state commercial lobster fisheries of both New York and Connecticut. Using the emergency appropriation, NMFS has awarded \$7.3 million in grants (\$3.65 million each) to the States of CT and NY for the following purposes: (1) to pay compensation to individuals for reductions in the number of lobsters caught in the LIS lobster fishery; (2) to provide sustaining aid to affected fishermen; and (3) to provide assistance to communities that are dependent on the LIS lobster fishery and have suffered losses from the resource disaster. Specifically, these funds are being effectively utilized to support activities in the two states, including economic compensation for reductions in fishery income, subsidization of interest costs on existing debts in the LIS fishing community, job retraining, and a trap tag buyback program.

Similar to the lobster resource decline in Long Island Sound in 1999 described in this section, the recent decline in lobster landings and the decline in juvenile and sub-legal abundance indices in LCMA 2 are likely to have unspecified impacts on Federal lobster permit

holders fishing in or electing to fish with traps in LCMA 2. In response to a Commission declaration of a resource disaster in 2002, the Commission approved effort control and broodstock measures in Addenda IV - VI, in part to address the LCMA 2 resource decline. The fourth and final year of the incremental lobster minimum gauge size increase for LCMA 2 (see Measure 2.2), was implemented one year earlier than initially approved by the Commission in Addendum II. The Federal increase in the minimum gauge size in LCMA 2 proposed in the preferred Alternative 5.4 in this document would complement existing state regulations currently in place of 3 3/8 inches (8.57 cm). In December 2003, the Commission approved Addendum IV, including requirements to increase the minimum gauge in LCMA 2 from 3 3/8 inches (8.57 cm) to 3 1/2 inches (8.89 cm) in four increments, ending in 2008. These gauge increases are similar to the gauge increase recommendations for LCMA 3 and the Outer Cape Management Area approved by the Commission in Addendum III. The LCMA 3 and the Outer Cape gauge measures need only be implemented if it is determined in subsequent years the area is not on target to achieve the egg production goals of the ISFMP (see Appendix 2 - If Necessary Measures); however, the LCMA 2 minimum gauge measure does not have that condition. Under the direction of the Commission, involved state and Federal management authorities are in discussion with fishing industry representatives and the LCMA 2 LCMT to develop an effective fishing effort control program for Area 2 that all regulatory agencies can implement. In response to a request by the LCMA 2 LCMT, in February 2005, the states of MA and RI began discussion with the Commission Lobster Management Board to evaluate potential alternatives to implementation of the scheduled gauge increase to 3 13/32 inches (8.66 cm) on July 1, 2005, by states with LCMA 2 lobster license holders. As discussed in detail in the NMFS lobster ANPR/NOI (70 FR 24495 - see Appendix 3), NMFS intends to evaluate recommendations by the Commission to implement compatible lobster effort control measures to those identified in Addenda II - VI of the ISFMP.

Cumulative Impacts of the Preferred Alternatives on the Biological Resources

Because this action would continue to support the goals of the ISFMP, direct and indirect impacts of the measures identified in Alternative 5.4 - the preferred alternative, when combined with other past, present, and reasonably foreseeable actions, are expected to be positive on the American lobster resource, as summarized below. The bundled measures in Alternative 5.4 are intended to directly increase protection to American lobster broodstock, to ensure egg production meets the F10% ISFMP overfishing objective and promote a fully restored resource. The bundled measures will, in certain lobster management areas: allow sublegal lobsters to exit through larger escape vents; allow more lobsters to reach reproductive size by an increase the minimum gauge size; prohibit possession of large female lobsters; and increase protection of egg bearing lobsters. While the proposed management measures do not change the level of fishing effort or authorized catch, some vessels may increase their level of fishing effort to recoup losses. However, changes in fishing behavior and effort will probably be marginal and impact a limited number of vessels since existing limited entry programs, fixed trap limits, and the territoriality of the lobster trap fishery preclude any significant increase in effort or significant effort shifts to other LCMAs. As previously noted, the majority of the proposed measures has been implemented at the state level, and coordination of state and Federal regulations would enhance enforcement, avoid confusion for industry participants, and would benefit the lobster resource. As previously noted, the proposed measures were developed under the Commission process with active industry participation. Such measures are more likely to be accepted and appropriated for the LCMA than a coastwide measure without local support, and acceptance should improve compliance to the benefit of the lobster resource. The impacts of the independent measures, primarily to clarify existing regulations to be more easily understood, are positive on the lobster resource. The independent measures would enhance enforcement and avoid confusion for industry members. In conclusion, the cumulative impacts on the American lobster resource of the proposed actions identified as the preferred alternatives evaluated in this

analysis, when combined with other past, present, and reasonably foreseeable future actions described in this EA, are not expected to result in significant cumulative impacts.

Overall, impacts of all the measures combined in this proposed action have neutral impacts on habitat or other biological resources. There would appear to be no significant negative effects on non-target species or finfish bycatch anticipated from the measures proposed in this action. The bundled measures in Alternative 5.4 are intended to directly increase protection to American lobster broodstock, and are unlikely to result in a significant change in the amount or distribution of fishing effort or have a significant negative impact on marine habitat or non-target species. An increase in the circular escape vent may allow legal non-target species, like black sea bass, to escape from the lobster trap. The effect would probably be marginal and negative impacts to lobstermen also possessing a Federal black sea bass permit are mitigated by the Area 5 Waiver program (Appendix 5). Compatible state and Federal lobster regulations would also facilitate effective enforcement and enhance compliance of fishery management measures overall. In conclusion, the cumulative impacts of the preferred alternatives evaluated in this analysis on the marine habitat, the American lobster resource, and non-target species, including finfish bycatch, are not expected to be significant.

Cumulative Impacts of the Preferred Alternatives on the Socioeconomic Environment

The impacts of the proposed regulations on vessels and communities were discussed in detail in Section 5.2 and 5.6.6 of this document. The bundled measures in Alternative 5.4 are intended to directly increase protection to American lobster broodstock, to ensure egg production meets the F10% ISFMP overfishing objective and promote a fully restored resource. Although some vessels may increase their level of fishing effort to recoup losses associated with the proposed broodstock measures, when evaluated in totality, the preferred measures are expected to be positive for the majority of vessels and their communities. Cumulative lobster regulatory impacts are mitigated under the Commission Lobster ISFMP most effectively through the LCMTs and Area-specific management programs. There was active industry input in the development of the measures identified in the preferred alternatives and regulations implementing these measures are more likely to be accepted, to mitigate the cumulative impacts, and to be appropriate for each LCMA than a coastwide measure without local support. State action has brought the overwhelming majority of Federal vessels into compliance with the Commission recommendations, and most impacted vessels are unlikely to fish under less restrictive conditions. Vessels from the *de minimis* states at the southern end of the range would likely be most impacted, but these vessels are also generally less dependent of lobster revenue (Table 5.6) and more likely to rely on revenue from other fisheries. Changes in fishing behavior and effort will probably be marginal and impact a limited number of vessels, since many vessels land little lobster throughout much of the year. In addition, existing limited entry programs, fixed trap limits, and the territoriality of the lobster trap fishery preclude any significant increase in effort or significant effort shifts to other LCMA's. Implementation of the proposed measures is not expected to reduce significantly the revenues and profits of most of these vessels. While negative impacts would be minimized, improvement in the American lobster broodstock condition would, in the long term, have positive benefits from a fully restored resource. The impacts of the independent measures, primarily to clarify existing regulations to be more easily understood, would be positive for the industry and affected communities. The independent measures would enhance understanding of existing Federal lobster regulations and avoid confusion for industry members. Participants would clearly understand the current requirements, such as gear retrieval and possession of another's traps, and law enforcement compliance should improve. Therefore, the preferred alternative would support the goals of the ISFMP, and, when combined with other past, present, and reasonably foreseeable future actions described in this EA do not appear to have significant cumulative socioeconomic impacts.

Cumulative Impacts of the Preferred Alternatives on Protected Resources

The proposed measures are not expected to have an adverse impact on marine mammals, protected resources, and sea turtles, which are known to become entangled by lobster traps. Primarily, the proposed broodstock enhancement measures do not address vertical lines or ground lines used with lobster trap gear. All Federal lobster permit holders are currently bound by existing Federal measures in place to protect marine mammals and protected species, including gear configuration requirements, and that situation will not change. Additionally, holders of Federal lobster permits are required to abide by the most restrictive measures (Federal or state) no matter where they fish. Elimination of a gap between state and Federal regulations is unlikely to result in a significant change in the amount or distribution of fishing effort that may concentrate fishing gear and have a negative impact on protected resources. Historic participation programs have already been implemented in several LCMAs, and difficulties of changing fishing locations in a highly territorial fishery all limit the extent to which vessels would be able to switch from one area to another. Although the real impacts of these proposed non-entanglement measures on marine mammals and protected resources would not be significant, elimination of existing discrepancies between State-Federal regulations would enhance effective State-Federal enforcement of the suite of lobster management measures and benefit enforcement of other associated measures, including those designed to address protected resources and marine mammals. The impacts of the independent measures, primarily to clarify existing regulations to be more easily understood, have similar positive impacts on marine mammals, protected resources, and sea turtles, i.e. the independent measures would enhance enforcement and avoid confusion for industry members. Therefore, the preferred alternatives, when combined with other past, present, and reasonably foreseeable future actions described in this EA do not appear to have any significant cumulative impacts on protected species.

6.0 OTHER APPLICABLE LAW

6.1 Paperwork Reduction Act (PRA)

The purpose of the Paperwork Reduction Act is to reduce the paperwork burden on the public. The Director of the Office of Management and Budget (OMB) has the authority to manage information collection and record keeping requirements in order to reduce paperwork burdens. This authority encompasses the establishment of guidelines and policies and the approval of information collection requests. The selected management actions in this draft environmental assessment do not contain new collection-of-information requirements subject to the PRA.

6.2 Coastal Zone Management Act (CZMA)

The principal objective of the CZMA is to encourage and assist states in developing coastal management programs, to coordinate state activities, and to safeguard regional and national interest in the coastal zone. Section 307(c) of the CZMA requires Federal activity affecting the land or water uses or natural resources of a state's coastal zone be consistent with that state's approved coastal management program, to the maximum extent practicable. NMFS is providing a copy of this draft environmental assessment and a consistency determination to the state coastal management agency in every state with a federally-approved coastal management program whose coastal uses or resources are affected by these lobster management measures. Each state has sixty days in which to agree or disagree with the determination regarding consistency with that state's approved coastal management program. If a state fails to respond within sixty days, the state's agreement may be presumed. If a state disagrees, the issue may be resolved through negotiation or, if that fails, by the Secretary of Commerce.

The regulatory actions proposed in this document should, if anything, increase consistency between state and Federal regulations. In any event, this proposed action will be

reviewed relative to CZM programs of Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, Virginia, and North Carolina. Letters and a copy of this draft EA will be sent to all of the states listed and will state that NMFS concluded that the proposed measures would not affect the state's coastal zone and was consistent to the maximum extent practicable with the state's CZM program as understood by NMFS.

6.3 Section 515 Information Quality Determination

6.3.1 Utility of Information Product

The document includes a description of the alternatives considered and the reasons for selecting the proposed management measures. The proposed measures are intended to meet the conservation and management goals of the ISFMP, consistent with the Magnuson-Stevens Act national standards. This document utilizes the best available information to evaluate the potential impacts of the alternatives considered. The Federal Register notice that announces the proposed rule and the proposed regulations that will accompany this EA will be made available in printed publication and on the website for the Northeast Regional Office. This document and the notice provide metric conversions for all measurements.

The intended users of the information are individuals involved in the American lobster fishery, such as fishermen, vessel owners and operators, lobster dealers, and processors. Both the proposed rule and the EA address measures considered for implementation in the American lobster fishery. The document is based on the most current information available and will be subject to public comment through proposed rulemaking as required under the Administrative Procedures Act and, therefore, may be improved based on comments received.

The proposed rule will be made available to the public as a publication in the Federal Register and the EA and proposed rule will be available in hard copy format. Additionally, both documents will be available on the NMFS Northeast Region web site at www.nero.noaa.gov.

6.3.2 Integrity of Information Product

All electronic information disseminated by the NOAA adheres to the standards set out in Appendix III, "Security of Automated Information Resources" OMB Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.

6.3.3 Objectivity of Information Product

The EA and proposed rule fall under the Natural Resource Plan category. In preparing the documents, NMFS must comply with the requirements of the Atlantic Coastal Act; the Regulatory Flexibility Act, the Paperwork Reduction Act, the Coastal Zone Management Act, the Endangered Species Act, the Marine Mammal Protection Act, the Data Quality Act, the National Standards of the Magnuson-Stevens Act, the National Environmental Policy Act (NEPA), Executive Order 13132 (Federalism), Executive Order 12866 (Regulatory Planning), and other applicable laws.

