Environmental Assessment, Final Regulatory Impact Review and Final Regulatory Flexibility Analysis
of a

LIMITED ACCESS PROGRAM
FOR
THE LOBSTER TRAP FISHERY
IN
FEDERAL LOBSTER MANAGEMENT AREA 1

Federal American Lobster Management in the Exclusive Economic Zone Based Upon Management Measures in

ADDENDUM XV TO AMENDMENT 3
of the
INTERSTATE FISHERY MANAGEMENT PLAN FOR AMERICAN LOBSTER

National Marine Fisheries Service
Northeast Region

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EXECUTIVE SUMMARY

This Environmental Assessment (EA) analyzes proposed revisions, and alternatives to those revisions, to the Federal American lobster regulations in response to recommendations for Federal action by the Atlantic States Marine Fisheries Commission (Commission) in Addendum XV to Amendment 3 of the Commission's Interstate Fishery Management Plan for American Lobster (ISFMP). The intent of Addendum XV is to maintain a current level of trap fishing effort – with "current" being defined as during the development of the addendum in 2008 - in the Federal waters of Lobster Conservation Management Area 1 (Area 1) through a limited entry program for Federal lobster trap fishermen based on specific eligibility criteria. NMFS would implement these regulations according to its authority in the Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA).

The American lobster resource is managed within the framework of the Commission. In 1999, NMFS transferred its Federal lobster regulations from the New England Fishery Management Council (Council) to the state-oriented Commission. The logic was straightforward, since 80 percent of the lobster fishery occurred in state waters, and Federal action alone could not ensure that the Council process could prevent overfishing. Under the Commission management process, the Commission decides upon a strategy and approves associated fishery management measures required of the states, and then recommends that the Federal Government enact regulations to complement these measures when appropriate. American lobsters are managed by the Federal Government under the ACFCMA which directs the Federal Government to support the actions of the Commission. To the extent the Federal Government seeks to regulate a Commission species, those Federal regulations must be compatible with the Commission's ISFMP and consistent with the 10 National Standards set forth in the Magnuson-Stevens Act.

Area 1, the most productive lobster management area with respect to landings, occurs within the Gulf of Maine stock area. The most recent lobster stock assessment (2009) indicated that Gulf of Maine lobster stock abundance is relatively high, with stable but relatively high levels of fishing mortality and fishing effort. Despite high biomass, the stock assessment cautioned that unchecked trap fishing effort in Area 1 could negatively impact the sustainability of the Gulf of Maine lobster fishery if lobster abundance declined to long-term median levels.

At this same time, Area 1 lobster fishers became aware that trap fishing effort in Area 1 was indeed relatively unchecked. Some fishers provided anecdotal evidence that Area 1 Federal waters fishing effort might be on the increase. Specifically, the industry-based Area 1 Lobster Conservation Management Team (LCMT) worried that limited access programs in the other

lobster management areas might cause, and perhaps were already causing, non-qualifiers to move their businesses into Area 1 - the only remaining non-limited access area. The Area 1 LCMT recommended that the Commission limit access to the trap fishery in Area 1 Federal waters to those fishers who could document having fished there with trap gear in the past. The Area 1 LCMT worried that speculators would newly declare into Area 1 upon hearing the news and, therefore, the LCMT recommended establishing an immediate control date after which fishing history could not be credited towards qualification.

The Commission agreed with the scientists and industry that a potential shift of trap fishing effort into Area 1 could jeopardize the sustainability of the Gulf of Maine lobster stock and Area 1 fishery and consequently, the Commission's Lobster Board began to develop Addendum XV in 2008 to set forth a limited access program for the lobster trap fishery in the Federal waters of Area 1.

As the Commission developed Addendum XV in October 2008, they asked NMFS to immediately publish a control date to prevent speculators from flooding into Area 1. NMFS published an Advance Notice of Proposed Rulemaking (ANPR) in the Federal Register (74 FR 67) to notify the public that any further investment in the Area 1 trap fishery may not guarantee future access should a limited entry program be implemented and to solicit public comments on the issue. Knowing that Federal action would be needed to restrict the migration of Federal lobster permits into Area 1, the Commission adopted the publication date of the ANPR (January 2, 2009) as a control date for determination of Area 1 eligibility.

The Commission approved Addendum XV in November 2009 after receiving public input in numerous public meetings. In Addendum XV, the Commission recommended an Area 1 limited access program with the following three eligibility criteria: 1) Possession of a Federal limited access lobster permit; 2) proof of an Area 1 designation on the Federal lobster permit as of the January 2, 2009 control date; and 3) Proof of purchase of an Area 1 lobster trap tag during any year from 2004-2008, inclusive. The Area 1 LCMT developed these qualification criteria, which were forwarded on to the Commission and approved in Addendum XV. The intent of the LCMT was to identify qualification criteria that would effectively capture current trap fishery participation in the Federal waters of Area 1 and limit future trap fishing effort to current Area 1 participants. Accordingly, NMFS interpreted criterion #2 to mean current Federal lobster permit holders who renewed their fishing year 2008 Federal lobster permit and designated Area 1 on the permit prior to the control date. The 2008 Federal fishing year ran from May 1, 2008 through April 30, 2009.

The National Environmental Policy Act (NEPA) requires that the Federal Government provide an assessment of the potential impacts to the human environment associated with any Federal action. NEPA requires that reasonable alternatives and their impacts be analyzed and

considered. Accordingly, NMFS evaluated the following three management alternatives in this EA: 1) a Status Quo Alternative; 2) implementation of a limited entry program using the Commission's Addendum XV eligibility criteria (Commission's Alternative); and 3) a third alternative (Preferred Alternative) that is essentially the Commission Alternative, but with the eligibility cut-off date extended by four months to April 30, 2009. A short summary of the NEPA alternatives analysis is set forth below.

Alternative 1: Status Quo

Contrary to the Commission's recommendations for Federal action in Addendum XV, the Status Quo Alternative would leave Area 1 as the last and only open-access lobster management area. It would allow any Federal lobster vessel to continue to fish in, or transition into, the Area 1 lobster trap fishery regardless of whether the permit had any prior history of fishing with trap gear in Area 1. Any or all of the 3,152 Federal lobster permit holders would be allowed to fish with trap gear in Area 1 under this alternative. Accordingly, the Status Quo Alternative provides the greatest potential for permits and effort to migrate into and proliferate in Area 1 and would be the alternative supported least by recommendations in the most recent stock assessment, Area 1 industry and the Commission's Lobster Board.

Selecting the Status Quo Alternative may pose additional threats to endangered and protected species such as whales, sea turtles, sea birds or protected fish species. The effects of continuing to allow all Federal lobster vessels access to the Area 1 lobster trap fishery could result in an increase in the presence of lobster traps over time, although the effects are not expected to be immediate. Current gear modifications for the trap fishery mandated by the Atlantic Large Whale Take Reduction Plan would maintain a means of limiting impacts to large whales if an entanglement occurs, but the risk of entanglement may increase if traps, or more specifically, if vertical lines associated with traps, increase as a result of the status quo alternative and the associated increase in lines increases the entanglement risk to large whales.

Unchecked trap effort in Area 1 resulting from the status quo alternative could increase traps in Area 1 and may lead to an increase in lobster regulatory discards – the discard of lobsters which cannot legally be kept due to size, v-notch or egg restrictions. The stress to lobster due to handling and discarding the lobster as well as predation as the lobster descends to the bottom are unquantifiable, but remain a concern.

Changes in fishing practices could occur with the Status Quo Alternative, if some traditional non-trap gear vessels opt into the trap fishery or if permits with trap fishing history in other lobster management areas migrate into Area 1. There would be no short-term negative impacts to the lobster fishing industry associated with this alternative. However, if failure to cap Federal lobster permits in Area 1 leads to a marked increase in lobster trap fishing effort in the area, it could have long-term negative effects on the lobster industry. The long-term negative

impacts could be associated with a potential rise in gear conflicts due to elevated trap levels and economic losses if increased fishing effort has a negative impact on the Gulf of Maine lobster stock.

Bycatch of regulated and non-regulated finfish and crustaceans may increase if the status quo alternative results in increased trap levels. Gear conflicts may also increase as could impacts to bottom habitat if the status quo leads to increased traps in the water.

Alternative 2: Commission's Alternative

The Commission Alternative would limit access into Area 1 and is compatible with the recommendations in the most recent stock assessment scientists, the Area 1 industry and Commission's Lobster Board. It is the most restrictive of the three alternatives because it establishes a qualification cut-off date on January 2, 2009. The January cut-off date is fair and appropriate because it is the date formal notice was provided in the Federal Register. In fact, given the highly regulated nature of the fishery and given the extent to which Area 1 limited access was being discussed in public meetings and reported in the media in 2008, Area 1 fishers either were aware or should have been aware of the potential for an Area 1 limited access program long before the January 2, 2009 control date. The Commission's Alternative would restrict Area 1 trap eligibility to the approximately 1,611 Federal lobster permits that purchased trap tags during 2004-2008 and were renewed for the 2008 Fishing year with an Area 1 trap gear designation by January 2, 2009.

Approximately 256 Federal lobster permits that elected Area 1 after the control date would not qualify under this alternative resulting in loss of trap fishing access in Area 1 which could devalue these Federal lobster permits. About 1,285 Federal lobster permits that are not part of the Area 1 lobster trap fishery would be restricted from the fishery without the option to transfer into this fishery as they would be if the status quo alternative is selected. Federal lobster permits in Confirmation of Permit History status prior to the control date – those permits eligible for renewal but not associated with a vessel and not actively renewed during 2008 – would not be eligible for the Area 1 trap fishery. The holders of the 1,611 Federal lobster permits expected to qualify under the Commission's Alternative would remain eligible to prosecute the Area 1 trap fishery and would reap any benefits resulting from the restriction of new effort into the fishery, such as increased permit value. They may also benefit from increased revenues if the limitations on effort associated with this alternative yield a healthier lobster stock.

Compared to the Status Quo alternative, the Commission's Alternative may help to mitigate entanglement risks to marine mammals and large whales since it would cap and control fishing effort in Area 1. Similarly, the Commission's Alternative would limit the number of traps that could potentially be fished in Area 1 which may stabilize any impacts to benthic habitat associated with lobster trap gear. Bycatch of lobster and other species would remain

relatively constant under the Commission's Alternative since it would cap Area 1 trap fishing at historical levels and would likely result in less bycatch mortality than the Status Quo.

Alternative 3: Preferred Alternative

Like the Commission's Alternative, the Preferred Alternative also is consistent with the Commission's Addendum XV criteria in that it requires possession of a Federal limited access lobster permit and purchase of a trap tag during 2004-2008. However, it extends the Area 1 designation period to include the entire 2008 Federal fishing year, from May 1, 2008 through April 30, 2009. NMFS analysis shows that 1,643 Federal lobster permits would likely qualify under this alternative, compared to the 1,611 that would qualify under the Commission's Alternative – suggesting that approximately 32 more permits would qualify if the qualification cut-off date were extended to April 30, 2009 than if the cut-off date were January 2, 2009.

The relative additional effort from these 32 permits holders is negligible and most of these permit holders have fished in Area 1 in the past. Rather than being conceived as allowing additional effort into the Area 1 trap fishery, the Preferred Alternative would base the limited entry program on current (2008 Fishing Year) Area 1 trap fishing levels. As a result, NMFS believes extending the cut-off date to April 30th mitigates negative impacts to active and historical Area 1 lobster trap vessels, whose permit holders simply did not renew their Area 1 permits prior to the publication of the control date, while still preventing the speculative practices feared by the Area 1 industry and Lobster Board. NMFS believes that the Preferred Alternative reflects the recommendations in the last lobster stock assessment, and would be supported by the Area 1 lobster industry and the Commission's Lobster Board.

Selection of the Preferred Alternative may mitigate some of the negative impacts of this action on the fishing industry by qualifying an additional 32 Federal lobster permits into the Area 1 trap fishery, compared to the Commission's Alternative. By extending the Area 1 designation criterion to include the entire Federal fishing year, it allows those permit holders who purchased trap tags but did not renew their permits prior to the control date, to maintain Area 1 eligibility. The Preferred Alternative would allow more trap fishing effort into the fishery compared to the Commission's Alternative. The additional 32 permits that would qualify under the Preferred Alternative, but not under the Commission's Alternative, are predominantly trap vessels hailing from Area 1 ports which, for business or other reasons, had not renewed their permit prior to the control date. However, the allowance of the additional permits is a minor addition and may reflect a more equitable approach preferable to constituents. On balance, the Preferred Alternative maintains the recent level of permits in the fishery and qualifies an insignificant amount of additional permits into the fishery when compared to the Commission's Alternative, while considering that Federal lobster permit holders have been allowed, for decades, to renew their Federal lobster permit at any time during the Federal fishing year without penalty.

The Preferred Alternative could potentially disqualify 224 permits that designated Area 1 lobster trap fishery in the 2008 fishing year because they had no record of purchasing lobster trap tags at any time from 2004-2008 as required under the qualification criteria. Approximately 60 percent of these permit holders elected non-trap gear on their 2008 Federal lobster permit and did not purchase trap tags, indicating that they were not likely to be harvesting lobster with traps. Although the remaining 40 percent would not qualify, they too were not likely to have been active Area 1 trap vessels because they did not purchase a tag during the entire 2004-2008 period. Therefore, these 224 vessels were not active Area 1 trap fishing vessels and any decision to restrict them from the fishery would not directly impact their historical fishing or business practices. Additionally, 1,285 Federal lobster permits that did not designate Area 1 during the 2008 Federal fishing year would not be eligible to transfer into the Area 1 trap fishery under either the Commission's or Preferred Alternatives. Although this would limit the flexibility, and potentially the value, of these permits in the future, these permits are not considered part of the current Area 1 lobster trap fleet. Consequently, the Area 1 lobster trap fleet is not expected to experience any significant negative impacts to their fishing or business practices under the Preferred Alternative. As with the Commission's Alternative, any permits in CPH during the 2008 fishing year would not be eligible for future access into the Area 1 lobster trap fishery, however, that number may be less for the Preferred Alternative since it would consider those CPH permits that were activated after the control date.

The holders of permits that maintain Area 1 trap fishery eligibility under this alternative may experience increased permit value since the number of permits would be capped and they may yield economic benefits associated with an improved stock condition due to the restrictions on new trap effort into the fishery. Those whose permits do not qualify would likely endure loss of permit value since they would no longer have the opportunity to use the permit for Area 1 trap fishing in the future.

The impacts on the lobster resource, bottom habitat, protected resources and bycatch are essentially the same as those associated with the Commission's Alternative given the minimal allowance of 32 additional vessels into the Area 1 trap fishery. Rather than being conceived as adding additional effort, the Preferred Alternative captures the current effort in the Area 1 trap fishery. On balance, the Preferred Alternative is consistent with the Commission's intent to cap lobster trap fishing effort at current levels and would mitigate any negative impacts to the environment that could occur if no action was taken and trap levels remained unchecked.

1.0 ATLANTIC COASTAL ACT (ACA) AND ATLANTIC STATES MARINE FISHERIES COMMISSION MANAGEMENT MEASURES

1.1 Introduction

American lobster (*Homarus americanus*) is one of the most valuable fishery resources in the United States. The fishery occurs in both Federal waters and in the waters of the Atlantic coastal states. NOAA's National Marine Fisheries Service (NMFS) manages lobster for the Federal government and has primary jurisdiction over the species in waters 3 to 200 nautical miles from the shoreline (also known as the Exclusive Economic Zone (EEZ). The states with lobster fisheries (i.e., the states of Maine southward to North Carolina) manage lobster within the waters of their individual states, 0 to 3 nautical miles from shore. NMFS and the states manage lobster within the framework of the Commission[1]. The Commission, a deliberative body comprised of representatives from the states and the Federal government, develops fishery conservation and management strategies for various coastal species, including lobster, and coordinates the efforts of the states and Federal government toward concerted sustainable ends. The Commission's American lobster management strategy is based on facilitating ongoing adaptive management with necessary elements implemented over time.

Until the late 1990's, the Federal authority to regulate the lobster fishery was governed by the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). Under this legislative authority, the American lobster resource was managed by the New England Fishery Management Council (Council[2]) through a Fishery Management Plan (FMP) developed by the Council and approved by NMFS. NMFS, in turn, enacted Federal lobster regulations consistent with the Council's lobster FMP.

The Council-based management framework for American lobster began to change with the passage of the Atlantic Coastal Fisheries Cooperative Management Act (Atlantic Coastal Act[3]) in 1993. The Atlantic Coastal Act facilitated a state-oriented fishery management structure for to the Interstate Fishery Management Plan for American Lobster (ISFMP) in response to

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[1] The Atlantic States Marine Fisheries Commission was formed in 1942 by the 15 coastal states to improve interstate coordination the protection and management of marine fisheries resources. Member states are Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia and Florida.

[2] The fishery management council system was established by Congress under the Magnuson-Stevens Fishery Conservation and Management Act in 1976 to manage fisheries in a newly recognized exclusive economic zone (EEZ) between 3 and 200 miles offshore of the U.S. coastline. The Act established 8 regional fishery management councils which serve as decision-making bodies that develop and recommend specific management measures in the form of fishery management plans, subject to approval and implementation by NMFS.

[3] 16 U.S.C. 5101-5109; Title VIII of Pub. L. 103-206, as amended, (ACFCMA 1993).

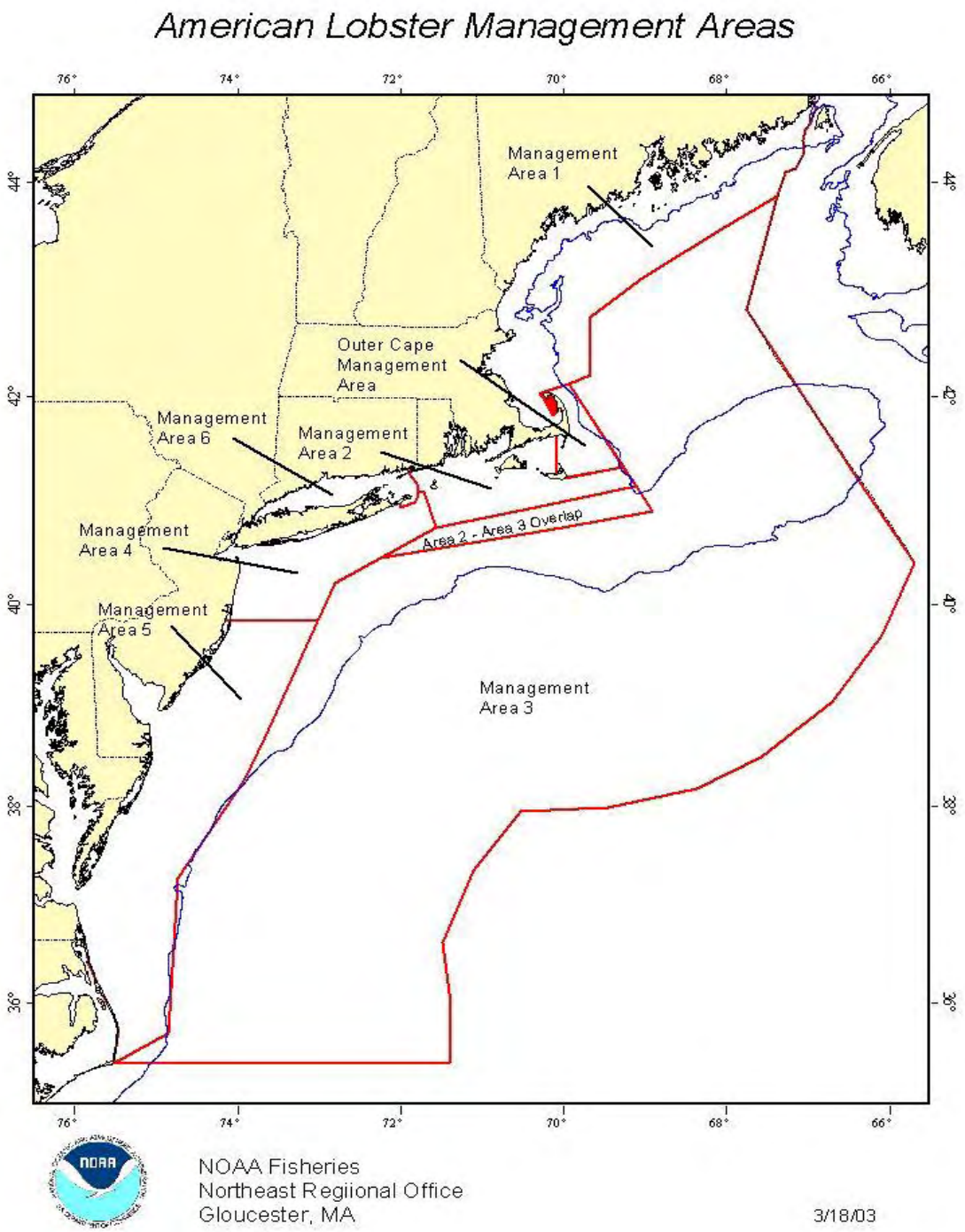
stock assessments and other information which may indicate a need for management action to sustain the lobster resource. The Commission prepares these actions on an ongoing, as-needed, basis in consultation with the states and the Federal government. Once new measures are approved through the Commission process, states implement and enforce them. In turn, under the Act, the Federal government is asked to implement management measures for the American lobster fishery that are consistent with and supportive of the actions of the Commission.

The Congressional rationale for altering the Federal management authority of the American lobster resource from the Magnuson-Stevens Act to the Atlantic Coastal Act was straightforward: since approximately 80 percent of the fishery occurs in state waters, NMFS could not ensure that the Federal FMP, which covered only Federal waters, could accomplish the requisite management objectives under the Magnuson-Stevens Act to prevent overfishing. What was needed, and what the Atlantic Coastal Act provided, was a regulatory structure that more realistically reflected the joint state-Federal nature of the resource and the need for cooperative and coordinated management. Under this coordinated regime, Federal management of the American lobster fishery is largely, although not exclusively, influenced by the management recommendations of the Commission.

The Commission set forth the foundation of its ISFMP in Amendment 3 in December 1997. The goal of Amendment 3 is to have a healthy lobster resource and a management regime that provides for a sustained lobster harvest, maintains appropriate opportunities for participation, and provides for cooperative development of conservation measures by all stakeholders. Amendment 3 established measures to directly address overfishing, including inshore trap limits and trap tag requirements.

This new era of lobster management under the Atlantic Coastal Act also was responsible for the establishment of seven lobster conservation management areas (LCMA's/Areas); Area 1 – Inshore Gulf of Maine (GOM); Area 2- Inshore Southern New England; Area 3 – Offshore waters; Area 4- Inshore Northern Mid-Atlantic; Area 5 – Inshore Southern Mid-Atlantic; Area 6 – New York and Connecticut State Waters (primarily Long Island Sound (LSI)); and the Outer Cape Cod Management Area (see Figure 1.1). All state and Federal management efforts since 1997 have been based on this LCMA-focused management structure. NMFS issued compatible regulations that complemented Amendment 3 in December 1999. A framework of more specific measures was built through the adoption of subsequent Amendment 3 addenda (I-XVI), which serve to address various issues including stock rebuilding, effort control, and other needs (See the Commission's website for more details at www.asmfc.org).

Figure 1.1 Lobster Conservation Management Areas and Lobster Stock Areas



Relevant to this action, the Commission adopted Addendum XV (Appendix 1) in November 2009 to address concerns for the potential escalation of lobster trap fishing effort in Area 1 since any Federal lobster permit may be designated for lobster trap fishing in that area, regardless of past participation. This Environmental Assessment (EA) evaluates the impacts associated with eligibility requirements established by the Commission to cap lobster trap fishing effort in Area 1. The three alternatives are discussed in Chapter 2 and evaluated in Chapter 4.

Under current Federal rules, any Federal lobster permit, regardless of past fishing practices, may be designated for trap fishing in lobster conservation management area 1 (LCMA 1, Area 1) (see Figure 1.1) which is predominantly reliant on the GOM Lobster Stock. Restrictions enacted to control fishing effort in other lobster management areas, and in other commercial fisheries, may increase lobster trap fishing effort in Area 1 while transfers of permits into this area remain unchecked and permit holders continually adjust their fishing practices in response to management measures. The potential for trap fishing effort shift into Area 1 may threaten GOM lobster stock stability and stock rebuilding efforts set forth in the Atlantic States Marine Fisheries Commission's (Commission) ISFMP, and the Commission's lobster management board, at the recommendation of the GOM lobster industry, has adopted measures into the ISFMP to cap and control trap fishing permits in Area 1.

To address industry concerns of increased fishing effort in Area1 the Commission adopted Addendum XV to Amendment 3 of the ISFMP in November 2009 which includes management measures to cap the number of Federal Area 1 trap permits at current levels and limit future participation in the Area 1 trap fishery to those Federal permits which qualify, based on eligibility criteria approved with the addendum. The purpose of this environmental assessment (EA) is to evaluate management alternatives in response to the Commission's recommendations for Federal action in Addendum XV to limit fishing effort in Area 1. Accordingly, the Commission's qualification criteria are evaluated in addition to two other alternatives. The eligibility criteria and various management alternatives are further discussed in Chapter 2 and their respective impacts evaluated in Chapter 4.

1.2 Purpose and Need

The purpose of this action is to evaluate management alternatives in response to the Commission's recommendations for Federal action in Addendum XV to limit fishing effort in Area 1. This action is needed to prevent overfishing and maximize the sustainability of the American lobster fishery.

Since Federal management of American lobster occurs in consort with state management, NMFS must take action in response to recently-approved state management measures that control effort within the lobster fishery. Specifically, the Commission's ISFMP seeks to limit entry into Area 1. Of the seven LCMAs only Area 1 remains open and accessible to all Federal

lobster permit holders. Commissioners and Area 1 permit holders alike are concerned that restrictions in these other LCMAs could cause a shift of trap fishing effort into Area 1, potentially flooding Area 1 with new fishers, upsetting local lobster stock stability, frustrating rebuilding efforts, and undermining existing social and cultural lobster fishing traditions in Area 1.

The management measures analyzed in this EA respond to the Commission's effort control measures in the other LCMAs generally and, in particular, the Commission's recommended Area 1 restrictions.

1.3 Cooperative Lobster Management Under the Atlantic States Marine Fisheries Commission

Generally speaking, Commission management strategy has fallen with two types of management actions: 1) broodstock measures, which focus on abundance and mortality issues and rely on limiting the size of the lobster that can be landed so that egg-producing females are protected; and, 2) effort-control measures, which have conservation benefits, but also focus on economic efficiency issues and rely on restrictions that limit access to the fishery through the number of permits and traps allowed. The Commission has passed addenda that establish various broodstock measures for the states and these measures either have been addressed already or will be addressed by NMFS through separate actions under the National Environmental Policy Act (NEPA) and the Federal rulemaking process – and, in particular, measures recently approved by the Commission limiting access to the Area 1 trap fishery.

Summary of Lobster Trap Fishery Limited Access Programs

The concept of controlling lobster fishing effort by limiting access to historical fishers is not new. The New England Fishery Management Council's Lobster FMP, and more recently, the Commission's ISFMP, includes several actions to control fishing effort and restrict the movement of Federal permits across management areas. Specifically, in 1994, NMFS generally limited access into the Federal lobster fishery to those who could document participation in the fishery before 1991 (59 FR 31943 – June 1994). Later, in August 1999, the Commission passed Addendum I, which limited access to the lobster trap fishery in LCMAs 3, 4 and 5 to only those who could document fishing history in those areas. Subsequent Commission addenda similarly attempt to control effort by limiting access to other LCMAs (see Figure 1.2). Area 1, in the GOM, was the last LCMA for which the Commission proposed to limit entry, and is the focus of this EA. More detailed information on these effort control programs is provided in Section 3.1 – Regulatory Environment.

Figure 1.2 Limited Entry Actions in the American Lobster Fishery

Area of Limited Entry	Commission Action	Corresponding Federal Action
EEZ	March 1994 – Amendment 5[4]	June 1994 (59 FR 31943)
Area 6 (Long Island Sound – state waters of CT/New York (NY))	1995 – by State Action	None
Area 3 (Offshore EEZ)	August 1999 – Addendum I	March 2003 (68 FR 14902)
Area 4 (Northern Nearshore Mid-Atlantic)	August 1999 – Addendum I	March 2003 (68 FR 14902)
Area 5 (Southern Nearshore Mid-Atlantic)	August 1999 – Addendum I	March 2003 (68 FR 14902)
Outer Cape Cod Area	February 2002 – Addendum III	Under analysis
Area 2	December 2003 – Addendum IV[5]	Under analysis
Area 1	November 2009 – Addendum XV	Focus of this EA

To date, NMFS has carried out an area-specific eligibility process in the Federal lobster fishery only for Areas 3, 4 and 5 with the publication of a final rule (68 FR 14902) on March 27, 2003. Area 3 is the largest lobster management area and is located exclusively in Federal waters. It begins on the eastern boundary of the nearshore lobster management areas, extending from the GOM to Cape Hatteras, North Carolina and out to the Hague Line (EEZ 200-mile limit). Area 3 overlaps all three lobster stock areas. Area 4 is the northern nearshore mid-Atlantic lobster management area, extending from east of Montauk, New York, southwesterly to mid-coast New Jersey and eastward to approximately 50 miles from shore. Area 5 is the southern nearshore mid-Atlantic lobster management area, extending from mid-coast New Jersey to Cape Hatteras, North Carolina and eastward approximately 60 miles from shore.

This rule was implemented to support measures recommended by the fishing industry and adopted by the Commission in the Addendum I to Amendment 3 of the ISFMP. The intent of

[4] New England Fishery Management Council document. This action occurred prior to the 1999 transfer of Federal lobster management to the Commission under the Atlantic Coastal Act.
[5] Addendum IV was rescinded and replaced by Addendum VI in February 2005.

the action was to cap and control fishing effort in these three management areas as part of an overall program to end overfishing and rebuild lobster stocks. The final rule included criteria, consistent with those established by the Commission in the ISFMP, to determine Federal permit holder eligibility in each specific management area. The criteria, which varied by area, included a minimum landings requirement (Area 3) and proof of participation of the historical number of traps fished, as well as proof that the vessel fished at least 200 traps in the area over a two consecutive month period. Ultimately, vessels were assigned individual trap allocations for each qualified area. The Area 4 and 5 programs established a trap limit, whereby no qualified vessel could fish more than 1,440 lobster traps. In Area 3, qualified vessels were capped at 2,656 traps with subsequent annual trap reductions bringing the maximum Area 3 trap limit to no more than 2,267 traps in 2006. In a subsequent rulemaking published in the Federal Register during October 2007 (72 FR 56935), additional annual trap reductions of 2.5 percent of each vessel's trap limit were imposed in Area 3. At the end of the reduction schedule, the trap limit for each vessel in that Area was reduced to no more than 1,945 traps as of July 1, 2010. Initial qualification for each area reduced the number of vessels eligible to fish to the following numbers of permits as shown in Figure 1.3.

Figure 1.3 Number of Qualified and Active Permits in LCMAs 3, 4 and 5

Limited Access Management Area	Total Permits Qualified 2006	Active Permits 2009[6]	Total Eligible Permits 2009[7]
Area 3	139	101	137
Area 4	81	68	80
Area 5	42	40	41

Federal Lobster Trap Limited Entry Programs Under Evaluation

In addition to limited entry in the Area 1 trap fishery as evaluated herein, NMFS is currently assessing the impacts of various alternatives associated with the Commission's recommendations for a limited entry program in Area 2 and the Outer Cape Cod Management Area based on historical participation. NMFS published a Draft Environmental Impact

[6] The 2009 values reflect the number of permit holders who selected Area 3, 4 or 5 during the 2009 Federal fishing year and represent a lower value than the current number of Federal permits eligible for these areas.
[7] Indicates the number of existing permit "histories" that qualify for each area. They have decreased slightly for each area since 2006 due to the voluntary relinquishment of the lobster permit due to permit consolidation.

Statement, in April 2010, to evaluate a program to cap and control fishing effort within these two management areas.

Currently, Federal regulations allow Federal lobster vessels to fish up to 800 traps in these areas and, similar to Area 1, any Federal lobster permit may be designated for trap fishing within these areas, regardless of past participation. The Commission established guidance regarding limited access programs in Addendum XII to Amendment 3 of the ISFMP, approved in February 2009. NMFS also recognizes the Commission's guidance for a trap transfer program for Area 2, the Outer Cape and Area 3. The Draft Environmental Impact Statement was published in April of 2010 with a proposed rule expected in mid-2012.

1.4 Commission Public Process –Generally

Typically, a public discussion of a potential Federal lobster action begins within the Commission process. Specifically, the Commission's Lobster Management Board (Lobster Board, Board) often charges its Plan Development Team or Plan Review Team sub-committees of the Lobster Board to investigate whether the existing ISFMP needs to be revised or amended to address a problem or need, often as identified in a lobster stock assessment. The Plan Review and Plan Development Teams are typically comprised of personnel from state and Federal agencies knowledgeable in scientific data, stock and fishery condition and fishery management issues. If a team or teams conclude that management action is warranted, it will so advise the Lobster Board, which would then likely charge the LCMTs to provide the Board with recommendations on industry-supported management options to address the problem or need. The LCMTs, most often composed of industry representatives, conduct a number of open public meetings wherein they develop a plan or strategy, i.e., remedial measures, in response to the Lobster Board's request. The LCMTs then vote on the recommendations and report the results of their vote back to the Lobster Board. Minutes of the LCMT public meetings can be found at the Commission's website at http://www.asmfc.org under the "Minutes & Meetings Summary" page in the American Lobster subcategory of the Interstate Fishery Management heading.

After receiving an LCMT proposal, the Commission's Lobster Board will often attempt to seek specialized comment from both the Lobster Technical Committee and Lobster Advisory Panel before the proposal is formally brought before the Board. The Technical Committee is composed of specialists, often scientists, whose role is to provide the Lobster Board with specific technical or scientific information. The Advisory Panel is a committee of individuals with particular knowledge and experience in the fishery, whose role is to provide the Lobster Board with comment and advice. Minutes of the Technical Committee and Advisory Panel can be found at the Commission's website at http://www.asmfc.org under the "Minutes & Meetings Summary" page in the American Lobster subcategory of the Interstate Fishery Management heading.

Upon receipt of sub-committee advice, the Lobster Board debates the proposed measures in an open forum whenever the Board convenes (usually four times per year, one time in each of the spring, summer, fall and winter seasons). Meeting transcripts of the Lobster Board can be found at the Commission's website at http://www.asmfc.org under "Board Proceedings" on the "Minutes & Meetings Summary" page in the American Lobster sub-category of the Interstate Fishery Management heading. These meetings are typically scheduled months in advance and the public is invited to comment at every Board meeting. In the circumstance of an addendum, the Board will vote on potential measures to include in a draft addendum. Upon approving a draft addendum, the Lobster Board will conduct further public hearings on that draft addendum for any state that so requests. After holding the public hearing, the Lobster Board will again convene to discuss the public comments, new information, and/or whatever additional matters are relevant. After the debate, which may or may not involve multiple Lobster Board meetings, additional public comment and/or requests for further input from the LCMTs, Technical Committee and Advisory Panel, the Lobster Board will vote to adopt the draft addendum and recommend the Federal Government to implement compatible regulations.

1.5 The Commission Public Process – Addendum XV

In the process of completing its limited access programs for Area 2 and the Outer Cape Cod LCMAs, the Lobster Board became concerned that restrictions in those and other fisheries might cause effort to shift into Area 1, which was at that time the only LCMA open to any person with a Federal lobster permit. Accordingly, the Board convened the Area 1 LCMT to discuss the problem. The LCMT met on January 15, 2008 and again on March 25, 2008 in Portsmouth, New Hampshire to discuss the problem in more detail. The LCMT agreed that the potential for effort shift in to Area 1 existed and that action was needed. The LCMT voted at their March 25, 2008 meeting to create a sub-committee to analyze the possibility of limiting access to Area 1.

During the May 2008 Board meeting, Board delegates from Maine and Massachusetts reported on the progress of the sub-committee, indicating that the sub-committee was in the process of determining a common denominator data element to represent eligibility for the Area 1 trap fishery. Past history-based participation programs have used landings data for determining historic participation. However, knowing that such reporting requirements are not consistent across all Area 1 fishermen, the sub-committee reported that other indicators, such as trap tag purchases, may need to be explored. The sub-committee met three times prior to August 2008.

Later, in October 2008, the Lobster Board heard an update on the progress of the sub-committee. It was reported that the group unanimously agreed upon a purpose and need for the action which is to develop a program to limit entry into the Area 1 lobster trap fishery and

restrict entry of permits into Area 1 within the Federal permit process as well as to restrict the change-over of non-trap permits into the trap fishery. Additionally, the group agreed that the process should allow for the transfer of eligible Area 1 permits, while maintaining cultural and historic participation.

At its October 2008 meeting the Board moved to initiate the development of an addendum to the ISFMP to include options for a limited entry program for Area 1 and request publication of a control date by NMFS, a date which may be used to affect future participation in the fishery. The eligibility criteria included the use of trap tags as a means of determining eligibility since all Federal lobster permit holders with active participation in the trap fishery are required to purchase and affix trap tags to all traps. The Board attempted to implement a a control date retroactively (i.e., looking to the past and picking a date that had already passed), but in the process of deliberating this at the public meeting, it was determined that such a date should likely come from NMFS since it would affect Federal lobster permits. As a result, the Commission requested that NMFS establish a control date, which NMFS did in a Federal Register notice on January 2, 2009 (Appendix 2). This January 2, 2009 date serves as the Control Date deadline for Alternative 2, which is discussed later in Chapter 2 of this EA. This EA also analyzes a deadline date that is approximately four (4) months after Federal Register Notice in Alternative 3, which is also discussed in greater detail in Chapter 2 of this EA.