The document has been developed to comply with all applicable National Standards, including National Standard 2. National Standard 2 states that management measures shall be based upon the best scientific information available. Despite current data limitations as discussed in this document, the conservation and management measures proposed to be implemented are based upon the best scientific information available. This information includes NMFS dealer weighout and permit data, and the most current stock assessment available. The specialists who worked

with these data are familiar with the most recent analytical techniques and with the available data and information relevant to the lobster fishery.

The policy choices (i.e., management measures) proposed to be implemented are supported by the available scientific information, and, in cases where information was unavailable, proxy reference points are based on observed trends in the survey data. The proposed management measures are designed to meet the conservation goals and objectives of the ISFMP, to prevent overfishing, and to rebuild this growth overfished resource, while maintaining sustainable levels of fishing effort to ensure a minimal impact on fishing communities. The supporting materials and analyses used to develop the measures are contained in the document, and to some degree in previous environmental assessments as noted in this document.

The review process for this proposed regulatory action involves the Northeast Fisheries Science Center, the Northeast Regional Office, and NMFS headquarters. The Centers technical review is conducted by senior level scientists with specialties in population dynamics, stock assessment methods, coastal migratory resources, population biology, and the social sciences. Review by Northeast Regional Office staff is conducted by those with expertise in fisheries management and policy, habitat protection, protected species, and compliance with applicable law. Final approval and clearance of the document is conducted by staff at NMFS headquarters and the Department of Commerce.

6.4 Magnuson-Stevens Fishery Conservation and Management Act

6.4.1 National Standards of the Magnuson Stevens Act

Compliance with National Standards - Atlantic Coastal Act requires that Federal regulations be consistent with the national standards of the Magnuson-Stevens Act.

National Standard 1 requires that conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry. The American lobster fishery is currently overfished throughout its range. By itself, the selected management action will not end overfishing and restore stocks of American lobster, but is part of and will complement an ongoing long-term management strategy to achieve these purposes (NMFS 1999). The degree to which the selected management actions will limit fishing effort and associated lobster mortality is difficult to state with precision. Nevertheless, it is anticipated that the enhancement of American lobster broodstock associated with the selected management action when combined with other lobster management measures, will increase the overall effectiveness of those measures in achieving ISFMP objectives and ultimately end overfishing and rebuild stocks of American lobster under National Standard 1. Additional lobster management measures in both state and Federal waters will be needed in the future in accordance with the resource management requirements addressed by the ISFMP to end resource overfishing. See Section 1.3 - Action Process and 5.7 - Cumulative Impacts for additional discussion of future state and Federal lobster rulemaking.

National Standard 2 requires that management measures be based upon the best scientific information available. The information base for evaluation of the proposed measures in this action is based upon the best scientific information available and incorporates the scientific review and associated approval by state and Federal lobster scientists through the Commission's Lobster Technical Committee. For example, the March 2000 Commission Stock Assessment Report, the July 2000 Stock Assessment Peer Review Report and the 2003 Annual State and Federal Trawl Survey Update, all of which suggest American lobster is growth overfished,

provide the basic underpinnings of the proposed action. In addition, current NMFS vessel and dealer reporting data is incorporated in the assessment of impacts for this action.

National Standard 3 requires, as practicable, that an individual stock be managed as a unit throughout its range, and that interrelated stocks be managed as a unit or in close coordination. NMFS believes that the proposed action illustrates the consistency and coordination sought by this National Standard. The three stock areas for American lobster are being managed, throughout the range of the population from Maine to North Carolina, through an area management approach in coordination with state jurisdictional management and Federal management through the Commission's ISFMP and complementary Federal regulations.

National Standard 4 requires that conservation and management measures not discriminate between residents of different states. As a preliminary matter, the principle action is not state specific. That is, all Federal permit holders must adhere to the same qualification criteria regardless of the state from which they hail. Further, the selected management actions for the EEZ were developed in consultation with the Commission and the lobster industry through its LCMT program, and take into account the social and economic distinction among the nearshore and offshore EEZ fisheries. NMFS gave great consideration to the expertise of the LCMTs, whose membership is appointed by the involved states, and who were presumed to have intimate knowledge of how their proposal would effect their state's fishery. Further, despite a dearth of information due to the lack of mandatory reporting, NMFS examined the best available information to discern any unintended discriminatory effect and used its best efforts to create counter measures to guard against such unexpected eventualities.

National Standard 5 requires that, where applicable, conservation and management measures promote efficiency in the utilization of fishery resources. The proposed action is consistent with such a standard. Active industry involvement ensured selection of measures that the majority of the industry supported as most efficient for the industry and effective for conservation of the American lobster broodstock. Additionally, the proposed action would result in more consistent, and thus more efficient, management between state and Federal governments.

National Standard 6 requires that conservation and management measures take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches. The selected management actions takes into account the variations in fisheries, fishery resources, and catches, in consultation with the Commission and industry groups through coordination with LCMTs, and among the inshore and offshore EEZ fisheries. Industry involvement through the ISFMP process ensures flexibility in management of the fisheries, and fishery resource over seven management areas.

National Standard 7 requires that, where practicable, conservation and management measures minimize costs and avoid unnecessary duplication. The implementation of the proposed measures would ensure state and Federal regulations are compatible, minimize confusion by industry participants, enhance compliance, and would avoid duplication.

National Standard 8 requires that, consistent with fishery conservation requirements, conservation and management measures take into account the importance of fishery resources to fishing communities. As a preliminary matter, the proposed action is premised on broodstock enhance to achieve overfishing objectives, which should, in the long term, maintain the integrity of reliant fishing communities. NMFS examination of available data showed no incongruence with that expectation. Sustained participation of communities and consideration of economic

impacts is facilitated through the ISFMP's area management provisions, which allow fishing communities to participate in, and provide public comment on, proposed management measures.

National Standard 9 requires that, to the extent practicable, conservation and management measures minimize bycatch, and to the extent bycatch cannot be avoided, minimize the mortality of such bycatch. In the lobster trap fishery, bycatch of non-legal lobster is addressed through trap configuration requirements such as escape vents and ghost panels, and lobster fishing practices are designed to keep the lobster bycatch alive and therefore, bycatch is returned to the sea alive. The broodstock measures in this action will increase the trap escape vent size in conjunction with an increase in the minimum and maximum gauge size and further minimize bycatch.

National Standard 10 requires that, to the extent practicable, conservation and management measures promote the safety of human life at sea. The selected management actions will have no anticipated impact on safety at sea, because it would not result in any changes in fishing practices.

6.4.2 Essential Fish Habitat (EFH)

Section 305(b) of the Magnuson-Stevens Act requires all Federal agencies to consult with NMFS' Habitat Conservation Division on any future action that may adversely affect EFH. NMFS conducted an initial EFH consultation on May 28, 1999, in preparation of its FEIS (64 FR 29025) that analyzed promulgating regulatory recommendations from the Commission under the Atlantic Coastal Act rather than from the New England Fishery Management Council under the Magnuson-Stevens Act. At that time, it was concluded that the regulations would not adversely impact EFH for any federally-managed species (see below table).

The measures identified in this proposed action are also not expected to adversely impact EFH. As a preliminary matter, the proposed action addresses non-habitat measures that would not result in an increase in fishing effort. The proposed measures include: an increase in the minimum legal carapace size; an increase in escape vent size; an increase in the maximum legal carapace size; and establishment of an overlap running the length of the boundary of LCMAs 3 and 5. Geographical limitations and more restrictive regulation in other management areas are expected to minimize possible effort displacement into other areas. Effort control measures for LCMAs 3 and 5, implemented in 2003, minimize effort shifts along the boundary of LCMAs 3 and 5 to historic levels. Accordingly, the proposed action is not expected to have an adverse impact on EFH, and further EFH consultation, therefore, would not be required.

Council/Management Authority	FMPs
New England Fishery Management Council (NEFMC)	Multispecies; Sea Scallop; Monkfish, Red Crab
Mid-Atlantic Fishery Management Council	Summer Flounder, Scup, and Black Sea Bass; Squid, Atlantic Mackerel, and Butterfish; Surf Clam and Ocean Quahog
South Atlantic Fishery Management Council	Coastal Migratory Pelagics; Red Drum; Golden Crab
NMFS	Atlantic Highly Migratory Species; Atlantic Billfishes

6.5 Executive Order 12630

The proposed action will not result in a regulatory taking. The chief components of this proposed action would have the benefits in terms of egg production per recruit and yield per recruit that directly responds to the latest scientific data that indicate the American lobster fishery is growth overfished. As a preliminary matter, there is no physical taking of actual property. Additionally, there would be no taking of any intangible property -- for example, the "right" to fish -- because there is no general property right to harvest wildlife and because NMFS's Federal lobster permits lack the traditional hallmarks of property and are more akin to a revocable license. Further, the proposed action is non targeting and is not retroactive, and reasonable expectations should have been tempered, since the fishery has long been highly regulated and the proposed action is consistent with past regulations. Finally, the proposed action is not expected to alter the fishing practices of Federal permit holders.

6.6 Executive Order 12866

E.O. 12866 requires a review of proposed regulations to determine whether or not the expected effects would be significant, where a significant action is any regulatory action that may:

- Have an annual effect on the economy of \$100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Of these four criteria, the discussion to follow focuses only on the expected magnitude and duration of the economic impacts of the proposed action. The proposed action would bring regulations governing the taking of lobsters in the EEZ into conformance with Addendas II and III of the Commission's ISFMP for American lobster. These actions were recommended by the Commission and most participating states have already implemented most, if not all, of the Addenda II and III measures for their licensed lobster vessels. As such, Federal action would complement these actions establishing a consistent regulatory framework throughout the range of the lobster resource.

The economic impacts of the proposed action are discussed in Section 5.4.2. That analysis indicates that approximately 90% of all lobster vessels would be unaffected by the proposed action since they are already required to fish under the current more restrictive conditions in their respective states. That is, if no action were taken, at most 10% (and likely a number far less) of federally permitted lobster trap vessels would potentially be able to fish under less restrictive measures than all other vessels fishing in the same area. The proposed action would assure that all lobster vessels fishing in a given LCMA would be subject to the same regulations.

Given that the proposed action would bring Federal regulations into conformance with what the majority of states have already done, such action would not impose any additional economic burden on the majority of lobster vessels. For the 10% of the vessels that may be affected, the majority are likely to actually be fishing under conditions consistent with that of the LCMA in which they fish even though they could fish under less restrictive measures. For example, even though 67 Maine vessels selected an LCMA other than LCMA 1 (the state and Federal waters directly adjacent to Maine) on their 2004 permit application, the majority probably do not fish outside of LCMA 1. This means that even vessels that could be affected by the proposed action will not be, thus, there would be no realized impact on their fishing business.

Since the proposed action would complement existing state actions, the proposed action would have no appreciable added impact on lobster markets or the cost of fishing for lobster. For this reason, the proposed action would have only a negligible economic impact and would not, therefore, be a significant action under the Executive Order.

6.7 Executive Order 13132

This rule does not contain policies with Federalism implications sufficient to warrant preparation of a Federalism assessment under E.O. 13132.

6.8 Executive Order 13211

Executive Order 13211, which became effective on May 18, 2001, addresses “actions concerning regulations that significantly affect Energy supply, distribution, or use”. To the extent permitted by law, an agency is obligated to prepare a Statement of Energy Effects for those matters identified as a significant energy action. According to E.O. 13211, “significant energy action” means “any action by an agency that promulgates or is expected to lead to the promulgation of a final rule or regulation: (1) that is a significant regulatory action under Executive Order 12866 or any successor order, and; (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy. Based on this criteria, the proposed regulatory actions identified in this draft EA does not require a Statement of Energy Effects, since these proposed regulatory actions are not likely to have a significant adverse effect on the supply, distribution or use of energy.

6.9 Atlantic Coastal Act

Presently, American lobster regulations are issued under the Atlantic Coastal Fisheries Cooperative Management Act in Title 50 of the Code of Federal Regulations, Part 697. The lobster regulations under the Atlantic Coastal Act are in keeping with the regulatory standard set forth in the Atlantic Coastal Act: 1) that the regulations be consistent with the National Standards set forth in the Magnuson-Stevens Act; and 2) that the regulations be compatible with the Commission’s lobster ISFMP. The Atlantic Coastal Act contemplated transition of lobster management from the more Federally oriented fishery management councils created under the Magnuson-Stevens Act to the state oriented Commission. The logic of the decision is straightforward: Since approximately 80% of the fishery for American lobster occurs in state waters, the Federal FMP objectives of maintaining a sustainable fishery and preventing overfishing of the resource could not be achieved effectively by Federal action alone. NMFS could no longer ensure that the Federal FMP, which covered only Federal waters, was consistent with National Standard 1 of the Magnuson-Stevens Act, which requires implementation of conservation and management measures to prevent overfishing. Such a process occurred in part when the Commission in December 1997 issued its lobster ISFMP entitled “Amendment 3 to the

Interstate Fishery Management Plan” and later, on December 6, 1999 when NMFS issued a Final Rule (64 FR 68228) that transferred Federal lobster fishery regulations from the Magnuson-Stevens Act to the Atlantic Coastal Act. The proposed measures evaluated in this EA are in keeping with the Atlantic Coastal Act regulatory standard to develop compatible regulations to Addenda II and III to the Commission’s lobster ISFMP, and, as stated in section 6.4.1, are consistent with the National Standards set forth in the Magnuson-Stevens Act.