In May 2009, the Area 1 sub-committee reported that it had met in April, 2009 to finalize their recommendations for limited entry in Area 1. The group had unanimously agreed upon the criteria for the eligibility program and presented a motion to the management Board recommending that the Board take action to implement the program to cap trap permits in Federal waters of Area 1 by implementing a qualification process for Federal permit holders to obtain authorization to maintain the permit. At the May 2009 Board meeting, the Board voted to begin the development of a draft addendum to cap permits to fish traps in the Federal waters of Area 1 by requiring a qualification process for Federal permit holders to obtain authorization to maintain LCMA 1 permits: A. Federal permit; B., proof of Area 1 designation as of January 2, 2009; and, C.; appropriate trap tag orders for Area 1 for any one of the years from 2004-2008, as of January 2, 2009; including the consensus recommendations to cap permits by not reduce the number of permits in Area 1 and continue to allow Area 1 permits to be transferred [8].

The sub-committee, during their discussions, had initially considered a very short two-year eligibility period and also consideration of military and medical exemptions. However, during their discussions, they decided that such exemptions were hard to characterize and might engulf the proposal, so they decided not to include such. The sub-committee also made clear that

[8] Paraphrased from the minutes of the ASMFC Lobster Management Board meeting , May 2009, Alexandria, VA.

the intent of the program is to cap, but not reduce, the number of Area 1 trap permits, and to maintain the ability to transfer Area 1 permits within Area 1.

At the next Board meeting in August 2009, the Board voted to move the draft addendum, now called Addendum XV, out for public comment (Appendix 3, ASMFC Comment Summary for Draft Addendum XV).

In November 2009, after hearing the public hearing comments, the Board approved Addendum XV and it was adopted as part of the ISFMP. No specific state action was required since the action pertains only to the qualification of Federal Area 1 lobster trap permits. The Board; however, did move to require Area 1 states to provide trap tag purchase information to NMFS by February 2010 to facilitate the use of trap tag purchase data as a means of determining eligibility.

1.6 Relevant Federal Actions

Advance Notice of Proposed Rulemaking and Area 1 "Control Date"

NMFS published an Advance Notice of Proposed Rulemaking (ANPR) in the Federal Register on January 2, 2009 (74 FR 67). The ANPR informed the public that the agency had begun considering development of new rules to limit or restrict future access to the American lobster trap fishery in Area 1 based upon prior Area 1 trap fishing history. It further served to recommend that those participants in the fishery locate and preserve records to substantiate Area 1 trap fishery participation prior to the publication date of the notice, known as a control date, and to caution new participants into the fishery that they may be restricted from fishing in Area 1, depending upon the limited access criteria developed, should NMFS initiate new rules to limit entry.

The ANPR further served to solicit public comment on the issue of limited entry into the Area 1 lobster trap fishery. The document points out that although the publication date serves as a control date, it does not guarantee eligibility for those participants prior to the date, nor does it mean that NMFS is obligated to consider those participants outside the date and it NMFS may choose not to use that date or could choose a different date.

Proposed Rule for Area 1 Lobster Trap Limited Entry Program

We published a proposed rule in the Federal Register on November 18, 2011 (76 FR 71501), and solicited public comments through January 3, 2012. The proposed rule supported the implementation of a limited entry program for the Area 1 lobster trap fishery consistent with the recommendations by the Commission in Addendum XV. The proposed program

requirements are consistent with the preferred alternative (Alternative 3) analyzed in this EA. The preferred alternative and proposed rule differ from the Commission's Addendum XV recommendations only in that they would extend the qualification period cut-off date from January 2, 2009, to April 30, 2009, which expands the eligibility period by four months to coincide with the 2008 Federal Fishing Year (May 1, 2008-April 30, 2009) . The full description of the eligibility criteria is provided in Section 2.2.3: Alternative 3 – Preferred Alternative. The analysis of the preferred option is provided in Section 4.3: Modified Commission Alternative – Preferred.

We received 18 comments in response to the proposed rule. The majority of the respondents favored the preferred alternative including the state marine fisheries agencies from Maine, New Hampshire, and Massachusetts, the Commission, and the Maine and Massachusetts Lobstermens Associations. A full summary of the comments and the responses are provided in the Final Rule for this action.

1.7 Regulatory Environment

Specific regulatory elements regarding Federal fishery permits as they relate to this rulemaking action are discussed here to provide sufficient background information to prepare the reader for the subsequent analysis and discussion in the document. This section summarizes the Federal actions taken which are relevant to the Area 1 limited entry discussion.

Federal Lobster Moratorium Permits

Until the late 1990's, the American lobster resource in Federal waters was managed under the authority of the Magnuson-Stevens Fishery Conservation and Management Act through the American Lobster Fishery Management Plan enacted by the New England Fishery Management Council (NEFMC) (see section 1.1). During this period, with increasing concerns of the stability of the lobster stock, the NEFMC adopted a provision in Amendment 5 to the FMP to implement a five-year moratorium on the issuance of Federal lobster permits. This created a limited access fishery for American lobster in Federal waters for the first time, while previously, any vessel could apply for and obtain an open access permit to fish for and possess lobster in the EEZ. In 1994, NMFS implemented regulations (59 FR 31938; June 21, 1994) to require any open access permit holder interested in maintaining lobster fishing privileges in the EEZ to submit proof of the commercial sale of at least one pound of lobster as of March 25, 1991, to document their history as a Federal lobster fisherman. Ultimately, this qualification process established a known universe of approximately 5,000 Federal limited access lobster permits for all gear types combined. In an effort to cap participation in the lobster fishery to further augment conservation of lobster stocks, the moratorium on new permits was extended indefinitely in a rulemaking published in December 1999 (64 FR 68228) as part of the action to

transfer management authority for Federal lobster management from the Magnuson-Stevens Act to the Atlantic Coastal Act.

Since the initial implementation of the lobster permit moratorium, the total pool of permits has decreased to approximately 3,200 permits due to many factors. Primarily, some are lost each year due to non-renewal. All limited access permits must be renewed at some point during each Federal fishing year (May 1 – April 30) to remain eligible, and those permits which are not renewed are no longer eligible for participation in the lobster fishery and are permanently removed from the pool of active, eligible Federal lobster permits. In other words, a limited access Federal permit, such as a lobster permit, must be renewed at some point during the permit year. Otherwise, it is no longer a valid permit and the permit holder loses the permit and all history and fishing rights associated with the permit are cancelled.

Consolidation is another reason for the decrease in overall permits. Consolidation occurs when the Federal permits from one vessel are transferred[9] to another vessel which already holds some of the same limited access fishery permits. A vessel may not possess more than one limited access permit from the same fishery and therefore may not combine both permits into one permit, known as "stacking." One of the limited access permits must be eliminated in the process. For example, the vessel's permits may include limited access multi-species, lobster, and scallop histories that are inextricably linked to one another, and may not be separated. If these permits are transferred to another vessel which also has a limited access lobster permit (the buyer may be interested in the multi-species and scallop permits, but must also purchase the lobster history) one of the lobster permit histories must be cancelled. Therefore, if a limited access lobster permit is transferred with other permits to another vessel which already holds a limited access lobster permit, one of the lobster permits must be vacated or dropped as a result of the marriage of the two permits. This requirement has led to the elimination of many Federal limited access lobster permit histories since the moratorium on the issuance of Federal lobster permits was initiated, as the transfer of permits is a common practice among Federally-permitted fishermen.

Federal Permit Renewal Process

Federal regulations require Federal permits to be renewed prior to the end of each Federal fishing year to maintain their status as eligible, active permits. Those permits that are not renewed during the fishing year become ineligible and are negated; removed indefinitely from the pool of active eligible Federal fishing permits.

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[9] Certain limited access permits, such as the multispecies permit, have vessel length and horsepower upgrade restrictions which limit the percent increase in length and horsepower of the replacement vessel as compared to the initial vessel. The upgrade provisions are intended to limit increased fishing capacity on the regulated fishery as a result of a permit transfer or vessel upgrade. See § 697 (Insert appropriate regulatory citation).

All Federal permit holders are mailed a copy of a Federal permit renewal packet, usually during January or February of each year. The packet includes detailed instructions for permit renewal as well as a pre-printed renewal application which details the information included in the most recent permit issued to the vessel. During the renewal process, permit holders may make changes to the selections on the permit application, as allowable, to reflect their intended fishing practices for the coming year. Such changes may include the addition or deletion of open access permits (permits that can be obtained without prior proof of participation or fishing history), changes to the gear types used in the prosecution of each fishery, and updates to vessel and permit holder information.

Federal limited access permits are subject to a "renew or lose" requirement, meaning that the permit must be renewed each fishing year in order to be eligible for renewal in subsequent years. Although the Federal fishing year begins May 1, the permit holder has until the end of the fishing year, April 30 of the following calendar year, to renew the permit in order to maintain the permit as eligible for use. However, the permit is not valid for fishing until it has been renewed by the permit holder and processed by NMFS (see discussion on moratorium permits in the previous section).

Change in Ownership

Federal fishery permits may not be bought or sold without a vessel. That is, a Federal permit holder may sell his fishing permits, but they must be sold while "attached" to a vessel. At such time as the seller takes possession of the vessel and permits, he may choose to transfer the permit history (i.e., permits) to another vessel in compliance with any relevant length or horsepower upgrade restrictions which may exist for the suite of fishing permits attached to the permit holder's vessel.

The fishing and permit history of a vessel is presumed to transfer with the vessel whenever it is bought, sold, or otherwise transferred. A permit holder may remove the permit history from his vessel and sell the vessel without the permits. The permit history may be transferred to an eligible replacement vessel or kept in Confirmation of Permit History (CPH), remaining in eligible but inactive status while the permit holder obtains a replacement vessel.

Confirmation of Permit History

As set forth in the Federal fishery regulations at § 648.4 (a)(1)(i)(J), and in the Federal lobster regulations at § 697.4 (a)(5), a person who does not currently own, but who has owned a qualifying vessel that has sunk, been destroyed, or transferred to another person must apply for and receive a CPH if the fishing and permit history is lawfully valid. An application must be received no later than 30 days prior to the end of the first full fishing year in which a vessel

permit cannot be issued. The issuance of a valid CPH preserves the permit's fishing history as it existed at the time the permit went into CPH. A permit in CPH, however, would not accrue additional fishing history while in CPH because the permit is inactive during that time. In other words, while CPH will preserve a permit so that it does not lose history previously accrued, it does not follow that permits in CPH can somehow gain fishing history whilst inactive. In short, CPH is a place to store an inactive permit; it is not a mechanism to exempt or excuse permits from future regulations that require a showing of fishing activity during that inactive time.

Vessel Replacements

The owner of a vessel issued a moratorium or limited access Federal fishery permit may replace the vessel no more than once each fishing year. The sole exception to this is lobster permits which may be replaced without restriction throughout the Federal fishing year. Some Federal moratorium permits such as multispecies (groundfish) have horsepower and length restrictions, which limit the increase in the replacement vessel's length and horsepower with respect to the original vessel. There are no limitations on increased length or horsepower for a replacement of a vessel assigned only a Federal lobster permit and no other permits. However, if the vessel's permit portfolio also includes a multispecies permit or other limited access Federal permit with upgrade restrictions, then those restrictions apply to the replacement vessel.

Lobster Trap Tagging Requirements

A final rule published in 1999 (64 FR 68228) established the lobster conservation management areas (Appendix 4, Lobster Conservation Management Areas), required all vessels fishing with trap gear to designate a lobster management area(s) on the Federal permit where they intend to fish with lobster traps, and mandated the purchase of a lobster trap tag for the purposes of gear identification and to facilitate the enforcement of static, LCMA-based, trap limits.

Since the states were already required under the Commission's plan to implement a trap tagging requirement under Addendum I of the Commission's ISFMP, and since nearly all Federal lobster fishers also hold either a fishing or a landing license for a specific state, NMFS took action to cooperate with the states and streamline the trap tagging requirements. Consequently, NMFS entered into agreements with the marine fisheries agencies of the five coastal New England states to facilitate the joint issuance of lobster trap tags to dual (state and Federal) lobster permit holders. These so-called memoranda of understanding (MOU) allowed the states to take the lead in issuing trap tags to their respective state licensees who also hold Federal lobster permits and allow the state-issued tags to satisfy both state and Federal trap tagging requirements. The states and NMFS established a data-sharing processes to ensure that trap tags were issued only to those Federal permit holders who had renewed their Federal lobster permit for the current fishing year and to check that a number of trap tags based on the most

restrictive of either state or Federal trap limits, or the most restrictive trap limit of all the areas on the Federal permit, were authorized.

The MOUs have been successful in helping to enforce trap limits and have established a common identifier for state and Federal permits since states, through the use of the MOUs have agreed to include the Federal permit number in their trap tag lists. The trap tag data, over time, becomes increasingly important as an indicator of active trap fishing on an LCMA basis, particularly as NMFS, in concert with the Commission, evaluates measures to limit entry into various LCMA's based on past participation. A coast-wide interjurisdictional trap tag database is currently under development to foster the issuance of trap tags, with the intent to provide easy access to trap tag data for management purposes.

Federal Lobster Landings Data Collection

Federal lobster permit holders are required to submit landings reports, called Federal Vessel Trip Reports (VTRs), to the Federal government only if they also hold another Federal fisheries permit, such as a multispecies permit, which requires reporting. Federal lobster permit holders with no other Federal permits are not required to submit VTRs to show landings. Of the 3,152 Federal lobster permit holders, 1,930 distinct vessels, about 61 percent of all Federal lobster vessels, submitted VTRs during the 2008 Federal fishing year. Of these, 787 vessels had an Area 1 trap gear designation on their 2008 Federal lobster permit; about 42 percent of all vessels with an Area 1 permit in the 2008 fishing year.

Addendum X to Amendment 3 of the Commission's ISFMP mandates vessel harvest reporting for 10 percent of vessels (ASMFC Addendum X, February 2007). Recognizing the inconsistent reporting requirements across the industry, the Commission's Lobster Management Board elected to use trap tag purchases as an indicator of an "active" Federal lobster permit in Addendum XV for the purposes of determining Area 1 eligibility since the trap tag requirement is a long-standing requirement for all participants of the lobster trap fishery and consistently applied along the coast.

Northeast Multi-species (Groundfish) Sectors Management Program

One reason the Commission and the Area 1 lobster trap industry initiated the development of Addendum XV was to prevent a shift in effort from the non-trap sector to the trap gear sector. Many Federal groundfish vessels also hold Federal lobster permits and the majority of these vessels fish predominantly for groundfish with non-trap gear and are allowed to keep a bycatch of lobster. In the wake of landings restrictions for groundfish, some in the lobster trap industry became concerned that these vessels may switch over to the Area 1 lobster trap fishery to adjust for groundfish controls. This concept is evaluated in Chapter 4 with respect to the Commission's Alternative (Section 4.2) and the Preferred Alternative (Section 4.3). This

section is intended to provide the reader with some background information on the groundfish sectors program to assist in understanding the potential impacts associated with Federal lobster and multispecies permits as they relate to the various management options for the Area 1 trap fishery.

The fishery for cod, haddock, flounders and other bottom-dwelling fishes, collectively known as groundfish, has long been the backbone of the traditional New England commercial fishing industry. The fishery has been managed for decades by the New England Fishery Management Council under a single management program known as the Northeast Multispecies Fishery Management Plan (Multispecies Plan). The sustainable management of the groundfish resource has been challenging for fishermen and managers alike and up until the late 2000's each stock was managed by setting an overall quota for harvest by vessels assigned a specific number of days at sea with trip limits to catch their fish. The number of days at sea assigned to each vessel was derived from the vessel's historical groundfish landings. With groundfish stocks failing to respond to this management approach, a new way of sustaining the fishery was needed.

A small group of New England fishermen approached the Council with a novel approach to managing groundfish that allows fishermen to consolidate portions of the groundfish quota and manage it as a sub-unit of the overall quota. These groups, known as Sectors, were developed in 2004 as a way to allow interested groups of fishermen to opt for quota-based management in place of an effort-control management regime without a mandatory transition to quota-based management for the entire fishery. This allowed a dual management system for the Northeast multi-species fishery; a fishery that was not yet ready for a complete conversion to a catch share method of management. In 2004 a single sector was approved, formed by a group of small-boat hook fishermen from Cape Cod that targeted Georges Bank cod. This was the archetypal sector formed by a self-selected group that was already working together to address common concerns. A second similar sector formed in 2006.

The New England Fishery Management Council (Council) allowed vessels to form sectors of their own choosing. Such self-selected sectors might be based on common fishing practices, vessel characteristics, community organization, or marketing arrangements, but this was not required and the program offered a great deal of flexibility in the formation of sectors. One of the major benefits of self-selecting sector is that they provide incentives to self-govern, therefore, reducing the need for Council-mandated measures. They also provide a mechanism for capacity reduction through consolidation.

In 2010 Amendment 16 to the Federal Multi-species Fishery Management Plan implemented annual catch limits (ACL), accountability measures (AM), and reduced effort on some stocks up to 100 percent to end overfishing and/or rebuild overfished stocks in the mandated rebuilding time. The use of effort-controls in a multispecies fisher, including limiting

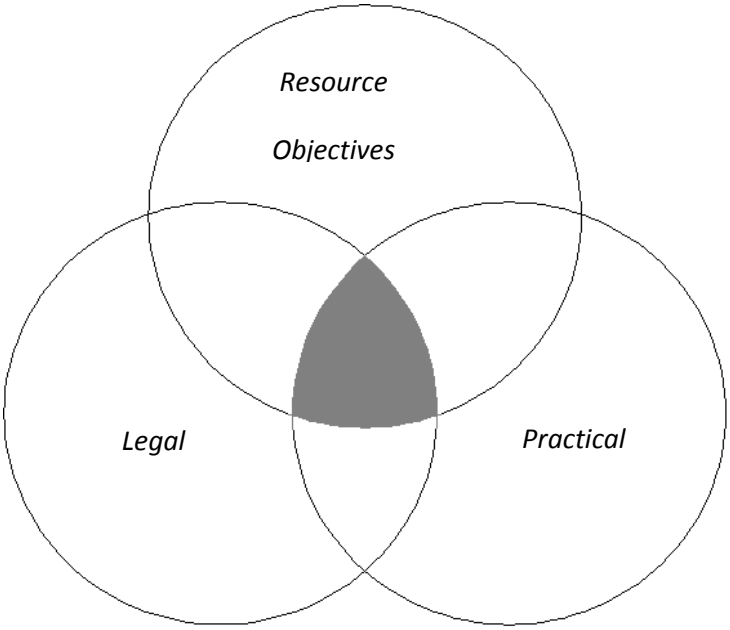
days-at-sea of each vessel, meant that the necessary effort and mortality reductions would dramatically curtail fishing. Amendment 16 extensively revised and expanded the use of sectors to mitigate (to the extent possible) the economic impacts. Amongst the changes were expanded requirements for sector operations plans, including detailed monitoring systems. Sector vessels are also granted a number of exemptions from existing effort control regulations in exchange for constraining catch to their allocated quotas. Seventeen sectors are now in operation, encompassing nearly half of the limited access northeast multispecies permits and over 90 percent of historical groundfish landings. Those groundfish vessels that did not join a sector are subject to trip limits drawing from the balance of the overall quota, or roughly 10 percent of the quotas for groundfish species, known as the common pool. Nearly half of all Federal groundfish vessels (714 of 1,473) participate in the common pool sector.

2.0 MANAGEMENT MEASURES AND ALTERNATIVES

2.1 Introduction

Any potential Federal lobster management action is bound by three categories of considerations: 1) resource objectives; 2) legal mandates; and, 3) practical/managerial considerations. The three categories relate to one another in a manner similar to the way that circles interact in a Venn diagram (Figure 2.1). That is, each category contains measures which do and do not overlap with measures in other categories. The Federal Government strives to focus its resources on those measures common to all categories (e.g., the shaded area in the Venn diagram).

Figure 2.1. Venn Diagram of Lobster Management Considerations



The first consideration, which is illustrated in the top circle in the Venn diagram schematic, involves resource objectives. Generally, NMFS and the states seek to end overfishing of lobster and restore the fishery to sustainable levels. The Commission set forth its resource objectives more specifically in its ISFMP.[10]

The second category, which is shown as the left circle in the Venn diagram, involves legal mandates. Specifically, the Atlantic Coastal Fisheries Cooperative Management Act (Atlantic Coastal Act) mandates that NMFS support the management efforts of the Commission. The Atlantic Coastal Act also requires that NMFS regulations, to the extent that it issues regulations, must not only be compatible with the Commission lobster ISFMP but also must be consistent with the ten National Standards articulated in the Magnuson-Stevens Act.[11]

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[10] The plan's overall objectives were set forth in Amendment 3. They are as follows:

(1) Protect, increase or maintain, as appropriate the brood stock abundance at levels that would minimize risk of stock depletion and recruitment failure;
(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; 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.

[11] The 10 National Standards are:

(1) Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry.
(2) Conservation and management measures shall be based upon the best scientific information available.
(3) To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.
(4) Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be: (A) fair and equitable to all such fishermen; (B) reasonably calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.
(5) Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.
(6) Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.
(7) Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.
(8) Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to: (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.
(9) Conservation and management measures shall, to the extent practicable: (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.
(10) Conservation and management measures shall, to the extent practicable, promote the safety of human

Additionally, any potential Federal lobster management action must not violate other NMFS trust responsibilities, such as for other species managed under other statutory mandates, including the Endangered Species Act, Marine Mammal Protection Act and Magnuson-Stevens Act.

The third general category, which is depicted as the right circle in the Venn diagram, involves practical/managerial considerations. Specifically, the potential Federal lobster management action must be feasible. In other words, it is impractical to consider taking actions that are unrealistic, even if those actions might hypothetically achieve resource goals without violating legal mandates. Such actions might include those which are deemed unenforceable or irreconcilably constrained by administrative or budgetary restrictions.

2.2 Scope of This Environmental Assessment and Summary of Management Alternatives

The scope of this EA is the issue of capping lobster trap fishing effort in Area 1 in consideration of the eligibility criteria set forth in Addendum XV to Amendment 3 of the Commission's Lobster ISFMP. Adopted by the Commission in November 2009 and based on the recommendations of the Area 1 LCMT, Addendum XV identifies qualification criteria to facilitate the control of lobster trap fishing effort in Area 1. This chapter describes three alternatives which are further analyzed in Chapter 4. The alternatives include a status quo alternative, adoption of the Commission's eligibility criteria, and a third option which slightly modifies and liberalizes the Commission's alternative. A full description of the purpose and need for action is provided in Chapter 1. A brief description of the eligibility requirements for each alternative is provided below and summarized in Figure 2.2.

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life at sea.

Figure 2.2. Summary of Qualification Criteria by Alternative

Alternative	Area 1 Trap Fishery Eligibility Criteria by Alternative		
	Permit Requirement	**Permit Renewal Requirement**	**Trap Tag Requirement**
Alt 1 (Status Quo)	Possession of a valid Federal limited Access Lobster Permit	Annual Renewal with A1 Designation	None needed to qualify but need tags to fish traps
Alt 2 (Commission Criteria)	Possession of a valid Federal limited Access Lobster Permit	Renewed with Area 1 Designation by January 2, 2009 for 2008 Fishing year	Purchased any number of tags for Area 1 in any year 2004-2208, inclusive
Alt 3 (Liberalized Commission Criteria)	Possession of a valid Federal limited Access Lobster Permit	Renewed with Area 1 Designation at any time during 2008 Fishing Year*	Purchased any number of tags for Area 1 in any year 2004-2008, inclusive

*2008 Fishing year ran from May 1, 2008 through April 30, 2009.

2.2.1 Alternative 1: Status Quo

With this alternative, NMFS would not take action to adopt the Commission's recommendations in Addendum XV to qualify permits for future access into the Area 1 trap fishery, based either on the established Commission criteria or by any other means. No management measures would be implemented to control the transfer of Federal lobster permits into Area 1 from other areas or to cap effort at current levels. Also, no action would occur to curb the ability of Federal lobster permit holders, whose vessels historically fished with non-trap gear, from designating Area 1 for trap gear on their permit and deploying lobster traps in Area 1.

With the status quo alternative, any holder of a Federal lobster permit would have the option to designate Area 1 for trap fishing on the permit, as permissible under the current Federal regulations, regardless of whether the permitted vessel or the permit history had any past participation in the Area 1 lobster trap fishery. Federal permit holders with state lobster licenses, however, would be bound to any state regulations that would otherwise prohibit their ability to fish in Area 1 with traps or land and possess lobster in state waters which was legally harvested in the EEZ.

2.2.2 Alternative 2: Commission's Alternative

Adoption of the Commission's Alternative would require NMFS to implement regulations to cap the number of Area 1 lobster trap permits based on the criteria set forth in Addendum XV.

The criteria set forth in Section 4 of the Addendum are:

A. Possession of a valid Federal American Lobster permit;
B. Proof of LCMA 1 designation on the Federal permit as of January 2, 2009[12]; and,
C. Proof of purchase of lobster trap tags for Area 1 for any one fishing year between the fishing years 2004 through 2008 as of January 2, 2009.

Rationale

Under this option, NMFS would determine which Federal lobster permits were active and designated for Area 1 as of the January 2, 2009 control date. The control date is based on the date of publication of the Advance Notice of Proposed Rulemaking (ANPR) which served as the first notification to the public by the Federal government that NMFS was considering a limited entry program in Area 1. The qualification cut-off of January 2, 2009 falls within the middle of the 2008 Federal lobster fishing year. With this option, NMFS would select the permits that had been actively renewed by the permit holder for the 2008 fishing year and had an Area 1 trap gear designation on them. Other permits that were not renewed by January 2, 2009 (although potentially eligible for renewal as all Federal permits must be renewed during some point in the Fishing Year or else they are invalid for renewal) would not qualify under this option.

Permits renewed for Area 1 by the control date would be checked for trap tag purchases as per criterion C and if a record exists that tags were purchased for the permit in any one year between 2004 and 2008, inclusive, then the permit would meet the eligibility requirements for future participation in the Area 1 lobster trap fishery. Once the universe of eligible permits is established, only those permits would be eligible to elect Area 1.

2.2.3 Alternative 3: Preferred Alternative

This option expands the time period for consideration of an eligible Area 1 Federal lobster permit to include the entire 2008 Federal fishing year, as opposed to only the period during the fishing year up until the January 2, 2009 control date, as proposed in Alternative 2, the Commission's Alternative. While Criteria A and C don't change, under Alternative 3, a Federal lobster permit would meet the requirements under Criterion B. of Addendum XV if the permit

[12] January 2, 2009 is the date of publication for an Advance Notice of Proposed Rulemaking in the Federal Register (74 FR 0067), known as the control date, and the first time NMFS informed the public that a limited entry program for the Area 1 trap fishery was being considered.

was renewed at any time during the 2008 fishing year, from May 1, 2008 through April 30, 2009. Essentially, the distinction between this option, Alternative 3, and the Commission's option, Alternative 2, is that the Commission's option considers permits that were renewed for the 2008 permit year through the control date, January 2, 2009, and not the entire Federal fishing (Federal permit) year. Conversely, Alternative 3 expands the Area 1 permit renewal requirement (Criterion B in Addendum XV) to include the entire permit year; through April 30, 2009.

Alternative 3 remains consistent with the Commission's Alternative with respect to Criterion A., possession of a valid Federal American lobster permit, and Criterion C., the trap tagging requirement, requiring such permits to be associated with a trap tag purchase for the associated vessel during at least one of the years between 2004 through 2008, inclusive.

Rationale

When the Commission drafted Addendum XV, the intent was to cap effort and permits in Area 1 at current levels. Ensuring this outcome requires action to prevent those permits previously linked with vessels in areas outside of Area 1 and the potential trap effort associated with them, from migrating into the Area 1 fishery, as well as the conversion of non-trap fishing effort into trap fishing effort.

The ANPR cautions the industry that NMFS is considering action to limit fishing in Area 1 based on prior participation and that any further activity or investment in the Area 1 trap fishery may not necessarily be consider with respect to the future eligibility of the vessel for the Area 1 trap fishery should Federal action be taken. The control date falls within the middle of the permitting year when some permits that may have previously been Area 1 trap permits may not have been renewed for the 2008 fishing year, although they would still have, under Federal regulations, remained eligible for renewal until the end of the fishing year on April 30, 2009. Therefore, this option would allow any Federal lobster permit that was valid for Area 1 trap fishing at any time during the 2008 fishing year to meet the requirements for Criterion B of Addendum XV. Once that test is met, then the permits must also meet the tag purchase requirements for Criterion C. Also, this option would allow Federal permits in confirmation of permit history (CPH) to qualify if they also had a trap tag purchase history.

3.0 AFFECTED ENVIRONMENT

The Chapter 3 sub-sections that follow describe the valued ecosystem components (VECs) that represent the scope of the alternatives. These include the three American lobster stocks and the associated biological, physical, and socioeconomic environment and the protected resources inhabiting both nearshore and offshore LCMAs. Other aspects of the human environment are not addressed in this EA because only the listed VECs have the potential to be measurably affected by the alternatives. The impacts of the alternatives on the VECs are discussed in detail in Section 4.0 Environmental Consequences – Analysis of Impacts.

3.1 American Lobster Resource

3.1.1 Status of the American Lobster Stocks

The United States (U.S.) lobster resource occurs in continental shelf waters from Maine to North Carolina[13]. The most recent peer-reviewed stock assessment for American lobster, published by the Atlantic States Marine Fisheries Commission (ASMFC) in 2009, identifies the status of the three biological stock units, delineated primarily on the basis of regional differences in life history parameters, such as lobster distribution and abundance, patterns of migration, location of spawners, and the dispersal and transport of larvae. These stock units are the GOM, Georges Bank (GBK), and Southern New England (SNE) (Figure 3.1).[14]

The U.S. lobster fishery is conducted in each of the three stock units – GOM, GBK, and SNE. While each area has an inshore and offshore component, GOM and SNE areas support predominantly inshore fisheries and the GBK supports a predominantly offshore fishery. The GOM stock is primarily fished by fishermen from the states of Maine, Massachusetts, and New Hampshire. The GBK stock is primarily fished by fishermen from Massachusetts and Rhode Island. The SNE stock is primarily fished by fishermen from the states of Connecticut, Massachusetts, New York, and Rhode Island, with smaller contributions from the states of New Jersey, Delaware and Maryland.

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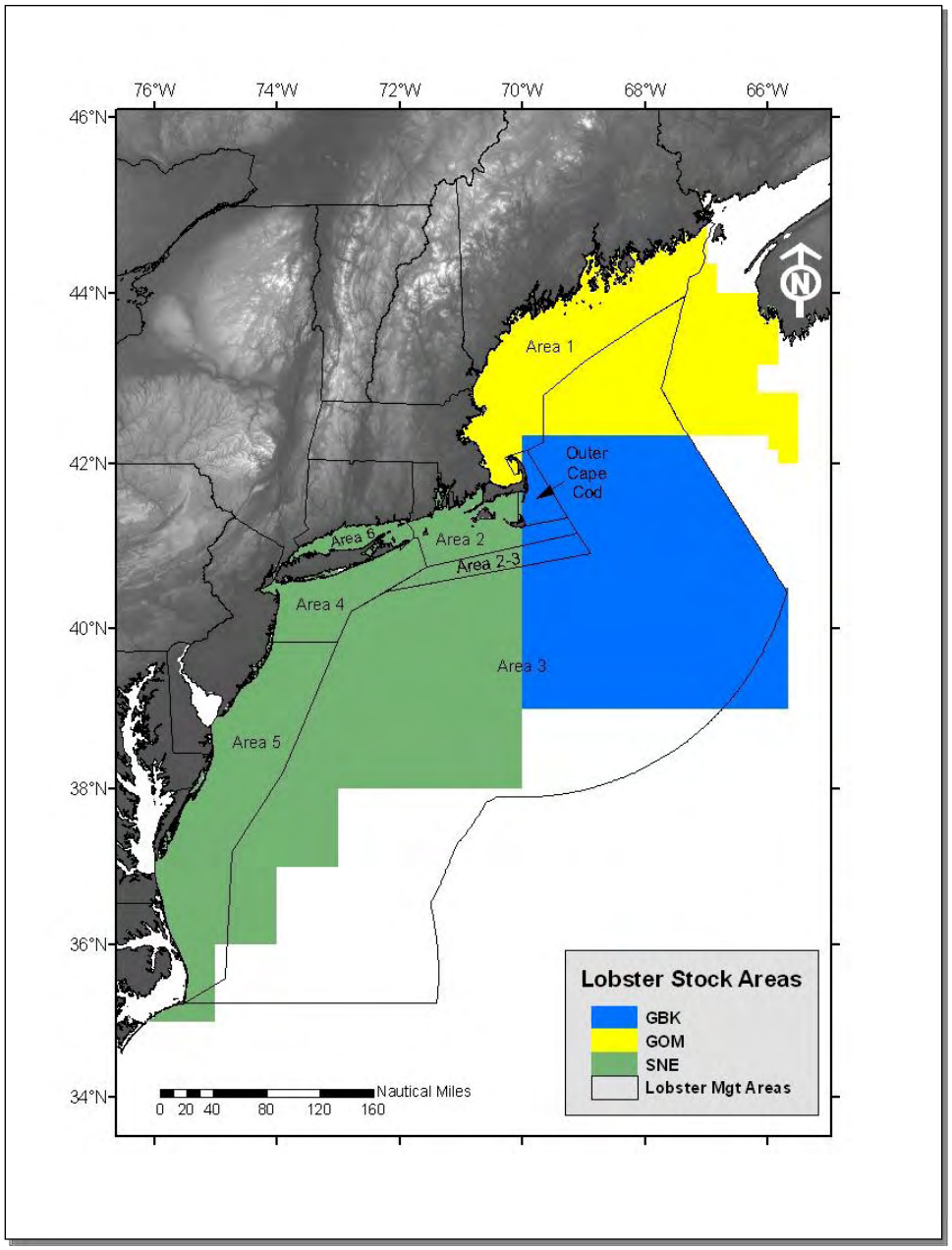
[13] In addition to American lobster, the United States also has a spiny lobster fishery, which makes up a small percentage of the total U.S. landings. For purposes of this EA, however, it is assumed that total U.S. landings are composed exclusively of American lobster.

[14] These units replace previously delineated boundaries, which were the GOM, Georges Bank and Southern New England Outer Shelf (GBS), and South of Cape Cod to Long Island Sound (SCCLIS) stock areas.

Figure 3.1 Lobster Stock and Management Areas



The most recent 2009 Stock Assessment Report concluded that "(t)he American lobster fishery resource presents a mixed picture, with stable abundance for much of the GOM stock, increasing abundance for the GBK stock, and decreased abundance and recruitment yet continued high fishing mortality for the SNE stock."[15]

[15] See Stock Assessment Report No. 09-01 (Supplement) of the Atlantic States Marine Fisheries Commission, *"American Lobster Stock Assessment Report for Peer Review,"* 2009, www.asmfc.org, (ASMFC 2009).

More specifically, the 2009 stock assessment evaluated the status of the American lobster fishery in terms of stock abundance, fishing mortality, and fishery performance (i.e., fishing effort, as measured by number of traps, landings, mean length of catch, and gross catch per unit effort (CPUE)), measuring these parameters against recommended reference points that include median reference abundance and median exploitation rate thresholds for sexes combined over the fixed time period of 1982-2003 in GOM and GBK and 1984-2003 in SNE. The assessment determined stock status by comparing the average reference abundance and average exploitation rate for sexes combined during the most recent three years to stock-specific threshold values.

Based on these reference points, "overfishing" would occur if the average effective exploitation rate during 2005-2007 were higher than the stock-specific median threshold. A stock would be "depleted" if average reference abundance during 2005-2007 fell below the median threshold level. In either of these cases, corrective management action should be implemented. The results of this evaluation are summarized in Figure 3.2 and discussed below.

The assessment determined that stock conditions are relatively favorable in the GOM and GBK, with both stocks exhibiting high abundance and recruitment, and neither stock is depleted or experiencing overfishing. However, the assessment cautioned that since the GOM fishery is highly-reliant on the harvest of new recruits, future declines in recruitment indices could jeopardize the sustainability of the fishery, particularly at current high levels of fishing effort. Along with landings, GOM fishing effort is the highest observed in three decades, both in numbers of traps fished and trap soak time. Consequently, the assessment cautioned against further increases in fishing effort in the GOM. In addition, the assessment determined that the Area 514 (Massachusetts Bay) component of the GOM stock is in poor condition with low recruitment and abundance and high fishing mortality; a trend that has continued over the course of the last two decades.

In contrast to the GOM and GBK stocks, the last assessment determined that the SNE stock abundance and recruitment are depleted with high fishing mortality and dependence on newly recruited individuals. SNE abundance is at its lowest level since the 1980's with recruitment on the decline since 2000. Given the condition of the SNE stock, the Lobster Board directed the Lobster Technical Committee to provide recommendations for management measures, with particular concern for the SNE stock. The Technical Committee's subsequent report which also included more recent data than the assessment, indicated that the SNE stock is experiencing recruitment failure and recommended that the Board take action to reduce pressure on the stock by implementing a five-year moratorium on lobster fishing.

The report was controversial and the Board held a special meeting in Warwick, RI on July 22, 2010 to discuss the issue, review the available data, and listen to public comment. The Board was concerned about the sensitivity of the model used to generate the updated stock

projections and voted to have the report reviewed by an independent panel of experts. The independent panel's review generally agreed with the Technical Committee report. The Commission's lobster board has since asked the Lobster Fishery Management Plan Development Team[16] to develop a suite of management alternatives to address the SNE situation in light of the findings of the stock assessment, technical committee review and independent expert review. The approaches under development are intended to reduce the exploitation rate in the fishery by 50 percent or by 75 percent. An option for status quo, or no change in the current exploitation rate, will also be presented along with a wide range of management options including size limitations, closed seasons and areas, trap reductions and quotas that may reduce exploitation by the required amount.

Figure 3.2 2009 Stock Assessment Results for American Lobster by Stock Area[17]

Variable	GOM	GBK	SNE
Effective exploitation			
Effective exploitation threshold	0.49	0.51	0.44
Recent effective exploitation 2005-2007	0.48	0.30	0.32
Effective exploitation below threshold?	YES	YES	YES
Reference abundance			
Abundance threshold	72,030,500	1,912,355	25,372,700
Recent abundance 2005-2007	116,077,000	4,698,670	14,676,700
Abundance above threshold?	YES	YES	NO

[16] The Plan Development Team consists of a group of state and Federal fishery managers and scientists appointed by the Lobster Management Board to develop addenda and amendments to the fishery management plan for the Board's review based on available scientific advice, data and guidance from the Board.