7.0 NATIONAL ENVIRONMENTAL POLICY ACT

In accordance with the National Environmental Policy Act as amended, NMFS has prepared an Environmental Assessment to determine whether further analysis and an Environmental Impact Statement (EIS) are needed. The EA has estimated the degree of impacts (short-term and cumulative) on the human environment, and the results justify a Finding of No Significant Impact (FONSI). NMFS analyzed the impacts of the No Action alternative. Under the No Action alternative, all lobster stock areas must achieve the egg production schedule target of F10% by 2005. Since landings from the EEZ account for approximately 20% of all American lobster landed in U.S. waters, a complete ban on fishing for lobster in Federal waters would be the most likely approach to achieve the targets specified in the existing egg production schedule (2005 target). Thus, the No Action alternative would likely require a complete closure of Federal waters to fishing for, possession of, or landing of American lobster. The Modified No Action/Status Quo alternative would change the existing egg production schedule to the Commission-recommended schedule, which would move the deadline to 2008, but would make no changes to existing Federal lobster management regulations. Thus, impact estimates are compared to the Modified No Action/Status Quo alternative in this analysis.

NMFS has determined through an Environmental Assessment that preparing an EIS at this time is unnecessary to justify actions in this document, as noted in the FONSI.

7.1 Finding of No Significant Impact (FONSI)

National Oceanic and Atmospheric Administration Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. In addition, the Council on Environmental Quality regulations at 40 C.F.R. 1508.27 state that the significance of an action should be analyzed both in terms of “context” and “intensity.” Each criterion listed below is relevant in 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?

The proposed action is not expected to jeopardize the sustainability of any target species that may be affected by the action. This action, to enhance protection to American lobster broodstock, will revise the overfishing timeline; increase the minimum legal carapace size; increase the lobster trap escape vent size; implement a maximum legal carapace size; implement a mandatory v-notch requirement; and implement a zero tolerance v-notch definition. The majority of Federal permit holders are currently bound to abide by the proposed broodstock measures under their state lobster regulations. Federal implementation of these measures are not expected to result in a change to fishing practices or fishing effort, because the number of potentially impacted Federal permit holders is very limited and, of those impacted, the majority

reside in states south of New Jersey where annual state lobster landings are minimal (do not exceed 40,000 lbs (18, 144 kg)).

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

The proposed action is not expected to jeopardize the sustainability of any non-target species that may be affected by the action. The harvest of non-target species, such as black sea bass and scup, by lobster trap gear should decrease in most of the lobster management areas due to the proposed increase in the trap escape vent size. Since the rectangular lobster trap escape vent size would increase from 1 15/16 inches x 5 3/4 inches (4.92 cm x 14.61 cm) to 2 inches x 5 3/4 inches (5.08 cm x 14.61 cm) in LCMA 2, 3, 4, 5, and the Outer Cape, and the circular lobster trap escape vent size would increase from 2 7/16 inches (6.19 cm) to 2 5/8 inches (6.67 cm) in LCMA 2, 3, 4, 5, and the Outer Cape, non-target species would likely exit the lobster trap more easily and thereby not jeopardize their sustainability.

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

The proposed action is not expected to cause damage to the ocean, coastal habitats, and/or EFH. The limited number of Federal permit holders that are impacted by these proposed measures reside in states at the southern end of the species' range where lobster landings and fishing effort are minimal. The proposed action is not expected to increase the number of lobster traps fished, or significantly increase the frequency the lobster traps are tended. As described in more detail in Section 5.2.2, the potential for a State-Federal gap in lobster regulations in these states to provide an economic incentive to change fishing patterns is likely to be quite limited. Most states already have implemented more restrictive measures so vessels cannot simply seek out less restrictive measures by obtaining a lobster permit from another state due to limited access programs in most states. Given state regulations already implemented in all of the Gulf of Maine states as well as Rhode Island, New York, New Jersey and most of the southern states, such a change in fishing patterns solely to take advantage of less restrictive Federal broodstock lobster measures is quite limited. Further, the practical reality of changing fishing locations in a highly territorial fishery would also limit the extent to which vessels would be able to switch from one area to another. Overall, the broodstock enhancement measures proposed in this action are not expected to result in a change to fishing practices or fishing effort and are expected to result in neutral effects to the ocean, coastal habitats, and/or EFH.

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

This proposed American lobster broodstock enhancement action is not expected to impact adversely public health or safety. The proposed measures, including an increase in the minimum legal size and establishment of a maximum legal size, are not expected to change the behavior of the target species or increase the exposure of the target species to activities or materials that would reasonably be expected to adversely impact public health or safety. This proposed action is not expected to result in an increase in fishing effort that would expose industry participants to increased safety risks.

5. Can the proposed action be reasonably expected to have an adverse impact on endangered or threatened species, marine mammals, or critical habitat of these species?

This proposed American lobster broodstock enhancement action is not expected to adversely impact endangered or threatened species, marine mammals, or their critical habitat.

The lobster broodstock measures in this proposed action do not directly impact marine mammal or protected resources and do not change existing regulations for vertical lines or ground lines used with lobster trap gear. All Federal lobster permit holders continue to be bound by all existing Federal measures in place to protect marine mammals and protected species, including gear configuration requirements, and that situation will not change under this proposed action. The implementation of the measures would impact only a limited number of Federal lobster permit holders not currently bound by the proposed measures at the state level, and this action is not expected to result in a shift in fishing patterns that may negatively impact marine mammals or protected resources (see section 5.2.2.). The potential for a shift in historic fishing effort upon implementation of a proposed 5-mile (8 km) overlap between LCMAs 3 and 5 would also be unlikely to occur. Since August 1, 2003, access to LCMAs 3, 4, and 5 has been limited to qualified lobster permit holders with documented historic participation in these LCMAs, as implemented by Federal rulemaking in March 2003 (68 FR 14902). Under this limited access program, trap fishing effort is also capped in LCMAs 4 and 5 and is being capped and reduced in LCMA 3.

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 measures would, in certain lobster management areas: allow sublegal lobsters to exit through larger escape vents; allow more lobsters to reach reproductive size by an increase in the minimum gauge size; prohibit possession of large female lobsters over 5 1/4 inches (13.34 cm); and increase protection of egg bearing lobsters. The clear intent of these broodstock measures is to enhance protection to egg bearing lobsters, and thereby increase benthic productivity. However, only a limited number of Federal permit holders are impacted by these proposed measures, at most 10 percent or 251 Federal permit holders (as described in section 5.2), and the majority reside in states at the southern end of the species' range where lobster landings and fishing effort are minimal. Given the limited context and intensity of these proposed broodstock management measures, they are not expected to have a substantial impact on biodiversity and/or ecosystem function.

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

The majority of lobster landings are being taken from state waters. The proposed Federal regulations in Alternative 5.4 - the preferred alternative, would complement similar, already existing state regulations. As noted in Section 5.2.2 - Table 5.5, a review of existing state management measures indicates a maximum of 251 vessels (10.4%) of a total of 2,407 Federal permit holders fishing with traps are not currently impacted at the state level by the proposed broodstock measures. In addition, the proposed measures would primarily impact lobster permit holders at the southern end of the range of American lobster, where permit holders are more likely to hold Federal permits for several fisheries. Vessels that fish with traps in these southern areas typically depend primarily on multiple finfish fisheries and do not rely on lobster for their fishing income.

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

The action does not set any new precedence, but the benefits of greater protection to egg bearing lobsters in Federal waters to complement existing state actions do enhance cooperative management of American lobster in state and Federal waters. The proposed action is not expected to result in changes in fishing activity, effort, or significantly impact landings, and

there does not appear to be effects on the human environment that are highly controversial or uncertain or that involve unique or unknown risks.

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?

The proposed action is not expected to result in substantial impacts to unique areas. The proposed broodstock enhancement measures primarily impact participants at the southern end of the species' range in Delaware, Maryland, Virginia and North Carolina. In the Mid-Atlantic region, Federal lobster permit holders primarily harvest lobsters as a bycatch in areas where various finfish trap fisheries have been in operation for a long period of time. Implementation of the broodstock protection measures is not expected to change industry fishing behavior or encourage Federal permit holders to seek or utilize new and/or unique ecologically critical areas.

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

No; lobster broodstock management measures have been in place, initially at the state level, for many decades. The proposed Federal regulations would complement similar, already existing state regulations, and no unique or unknown risks have been identified. At most, less than ten percent of Federal lobster permit holders would be impacted by the proposed broodstock management measures, primarily at the southern end of the range of the resource where participants do not rely solely on the lobster fishery.

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

The proposed action is not expected to result in cumulatively significant impacts. As described in further detail in section 5.13 - Cumulative Impacts Assessment, the proposed broodstock management measures are not expected to result in a change in fishing activity, fishing effort, or significantly impact lobster landings. The cumulative impacts to participants at the southern end of the range that are reliant on traps to harvest both finfish and lobsters have been mitigated by implementation of a gear requirements waiver program that limits dual black sea bass and lobster permit holders to a fixed daily lobster landing allowance (100 lobsters per day, up to a maximum of 500 lobsters for trips of 5 or more days), but it exempts them from the more restrictive lobster trap gear regulations. Participants at the southern end of the range of the lobster resource, which are those most likely to be impacted by the proposed broodstock measures, generally do not rely on lobster for a significant share of their fisheries income, and these potentially impacted participants are not likely to change fishing patterns. Most states already have implemented more restrictive measures so vessels cannot simply seek out less restrictive measures by obtaining a lobster permit from another state due to limited access programs in most states.

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?

No; the proposed lobster broodstock management measures are primarily impacting Federal lobster permit holders at the southern end of the range of the resource where participants do not rely solely on the lobster fishery. Benefits of greater protection to egg bearing lobsters in Federal waters to complement existing state actions do enhance cooperative management of

American lobster in state and Federal waters, yet are not likely to change fishing patterns, nor increase existing fishing effort, and are not 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.

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

Since the proposed broodstock management measures are not expected to result in a change in fishing activity, fishing effort, or significantly impact lobster landings, the transport, introduction, or spread of a nonindigenous species is unlikely. The potential to provide an economic incentive to change fishing patterns is likely to be quite limited. Most states already have implemented more restrictive measures so vessels cannot simply seek out less restrictive measures by obtaining a lobster permit from another state due to limited access programs in most states. Given state regulations already implemented in all of the Gulf of Maine states as well as Rhode Island, New York, New Jersey and most of the southern states, a change in fishing patterns is quite limited. Further, the practical reality of changing fishing locations in a highly territorial fishery would also limit the extent to which vessels would be able to switch from one area to another and therefore unlikely to introduce nonindigenous 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?

The proposed action is not likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration. The majority of Federal permit holders are currently bound to abide by the proposed broodstock measures under their state lobster regulations. Federal implementation of these measures is not expected to result in a change to fishing practices or fishing effort, because the number of potentially impacted Federal permit holders is very limited and, of those impacted, the majority reside in states south of New Jersey where annual state lobster landings are minimal (do not exceed 40,000 lbs (18, 144 kg)).

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?

The proposed action is not expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment. A review of existing state management measures indicates a maximum of 251 vessels (10.4%) of a total of 2,407 Federal permit holders fishing with traps are not currently impacted at the state level by the proposed broodstock measures. Federal implementation of these measures is not expected to result in a change to fishing practices or fishing effort, because the number of potentially impacted Federal permit holders is very limited and, of those impacted, the majority reside in states south of New Jersey where annual state lobster landings are minimal (do not exceed 40,000 lbs (18, 144 kg)).

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 proposed action is not expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species. The proposed measures would allow sublegal lobsters to exit through larger escape vents; allow more lobsters to reach reproductive size by an increase the minimum gauge size; prohibit possession of large female lobsters over a specified maximum size (5 1/4 inches (13.34 cm)); and increase protection of egg bearing lobsters. The clear intent of these broodstock measures is to enhance protection to egg bearing lobsters.