[17] See Stock Assessment Report No. 09-01 (Supplement) of the Atlantic States Marine Fisheries Commission, "*American Lobster Stock Assessment Report for Peer Review,"* 2009, www.asmfc.org, (ASMFC 2009).

Since the last stock assessment in 2009 the ASMFC lobster technical committee determined that the SNE lobster resource is experiencing recruitment failure. Consequently, the Board has initiated the development of a new addendum to the ISFMP to explore alternatives that could reduce exploitation in the fishery by up to 75 percent.

3.1.2 Range and Distribution

This section focuses on the Gulf of Maine lobster stock area since the proposed action is relevant to lobster management Area 1 which resides exclusively in the Gulf of Maine and harvests lobster from the Gulf of Maine stock.

Gulf of Maine

The American lobster, *Homarus americanus*, is distributed throughout the Northwest Atlantic from the Straight of Belle Isle, Newfoundland to Cape Hatteras, North Carolina from mean low water line along the coast to depths of 700 meters (m) (Cooper and Uzmann 1980; Lawton and Lavalli 1995). In the U.S., the American lobster resource occurs in continental shelf waters from Maine to North Carolina, and they are most abundant in relatively shallow coastal zones. Population densities ranging from one to ten per square meter (m^2) have been reported in Maine for juvenile lobsters in 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 lower east of Penobscot Bay and in the far southwestern GOM. Inshore landings have increased steadily since the early 1970s. Fishing effort is intense and increasing throughout much of the range of the species. The majority of the landings are reportedly harvested from state waters (within 3 miles of shore).

The Area 3 trap fishery is primarily a deepwater fishery for lobster that occurs farther from shore (approximately 25-200 miles out) and includes the canyon areas along the edge of the continental shelf. In areas south of the GOM, bottom trawl survey data indicate that catch rates of legal-sized lobsters were higher in inshore southern New England and lowest on Georges Bank and the offshore southern New England waters. Cooper, et al. (1987) reported that deep water population densities were one to two orders of magnitude less than those found in coastal zones. However, lobsters (particularly large ones) are known to aggregate in offshore canyons on the southern edge of the continental shelf in much greater concentrations than in the surrounding deep water areas, where they cannot easily be caught in bottom trawls; thus, catch rates on Georges Bank and the outer continental shelf that are based primarily on trawl survey data may imperfectly reflect the actual population densities. Research has shown concentrations of adolescents and adult lobsters are substantially greater in deep sea canyons than in nearby areas that are occupied mostly by adults (Cooper, et al., 1987).

3.1.3 Life History and Reproductive Success

The information contained in this section is a summary of the life history and reproductive success of the American lobster. For a more extensive review of the status of American lobster, see the Commission Stock Assessment Report No. 09-01, dated March 2009 (ASMFC, 2009) located at the Commission's website at www.asmfc.org.

The American lobster is long-lived and known to reach more than 40 pounds (lbs.) (18 kilogram (kg)) in body weight (Wolff, 1978). The American lobster is a bottom-dwelling, marine crustacean characterized by a shrimp-like body and ten legs, two of which are enlarged to serve as crushing and gripping appendages. Lobsters are encased in a hard external skeleton that provides body support and protection. Periodically, this skeleton is cast off (molted) to allow growth and mating to take place. Lobster growth and reproduction are linked to the molting cycle. The age of lobsters is difficult to estimate 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 and experimentally based on lipofuscin pigments in the brain. 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 millimeter (mm(s)) size class. Research on aging of lobsters using lipofuscin was conducted in the UK on measurements from the eyestalk ganglia (Sheehy and Bannister, 2002). Molting was variable and protracted in European lobster between 70 and 80 mm carapace length (CL) and it takes up to five years for the lobster to completely recruit to legal size (81 mm) in the trap fishery off the UK (Sheehy, et al., 1996). These same researchers concluded that changes in lobster body length explained less than five percent of the variation in true age in European lobster. Predicted sizes at age were significantly below those estimated from tagging studies, and large animals approached 54 years in age based on lipofuscin data.

Water temperatures exert significant influence on reproductive and developmental processes of lobster. Huntsman (1923, 1924) found that larvae hatched in water less than 15° C developed much more slowly than those hatched in warmer water. Size at maturity is related to summer water temperatures, e.g., high temperatures enhance maturation at small sizes, and the frequency of molting increases with water temperature (Aiken, 1977). The Commission's Lobster Technical Committee noted in its SNE recruitment failure analysis (ASMFC, 2010) the increase in the area and duration of water temperatures in SNE that exceed 20° C, with long-term trends indicating a pronounced warming period in the inshore portion of the SNE area since 1999. Lobster can experience respiratory and immune system stress (Worden et al., 2006; Dove et al., 2005, Crossin et al., 1998), increased incidence of shell disease (Glenn and Pugh, 2006),

acidosis and suppression of immune defenses in lobster (Dove et al., 2004, Robohm et al., 2005). Lobster avoid water that is warmer than 19 ° C (Crossin et al., 1998). Loss of optimal shallow water habitat is causing the stock to contract spatially into deeper water (ASMFC, 2010). Increased abundance of predators such as striped bass, dogfish and scup may lead to increased shallow water mortality of lobster as routine discards of v-notched, sub-legal and egg-bearing lobster from traps increased the exposure of lobster to these predators as discarded lobster sink to the bottom (ASMFC, 2010).

Within the range of lobster, water temperatures tend to increase from north to south and tend to range higher inshore than offshore during summer and autumn. However, adult lobsters exhibited a smaller size increase per molt in warmer areas (NUSCO 1999) compared to those measured in the U.S. offshore waters (Uzmann, et al., 1977, Fogarty and Idoine, 1988). 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).

Despite the benefits of increased growth rate associated with warming waters, lobster remain very sensitive to temperature increases beyond threshold values and even relatively small increases in water temperature can have adverse physiological impacts on lobster (ASMFC, 2010).

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). Eggs (7,000 to 80,000) are extruded and carried under the female's abdomen during the 9 to 12 month incubation period. Hatching and release of larvae occur 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 – September, occurring earlier and over a longer period in the southern part of the range.

Smaller lobsters molt more often than larger ones; however, larger females (>120 mm carapace length) can become ovigerous (develop eggs) 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 greater energy content and thus, may produce larvae with higher survival rates (Attard and Hudon, 1987). Once the eggs mature, 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). (See section 3.2 – Description of Physical Environment for more information on lobster habitat selection behavior).

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 gravel and cobble that provide shelter 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 20 miles (32 km) (Campbell and Stasko, 1985; Campbell 1986). In general, mature legal lobsters are more abundant offshore and in deeper water (Harding and Trites, 1989b). For the offshore trap fishery, the deep water canyons contain habitat with an abundance of favorable potential shelters. Clay and mud allow lobsters to excavate burrows up to 1.5 m long with bowl-like depressions that may shelter several lobsters at a time. However, while gravel and rocky habitat provide ready-made shelters, large sexually mature lobsters are capable of traversing great distances and show at least three different migration behaviors: those that do not migrate; those who migrate seasonally; and those who migrate long distances. Fogarty (1998) calculated that even a modest amount of offshore larvae supplied by larger sexually mature lobsters could add significantly to the resiliency of inshore areas.

Several studies have shown that lobster growth rates decline as food availability and quality decline (Castell and Budson, 1974, Bordner and Conklin, 1981, Capuzzo and Lancaster, 1979). In laboratory studies, greater densities of lobster as well as limited space reduce growth rates (Stewart and Squires, 1968, Hughes et al., 1972, Aiken and Waddy, 1978, Van Olst et al., 1980, Ennis, 1991). Growth rates of smaller lobster seem to be slower when they are in the presence of larger lobster (Cobb and Tamm, 1974, 1975). All of these variables have been shown to influence the frequency of molting and/or the length of the molt increments.

The adult American lobster is the largest mobile benthic invertebrate in the North Atlantic. Estrella and Morrissey (1997) reference multiple tagging studies in the offshore (Saila and Flowers, 1968; Cooper and Uzmann, 1971, 1980; Uzmann, et. al., 1977; Fogarty, et al., 1980; Campbell, et al., 1984[18]) and southern nearshore (Morrissey, 1971; Briggs and Muschacke, 1984[19]) areas supporting the movement of large, sexually mature lobster from offshore to inshore areas with the potential for individual lobster from different stocks becoming intermixed. A tagging study in the Outer Cape Area (Estrella and Morrissey, 1997) indicated that lobster

[18] All sources as referenced in Estrella and Morrissey, 1997.
[19] Ibid.

recaptured within 200 days of tagging were capable of traveling a notable distance from the point of release. Larger, legal-sized, egg-bearing lobsters were found to travel greater distances (an average of about 26 km) than sublegal individuals (Estrella and Morrissey, 1997).

Cooper and Uzmann, (1971) and Uzmann, et al., (1977) observed that tagged lobster were observed to move to relatively cool deep canyon areas in late fall and winter, and then migrate back to shallower and relatively warm water in spring and summer. The recapture patterns in these experiments represent movement from Georges Bank and deepwater canyons to the south to areas east of Cape Cod. Estrella and Morrissey, (1997) found in their tagging work that tagged lobster exhibited a northerly and westerly movement pattern along the eastern shore of Cape Cod, consistent with the findings of Morrissey (1971) where movements from Eastern Cape Cod into Cape Cod Bay were observed. These studies support the movement and mixing of inshore and offshore lobster stocks. On balance, tagging data indicate that lobster move between stock areas and management areas.

The relatively large size of the American lobster 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 spatially and temporally. In areas where lobster traps are numerous, bait is probably a relatively 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.

3.1.4 Factors Affecting Survival

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 become larger. A low and stable natural mortality rate seems less certain for inshore lobster stocks south of Cape Cod, particularly during recent years (ASMFC, 2006a). The dominant source of natural mortality includes predation, disease, and extreme environmental conditions, such as increases in water temperature as exhibited in the SNE stock (ASMFC Technical Committee Report, May 2009). 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, helmintha, and copepods. Aiken and Waddy (1986), and Sherburne and Bean (1991) reported a cyclical infestation of the ciliate *Mugardia* species (spp.) in lobsters. Eggs are subject to high mortality rates by a nemertean worm, *Pseudocarcinonemertes homari*.

A well-known disease that leads to the development of gaffkemia, a fatal infection (Stewart, 1980), is caused by the bacteria *Aerococcus viridans*.

External bacteria that digest the minerals in a lobster's shell cause shell disease. Shell disease is believed to be the result of opportunistic bacteria 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. Laboratory studies have shown that lobster with shell disease can heal themselves by molting out of the diseased shell and replacing it with a new healthy one. However, if the disease-causing bacteria become thick enough to penetrate completely through a lobster's shell, internal lesions lead to a compromised immune system or death. Ecdysone, a hormone that controls the molting process in lobster, has been found at levels well above normal in shell-diseased lobster, indicating that severe cases of the disease may interfere with normal molting and result in early molting (Laufer, 2005). Since the disease is most prevalent in egg-bearing females, early molting may cause declines in reproduction.

Lobster are preyed upon by a variety of 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. Once postlarvae find suitable shelter, their risk of predation from fish declines (Wahle and Steneck, 1992), but shelter may not necessarily protect them from predation by some invertebrates, such as burrowing crabs (Lavalli and Barshaw, 1986). Mud crabs, green crabs, and rock crabs are abundant and are probably 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, substantial predation of sublegal lobster by striped bass has been reported, especially due to observed predation on discards (short or egg-bearing lobsters) by striped bass and dogfish during commercial and recreational fishing operations (ASMFC Technical Committee Report on SNE, May 2009).

Lobsters and crabs compete for space and food (Richards, et al., 1983; Cobb, et al., 1986; Richards and Cobb, 1986). These studies showed that competition between lobsters and crabs affected the spatial distribution of both species. Lobsters that lost space due to competition also showed an increased mortality. Intra-specific competition among lobsters is well known (O'Neill and Cobb, 1979). Large body size and claw size are 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.

3.2 Lobster Habitats

3.2.1 Physical Environment – Gulf of Maine

This section focuses on the Gulf of Maine physical environment for lobster since the proposed action is concerned with the Area 1 lobster fishery which occurs exclusively in the Gulf of Maine.

The GOM is actually an enclosed coastal sea, bounded on the east by Browns Bank, on the north by the Nova Scotian (Scotian) Shelf, on the west by the New England states, and on the south by Cape Cod and Georges Bank (Figure 3.3, Appendix 5). The GOM was glacially derived, and is characterized by a system of deep basins, moraines and rocky protrusions with limited access to the open ocean. This geomorphology influences complex oceanographic processes that result in a rich biological community.

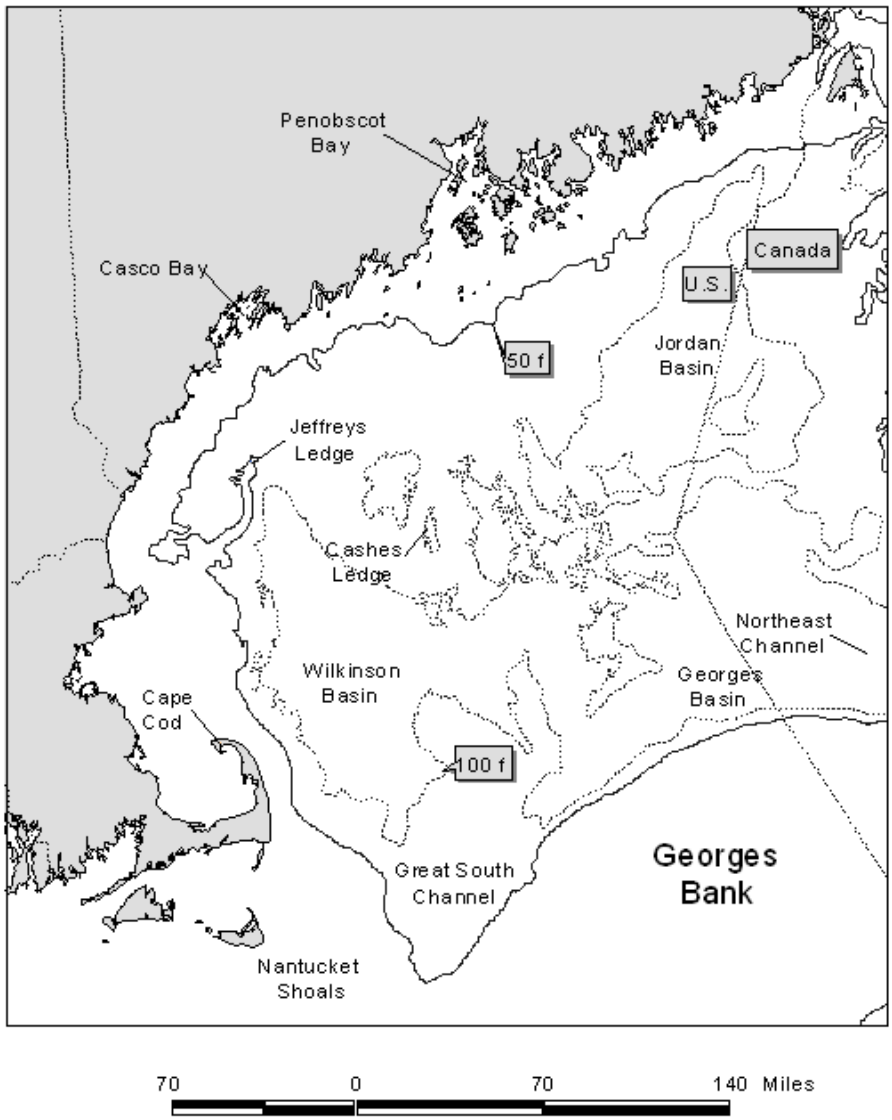
The GOM is topographically unlike any other part of the continental border along the U.S. Atlantic coast. The GOM's geologic features, when coupled with the vertical variation in water properties, result in a great diversity of habitat types. It contains twenty-one distinct basins separated by ridges, banks, and swells. The three largest basins are Wilkinson, Georges, and Jordan. Depths in the basins exceed 250 meters (m) or about 820 feet (ft), with a maximum depth of 350 m (1,148 ft) in Georges Basin, just north of Georges Bank. The Northeast Channel between Georges Bank and Browns Bank leads into Georges Basin, and is one of the primary avenues for exchange of water between the GOM and the North Atlantic Ocean.

High points within the Gulf include irregular ridges, such as Cashes Ledge, which peaks at 9 m (30 ft) below the surface, as well as lower flat topped banks and gentle swells. Some of these rises are remnants of the sedimentary shelf that was left after most of it was removed by the glaciers. Others are glacial moraines and a few, like Cashes Ledge, are outcroppings of bedrock. Very fine sediment particles created and eroded by the glaciers have collected in thick deposits over much of the GOM, particularly in its deep basins. These mud deposits blanket and obscure the irregularities of the underlying bedrock, forming topographically smooth terrains. Some shallower basins are covered with mud as well, including some in coastal waters. In the rises between the basins, other materials are usually at the surface. Unsorted glacial till covers some morainal areas, as on Sewell Ridge to the north of Georges Basin and on Truxton Swell to the

south of Jordan Basin. Sand predominates on some high areas and gravel, sometimes with boulders, predominates on others.

Coastal sediments exhibit a high degree of small-scale variability. Bedrock is the predominant substrate along the western edge of the GOM north of Cape Cod in a narrow band out to a depth of about 60 m (197 ft). Rocky areas become less common with increasing depth, but some rock outcrops poke through the mud covering the deeper sea floor. Mud is the second most common substrate on the inner continental shelf. Mud predominates in coastal valleys and basins that often abruptly border rocky substrates. Many of these basins extend without interruption into deeper water. Gravel, often mixed with shell, is common adjacent to bedrock outcrops and in fractures in the rock. Large expanses of gravel are not common, but do occur near reworked glacial moraines and in areas where the seabed has been scoured by bottom currents. Gravel is most abundant at depths of 20-40 m (66-131 ft), except in eastern Maine where a gravel-covered plain exists to depths of at least 100 m (328 ft). Bottom currents are stronger in eastern Maine where the mean tidal range exceeds 5 m (16 ft). Sandy areas are relatively rare along the inner shelf of the western GOM, but are more common south of Casco Bay, especially offshore of sandy beaches.

Figure 3.3. Gulf of Maine. (Depths in fathoms (f), 1 fathom = 6 feet = 1.83 meters)



3.2.2 Lobster Habitat Types

The narrative in this section includes descriptions of habitat types associated with the GOM and New England waters as the scope of this EA is relevant to GOM lobster fishery and resource.

3.2.2.1 Inshore

The American lobster is distributed throughout the Northwest Atlantic Ocean from Newfoundland to Cape Hatteras, North Carolina. Juvenile and adult American lobsters occupy a wide variety of benthic habitats from the intertidal zone to depths of 700 m (2,297 ft) on the

outer continental shelf and slope. 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 primary source documents. This information has been supplemented by the addition of some more recent research results. Figure 3.4 summarizes information on lobster densities by habitat type. Unless otherwise noted, the information noted below was originally provided by Cooper and Uzmann (1980).