DETERMINATION

In view of the information presented in this document and the analysis contained in the supporting Environmental Assessment prepared for this action, it is hereby determined that the proposed action will not significantly impact the quality of the human environment as described above and in the supporting Environmental Assessment. 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 or SEIS for this action is not necessary.

Assistant Administrator for Fisheries, NOAA

Date

8.0 LIST OF PREPARERS OF THE ENVIRONMENTAL ASSESSMENT

This document was prepared by: Harold Mears, Bob Ross, Peter Burns, Tom Fletcher, Nicole MacDonald, Sarah Thompson, Lynn Lankshear, David Stevenson, Marcie Scott, John Catena, and Dana Belden of NMFS, Gloucester, MA; Charles Lynch, General Counsel, Northeast Region, Gloucester, MA; Phil Logan, Eric Thunberg, Patricia Pinto da Silva, and Josef Idoine, NMFS Science Center (NEFSC), Woods Hole, MA. This document was reviewed by individuals in the NMFS Regional Office, the NEFSC, Tom Meyer and Mark Milliken of NMFS, Silver Spring, MD; and Steve Kokkinakis of the NOAA Office of Strategic Planning.

9.0 INITIAL REGULATORY FLEXIBILITY ANALYSIS

The proposed action would implement complementary regulations affecting the harvesting of lobsters within the EEZ. These actions were recommended to the Federal government by the Commission to assure a unified consistent State-Federal approach to lobster management as required under the Atlantic Coastal Act. The proposed action would potentially affect any vessel in the Northeast region that holds a Federal limited access lobster permit. During fishing year 2003, a total of 3,217 limited access lobster permits were issued to Northeast region permitted vessels. Based on the SBA's size standard of \$3.5 million in gross sales, all of these vessels would be considered small entities as the maximum earnings for any given vessel was less than half of this standard.

While the number of permitted vessels represents the universe of vessels that may be affected, an assessment of impacts needs to distinguish between this universe and the number of vessels that are actually participating in the lobster fishery. Unfortunately the precise number of participating vessels is not known with certainty since lobster permit holders are not subject to mandatory reporting. Specifically, less than half of all vessels using trap gear (the primary gear used on the fishery) were subject to mandatory reporting. Based on 2003 dealer records, while 62% of these vessels subject to mandatory reporting reported landings, only 361 (18 %) vessels reported landing lobster. Applying this proportion to the total number of permit holders would result in an estimate of 582 participating vessels. Alternatively, where it was possible to identify Federal permit holders, comparing the number of vessels eligible to purchase trap tags to the number of vessels that actually did purchase trap tags in 2003 indicates that about 46 % of Federal permit holders using trap gear participate in the EEZ fishery. Applying this number to the total number of permit holders results in an estimate of almost 1,500 participating vessels; an estimate that seems more likely than that based on activity reports but is still subject to uncertainty.

Preferred Alternative

The proposed action would implement changes to rebuilding targets, minimum and maximum sizes, escape vent size, and v-notch requirements in certain LCMA's. The ways in which each of these measure may be implemented were described in Section 2.0. The preferred alternative would implement a 3 3/8 inches (8.57 cm) minimum size in LCMA 2, 3, 4, 5 and the Outer Cape; an escape vent increase to 2 inches by 5 3/4 inches (5.08 cm by 14.61 cm) for rectangular vents and to 2 5/8 inches (6.67 cm) for circular vents. The preferred alternative would also implement mandatory v-notch in LCMA 1 and in LCMA 3 above 42° 30' North latitude, a zero tolerance v-notch definition in LCMA 1, as well as a maximum size of 5 1/4 inches (13.34 cm) in LCMA 4 and 5 1/2 inches (13.97 cm) in LCMA 5. The economic impacts of these changes were described in Section 5.4.2. Based on this analysis, approximately 10 % of Federal permit holders could be affected by these changes. That is, due to the requirement to abide by the more restrictive state or Federal measures about 90 % of Federal lobster vessels would already be required to fish in a manner consistent with the preferred alternative due to action already taken by the states (see Table 5.4 of Section 5.4.2). Further, the economic analysis also suggests that the majority of the 251 affected vessels - i.e., the remaining 10 % - were likely to be fishing in areas that would mean that they would not be required to change their fishing practices as a result of Federal action. That is, the majority of vessels potentially affected by the minimum size change are likely to fish predominantly in LCMA 1 where neither minimum gauge nor escape vent size changes would be made. Similarly, the majority of vessels fishing in LCMA 3 would not be affected by the change in v-notch (mandatory and zero tolerance) regulations because they do not fish in the affected area (i.e. they fish south of 42° 30' North latitude). In effect, the preferred alternative would have negligible impacts on a large majority of Federal lobster vessels since the proposed action would not impose any added economic burden beyond what states have already implemented or would have no impact on existing fishing practices.

For those vessels that would be affected, an estimate of realized impact cannot be quantified. At an estimate \$1.40 in materials in labor replacement of escape vents for a vessel with the maximum of 800 traps (most vessels fish less than 800 traps) would be \$1,000. The foregone revenue associated with a change in minimum gauge size will depend on the relative proportion of lobsters between 3 1/4 inches (8.26 cm) and 3 3/8 inches (8.57 cm) in an individual's catch. In the absence of reliable data on the size composition of the trap or non-trap commercial catch, this proportion cannot be reasonably estimated. Similarly, the impact of a change in the maximum gauge in LCMA 4 and 5 is not known although the proportion of lobster at or above these sizes is small so the impact on landings to an individual lobster business is likely to be very low. Last, the foregone revenue associated with a change in v-notch requirements will depend on the proportion of berried female lobsters and lobsters with a v-shaped notch in an individual's catch. As noted previously, this impact would only affect a vessel fishing above 42° 30' North latitude in LCMA 3. Any such vessel would be able to move traps below this line and would not be subject to the mandatory v-notch requirement. In general, the overall impact on non-trap vessels is likely to be less than that for trap vessels since lobster is predominantly a bycatch in non-trap fisheries. On average, lobster represented less than 4 % of total fishing income for non-trap vessels in calendar year 2003.

The previous discussion suggests that while the impact on a particular small Federal lobster fishing entity cannot be readily determined, this impact is likely to affect only a portion of total fishing income. The majority of lobster vessels would be largely unaffected under the preferred alternative. Therefore, while the preferred alternative could have a significant impact on some small entities, the alternative would not affect a substantial number of small entities.

Alternatives to the Preferred Alternative

In addition to the preferred alternative four other alternatives were considered. Among these, Alternatives 2 and 3 may have less economic impact on small entities while Alternatives 1 and 5 would have much greater economic impact on small lobster businesses.

Alternative 2 would implement the Commission rebuilding schedule but would make no changes to existing Federal management regulations. That is, the minimum gauge and escape vent sizes would remain unchanged; the v-notch regulations would not be implemented and there would be no maximum gauge in LCMA's 4 and 5. As noted above, about 90 % of Federal lobster vessels would still be required to fish under more restrictive measures due to actions already taken by the states but the remaining 10% of vessels would be able to fish under the less restrictive Federal regulations. As a practical matter, even vessels that would be able to fish under less restrictive measures are unlikely to do so since current fishing practices are likely to be consistent with requirements appropriate to the area in which they fish. This means that for the vast majority of trap and non-trap vessels the realized impact of Alternative 2 is likely to be no different than that of the Preferred Alternative. Nevertheless, under Alternative 2 vessels from two different states could fish under different conditions even though they may set traps or otherwise fish for lobster in the same area. Such a discrepancy creates regulatory inequities, confusions related to enforcement of regulations, Magnuson-Stevens Act National Standard 4 equity issues, and is counter to the spirit and intent of the Atlantic Coastal Act. For these reasons, and the fact that the anticipated impacts between Alternative 2 and the Preferred would be virtually indistinguishable, Alternative 2 was rejected.

Alternative 3 would implement the Commission recommended regulations in certain LCMA's but would do so according to the original Addendum II and III schedule. In effect, this would involve a phase-in of the Preferred Alternative measures over a four-year period. In fact, had complementary Addendum II and III measures been implemented at the time these Addenda were approved by the Commission, present Federal regulations would be consistent with current State regulations. Alternative 3 would perpetuate the current problem of having a gap between state and Federal regulations for another four years. Further, as a practical reality, Commission is likely to take additional action (Addendum IV has already been approved) within this time frame. This means that other complementary regulations would end up being promulgated or superseding those of Alternative 3 before they have been fully implemented. In terms of economic impacts on small entities Alternative 3 would likely have less impact on small fishing businesses than the Preferred Alternative since they would be allowed to phase-in changes to their fishing practices over time. However, as noted previously, action taken by States has brought the vast majority of vessels under the more restrictive measures contemplated by Alternative 3 so the realized difference between the Preferred Alternative and Alternative 3 would be negligible. For this reason as well as the practical problems with implementing the Commission recommendations under Alternative 3, this alternative was rejected.

Alternative 1 was rejected as it could likely require a complete closure of the EEZ to lobster fishing. The key element to Alternative 1 would be that no change would be made to the current rebuilding schedule and time frame. Specifically, this time frame would require that the rebuilding target be accomplished by the end of calendar year 2005. The maximum that the NMFS could do to achieve this biological objective would be a closure of the EEZ to all lobster fishing. The potential economic impacts of such an action were described in Section 5.1.2. These impacts could affect approximately \$57 million in lobster revenues. The estimated average loss in fishing revenues was about \$27 thousand per vessel, but could be as high or much higher than \$80 thousand per vessel. In addition to the fact that Alternative 1 would be inconsistent with the Atlantic Coastal Act, it would have a significant impact on a substantial number of small entities and was rejected.

Alternative 5 was also rejected because it would be inconsistent with the spirit and intent of the Atlantic Coastal Act and because of its impact on small lobster business entities.

Alternative 5 would provide the highest assurance that the biological objectives for the lobster resource are met by implementing the most restrictive of the management measures proposed in this action throughout the range of the resource. Such action would implement mandatory v-notch, zero tolerance, a 3 3/8 inch (8.57 cm) minimum gauge, larger escape vent sizes, and maximum gauge in all LCMA's. The impacts of these measures (described in Section 5.5.2) are difficult to quantitatively assess. However, Alternative 5 would have at least some impact on 95 % of all Federal lobster permit holders. At least in the short term, these impacts would be likely to be greatest on vessels fishing in LCMA 1 as a substantial portion of the lobster catch is at the current 3 1/4 inch (8.26 cm) minimum size limit. Over time, these losses would be recovered as lobsters molt into the 3 3/8 inch (8.57 cm) size class. Nevertheless, the immediate impact would likely be significant for a substantial number of small lobster fishing entities. Alternative 5 was rejected for this reason as well as being inconsistent with the Atlantic Coastal Act.

10.0 AGENCIES AND PERSONS CONSULTED

The following agencies and organizations were consulted during the development of the proposed action: the Atlantic States Marine Fisheries Commission and its member states, the New England Fishery Management Council, and the Mid-Atlantic Fishery Management Council.

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12.0 APPENDIX

- Appendix 1: Addendum II to Amendment 3 to the Commission ISFMP
- Appendix 2: Addendum III to Amendment 3 to the Commission ISFMP
- Appendix 3: NMFS American Lobster ANPR/NOI - Effort Control Notice - May 10, 2005
- Appendix 4: *De minimis* Text from Addendum I to Amendment 3 to the ISFMP.
- Appendix 5: Federal American Lobster EEZ Area 5 Trap Waiver Regulations
- Appendix 6: Chart of Proposed Lobster Management Areas 3/5 Overlap Boundary
- Appendix 7: Chart and Coordinates for American Lobster Conservation Management Areas

Addendum II to Amendment 3 to the Interstate Fishery Management Plan for American Lobster



Approved February 1, 2001

Prepared by the Plan Review Team

Heather Stirratt, Chair
Richard Allen
Clare McBane
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1. INTRODUCTION

Amendment 3 was approved in December 1997. During 1998, the Board engaged in discussions to fully implement Amendment 3. Amendment 3 established a framework for area management, which includes industry participation through seven Lobster Conservation Management Teams (LCMT). The LCMTs were encouraged to develop a management program, which suits the needs of the area while meeting targets established in the plan. The LCMTs, with the support of state agencies, have played a vital role in advancing the area management program.

The LCMTs for LCMA 2, 3, 4, 5, 6, and the Outer Cape submitted area management proposals to the Board during the fall of 1998. The proposals included management measures to control effort and increase egg production. A technical evaluation was conducted to ensure that the proposals achieved the targets in Amendment 3. After reviewing the proposals and the technical evaluation, the Board chose to incorporate the LCMT recommendations into the area management program.