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 m^2.

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, Maine (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/m^2. 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/m^2).

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 centimeter (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 $0.1/m^2$, 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 prerecruit 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/m^2 at 0.4 m (1 ft) below mean low water. Preliminary results indicate that areas of the lower intertidal zone serve as nursery grounds for juvenile lobster.

Figure 3.4 American Lobster Habitats and Densities

Habitat	Lobster Densities (no./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	Prerecruits	Steneck & Wilson, 1998
Rock/shell			
SALT MARSHES/PEAT	Up to 5.7		Barshaw & Lavalli, 1988
KELP BEDS	1.2-1.68	Prerecruits (51-61 mm)	Bologna & Steneck, 1993
EEL GRASS	< 0.04	Juveniles and prerecruits	Barshaw & Lavalli, 1988
	0.1	80% prerecruits	Short, et al., 2001
INTERTIDAL ZONE	0-8.6	Juveniles and prerecruits	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

Figure 3.4 American lobster habitats and densities (Continued)

Habitat	Lobster Densities (no./square meter)	Lobster Sizes (carapace length = CL)	Source
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	Prerecruits and adults	Cooper, et al., 1987
Canyon walls	Up to 0.001	Prerecruits and adults	Cooper, et al., 1987
Rim and head of canyons and at base of walls	0.0005-0.126	Prerecruits and adults	Cooper, et al., 1987
Pueblo villages	0.0005-0.126	Prerecruits and adults	Cooper, et al., 1987

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

Inshore Rock Types

Sand base with rock – This is the most common inshore rocky habitat type in depths > 40 m (131 ft). 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 (Figure 3.4).

Boulders overlaying sand – This habitat type is relatively rare in inshore New England waters. Compared to other inshore rocky habitats, densities are low (Figure 3.4).

Cobbles – Lobsters occupy shelters of varying size in the spaces among rocks, pebbles, and boulders. Densities as high as 16 lobsters/m^2 have been observed, making this the most densely populated inshore rock habitat for lobsters in New England (Figure 3.4).

Bedrock base with rock and boulder overlay – This habitat type is relatively common inshore from low tide to depths of 15-45 m (49-148 ft). 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 (Figure 3.4).

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 (Figure 3.4).

3.2.2.2 Offshore

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

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.

3.2.3 Geographic Location of Area 1

Area 1 waters lie within the GOM and include the coastal waters of New Hampshire and Maine as well as those coastal areas of Massachusetts north of Cape Cod such as Cape Cod and Massachusetts Bays. Area 1 extends seaward of the Maine and New Hampshire coastline to the 25600 LORAN C line, originating in its northeast point where it bisects the Hague Line (eastern Area 1 boundary) and following it south westerly to where it bisects the LORAN C 13400 line at approximately 69 degree 45 minutes west longitude. Then the boundary extends south to a point at approximately 42 degrees 15 minutes north latitude. The boundary then proceeds southwesterly to a point north and west of the tip of Cape Cod. The Area 1 boundary extends slightly south and then easterly again until it intersects with the shoreline just south of Provincetown, Massachusetts at a point on the western side of Cape Cod. Area 1 shares the portion of Cape Cod Bay and around the tip of Cape Cod with the Outer Cape Cod Management Area. Area 1 borders Offshore Area 3 to the south and east, and the Outer Cape Cod Management Area to the south and west. See Appendix 4 for the complete set of coordinates for the Area 1 boundaries.

3.2.4 Impacts of Lobster Traps/Pots on Habitat

Lobster pots are typically rectangular and are divided into two sections, the chamber and the parlor. The chamber has an entrance on both sides of the pot and is usually baited. Lobsters enter the parlor via a tunnel (Everhart and Youngs 1981). Escape vents are installed in both areas of the pot to minimize the retention of sub-legal sized lobsters (DeAlteris 1998). Lobster pots are fished as either a single pot per buoy (although two pots per buoy are used in Cape Cod Bay, and three pots per buoy in Maine waters), or a "trawl" or line with up to one hundred pots. According to the Northeast Fishery Science Center (NEFSC 2002), important features of lobster pots and their use are the following:

- About 95 percent of lobster pots are made of plastic-coated wire.
- Floating mainlines may be up to 25 ft (8 m) off bottom; sinking groundlines are used where entanglements with marine mammals are a concern.
- Soak time depends on season and location - usually 1 to 3 days in inshore waters in warm weather to weeks in colder waters.
- Offshore pots are larger [more than 4 ft (1 m) long] and heavier (~ 100 lb or 45 kg), with an average of about 40 pots/trawl and 44 trawls/vessel. They have a floating mainline and are usually deployed for a week at a time.
- The area of bottom that comes into contact with a single trap during the setting and hauling process is small.

There is little information on the impacts to benthic habitats from lobster pots. However, it is generally accepted that pots have relatively little impact on the habitats and communities where they are fished. Eno et al. (1999) described very few direct impacts to benthic habitats associated with the use of traps. They conducted several studies on the effects of lobster and crab pots on different types of habitat. Observations of pots being hauled from a variety of habitat types revealed that the habitats and their communities "appeared relatively unaffected by the fishing activity" (Eno et al. 1999). An expert panel report, produced by the Pew Charitable Trusts and entitled "Shifting Gears: Addressing the Collateral Impacts of Fishing Methods in U.S. Waters" (Morgan and Chuenpagdee 2003), evaluated the habitat effects of 10 different commercial fishing gears used in U.S. waters. The report concluded that bottom trawls have relatively high habitat impacts; bottom gillnets and pots and traps have low to medium impacts; and bottom longlines have low impacts. The impacts of bottom gillnets, traps, and bottom longlines were limited to warm or shallow water environments with rooted aquatic vegetation or "live bottom" environments (e.g., coral reefs).

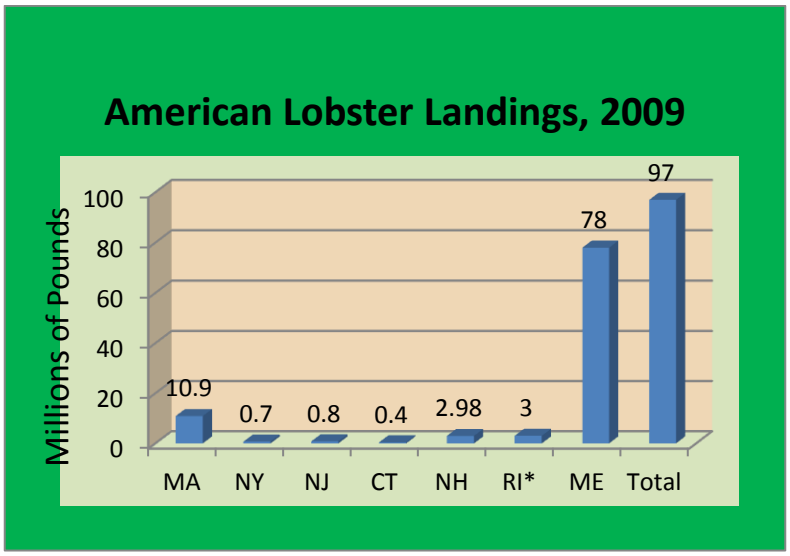
3.3 Lobster Industry

3.3.1 Fishery Overview

Domestic Landings

American lobster (*Homarus americanus*) supports one of the most valuable commercial fisheries in the Northeast U.S., with estimated annual revenues of $299.5 million in 2009. U.S. lobster landings were nearly 97 million lbs. (44,045 metric tons (mt)), an increase of 15.1 million lbs. (6,900 mt), or 18 percent, but landings value decreased by almost $6.7 million, compared to 2008 values. Maine led all states for the 28th consecutive year as the top producing lobster state landing 78 million lbs. (35,455 mt) valued at $228.6 million, an increase of 14 million lbs. (6,636 mt), or 23 percent compared to 2008. Massachusetts finished second in landings and value with Bay State harvesters landing about 11 million lbs. valued at about $41.9 million, an increase of nearly 1.1 million (10 percent, 500 mt) compared to 2008 landings (Fisheries of the US, NMFS, 2010 and ASMFC Lobster Technical Committee, See Figure 3.5). Combined landings for these two top producing states account for about 92 percent of the total domestic American lobster harvest (Fisheries of the U.S., 2009). It is estimated that the EEZ accounts for about 20 percent of all domestic landings of American lobster. Therefore, applying this to the total landings statistics, it is assumed that the 2009 EEZ lobster fishery accounts for approximately 19.4 million lbs. (8,818 mt) valued at nearly $60 million. This may be underestimated since EEZ landings are comprised of larger-sized, more valuable lobster.

Figure 3.5 American Lobster Landings by State, 2009



*Rhode Island (RI) total represents an average of SAFIS reported landings (2.8 M lbs.) and Vessel Logbook reported landings (3.3 M. lbs.). RI is in the process of reconciling the numbers.

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 the lobster harvest is sold to the live lobster market, and an extensive network of storage facilities, called lobster lbs., hold live lobsters so that markets can be regularly supplied.

Through the late 1970s, total landings for the U.S. lobster fishery were relatively constant, at 30.8 million lbs. (14,000 mt). By 1998, landings more than doubled, reaching 83.6 million lbs., and then dropping to 72.6 million lbs. (33,000 mt) in 2003. These figures represent landings primarily from nearshore waters (0 to 12 nautical miles).

GOM supports the largest fishery, constituting 76 percent of the U.S. landings from 1981 to 2007, and 87 percent since 2002. Landings in the GOM were stable between 1981 and 1989, averaging 32.1 million lbs. (14,600 mt), then increased dramatically from 1990 (42.2 million lbs. (19,200 mt)) to 2006 (82 million lbs. (37,300 mt)). Landings averaged 72.6 million lbs. (33,000 mt)) from 2000-2007 (ASMFC, 2009).

GBK constitutes the smallest portion of the U.S. fishery, averaging five percent of the landings from 1981 to 2007. From 1981-2002, landings from the GBK fishery remained stable (averaging 2.9 million lbs. (1,300 mt)). Landings nearly doubled from 2003-2007, reaching a high of 5.3 million lbs. (2,400 mt) in 2005. Landings have subsequently declined, although they remain high, reaching 4.5 million lbs. (2,064 mt) in 2007, the most recent year that landings have been compiled by stock area (ASMFC, 2009).

SNE has the second largest fishery, accounting for 19 percent of the U.S. landings between 1981 and 2007. Landings increased sharply from the early 1980s to the late 1990s, reaching a time series high of 21.8 million lbs. (9,900 mt) in 1997. Landings remained near the time series high until 1999, when the fishery experienced dramatic declines in landings. From 2000 to 2007, landings from the SNE accounted for only nine percent of the U.S. total for American Lobster, reaching a time series low of six percent in 2004. Landings have exhibited a decline since then, reaching about 5.3 million lbs. (2,435 mt) in 2007, the lowest level since 1981 (ASMFC, 2009).

Export Market

There is an extensive cross-border trade with Canada to ensure a consistent domestic supply and to supply the export markets. In recent years, the development of new freezing processes has 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. Imports of live lobster from outside the U.S. accounted for 67.2

million lbs. (30,494 mt), valued at $481 million (U.S.) in 2009. This is comparable to 2008 estimates of volume, when imports accounted for 67.6 million lbs. (30,680 mt), but lower prices in 2009 resulted in a marked decrease from 2008 import value estimated at about $592 million.

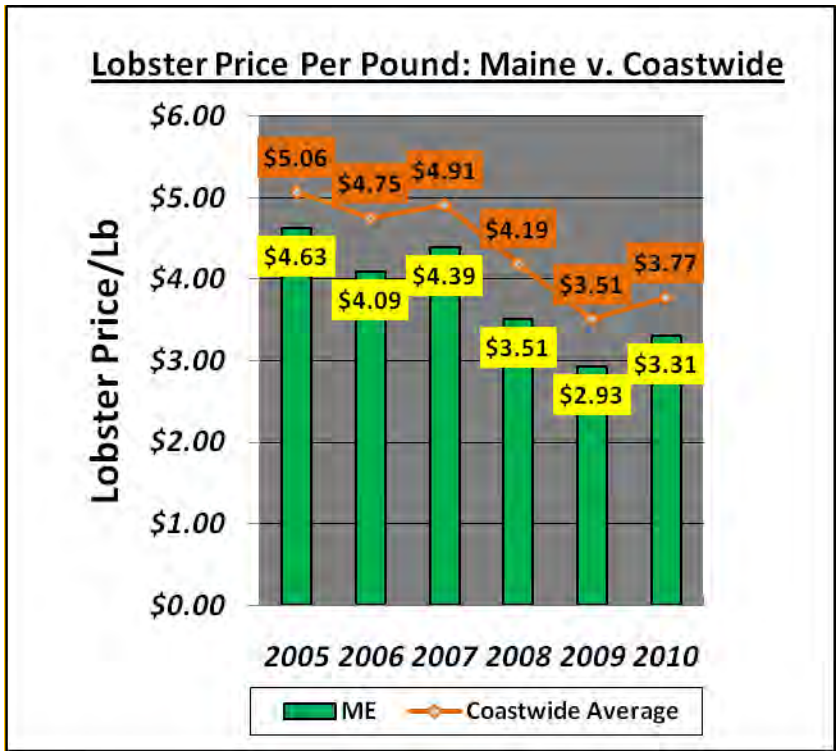
Total U.S. exports of fresh and frozen lobster were 53 million lbs. (24,076 mt) valued at $328 million in 2009, compared to 58 million lbs. (26,387 mt) valued at $367 million in 2008. Canada accounted for 26.9 million lbs. (12,212 mt), approximately 51 percent of exported lobster, valued at $139 million (U.S.) in 2009. In 2009, the most important U.S. export markets outside of Canada for American lobsters were: Italy – 7.8 million lbs (3,565 mt) valued at $54.9 million; Spain – 7.4 million lbs (3,376 mt) valued at $53.6 million; France – 4.7 million lbs (2,117 mt) valued at $32.3 million; United Kingdom – 1.2 million lbs (544 mt) valued at $8.3 million; and Japan – 1.0 million lbs (470 mt) valued at $8.0 million.

Domestic Lobster Prices

Ex-vessel prices for lobster landed by U.S. lobstermen averaged $4.37 per pound from 2005 to 2010. The period experienced a decreasing price trend, with a high of $5.06 in 2005, dropping steadily to $3.51 in 2009 (Figure 3.6). Prices paid to Maine fishermen, representing the largest component of the harvest coastwide, were far lower than the coastal average over the time series and on an annual basis, averaging $3.81 per pound for the time series and reaching a punishing low of $2.93 per pound in 2009.

There are many reasons cited for the price drop during this time period which resulted in an economic setback for the U.S. lobster industry, particularly the Maine component with reports of off-the-boat prices as low as $2.25 per pound in 2009 (CNN, 2009). The reasons for the decline are partially rooted in the collapse of Icelandic banks in 2009 which are an important source of financing for Canadian lobster processors – a sector which routinely purchases and processes about half of the Maine lobster harvest each year and ships it worldwide to restaurants, cruise lines and supermarkets (CNN, 2009). Without financing from the Icelandic banks, Canadian processors lacked the capital to purchase Maine lobster, cutting the largest market for Maine lobstermen and processors. Domestic markets were also diminished as poor economic conditions in the U.S. limited the purchasing power of U.S. consumers on luxury items such as lobster, despite record low retail prices. Lobster fishermen were further affected by high costs of bait and fuel which added to the expense of lobster fishing and cut deeper into profits since revenues were reduced due to low wholesale prices (CNN, 2009).

Figure 3.6 Lobster Price Data



Source: NMFS Northeast Region Federal Dealer Data, 2011.

3.3.2 Area 1 Lobster Harvesters and Fishery

Generally, community dependency on lobster fishing, and more specifically lobster trap fishing, decreases from north to south. While industry participants from downeast (northern) and mid-coast Maine are largely dependent on lobster, lobstermen from southern Maine, Massachusetts and Rhode Island are proportionately less reliant on lobster compared to other fisheries. The community dependency on lobster fishing decreases dramatically south of Rhode Island, and landings of lobster from Connecticut to North Carolina accounted for less than three percent of coastwide landings in 2008 (ASMFC, 2009). Figure 3.7 shows that of the approximately 3,152 Federal lobster permits in 2008, 2,311, or about 73 percent hail from Maine and Massachusetts ports. Consequently, vessels from these two states land about 90 percent of the total U.S. lobster harvest (ASMFC, 2009). The highest percentage of lobster harvest comes from within state waters (0-3 miles from shore) with fishermen operating small coastal "day boats" which concentrate on the run of lobster that move shoreward in the spring and then to deeper water in the fall. Federal permit data highlight the increased economic importance of the lobster fishery as one travels from south to north, with the highest number of Federal lobster vessels hailing from Area 1 ports in the GOM, with numbers generally diminishing by management area to the south and west (Figure 3.8).

Figure 3.7 Federal Lobster Vessels by State, 2008 (Total = 3,152)

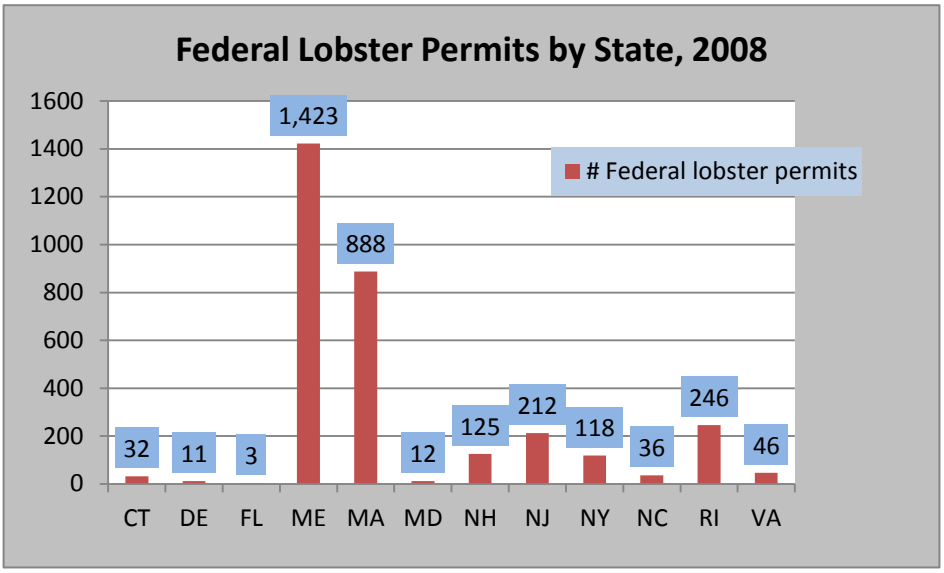


Figure 3.8 Federal Lobster Trap Permits by Management Area[20]

Lobster Management Area	Number of Federal Lobster Permits
A1 - Gulf of Maine	**1,960**
A2 - Southern New England	**427**
A3 - Offshore	**110**
A4 - Northern Mid-Atlantic	**70**
A5 – Southern Mid-Atlantic	**30**
A6 – Long Island Sound	**64**
OC - Outer Cape Cod	**160**
TOTAL Federal Trap Permits	**2,821**

As Holland and Singer (2007) found in their survey of New England lobstermen, the lobster fishery and its communities vary geographically. In downeast Maine, fishermen, and communities in general, are relatively more dependent upon the lobster fishery. Conversely, fishermen and communities in Massachusetts and Rhode Island have more varied occupational

[20] These numbers were not screened for specific permit histories and they are overestimated in the case of Area 1 and underestimated for Areas 3, 4 and 5. This data was obtained from a simple query of the NMFS vessel permit database to provide the reader with a rough estimate of the number of permits by areas. These numbers are less accurate than the numbers used to analyze this action as evidenced in Chapter 4.

opportunities to turn to besides fishing. Those that fish are not as reliant on lobster due to the availability of other fishing options.