The Board adopted a two-phase approach to incorporate the LCMT recommendations, which will involve two addenda to Amendment 3. Addendum I incorporated measures from the LCMT proposals directed towards controlling effort. The Board decided to address management measures affecting egg production in Addendum II, following the release of an updated, peer-reviewed stock assessment. The stock assessment was completed in March 2000 and reviewed by an independent panel of scientists through the Commission's Peer Review Process in May 2000. After consideration of the stock assessment and peer review results, the Board initiated the development of Addendum II in August 2000 to continue implementation of the 1998 LCMT proposals.

Addendum II also clarifies several components of Amendment 3, such as updating the egg production rebuilding schedule and reconvening LCMTs to develop recommendations for area management based on the recent stock assessment.

The management measures adopted by the states, to comply with the Commission's management plan, will apply within state waters. The Commission will recommend that the Secretary of Commerce implement the management measures adopted in Addendum I in federal waters.

2. MANAGEMENT PROGRAM SPECIFICATIONS

For a detailed description of the coastwide requirements, prohibited actions, and other compliance measures that are applicable under Amendment 3, Addendum I, and this addendum, readers should refer to *Fisheries Management Report No. 29 of the Atlantic States Marine Fisheries Commission: Amendment 3 to the Interstate Fishery Management Plan for American Lobster and Addendum I to Amendment 3*.

The provisions in this section may be changed in order to meet the goal and objectives specified in Section 2 of Amendment 3. Any changes made to Addendum II will be done via addendum under Section 3.6 of Amendment 3.

2.1. EGG PRODUCTION REBUILDING SCHEDULE (PARAGRAPHS 1 & 2 COPIED FROM AMENDMENT 3)

The fishery management plan seeks to restore egg production from the American lobster resource in each of the management areas to greater than the overfishing definition before the end of 2008. This restoration is expected to result from the application of the conservation and management measures contained in Amendment #3, Addendum I and Section 2.2 of Addendum II, below. Modifications may be made, as necessary, according to the adaptive management

procedures contained in Section 3.6 of Amendment #3 if ongoing monitoring demonstrates that such modifications are necessary to meet the FMP goal, objectives, and rebuilding target date.

Each area will be required to meet the egg production rebuilding schedule listed in Table 1. Area 1 will follow the Gulf of Maine schedule; Area 2 and 6 will follow the South of Cape Cod & Long Island Sound schedule; and Areas 3, 4, 5, and the Outer Cape will follow the Georges Bank & South schedule. Upon further analysis, the Board has the option to change, under Section 3.6, the rebuilding schedule to reflect current data.

Addendum I specified that the egg production rebuilding schedule contained in Amendment #3 shall be adjusted following the peer-reviewed stock assessment conducted in 2000. The revised schedule below accounts for updated information on the current status of the stock.

Table 1. Schedule for increasing egg production in each of the current stock assessment areas, although the Board may revise this schedule in the future according to the adaptive management procedures contained in Section 3.6 of Amendment 3.

Egg Production* (Percent of Maximum)								
	Year							
	2001	2002	2003	2004	2005	2006	2007	2008
Gulf of Maine	3.2	4.17	5.14	6.11	7.09	8.06	9.03	10+
Georges Bank & South	6.2	6.74	7.29	7.83	8.37	8.91	9.46	10+
South of Cape Cod & Long Island Sound	8.3	8.54	8.79	9.03	9.27	9.51	9.76	10+

* Egg production in 2001 based on the peer-review stock assessment conducted in 2000; projected egg production from 2002 forward is based upon a requirement for proportional increases for each of the areas from the level of egg production in 2001.

2.2. MEASURES APPLICABLE TO COMMERCIAL FISHING IN LOBSTER MANAGEMENT AREAS

2.2.1. Minimum Gauge Size in Lobster Management Areas [2, 3, 4, 5, and Outer Cape]

The minimum size for American lobster in management areas 2, 3, 4, 5, and Outer Cape shall be no lower than the carapace length identified in the following schedule. Carapace length is the straight-line measurement from the rear of the eye socket parallel to the centerline of the carapace to the posterior edge of the carapace. The carapace is the unsegmented body shell of the American lobster.

The 2001 year indicated runs throughout the entire calendar year (January 1-December 31).

Area 2	Area 3	Area 4	Area 5	Outer Cape
2001- 3-9/32"	2001- 3-9/32"	2001- 3-9/32"	2001- 3-9/32"	2001- 3-9/32"
2002- 3-5/16"	2002- 3-5/16"	2002- 3-5/16"	2002- 3-5/16"	2002- 3-5/16"
2003- 3-11/32"	2003- 3-11/32"	2003- 3-11/32"	2003- 3-11/32"	2003- 3-11/32"
2004- 3-3/8"	2004- 3-3/8"	2004- 3-3/8"	2004- 3-3/8"	2004- 3-3/8"
	2005*- 3-13/32"			
	2006*- 3-7/16"			
	2007*- 3-15/32"			
	2008*- 3-1/2"			

* NOTE – Area 3 will implement minimum size increases beyond 3 3/8" at the rate of 1/32" per year until a final minimum size of 3 1/2" is reached, if necessary to meet lobster management plan goals and objectives.

2.2.2. Minimum Escape Vent Size in Lobster Management Areas [2, 3, 4, 5, and Outer Cape]

All lobster traps in Areas 2, 3, 4, 5, and Outer Cape, whether fished commercially or recreationally, must contain at least one rectangular escape vent per trap or at least two circular escape vents according to the following schedule:

	One Rectangular Vent	Two Circular Vents
2003	2 inches by 5-3/4 inches	2 1/2 inches

2.2.3. Trap Reduction Schedule for Lobster Management Area 3

Each Area 3 trap allocation of greater than 1,200 traps will be reduced on a sliding scale basis over 4 years. Trap reduction will not go below a baseline of 1,200 traps. Area 3 trap allocations of less than 1,200 traps will remain at their initial qualifying level and will not be permitted to increase up from that number. The trap reduction schedule is as follows:

Initial Allocation	3250	3000	2800	2600	2400	2200	2000	1800	1600	1400
Year 1	2656	2493	2357	2218	2076	1930	1762	1628	1467	1290
Year 2	2493	2351	2230	2107	1981	1849	1715	1573	1423	1251
Year 3	2351	2225	2117	2008	1896	1776	1654	1523	1380	1213
Year 4	2267	2150	2050	1949	1845	1732	1616	1492	1352	1200

2.2.4. Reporting Requirements for Lobster Management Area 3

All Area 3 lobstermen are required to fill out multi-species logbooks until a lobster specific logbook is approved.

2.2.5. Review of the Area Management Program

Each LCMT, established in Section 3.4 of Amendment 3, shall review the revised egg rebuilding schedule, the previous LCMT recommendation, and the area management program, if any, and present to the Management Board alternative measures that would achieve the stock rebuilding targets contained in Section 2.1 of this addendum beginning June 1, 2001, for implementation via Addendum process by January 1, 2002.

3. RECOMMENDATIONS FOR ACTIONS IN FEDERAL WATERS

The Atlantic States Marine Fisheries Commission believes that the measures contained in Amendment #3, Addendum I and Addendum II are necessary to limit the expansion of effort into the lobster fishery and to rebuild egg production to recommended levels. Commission recommends that the federal government promulgate all necessary regulation to implement the measures contained in Section 2.

Specifically, The Commission recommends that the Secretary of Commerce take the following actions:

1. Implement the provisions of Section 2.1 in all waters of the Exclusive Economic Zone throughout the range of the resource.
2. Implement the provisions of Section 2.2 applicable to the respective areas in all waters of the Exclusive Economic Zone contained in each respective area.

4. COMPLIANCE

4.1 Mandatory Elements of a State Program

To be considered in compliance with Addendum II, all state programs must include a regime of restrictions on American lobster fisheries consistent with the requirements of Section 2; except that a state may propose an alternative management program under Section 3.5 of Amendment 3, which, if approved by the Board, may be implemented as an alternative regulatory requirements for compliance.

4.2. Regulatory Requirements

Each state must submit its required American lobster regulatory program to the Commission through Commission staff for approval by the Board. During submission, until the Board makes a decision on a state's program, a state may not adopt a less restrictive management program than contained in this Addendum.

4.3. Adjustments to the Compliance Schedule

State management programs must have regulations to implement the following Sections of Addendum II by the dates indicated in order to be in compliance with Amendment 3 to the American Lobster Fishery Management Plan.

By December 31, 2001: Section 2.1 Egg Production Rebuilding Schedule and Section 2.2 Measures Applicable to Commercial Fishing in Lobster Management Areas

Addendum III to Amendment 3 to the Interstate Fishery Management Plan for American Lobster



Approved February 20, 2002

Prepared by the Plan Review Team

Heather Stirratt, Chair
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Bob Ross
Carl Wilson

1. INTRODUCTION

Amendment 3 was approved in December 1997. During 1998, the Board engaged in discussions to fully implement Amendment 3. Amendment 3 established a framework for area management, which includes industry participation through seven Lobster Conservation Management Teams (LCMTs). The LCMTs were encouraged to develop a management program, which suits the needs of the area while meeting targets established in the plan. The LCMTs, with the support of state agencies, have played a vital role in advancing the area management program.

The LCMTs for Areas 2, 3, 4, 5, 6, and the Outer Cape submitted area management proposals to the Board during the fall of 1998. The proposals included management measures related to effort control and egg production. A technical evaluation was conducted to ensure that the proposals achieved the targets in Amendment 3. After reviewing the proposals and the technical evaluation, the Board chose to incorporate the LCMT recommendations into the area management program.

The Board adopted a two-phase approach to incorporate the LCMT recommendations, which involved two addenda to Amendment 3. Addendum I incorporated measures from the LCMT proposals directed at effort control. The Board decided to address management measures affecting egg production in Addendum II, following the release of an updated, peer-reviewed stock assessment. The stock assessment was completed in March 2000 and reviewed by an independent panel of scientists through the Commission's Peer Review Process in May 2000. After consideration of the stock assessment and peer review results, the Board initiated the development of Addendum II in August 2000 to continue implementation of the 1998 LCMT proposals.

Addendum II, approved on February 1, 2001, clarifies several components of Amendment 3, such as updating the egg production rebuilding schedule and reconvening LCMTs to develop recommendations for area management based on the recent stock assessment. According to Addendum II, each LCMT is required to review the revised egg rebuilding schedule, the previous LCMT recommendation, and the area management program, if any, and present to the Management Board alternative measures that will achieve the stock rebuilding targets.

In August 2001, the Board directed staff to begin development of Addendum III incorporating the alternative management measures presented to the Board for the purposes of meeting $F_{10\%}$ by calendar year 2008. Addendum III is intended for implementation by January 1, 2002.

The management measures adopted by the states, to comply with the Commission's management plan, will apply within state waters. The Commission will recommend that the Secretary of Commerce implement the management measures adopted in Addendum III in federal waters.

2. MANAGEMENT PROGRAM SPECIFICATIONS

For a detailed description of the coastwide requirements, prohibited actions, and other compliance measures that are applicable under Amendment 3, Addendum I, Addendum II and this addendum, readers should refer to *Fisheries Management Reports No. 29, 29a, and 29b of the Atlantic States Marine Fisheries Commission, which contain the text of Amendment 3 to the Interstate Fishery Management Plan for American Lobster, Addendum I to Amendment 3, and Addendum II to Amendment 3*. Copies can be obtained via the Commission's website at www.Commission.org.

The provisions in this section may be changed in order to meet the goal and objectives specified in Section 2 of Amendment 3. Any changes made to Addendum III will be done via addendum under Section 3.6 of Amendment 3.

2.1 MEASURES APPLICABLE TO COMMERCIAL FISHING IN LOBSTER MANAGEMENT AREAS

2.1.1 Area 1, Inshore Gulf of Maine

2.1.1.1 Vent Size

If following the next stock assessment for American lobster or following a technical review by using another model it is determined that Area 1 is not on target to reach its egg production goals by 2008, then Area 1 will increase the rectangular escape vent size on Traps to 2" in 2007 with a complementary increase in circular vent size.

All lobster traps in Area 1, whether fished commercially or recreationally, must contain at least one rectangular escape vent per trap or at least two circular escape vents according to the following schedule:

July 1st is the deadline for implementing regulations in the calendar year indicated below.

	One Rectangular Vent	Two Circular Vents
2007*	2 inches by 5-3/4 inches	2 1/2 inches

*NOTE Area 1 will implement a 2" escape vent size increase in 2007, if, following an updated stock assessment, it is necessary to meet lobster management plan goals and objectives

2.1.1.2 Zero Tolerance Definition of V-notching

V-notched female lobster mean any female lobster bearing a v-shaped notch of any size in the flipper next to and to the right of the center flipper as viewed from the rear of the female lobster. V-notched female lobster also means any female, which is mutilated in a manner, which could hide, obscure or obliterate such a mark. The flipper right of the center flipper will be examined when the underside of the lobster is down and its tail is toward the person making the determination.