Federal lobster permit holders are predominantly trap fishermen in Area 1 as the breakdown of Area 1 permits shows as presented in Figure 3.9. This is particularly true in Maine which borders only Area 1. More the 90 percent of the Federal lobster permit holders in Maine elected only Area 1 for trap fishing and did not elect a non-trap gear type. The majority of those permit holders from Maine with Area 1 trap and a non-trap gear designation held another type of Federal fisheries permit (NMFS, Northeast region permit data).

In New Hampshire, the small coastline is reflected by the relatively low number of Federal lobster permits. New Hampshire is home to several offshore Area 3 vessels which account for some of the total Federal permits in Figure 3.7 that have not elected Area 1. There is also a small bottom trawl fleet in the state with about half of the vessels declaring Area 1 and non-trap gear, as they are likely permitted for other fisheries besides lobster. Only about 28 percent of Federal lobster vessels from Massachusetts elected exclusively Area 1 for trap fishing. This is expected given that the Commonwealth borders on three lobster management areas and serves as the home port for more than 20 vessels fishing in Offshore Area 3. As Figure 3.9 indicates, many Area 1 trap vessels have also elected another management area or non-trap gear, reflective of the proximity to other lobster management areas and a more diverse array of fishing opportunities compared to neighboring states to the north. Accordingly, more than a third of the Massachusetts-based Federal lobster vessels elected non-trap gear only (NMFS, Northeast region permit data).

State	Total Lobster Permits	Area 1 Trap Only	Area 1 Trap and Other Trap Areas	A1 Trap and Non-trap	Non-Trap Only
ME	1,423	1,338	30	98	62
NH	125	45	8	58	29
MA	888	250	187	166	320
RI	246	1	69	4	46

Figure 3.9 Area 1 Elections by Gear Type And State (New England only) 2009

Estimates of the number of traps fished in Area 1, based on the number of Federally-permitted vessels and trap tag purchases, indicate that there are approximately 1.2 million traps fished in Area 1 by Federally-permitted vessels (Figure 3.10). This does not include traps fished by lobster trap fishers from Maine, Massachusetts and New Hampshire with state licenses and no Federal permit. Under the current management program, Area 1 trap vessels are bound to a maximum ceiling of 800 traps, although this amount may be lower due to differing state trap

limits [21]. Each trap must be affixed with a trap tag and each permit holder is allowed to purchase additional replacement tags for use when trap gear is lost. Lobstermen may purchase replacement tags in an amount that exceeds their allocation by 10 percent which amounts to 80 extra tags for a vessel fishing 800 traps. Figure 3.10 shows that of the 1,553 Federal lobster permit holders who purchased Area 1 trap tags in 2008 were allocated a cumulative total of almost 1.17 million traps and purchased nearly 1.25 million tags to cover those traps and routine losses through the purchase of the replacement tags.

Figure 3.10 2008 Area 1 Trap Allocations vs. Trap Tag Purchases

State	# Permits*	Cumulative Trap Allocation	10% Replacement (cumulative total)	Total Ordered*
CT	2	1,600	1,760	1,030
MA	236	188,762	207,638	190,254
ME	1,252	933,215	1,007,929	1,008,843
NH	37	27,600	30,360	27,940
RI	21	14,487	15,936	17,774
Other	5	2,604	2,864	2,504
TOTAL	1,553	1,168,268	1,266,488	1,248,345

*The number of permits column is the number of permits that purchased trap tags and is a subset of the total number of Area 1 permits.

3.4 Protected Species

There are numerous protected species that inhabit the environment within the management unit of the American Lobster ISFMP, and that, therefore, potentially occur in the operations area of the fishery. These species 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), and are under NMFS' jurisdiction. Figure 3.11 also includes one candidate fish species, as identified under the ESA. Non ESA-listed species protected by the MMPA that utilize this environment and have no documented interaction with the American lobster fishery will not be analyzed in this document, despite being listed in Figure 3.11.

[21] Federal lobster fishermen with ME and NH state lobster licenses may be limited to lower state allocations and are subject to those more restrictive trap limits.

3.4.1 Species Present in the Area

Figure 3.11 lists the species, protected either by the ESA, the MMPA, or both, that may be found in the environment that would be utilized by the American lobster fishery. Candidate species are those petitioned species that are actively being considered for listing as endangered or threatened under the ESA, as well as those species for which NMFS has initiated an ESA status review that it has announced in the Federal Register.

Candidate species receive no substantive or procedural protection under the ESA; however, NMFS recommends that project proponents consider implementing conservation actions to limit the potential for adverse effects on candidate species from any proposed project. NMFS has initiated review of recent stock assessments, bycatch information, and other information for these candidate species. The results of those efforts are needed to accurately characterize recent interactions between fisheries and the candidate/proposed species in the context of stock sizes. Any conservation measures deemed appropriate for these species will follow the information reviews. Please note that once a species is proposed for listing the conference provisions of the ESA apply (see 50 CFR 402.10).

3.4.2 Species Potentially Affected

It is expected that the sea turtle, cetacean, and pinniped species discussed below have the potential to be affected by the operation of the American lobster fishery[22]. Background information on the range-wide status of sea turtle and marine mammal species that occur in the area and are known or suspected of interacting with fishing gear can be found in a number of published documents. These include sea turtle status reviews and biological reports (NMFS and USFWS 1995; Marine Turtle Expert Working Group (TEWG) 1998, 2000; NMFS and USFWS 2007a, 2007b; Leatherback TEWG 2007), recovery plans for ESA-listed cetaceans and sea turtles (NMFS 1991a and b, 2005; NMFS and USFWS 1991a, 1991b; NMFS and USFWS 1992), the marine mammal stock assessment reports (e.g., Waring et al. 2006; 2007; 2010, and other publications (e.g., Clapham et al. 1999, Perry et al. 1999, Best et al. 2001, Perrin et al. 2002).

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[22] MMPA-listed species occurring on this list are only those species that have a history of interaction with similar gear types within the action area of the Atlantic American lobster Fishery, as defined in the 2011 List of Fisheries. Bottlenose dolphin Western North Atlantic coastal stock is listed as depleted. Green turtles in U.S. waters are listed as threatened except for the Florida breeding population which is listed as endangered. Due to the inability to distinguish between these populations away from the nesting beach, green turtles are considered endangered wherever they occur in U.S. waters. The Gulf of Maine Distinct Population Segment of the Atlantic Sturgeon was listed as Threatened throughout its range in February 2012. The New York Bight, Chesapeake Bay, Carolina & South Atlantic distinct population segments were listed as Endangered.

Additional ESA background information on the range-wide status of these species and a description of critical habitat can be found in a number of published documents including recent sea turtle (NMFS and USFWS 1995, TEWG 2000, NMFS SEFSC 2001, NMFS and USFWS 2007a), loggerhead recovery team report (NMFS and USFWS 2008), status reviews and stock assessments, Recovery Plans for the humpback whale (NMFS 1991), right whale (NMFS 1991a, NMFS 2005), right whale EIS (August 2007), fin and sei whale (NMFS 1998b), and the marine mammal stock assessment report (Waring et al. 2010) and other publications (*e.g.*, Perry *et al.* 1999; Clapham *et al.* 1999; IWC 2001).

A recovery plan for fin and sei whales is also available and may be found at the following web site: http://www.NOAAFisheries.noaa.gov/prot_res/PR3/recovery.html (NOAA Fisheries unpublished).

Figure 3.11 Species Protected under the ESA and MMPA that may occur in the operations area for the American lobster fishery.

SPECIES	STATUS
Cetaceans	
North Atlantic right whale (*Eubalaena glacialis*)	Endangered
Humpback whale (*Megaptera novaeangliae*)	Endangered
Fin whale (*Balaenoptera physalus*)	Endangered
Sei whale (*Balaenoptera borealis*)	Endangered
Blue whale (*Balaenoptera musculus*)	Endangered
Sperm whale (*Physeter macrocephalus*	Endangered
Minke whale (Balaenoptera acutorostrata)	Protected
Pilot whale (*Globicephala spp*.)	Protected
Risso's dolphin (*Grampus griseus*)	Protected
Atlantic white-sided dolphin (*Lagenorhynchus acutus*)	Protected
Common dolphin (*Delphinus delphis*)	Protected
Spotted dolphin (*Stenella frontalis*)	Protected
Bottlenose dolphin (*Tursiops truncatus*)	Protected
Harbor porpoise (*Phocoena phocoena*)	Protected
Sea Turtles	
Leatherback sea turtle (*Dermochelys coriacea*)	Endangered
Kemp's ridley sea turtle (*Lepidochelys kempii*)	Endangered
Green sea turtle (*Chelonia mydas*)	Endangered
Loggerhead sea turtle (*Caretta caretta*)	Threatened
Hawksbill sea turtle (*Eretmochelys imbricate*)	Endangered
Fish	
Shortnose sturgeon (*Acipenser brevirostrum*)	Endangered
Atlantic salmon (*Salmo salar*)	Endangered
Cusk (*Brosme brosme*)	Candidate
Alewife (*Alosa pseudo harengus*)	Candidate
Blueback herring (*Alosa aestivalis*)	Candidate
Atlantic sturgeon (*Acipenser oxyrinchus*)	
Gulf of Maine DPS	Threatened
New York Bight DPS	Endangered
Chesapeake Bay DPS	Endangered
Carolina DPS	Endangered
South Atlantic DPS	Endangered
Pinnipeds	
Harbor seal (*Phoca vitulina*)	Protected
Gray seal (*Halichoerus grypus*)	Protected
Harp seal (*Phoca groenlandicus*)	Protected
Hooded seal (*Cystophora cristata*)	Protected

Sea Turtles

Loggerhead, leatherback, Kemp's ridley, and green sea turtles occur seasonally in southern New England and Mid-Atlantic continental shelf waters north of Cape Hatteras, North Carolina. In general, turtles move up the coast from southern wintering areas as water temperatures warm in the spring (James et al. 2005, Morreale and Standora 2005, Braun-McNeill and Epperly 2004, Morreale and Standora 1998, Musick and Limpus 1997, Shoop and Kenney 1992, Keinath et al. 1987). The trend is reversed in the fall as water temperatures cool. By December, turtles have passed Cape Hatteras, returning to more southern waters for the winter (James et al. 2005a, Morreale and Standora 2005, Braun-McNeill and Epperly 2004, Morreale and Standora 1998, Musick and Limpus 1997, Shoop and Kenney 1992, Keinath et al. 1987). Hard-shelled species are typically observed as far north as Cape Cod whereas the more cold-tolerant leatherbacks are observed in more northern Gulf of Maine waters in the summer and fall (Shoop and Kenney 1992, STSSN database: http://www.sefsc.noaa.gov/seaturtleSTSSN.jsp).

The loggerhead sea turtle is listed as threatened throughout its worldwide range. On July 12, 2007, NMFS and USFWS (Services) received a petition from Center for Biological Diversity and Turtle Island Restoration Network to list the ''North Pacific populations of loggerhead sea turtle'' as an endangered species under the ESA. In addition, on November 15, 2007, the Services received a petition from Center for Biological Diversity and Oceana to list the ''Western North Atlantic populations of loggerhead sea turtle'' as an endangered species under the ESA.

NMFS published notices in the Federal Register, concluding that the petitions presented substantial scientific information indicating that the petitioned actions may be warranted (72 FR 64585, November 16, 2007; 73 FR 11849; March 5, 2008). In 2008, a Biological Review Team (BRT) was established to assess the global population structure to determine whether DPSs exist and, if so, the status of each DPS. The BRT identified nine loggerhead DPSs, distributed globally (Conant et al. 2009). On March 16, 2010, the Services announced 12-month findings on the petitions to list the North Pacific populations and the Northwest Atlantic populations of the loggerhead sea turtle as DPSs with endangered status and published a proposed rule to designate nine loggerhead DPSs worldwide, seven as endangered (North Pacific Ocean DPS, South Pacific Ocean DPS, Northwest Atlantic Ocean DPS, Northeast Atlantic Ocean DPS, Mediterranean Sea DPS, North Indian Ocean DPS, and Southeast Indo-Pacific Ocean DPS) and two as threatened (Southwest Indian Ocean DPS and South Atlantic Ocean DPS). On March 22, 2011, the timeline for the final determination was extended for six months until September 16, 2011 (76 FR 15932).

In general, sea turtles are a long-lived species and reach sexual maturity relatively late (NMFS SEFSC 2001; NMFS and USFWS 2007a, 2007b, 2007c, 2007d). Sea turtles are injured and killed by numerous human activities (NRC 1990; NMFS and USFWS 2007a, 2007b, 2007c,

2007d). Nest count data are a valuable source of information for each turtle species since the number of nests laid reflects the reproductive output of the nesting group each year. A decline in the annual nest counts has been measured or suggested for four of five western Atlantic loggerhead nesting groups through 2004 (NMFS and USFWS 2007a), however, data collected since 2004 suggests nest counts have stabilized or increased (TEWG 2009). Nest counts for Kemp's ridley sea turtles as well as leatherback and green sea turtles in the Atlantic demonstrate increased nesting by these species (NMFS and USFWS 2007b, 2007c, 2007d).

Large Cetaceans

The most recent Marine Mammal Stock Assessment Report (SAR) (Waring et al. 2010) reviewed the current population trend for each of these cetacean species within U.S. EEZ waters, as well as providing information on the estimated annual human-caused mortality and serious injury, and a description of the commercial fisheries that interact with each stock in the U.S. Atlantic. Information from the SAR is summarized below.

The western North Atlantic baleen whale species (North Atlantic right, humpback, fin, sei, and minke) follow a general annual pattern of migration from high latitude summer foraging grounds, including the Gulf and Maine and Georges Bank, to low latitude winter calving grounds (Perry et al. 1999, Kenney 2002). However, this is an oversimplification of species movements, and the complete winter distribution of most species is unclear (Perry et al. 1999, Waring et al. 2010). Studies of some of the large baleen whales (right, humpback, and fin) have demonstrated the presence of each species in higher latitude waters even in the winter (Swingle et al. 1993, Wiley et al. 1995, Perry et al. 1999, Brown et al. 2002, Patrician et al. 2009). Blue whales are most often sighted on the east coast of Canada, particularly in the Gulf of St. Lawrence, and occurs only infrequently within the U.S. EEZ (Waring et al. 2010).

In comparison to the baleen whales, sperm whale distribution occurs more on the continental shelf edge, over the continental slope, and into mid-ocean regions (Waring et al. 2006). However, sperm whales distribution in U.S. EEZ waters also occurs in a distinct seasonal cycle (Waring et al. 2006). Typically, sperm whale distribution is concentrated east-northeast of Cape Hatteras in winter and shifts northward in spring when whales are found throughout the Mid-Atlantic Bight (Waring et al. 2006). Distribution extends further 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. 1999).

For North Atlantic right whales, the available information suggests that the population is increasing at a rate of 2.1 percent per year during 1990-2005, and the total number of North Atlantic right whales is estimated to be at least 361 animals in 2005 (Waring et al. 2010). The minimum rate of annual human-caused mortality and serious injury to right whales averaged 2.8

per year during 2004 to 2008 (Waring et al. 2010). Of these, 0.8 per year resulted from fishery interactions.

The North Atlantic population of humpback whales is estimated to be 11,570, although the estimate is considered to be negatively biased (Waring et al. 2010). The best estimate for the Gulf of Maine stock of humpback whales is 847 whales (Waring et al. 2010). The population trend was considered positive for the Gulf of Maine population, but there are insufficient data to estimate the trend for the larger North Atlantic population. Based on data available for selected areas and time periods, the minimum population estimates for other western north Atlantic whale stocks are 3,269 fin whales, 208 sei whales, 440 blue whales, 3,539 sperm whales, and 6,909 minke whales (Waring et al. 2010). Insufficient data exist to determine trends for any other large whale species.

The Atlantic Large Whale Take Reduction Plan (ALWTRP) was revised with publication of a new final rule (72 FR 57104, October 5, 2007) that is intended to continue to address entanglement of large whales (right, humpback, fin, and minke) in commercial fishing gear and to reduce the risk of death and serious injury from entanglements that do occur.

NMFS expects to propose changes to right whale critical habitat in 2012. On October 5, 2010, NMFS published a notice of a 90-day petition finding and notice of 12-month determination in the Federal Register. NMFS was already conducting an ongoing analysis and evaluation of new information not available at the time of the original 1994 critical habitat designation prior to the receipt of this petition. Three critical habitat areas currently exist, established in 1994, two of which occur in the northeast region: feeding grounds in Cape Cod Bay; and the Great South Channel.

Small Cetaceans

Numerous small cetacean species (dolphins; pygmy and dwarf sperm whales; pilot and beaked, whales; and the harbor porpoise) occur within [the area from Cape Hatteras through the Gulf of Maine]. Seasonal abundance and distribution of each species in Mid-Atlantic, Georges Bank, and/or Gulf of Maine waters varies with respect to life history characteristics. Some species primarily occupy continental shelf waters (e.g., white sided dolphins, harbor porpoise), while others are found primarily in continental shelf edge and slope waters (e.g., Risso's dolphin, pilot whales), and still others occupy all three habitats (e.g., common dolphin, spotted dolphins, striped dolphins). Information on the western North Atlantic stocks of each species is summarized in Waring et al. (2010). None of the small cetacean species have documented deaths or injuries based on interactions with northeast/mid-Atlantic lobster pot gear, according to the 2011 List of Fisheries.

Pinnipeds

Of the four species of seals expected to occur in the area, harbor seals have the most extensive distribution with sightings occurring as far south as 30° N (Katona et al. 1993, Waring et al. 2010). Gray seals are the second most common seal species in U.S. EEZ waters, occurring primarily in New England (Katona et al. 1993; Waring et al. 2010). Pupping for both species occurs in both U.S. and Canadian waters of the western north Atlantic with the majority of harbor seal pupping likely occurring in U.S. waters and the majority of gray seal pupping in Canadian waters, although there are at least three gray seal pupping colonies in U.S. waters as well. Harp and hooded seals are less commonly observed in U.S. EEZ waters. Both species form aggregations for pupping and breeding off eastern Canada in the late winter/early spring, and then travel to more northern latitudes for molting and summer feeding (Waring et al. 2010). Both species have a seasonal presence in U.S. waters from Maine to New Jersey, based on sightings, stranding, and fishery bycatch (Waring et al. 2010). Of these pinnipeds only harbor seals have documented deaths or injuries based on interactions with northeast/mid-Atlantic lobster pot gear, according to the 2011 List of Fisheries.