2.1.1.3 Mandatory V-notching Requirements¹

All Area 1 lobster fishers are required to v-notch all egg bearing female lobsters caught in the process of lobstering.

2.1.2 Area 2, Inshore Southern New England

2.1.2.1 Minimum Gauge Size

The minimum size for American lobster in management Area 2 shall be no lower than the carapace length identified in the following schedule. Carapace length is the straight-line measurement from the rear of the eye socket parallel to the centerline of the carapace to the posterior edge of the carapace. The carapace is the unsegmented body shell of the American lobster.

The 2001 year indicated runs throughout the entire calendar year (January 1-December 31). July 1st is the deadline for implementing regulations in all other years (i.e. 2002 – 2004).

Area 2
2001 – 3 9/32"
2002 – 3 5/16"
2003 – 3 11/32"
2004 – 3 3/8"

2.1.3 Area 3, Offshore Waters

2.1.3.1 Minimum Gauge Size

The minimum size for American lobster in management Area 3 shall be no lower than the carapace length identified in the following schedule. Carapace length is the straight-line measurement from the rear of the eye socket parallel to the centerline of the carapace to the posterior edge of the carapace. The carapace is the unsegmented body shell of the American lobster.

The 2001 year indicated runs throughout the entire calendar year (January 1-December 31). July 1st is the deadline for implementing regulations in all other years (i.e. 2002 – 2008).

¹ The Commonwealth of Massachusetts will monitor the percentage of v-notched egg-bearing female lobster in commercial catches during 2002. If the observed percentage does not reach 50% by the end of 2002, the Commonwealth will consider additional management measures in 2003 to help achieve the goals of the FMP. At a minimum, all regulations promulgated to implement Addendum III in management Areas 2, 3, and the Outer Cape Cod will be expanded to include the Massachusetts portion of Lobster Management Areas 1. Other entities of Area 1 may also consider additional management measures in 2003 to achieve the goals of Addendum III.

Area 3
2001 – 3 9/32”
2002 – 3 5/16”
2003 – 3 11/32”
2004 – 3 3/8”
2005* - 3 13/32”
2006* - 3 7/16”
2007* - 3 15/32”
2008* - 3 1/2”

*NOTE – Area 3 will implement minimum size increases beyond 3 3/8” at the rate of 1/32” per year until a final minimum size of 3 1/2” is reached, if necessary, to meet lobster management plan goals and objectives.

2.1.3.2 Mandatory V-notching Requirements

All Area 3 lobster fishers fishing within the Gulf of Maine above the 42° 30’ latitude line are required to v-notch all egg bearing female lobsters caught in the process of lobstering.

2.1.3.3 Overlap Boundary Between Areas 3 and 5

A five-mile overlap area shall exist in Area 3 and extend the full length of Area 5. The overlap area is defined as follows:

Overlap Zone Boundary:

Point	Current Coordinates Latitude (°N)/Longitude (°W)	Overlap Coordinates Latitude (°N)/Longitude (°W)
V	39° 50’/73° 01’	39° 48’/72° 55’
X	38° 39.5’/73° 40’	38° 38.2’/73° 33.8’
Y	38° 12’/73° 55’	38° 10.4’/73° 49’
Z	37° 12’/74° 44’	37° 10.6’/74° 38’
ZA	35° 34’/74° 51’	35° 31.9’/74° 45.5’
ZB	35° 14.5’/75° 31’	35° 10.3’/75° 27.7’

From point V, current coordinates extending out to new overlap coordinates, back to point ZB

2.1.3.4 Choose and Use Provision

Once qualified for historic participation in Area 3, a federal permit holder requesting an Area 3 designation is required to permanently designate Area 3 on his/her federal permit. Federal permit holders have a one-time opportunity to drop the Area 3 designation. In addition, when an Area 3 permit is sold or transferred, permanent designation can be reconsidered, which allows the new owner the decision of whether they wish to designate Area 3 or not on his/her federal permit.

2.1.4 Area 4, Inshore Northern Mid-Atlantic

2.1.4.1 Minimum Gauge Size

The minimum size for American lobster in management area 4 shall be no lower than the carapace length identified in the following schedule. Carapace length is the straight-line measurement from the rear of the eye socket parallel to the centerline of the carapace to the posterior edge of the carapace. The carapace is the unsegmented body shell of the American lobster.

The 2001 year indicated runs throughout the entire calendar year (January 1-December 31). July 1st is the deadline for implementing regulations in all other years (i.e. 2002 – 2004) indicated.

Area 4

2001- 3-9/32"
2002- 3-5/16"
2003- 3-11/32"
2004- 3-3/8"
OR
2001 – No Action
2002 – 3 5/16"
2003 – 3 11/32"
2004 – 3 3/8"

2.1.4.2 Maximum Gauge Size

The maximum size for American lobster (female lobsters only) in management area 4 shall be no greater than the carapace length identified in the following schedule. Carapace length is the straight-line measurement from the rear of the eye socket parallel to the centerline of the carapace to the posterior edge of the carapace. The carapace is the unsegmented body shell of the American lobster.

July 1st is the deadline for implementing regulations in the calendar year indicated below.

<i>Area 4</i>
2002* – 5 1/4"

*NOTE – Area 4 may consider a maximum gauge size of 5" if, following an updated stock assessment, it is necessary to meet lobster management plan goals and objectives. If maximum gauge sizes are not in place in adjacent management areas then Area 4 fishermen may V-notch female lobsters above the maximum size.

2.1.5 Area 5, Inshore Southern Mid-Atlantic

2.1.5.1 Minimum Gauge Size

The minimum size for American lobster in management area 5 shall be no lower than the carapace length identified in the following schedule. Carapace length is the straight-line measurement from the rear of the eye socket parallel to the centerline of the carapace to the posterior edge of the carapace. The carapace is the unsegmented body shell of the American lobster.

The 2001 year indicated runs throughout the entire calendar year (January 1-December 31). July 1st is the deadline for implementing regulations in all other years (i.e. 2002 – 2004) indicated.

Area 5
2001- 3-9/32"
2002- 3-5/16"
2003- 3-11/32"
2004- 3-3/8"
OR
2001 – No Action
2002 – 3 5/16"
2003 – 3 11/32"
2004 – 3 3/8"

2.1.5.2 Maximum Gauge Size

The maximum size for American lobster (female lobsters only) in management area 5 shall be no greater than the carapace length identified in the following schedule. Carapace length is the straight-line measurement from the rear of the eye socket parallel to the centerline of the carapace to the posterior edge of the carapace. The carapace is the unsegmented body shell of the American lobster.

July 1st is the deadline for implementing regulations in the calendar year indicated below.

<i>Area 5</i>
2004* – 5 1/2"

*NOTE – Area 5 will implement the maximum size of 5 1/2" if, following an updated stock assessment, it is necessary to meet lobster management plan goals and objectives. If maximum gauge sizes are not in place in adjacent management areas then Area 5 fishermen may V-notch female lobsters above the maximum size.

2.1.5.3 Vessel Upgrade Limit

All vessels authorized to fish for lobster with traps in Area 5 shall be limited to a 10% increase in length and a 20% increase in horsepower through upgrading or replacement.

2.1.6 Area 6, New York and Connecticut State Waters

2.1.6.1 Minimum Gauge Size

The minimum size for American lobster in management area 6 shall be no lower than the carapace length identified in the following schedule. Carapace length is the straight-line measurement from the rear of the eye socket parallel to the centerline of the carapace to the posterior edge of the carapace. The carapace is the unsegmented body shell of the American lobster.

July 1st is the deadline for implementing regulations in the calendar years indicated below.

Area 6
2004* - 3 9/32"
2005* - 3 5/16"

* NOTE – Area 6 will implement minimum size increases beyond 3 1/4" at the rate of 1/32" per year, beginning in 2004, until a final minimum size of 3 5/16" is reached, if, following an updated stock assessment, it is necessary to meet lobster management plan goals and objectives.

2.1.6.2 Management Program after Calendar Year 2005

The LCMT for Area 6 will choose among two possible paths for lobster management beyond 2005.

July 1st is the deadline for implementing regulations in the calendar year indicated below.

PATH 1	
YEAR	ACTION
2006	Evaluate gauge increase and effort reduction from trap tag buy back program
2007*	Implement 1/32" gauge size increase, and/or 2" escape vent increase, and/or V-notch some percentage of female lobsters, and/or establish a maximum gauge size
2008*	Implement 1/32" gauge size increase, and/or 2" escape vent increase, and/or V-notch some percentage of female lobsters, and/or establish a maximum gauge size

* NOTE – Area 6 will implement the above management measures, if, following an updated stock assessment, it is necessary to meet lobster management plan goals and objectives.

-OR-

PATH 2	
YEAR	ACTION
2006	Implement a 2" escape vent size if a gauge increase was implemented in 2005
2007	Evaluate with new information, confirm that the overfishing threshold has been met or exceeded
2008	Evaluate with new information, confirm that the overfishing threshold has been met or exceeded

If Path 2 is selected for implementation, then all lobster traps in Area 6, whether fished commercially or recreationally, must contain at least one rectangular escape vent per trap or at least two circular escape vents according to the following schedule:

July 1st is the deadline for implementing regulations in the calendar years indicated below.

	One Rectangular Vent	Two Circular Vents
2006*	2 inches by 5-3/4 inches	2 1/2 inches

*NOTE Area 6 will implement a 2" escape vent size increase if a gauge size increase is implemented in 2005, as outlined in Section 2.1.5.1 of this Addendum.

2.1.7 Outer Cape Lobster Management Area

2.1.7.1 Minimum Gauge Size

The minimum size for American lobster in management area Outer Cape shall be no lower than the carapace length identified in the following schedule. Carapace length is the straight-line measurement from the rear of the eye socket parallel to the centerline of the carapace to the posterior edge of the carapace. The carapace is the unsegmented body shell of the American lobster.

The 2001 year indicated runs throughout the entire calendar year (January 1-December 31). July 1st is the deadline for implementing regulations in all other years (i.e. 2002 – 2004) indicated.

Outer Cape Cod
2001- 3-9/32"
2002- 3-5/16"
2003- 3-11/32"
2004- 3-3/8"
2005*- 3-13/32"
2006*- 3-7/16"
2007*- 3-15/32"
2008*- 3-1/2"

* NOTE – Outer Cape Lobster Management Area will implement minimum size increases beyond 3 3/8" at the rate of 1/32" per year until a final minimum size of 3 1/2" is reached, if, following an updated stock assessment, it is necessary to meet lobster management plan goals and objectives.

2.1.7.2 Trap Reduction Schedule for Lobster Management Area Outer Cape (OCLMA)

Beginning in 2002 and extending through 2008, a 20% reduction in the total number of traps allowed to be fished will occur in the Outer Cape lobster management area. An additional 5% reduction in the total number of traps allowed to be fished per year may be employed in 2006 and 2007, if necessary, to meet lobster egg production goals and objectives.

In order to control the expansion of fishing effort, an overall total number of traps allowed to be fished in OC Lobster Management Area (OCLMA) has been established from the sum of individual maximum traps reported by each OCLMA lobster fisher on Massachusetts (MA) catch reports in the year 1998. A reduction of this total number of traps by 20% will be implemented and resulting individual trap allotments will be defined accordingly during the stock rebuilding period. The starting trap allotments for each lobster fisher in the year 2002 will be based on MA 2000 catch report statistics. Allotments will be debited thereafter as needed by MA Division of Marine Fisheries (DMF). Participants in the 2001 OC lobster trap fishery, who received a license through the MA DMF or waiting list provisions during 2001, and as a result, have no prior lobster fishing history (i.e. filed catch reports) in the OCLMA, will receive a trap allotment based on proof of documentation of the number of traps they fished during 2001. These allotments will be apportioned from a percentage of the overall trap cap, not to exceed 2% of the total. Those who received a transferred license with an OCLMA fishing history will receive a starting trap allotment based on that history.

2.1.7.3 Annual Trap Transfer Period and Passive Reductions

The annual trap transfer period will be January 1 – March 31. Trap tags may be transferred among OC lobster fishers to allow an individual business to build up or down within the maximum allowable 800 trap limit, however, a passive reduction in traps will occur with each trap transfer event at the rate of 10%. For example, if 100 trap tags are transferred to a fisher, the net transaction received by that lobster fisher will be 90 and the overall OC trap cap will be reduced accordingly. The trap cap may be adjusted downward over time through active and/or passive reduction measures until such time that the fishing mortality rate is reduced to a level below $F_{10\%}$.

Each time a lobster license is transferred to another lobster fisher within the OC the trap tag allowance associated with that license will be reduced by 10%. No new participants will be permitted to partake in the OC lobster fishery without receiving trap tags through a transfer from those fishing within the established total trap cap.

A trap haul-out period will occur from January 1 through March 31 each year to assist in the enforcement of the trap cap. There will be no lobster traps in the waters of the OC during this time period.

3. RECOMMENDATIONS FOR ACTIONS IN FEDERAL WATERS

The Atlantic States Marine Fisheries Commission believes that the measures contained in Amendment #3 and Addenda I, II, and III are necessary to limit the expansion of effort into the lobster fishery and to rebuild egg production to recommended levels. Commission recommends that the federal government promulgate all necessary regulations to implement the measures contained in Section 2.

Specifically, The Commission recommends that the Secretary of Commerce take the following actions:

- 1 Implement the provisions of Section 2.1 applicable to the respective areas in all waters of the Exclusive Economic Zone contained in each respective area.

4. COMPLIANCE

4.1 MANDATORY ELEMENTS OF A STATE PROGRAM

To be considered in compliance with Addendum III, all state programs must include a regime of restrictions on American lobster fisheries consistent with the requirements of Section 2; except that a state may propose an alternative management program under Section 3.5 of Amendment 3, which, if approved by the Board, may be implemented as an alternative regulatory requirements for compliance.

4.2 REGULATORY REQUIREMENTS

Each state must submit its required American lobster regulatory program to the Commission through Commission staff for approval by the Board. A state may not adopt a less restrictive management program than contained in this Addendum, unless otherwise approved by the Board.

4.3. ADJUSTMENTS TO THE COMPLIANCE SCHEDULE

State management programs must have regulations to implement the following Sections of Addendum III by the dates indicated in order to be in compliance with Amendment 3 to the American Lobster Fishery Management Plan.

By July 1, 2002: Section 2.1 Measures Applicable to Commercial Fishing in Lobster Management Areas

Appendix 3: NMFS ANPR/NOI for Fishing Effort Control

[Date Published in the Federal Register: May 10, 2005 (70 FR 24495)]

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 697

[Docket No. 050329085-5085-01; I.D. 032305A]

RIN 0648-AT31

Atlantic Coastal Fisheries Cooperative Management Act Provisions; American Lobster Fishery

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Advance Notice of Proposed Rulemaking (ANPR), Notice of Intent (NOI) to combine rulemaking and prepare an Environmental Impact Statement (EIS); request for comments.

SUMMARY: NMFS announces its intent to consider revisions to the Federal lobster regulations in response to the effort control recommendations of the Atlantic States Marine Fisheries Commission (Commission) in Addenda II, III, IV, V and VI to Amendment 3 of the Interstate Fishery Management Plan for American Lobster (ISFMP), and prepare an EIS to assess the impact on the human environment of controlling fishing effort in the American lobster fishery, in the U.S. Exclusive Economic Zone (EEZ). Written comments are requested from the public regarding issues that NMFS should address in this EIS relative to fishing effort reduction measures as proposed in Addenda II through VI.

DATES: Written comments must be received no later than 5 p.m. Eastern Standard Time on or before June 9, 2005.

ADDRESSES: Written comments should be sent to Harold C. Mears, Director, State, Federal, and Constituent Programs Office, Northeast Region, NMFS, One Blackburn Drive, Gloucester, MA 01930. Comments may also be sent via email at Lob0105@noaa.gov, via fax (978) 281-9117, or via the Federal e-Rulemaking Portal at www.regulations.gov.

FOR FURTHER INFORMATION CONTACT: Thomas Fletcher, (978) 281-9349, fax (978) 281-9117, e-mail tom.fletcher@noaa.gov.

SUPPLEMENTARY INFORMATION: The Commission proposed a wide range of measures in Addenda II through VI, such as transferable trap programs, that aim to control lobster fishing effort. Because the effort control measures contain similar interrelated elements and might involve the creation of a single management program, these measures lend themselves to a single rulemaking and analysis. Although Addenda II and III have effort control elements, those addenda principally relate to broodstock protective measures, and the effort control measures are presented in less detail. The Commission's Addenda IV, V, and VI recommendations, however, principally involve effort control measures and more robustly present effort control measures. Accordingly, NMFS proposes to combine measures from all five addenda that control fishing effort for the American Lobster into one rulemaking and a single environmental impacts analysis.

This action augments an earlier ANPR and NOI (67 FR 56800) that NMFS published on September 5, 2002, in response to the Commission's recommendation that NMFS implement regulations in the EEZ that are compatible with Addenda II and III to Amendment 3 of the ISFMP. That earlier document explains NMFS' intention to solicit written comments and inform the public of the development of an EIS relative to Addenda II and III. In addition, that earlier document further stated NMFS' intention to combine the Addendum II and Addendum III rulemakings because the addenda involved similar subject matter - namely management measures designed to increase egg production and protect broodstock. Those measures included: a series of minimum gauge size increases (increases to the minimum legal length of the carapace, defined as the unsegmented body shell of the American lobster), and an increase in the minimum escape vent size of lobster trap gear fished in the following state and Federal waters of Lobster Conservation Management Area 2 (Area 2) (inshore Southern New England), Area 3 (offshore area, comprised entirely of Federal waters), Area 4 (nearshore Northern Mid-Atlantic), Area 5 (nearshore Southern Mid-Atlantic), and the Outer Cape Area (nearshore waters east of Cape Cod); a maximum gauge increase in Areas 4 and 5; a boundary change between Areas 3 and 5; and amending the timeline to end overfishing. The effects of these broodstock measures will be analyzed in a forthcoming environmental assessment.

Although designed principally as broodstock protection plans, Addenda II and III contain other management measures aimed at reducing fishing effort in the American lobster fishery. These measures are set forth in greater

detail and relate to different lobster management areas in the subsequently developed Addenda IV, V and VI.

Background

The following is a summary of effort control measures approved by the Commission and recommended for Federal rulemaking.

Addenda II through VI are part of an overall management regime set forth in Amendment 3 to the ISFMP. The intent of Amendment 3, approved by the Commission in December of 1997, is to achieve a healthy American lobster resource and to develop a management regime that provides for sustained harvest, maintains opportunities for participation, and provides for the cooperative development of conservation measures by all stakeholders. Amendment 3 employed a participatory management approach by creating the seven lobster management areas, each with its own lobster conservation management team (LCMT) comprised of industry members.

Amendment 3 tasked the LCMTs with providing recommendations for area-specific management measures to the Commission's American Lobster Management Board (Board) to meet the lobster egg production and effort reduction goals of the ISFMP. Certain effort reduction measures of the area plans were approved by the Board in August of 1999 as part of Addendum I to Amendment 3 (Addendum I). After technical evaluation, the Board approved the egg production measures as Addenda II and III in February 2001, and February 2002, respectively, and recommended that NMFS implement complementary Federal regulations. NMFS has the authority under the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA) to implement regulations in Federal waters that are compatible with the effective implementation of the ISFMP and consistent with the National Standards of the Magnuson-Stevens Fishery Conservation and Management Act. These Federal regulations are promulgated pursuant to the ACFCMA and are codified at 50 CFR part 697.

A brief outline of lobster effort control measures in Addenda II through VI are summarized in the following sections.

Addendum II Summary

Addendum II, approved on February 1, 2001, updated the lobster egg production rebuilding schedule and reconvened the LCMTs to develop recommendations for area management based on the stock assessment completed in 2000.

The measure that addresses effort control is the following:

Trap Reduction Schedule for Areas 3, 4, and 5

In Addendum I, the Commission implemented a plan that limited fishing access to Areas 3, 4 and 5, allocated traps to qualifiers and capped the number of traps that can be fished. Addendum II established a timeline for additional trap reductions for qualified permit holders in Area 3. Each trap allocation in Area 3, that exceeds 1,200 traps, would be reduced on a sliding scale over four years, with reductions not going below a baseline of 1,200 traps. Allocations of less than 1,200 traps would remain at their initial qualifying level. This measure was implemented by Federal rulemaking dated March 27, 2003, (68 FR 14902).

Addendum III Summary

Addendum III, approved February 20, 2002, was developed in response to an Addendum II requirement whereby each LCMT was asked to review the revised egg rebuilding schedule and area management plan and present the Board with alternative measures that are intended to achieve the stock rebuilding targets.

Measures that address lobster effort control include:

Trap Reduction in the Outer Cape Area

In Addendum III, the Commission proposed limiting fishing access to the Outer Cape Area, allocating traps to qualifiers and then reducing the numbers allocated, and allowing traps to be transferred among those permit holders who qualify for access. Beginning in 2002 and extending through 2008, a 20-percent reduction in trap allocations was proposed for the Outer Cape Area. These trap allocations may be transferred among Outer Cape lobster fishers to allow an individual business to build up or down within the maximum allowable 800 trap limit. Any trap transfer invokes a 10-percent trap reduction or "conservation tax" on the number of traps involved in the transfer. An additional 5-percent reduction, per year, in trap allocations may be employed in 2006 and 2007, if necessary, to meet lobster egg production goals and objectives.

Choose and Use in Area 3

The Commission in Addendum III approved a management measure specific to Area 3 entitled "Choose and Use". Currently, Federal permit holders are allowed to elect which Area(s) they intend to fish on an annual basis. However, Choose and Use would obligate Area 3 permit holders to designate (i.e. "choose") Area 3 on their Federal permits when renewing Federal permits each year. If a permit holder did not choose Area 3, then that permit holder would be prohibited from designating Area 3 on the vessel permit in future years. The permit would still retain its Area 3 qualification, and each successive owner would be given the opportunity to either permanently designate Area 3 or drop the Area 3 designation for the duration of possession of the qualified permit.

Addendum IV Summary

Addendum IV, approved December 17, 2003, addresses four issues: an effort reduction proposal from the Area 3 LCMT; broodstock and effort control measures in Area 2; new information about escape vent selectivity; and a change to the interpretation of the most restrictive rule.

Measures that address effort control include:

Trap Reduction in Area 3

Addendum IV includes a plan to increase trap reductions by 10-percent (5-percent in each year for 2007 and 2008) for all qualified Area 3 permit holders.

Trap Transferability and Passive Reduction in Area 3

The Area 3 transferable trap plan includes measures that would allow transfers of trap allocations among qualified Area 3 permit holders. These measures include: trap transfer minimums, an anti-monopoly clause, and a 10-percent trap reduction or "conservation tax" on any trap transfers.

Changes to the Most Restrictive Rule

In Amendment 3, the ISFMP for American lobster required multiple area fishermen to comply with the most restrictive management measures of all areas fished including the smallest number of traps allocated to them for each of the areas fished. The original intention of the most restrictive rule was to allow multi-area fishermen to continue to fish in the areas that they historically have fished in while maintaining the conservation benefits unique to each area. With the implementation of Amendment 3, permit holders in all areas were restricted to a maximum of 800 to 1,800 traps; however, qualification for historic participation in several areas resulted in individual area-specific trap allocations that vary from the initial fixed trap limits in Amendment 3. An unintended consequence of this rule limited multi-area fishermen to the lowest number of traps they have been allocated in any Area.

Effort Control in Area 2

The Commission approved an effort control plan developed by the Area 2 LCMT that proposed limiting fishing access to Area 2, allocating traps to qualifiers, allowing traps to be transferred among qualifiers, and a passive trap reduction or "conservation tax" on any trap transfers. Due to implementation concerns identified by the impacted regulatory agencies, the effort control components of the Area 2 plan were withdrawn in Addendum VI in February 2005, and will be amended in a forthcoming Addendum.

Addendum V Summary

Addendum V, approved March 2004, was initiated to address one particular aspect of the Area 3 trap transferability program approved in Addendum IV: a new proposal that reduced the overall trap cap from 2,600 to 2,200, with a higher passive reduction or "conservation tax" imposed when the purchaser owns 1,800 to 2,200 traps rather than 2,200 to 2,600 traps.

Measures that address effort reduction include:

Total Trap Cap and Conservation Tax

A conservation tax (passive reduction) of 10-percent would be assessed for each transfer that equates to a purchaser owning up to 1,800 traps. For all transfers where the transfer of traps results in a permit exceeding 1,800 traps, those traps over 1,800 would be taxed at 50-percent, up to the total trap cap of 2,200. This measure would be applicable to Area 3 permit holders only.

Addendum VI Summary

Addendum VI withdrew the Addendum IV effort control plan for Area 2 except for two points; a prohibition on issuance of any new lobster permits for Area 2 and the eligibility period for participation in the fishery. It also directs all jurisdictions with Area 2 permit holders and the Area 2 LCMT to develop a new effort control plan, which caps effort at or near current levels with the potential to adjust the levels based on the outcome of the upcoming stock assessment.

Classification

This ANPR has been determined to be significant for the purposes of Executive Order 12866.

Authority: 16 U.S.C. 5101 *et seq.*

Dated: May 5, 2005.

Rebecca Lent,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

[FR Doc. 05-9331 Filed 5-9-05; 8:45 am]

BILLING CODE 3510-22-S

Section 4. DE MINIMIS FISHERY GUIDELINES

Section 4.1. CRITERIA FOR DE MINIMIS CONSIDERATION

To be eligible for *de minimis* consideration, a state must prove that its commercial landings in the most recent two years for which data is available did not exceed an average of 40,000 pounds.

Section 4.2. PROCEDURES TO APPLY FOR DE MINIMIS STATUS

States must specifically request *de minimis* status each year. Requests for *de minimis* status will be reviewed by the American Lobster Plan Review Team (PRT) as part of the annual FMP review process. Requests for *de minimis* must be submitted to the Commission American Lobster FMP Coordinator as a part of the state=s yearly compliance report. The request must contain the following information: all available commercial landings data for the current year, all available commercial landings data for at least two years preceding, commercial regulations for the current year, and the proposed management measures the state plans to implement for the year *de minimis* status is requested. The FMP Coordinator will then forward the information to the PRT and, if necessary, the American Lobster Technical Committee and Stock Assessment Subcommittee.

In determining whether or not a state meets the *de minimis* criteria, the PRT will consider the information provided with the request, the most recent available coastwide landings data, any information provided by the Technical Committee and Stock Assessment Subcommittee, and projections of future landings. The PRT will make a recommendation to the Board to either accept or deny the *de minimis* request. The Board will then review the PRT recommendation and either grant or deny the *de minimis* classification.

The Board must make a specific motion to grant a state *de minimis* status. By deeming a given state *de minimis*, the Board is recognizing that: the state has a minimal commercial lobster fishery; there is little risk to the health of the lobster stock if the state does not implement the full suite of management measures; and the overall burden of implementing the complete management and monitoring requirements of the FMP outweigh the conservation benefits of implementing those measures in the particular state.

If commercial landings in a *de minimis* state exceed the *de minimis* threshold, the state will lose its *de minimis* classification, will be ineligible for *de minimis* in the following year, and will be required to implement all the commercial fishery requirements of the FMP. If the Board denies a state=s *de minimis* request, the state will be required to implement all the commercial fishery requirements of the FMP. When a state rescinds or loses its *de minimis* status the Board will set a compliance date by which the state must implement the required regulations.

Section 4.3. PLAN REQUIREMENTS IF DE MINIMIS STATUS IS GRANTED

If *de minimis* status is granted, the *de minimis* state is require to implement, at a minimum, the coastwide requirements contained in Section 3.1 of Amendment 3. Any additional components of the FMP, which the Board determines necessary for a *de minimis* state to implement, can be defined at the time *de minimis* status is granted. For all other required components of the plan, the Board will specify by motion which measures a *de minimis* state must adopt.

§697.26 EEZ Nearshore Management Area 5 Trap Waiver

(a) Eligibility. Vessels eligible for limited access lobster permits under § 697.4(a)(1) and limited access black sea bass permits under §648.4(a)(7)(i) of this chapter may request an Area 5 Trap Waiver Permit, under the procedures described in §697.4 - Vessel Permits.

(b) Restrictions. A vessel issued an Area 5 Trap Waiver permit under this section may engage in trap fishing for black sea bass in EEZ Nearshore Management Area 5 and is exempt from the provisions of §697.19 (lobster trap limits and trap tag requirements for vessels fishing with lobster traps), and §697.21 (lobster gear identification and marking, escape vent, maximum trap size, and ghost panel requirements) if such fishing is conducted in accordance with all other provisions of this section and all other Federal and state laws and regulations applicable to lobster and black sea bass fishing.

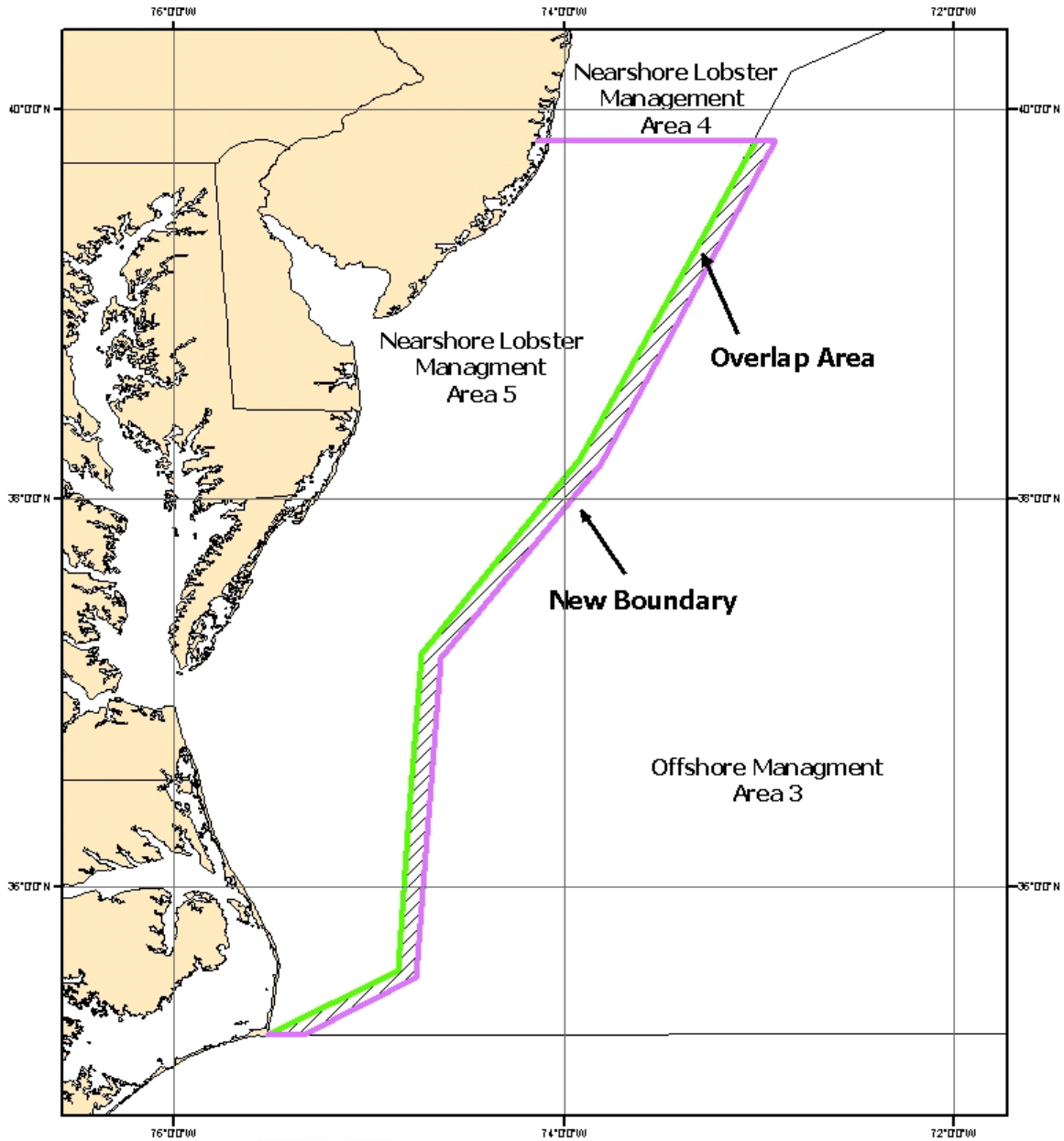
(1) A vessel issued a permit under this section may retain, land and sell an incidental allowance of lobster equal to the non-trap harvest restrictions specified in §697.17(a)*.

(2) A vessel issued a permit under this section may not possess on board or deploy bait or baited traps.

*§697.17(a) Non-trap landing limits. In addition to the prohibitions set forth in §600.725 of this chapter, it is unlawful for a vessel with any non-trap gear on board capable of catching lobsters, or, that fishes for, takes, catches, or harvests lobster on a fishing trip in or from the EEZ by a method other than traps, to possess, retain on board, or land, in excess of 100 lobsters (or parts thereof), for each lobster day-at-sea or part of a lobster day-at-sea, up to a maximum of 500 lobsters (or parts thereof) for any one trip, unless otherwise restricted by §648.80(a)(3)(i), (a)(4)(i)(A), (a)(8)(i), (a)(9)(i)(D), (a)(12)(i)(A), (a)(13)(i)(A), (b)(3)(ii) or §697.7(c)(2)(i)(C) of this chapter.

Current Federal American lobster regulations specified in §697 are located on the Northeast Region website: <<http://www.nero.noaa.gov/StateFedOff/>>

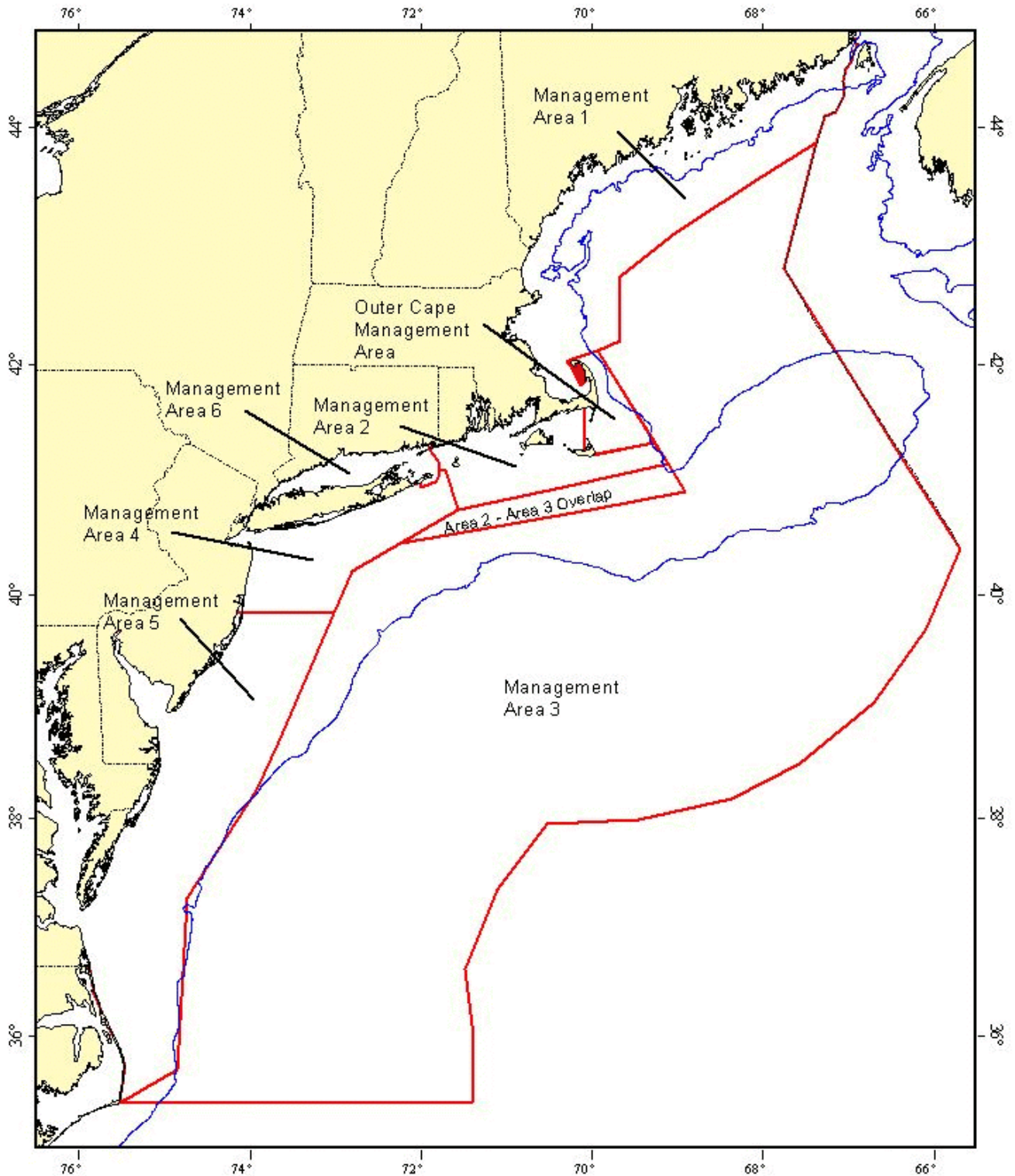
American Lobster Management Area 3/5 Overlap



NOAA Fisheries
Northeast Regional Office
Gloucester, MA

06/21/2004

American Lobster Management Areas



NOAA Fisheries
Northeast Regional Office
Gloucester, MA

3/18/03