3.4.3 Species Not Likely to be Affected

The action being considered in the EA is not likely to adversely affect Atlantic sturgeon, shortnose sturgeon, the Gulf of Maine distinct population segment (DPS) of Atlantic salmon, hawksbill sea turtles, blue whales, or sperm whales, all of which are listed as endangered species under the ESA. Shortnose sturgeon and salmon belonging to the Gulf of Maine DPS of Atlantic salmon occur within the general geographical areas fished by the American lobster fishery, but they are unlikely to occur in the area where the fishery operates given their numbers and distribution. Therefore, none of these species are likely to be affected by the American lobster fishery. The following discussion provides the rationale for these determinations. Although there are additional species that may occur in the operations area that are not known to interact with the specific gear types that would be used by the American lobster fleet, impacts to these species are still considered due to their range and similarity of behaviors to species that have been adversely affected.

Atlantic Salmon

The Gulf of Maine (GOM) Distinct Population Segment (DPS) of anadromous Atlantic salmon was initially listed by the USFWS and NMFS (collectively, the Services) as an endangered species on November 17, 2000 (65 FR 69459). A subsequent listing as an endangered species by the Services on June 19, 2009 (74 FR 29344) included an expanded range for the GOM DPS of Atlantic salmon.

Presently, the GOM DPS includes all anadromous Atlantic salmon whose freshwater range occurs in the watersheds from the Androscoggin River northward along the Maine coast to the Denny's River. Included are all associated conservation hatchery populations used to supplement these natural populations; currently, such conservation hatchery populations are maintained at Green Lake National Fish Hatchery (GLNFH) and Craig Brook National Fish Hatchery (CBNFH). Coincident with the June 19, 2009 endangered listing, NMFS designated critical habitat for the GOM DPS of Atlantic salmon (74 FR 29300; June 19, 2009). The critical habitat designation for the GOM DPS includes 45 specific areas occupied by Atlantic salmon at the time of listing that include approximately 19,571 km of perennial river, stream, and estuary habitat and 799 square km of lake habitat within the range of the GOM DPS and in which are found those physical and biological features essential to the conservation of the species. The entire occupied range of the GOM DPS in which critical habitat is designated is within the State of Maine.

The wild populations of Atlantic salmon found in rivers and streams from the lower Kennebec River north to the U.S. - Canada border are listed as endangered under the ESA. These populations include those in the Denny's, East Machias, Machias, Pleasant, Narraguagus, Ducktrap, and Sheepscot Rivers and Cove Brook. Juvenile salmon in New England rivers typically migrate to sea in May after a two- to three-year period of development in freshwater streams, and remain at sea for two winters before returning to their U.S. natal rivers to spawn. Results from a 2001 post-smolt trawl survey in Penobscot Bay and the nearshore waters of the Gulf of Maine indicate that Atlantic salmon post-smolts are prevalent in the upper water column throughout this area in mid- to late May. It is highly unlikely that the approval of this EA would affect the Gulf of Maine DPS of Atlantic salmon given that operation of the American lobster fishery would not occur in or near the rivers where concentrations of Atlantic salmon are likely to be found and American lobster fishing gear used by the fleet does not have a history of incidental catch of Atlantic salmon. Thus, this species is not considered further in this EA.

Atlantic Sturgeon

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

Atlantic sturgeon is an anadromous species that spawns in relatively low salinity, river environments, but spends most of its life in the marine and estuarine environments from Labrador, Canada to the Saint Johns River, Florida (Holland and Yelverton 1973, Dovel and Berggen 1983, Waldman et al. 1996, Kynard and Horgan 2002, Dadswell 2006, Atlantic Sturgeon Status Review Team (ASSRT) 2007). Tracking and tagging studies have shown that sub-adult and adult Atlantic sturgeon that originate from different rivers mix within the marine environment, utilizing ocean and estuarine waters for life functions such as foraging and overwintering (Stein et al. 2004a, Dadswell 2006, ASSRT 2007, Laney et al. 2007, Dunton et al. 2010).

Fishery-dependent data as well as fishery-independent data demonstrate that Atlantic sturgeon use relatively shallow inshore areas of the continental shelf; primarily waters less than 50 m (Stein et al. 2004b, ASMFC TC 2007, Dunton et al. 2010). The data also suggest regional differences in Atlantic sturgeon depth distribution with sturgeon observed in waters primarily less than 20 m in the Mid-Atlantic Bight and in deeper waters in the Gulf of Maine (Stein et al. 2004b, ASMFC TC 2007, Dunton et al. 2010). Information on population sizes for each Atlantic sturgeon DPS is very limited. Based on the best available information, NMFS has concluded that bycatch, vessel strikes, water quality and water availability, dams, lack of regulatory mechanisms for protecting the fish, and dredging are the most significant threats to Atlantic sturgeon.

Comprehensive information on current abundance of Atlantic sturgeon is lacking for all of the spawning rivers (ASSRT, 2007). Based on data through 1998, an estimate of 870 spawning adults per year was developed for the Hudson River (Kahnle et al., 2007), and an estimate of 343 spawning adults per year is available for the Altamaha River, GA, based on data collected in 2004-2005 (Schueller and Peterson, 2006).

Data collected from the Hudson River and Altamaha River studies cannot be used to estimate the total number of adults in either subpopulation, since mature Atlantic sturgeon may not spawn every year, and it is unclear to what extent mature fish in a non-spawning condition occur on the spawning grounds. Nevertheless, since the Hudson and Altamaha Rivers are presumed to have the healthiest Atlantic sturgeon subpopulations within the United States, other U.S. subpopulations are predicted to have fewer spawning adults than either the Hudson or the Altamaha (ASSRT, 2007). It is also important to note that the estimates above represent only a fraction of the total population size as spawning adults comprise only a portion of the total population (e.g., this estimate does not include sub-adults and early life stages).

Atlantic sturgeon from any of the five DPSs could occur in areas where the American lobster fishery operates, however, the species has not been captured in gear targeting American lobster (Stein et al. 2004a, ASMFC 2007), thus, this species is not considered further in this EA.

Shortnose Sturgeon

Shortnose sturgeon are benthic fish that mainly occupy the deep channel sections of large rivers. Shortnose sturgeon can be found in rivers along the western Atlantic coast from St. Johns River, Florida (although the species is possibly extirpated from this system), to the Saint John River in New Brunswick, Canada. The species is anadromous in the southern portion of its range (i.e., south of Chesapeake Bay), while some northern populations are amphidromous (NMFS 1998). Since the American lobster fishery would not operate in or near the rivers where concentrations of shortnose sturgeon are most likely found, it is highly unlikely that the fishery would affect shortnose sturgeon.

Hawksbill Turtle

The hawksbill turtle is uncommon in the waters of the continental U.S. Hawksbills prefer coral reefs, such as those found in the Caribbean and Central America. Hawksbills feed primarily on a wide variety of sponges but also consume bryozoans, coelenterates, and mollusks. The Culebra Archipelago of Puerto Rico contains especially important foraging habitat for hawksbills. Nesting areas in the western North Atlantic include Puerto Rico and the Virgin Islands. There are accounts of hawksbills in south Florida and individuals have been sighted along the east coast as far north as Massachusetts; however, east coast sightings north of Florida are rare (NMFS 2009a). Since operation of the American lobster fishery would not occur in waters that are typically used by hawksbill sea turtles, it is highly unlikely that its operations would affect this turtle species.

Blue Whale

Blue whales do not regularly occur in waters of the U.S. EEZ (Waring et al. 2010). In the North Atlantic, blue whales are most frequently sighted in the St. Lawrence from April to January (Sears 2002). No blue whales were observed during the Cetacean and Turtle Assessment Program (CeTAP) surveys of the mid- and north Atlantic areas of the outer continental shelf (CeTAP 1982). Calving for the species occurs in low latitude waters outside of the area where the American lobster fishery operates. Blue whales feed on euphausiids (krill) that are too small to be captured in fishing gear. Given that the species is unlikely to occur in areas where the American lobster fishery operates, and given that the operation of the fishery would not affect the availability of blue whale prey or areas where calving and nursing of young occurs, the proposed action would not be likely to adversely affect blue whales.

Sperm Whale

Unlike blue whales, sperm whales do regularly occur in waters of the EEZ. However, the distribution of the sperm whales in the EEZ occurs on the continental shelf edge, over the continental slope, and into mid-ocean regions (Waring et al. 2006). In contrast, the American lobster fishery would operate in continental shelf waters. The average depth of sperm whale sightings observed during the CeTAP surveys was 1,792 m (CeTAP 1982). Female sperm whales and young males almost always inhabit open-ocean, deep water habitat with bottom depths greater than 1000 m and at latitudes less than 40° N (Whitehead 2002). Sperm whales feed on large squid and fish that inhabit the deeper ocean regions (Perrin et al. 2002). Given that sperm whales are unlikely to occur in areas (based on water depth) where the American lobster fishery would operate, and given that the operation of the fishery would not affect the availability of sperm whale prey or areas where calving and nursing of young occurs, the Proposed Action would not be likely to adversely affect sperm whales.

Although large whales and marine turtles may be potentially affected through interactions with fishing gear, it is likely that the continued authorization of the American lobster fishery should not have any adverse effects on the availability of prey for these species. Right whales and sei whales feed on copepods (Horwood 2002, Kenney 2002). The American lobster fishery would not affect the availability of copepods for foraging right and sei whales because copepods are very small organisms that would pass through American lobster fishing gear rather than being captured in it. Humpback whales and fin whales also feed on krill as well as small schooling fish (e.g., sand lance, herring, mackerel) (Aguilar 2002, Clapham 2002).

3.5 Bycatch

3.5.1 Interactions Between Lobster Gear and Marine Fish and Shellfish Species

Several marine fish and shellfish species are incidentally caught in the directed lobster trap fishery. These species vary depending on seasons and geographic area. Size of individuals caught in lobster traps is generally limited by the circular openings in the entrance of the trap as well as the escape vent size. This section discusses, on a qualitative level, some species that are most likely expected to be caught in lobster traps and is not meant to be an exhaustive list of all the regulated and non-regulated species that may be caught in the traps.

The coastal lobster trap fishery in Massachusetts Bay and the GOM is a seasonal one that directly targets lobster. Bycatch species include various species of crabs (*Cancer* spp.), and unregulated benthic finfish species such as sculpins (*Myoxocephalus* spp.), sea raven (*Hemitripterus americanus*), sea robins (*Prionotus* spp.), wrymouth eel (*Cryptacanthoides*

maculates), lumpfish (*Cyclopterus lumpus*), and Atlantic tomcod (*Microgadus tomcod*). Regulated species such as cod (*Gadus morhua*), haddock (*Melanogrammus aeglefinus*), pollock (*Pollachius virens*), cusk (*Brosme brosme*), and red hake (*Urophycis chuss*) may be encountered in lobster traps. Flatfish such as yellowtail flounder (*Limanda ferrugina*), winter flounder (*Pseudopleuronectes americanus*) windowpane flounder (*Scopthalmus aquosus*) and American plaice (*Hippoglossiodes platessoides*) may also be encountered in the traps. Regulated species to a varying degree are sometimes harvested if the vessel has the associated permits necessary to do so, as required under 50 Code of Federal Regulations (CFR) part 648.

South of New England, the trap fishery remains directed on lobster although some vessels, with the appropriate permits, may seasonally focus their efforts on finfish such as tautog (*Tautoga onitis*), scup (*Stenotomus chrysops*) and black sea bass (*Centropristis striata*) in the coastal fisheries from Nantucket Sound south to North Carolina. Incidental catch of non-Federally regulated species such as crabs (*Cancer* spp.), four-spot flounder (*Paralychthys oblongus*), among others is likely. All vessels with a Federal lobster permit are required to comply with the lobster gear specifications set forth under the Federal lobster regulations at 50 CFR § 697.21 regardless of whether lobster is the target species.

Concerned with the impacts on commercial fishing enterprises from differing management systems, the Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) and the Commission requested that NMFS provide an exemption from the lobster gear requirements to black sea bass fishers in the Mid-Atlantic area, specifically in Lobster Management Area 5. Black sea bass fishermen typically use smaller escape vents in their traps than that required by the Federal lobster regulations and may use as many as 1,500 traps, compared to the maximum lobster trap limit of 1,440 traps in this management area. Area 5 has historically represented less than two percent of total coastwide lobster landings, and these dual permit holders tend to direct their fishing on black sea bass, with lobster as a marketable bycatch. The Mid-Atlantic Council and Commission recommended further that the incidental lobster allowance that applies to non-trap lobster fishermen be applied to exempted black sea bass fishers.

In response to these recommendations and after several opportunities for public comment, NMFS published a final rule in the Federal Register (FR) on March 13, 2001 (66 FR 14500). This rule allows black sea bass fishers who concurrently hold limited access lobster and limited access black sea bass permits to temporarily request to enter into the Area 5 waiver program, which allows them to participate in a directed black sea bass trap fishery in Area 5 while exempt from the lobster trap gear specifications. While in the waiver program, the vessels are limited to the non-trap lobster possession limits.

In the offshore component of the fishery, Federal lobster vessels direct their trap fishing on lobster. Some bycatch of regulated and non-regulated finfish and shellfish species is known

to occur. Specifically, the regulated species mentioned above as well as Atlantic wolf fish (*Anarhicas lupus*), white hake (*Urophycis tenuis*), cusk (*Brosme brosme*), and red fish (*Sebastes fasciatus*) may also be encountered. The red crab fishery is a directed trap fishery occurring in the deeper canyons along Georges Bank. Of the generally small number of participants in this fishery, some subset may hold Federal lobster permits and therefore may keep lobster as a bycatch for commercial purposes as regulations allow. Due to the depths at which the red crab fishery is prosecuted, lobster are not as likely to be encountered in red crab directed trap fishing operations and red crab traps set deeper than 200 fathoms are exempted from the lobster trap gear specifications.

3.5.2 Interaction Between Lobster Gear and Protected Resources

Commercial fisheries are categorized by NMFS based on a two-tiered, stock-specific fishery classification system that addresses both the total impact of all fisheries on each marine mammal stock as well as the impact of individual fisheries on each stock. The system is based on the numbers of animals per year that incur incidental mortality or serious injury due to commercial fishing operations relative to a stock's Potential Biological Removal (PBR) level (the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population). Tier 1 takes into account the cumulative mortality and serious injury to marine mammals caused by commercial fisheries while Tier 2 considers marine mammal mortality and serious injury caused by the individual fisheries; Tier 2 classifications are used in this EA to indicate how lobster gear may affect marine mammals.

Figure 3.12 identifies the classifications used in the final List of Fisheries (LOF) for FY 2011 (75 FR 68468; November 8, 2010) (NMFS List of Fisheries, 2010), which are broken down into Tier 2 Categories I, II, and III. A proposed LOF for FY 2012 was published on June 28, 2011 (76 FR 37716), but the LOF for FY 2012 has not yet been adopted and is not discussed further in this document.

Interactions between gear and a given species occur when fishing gear overlaps both spatially and trophically with the species' niche. Spatial interactions are more "passive" and involve inadvertent interactions with fishing gear when the gear is deployed in areas used by protected resources. Trophic interactions are more "active" and occur when protected species attempt to consume prey caught in fishing gear and become entangled in the process. Spatial and trophic interactions can occur with various types of fishing gear used by the multispecies fishery through the year.

Interactions between protected species and gear deployed by the lobster fishery typically involve an entanglement in the vertical lines that connect gear to the surface and surface systems.

The potential for entanglements to occur is assumed to be higher in areas where more gear is set and in areas with higher concentrations of protected species.

Figure 3.12 Descriptions of the Tier 2 Fishery Classification Categories (50 CFR 229.2)	
Category	**Category Description**
Category I	A commercial fishery that has frequent incidental mortality and serious injury of marine mammals. This classification indicates that a commercial fishery is, by itself, responsible for the annual removal of 50 percent or more of any stock's PBR level.
Category II	A commercial fishery that has occasional incidental mortality and serious injury of marine mammals. This classification indicates that a commercial fishery is one that, collectively with other fisheries, is responsible for the annual removal of more than 10 percent of any marine mammal stock's PBR level and that is by itself responsible for the annual removal of between 1 percent and 50 percent, exclusive of any stock's PBR.
Category III	A commercial fishery that has a remote likelihood of, or no known incidental mortality and serious injury of marine mammals. This classification indicates that a commercial fishery is one that collectively with other fisheries is responsible for the annual removal of: a. Less than 50 percent of any marine mammal stock's PBR level, or b. More than 1 percent of any marine mammal stock's PBR level, yet that fishery by itself is responsible for the annual removal of 1 percent or less of that stock's PBR level. In the absence of reliable information indicating the frequency of incidental mortality and serious injury of marine mammals by a commercial fishery, the Assistant Administrator would determine whether the incidental serious injury or mortality is "remote" by evaluating other factors such as fishing techniques, gear used, methods used to deter marine mammals, target species, seasons and areas fished, qualitative data from logbooks or fisher reports, stranding data, and the species and distribution of marine mammals in the area or at the discretion of the Assistant Administrator.

Figure 3.13 lists the marine mammals known to have had interactions with gear used by the lobster fishery, as excerpted from the LOF for FY 2011 (75 FR 68468; November 8, 2010).

Figure 3.13
Marine Mammal Species and Stocks Incidentally Killed or Injured Based on American Lobster Fishing Areas and Gear Types (based on 2011 List of Fisheries)

Fishery		Estimated Number of Vessels/Persons	Marine Mammal Species and Stocks Incidentally Killed or Injured
Category	**Type**		
Category I	Northeast/Mid-Atlantic American lobster trap/pot	12,489	Harbor seal, WNA Humpback whale, Gulf of Maine Minke whale, Canadian east coast North Atlantic right whale, WNA[1]

[1] Fishery classified based on serious injuries and mortalities of this stock, which are greater than 50 percent (Category I) or greater than 1 percent and less than 50 percent (Category II) of the stock's PBR

To minimize potential impacts to certain cetaceans, lobster vessels would be required to adhere to measures in the ALWTRP, which were developed to address entanglement risk to right, humpback, and

fin whales, and to acknowledge benefits to minke whales in specific Category I or II commercial fishing efforts that utilize traps/pots and gillnets. The ALWTRP calls for the use of gear markings, area restrictions, and use of weak links, and sinking groundline.

4.0 ENVIRONMENTAL CONSEQUENCES – ANALYSIS OF IMPACTS

Overview of Alternatives to Limit Future Access in Area 1 Based on Prior History

NMFS evaluated three alternatives in this EA in response to the Commission's recommendations for Federal action in Addendum XV to Amendment 3 of the Commission's Plan, to cap the number of Federal lobster permits authorized to fish with traps in Area 1. As described in more detail in Section 2.2 [Summary of Management Alternatives], the alternatives include: Alternative 1, the status-quo alternative, which would allow any Federal lobster permit holder to elect to fish with traps in Area 1; Alternative 2, the Commission's Alternative, which would limit the ability of Federal lobster permit holders to elect to fish with traps in Area 1 to those who met Commission criteria prior to the NMFS Control Date of January 2, 2009; and, the preferred Alternative 3, the Modified Commission Alternative, which would limit the ability of Federal lobster permit holders to elect to fish with traps in Area 1 to those who met Commission criteria prior to the end of the Federal lobster fishing year (May 1, 2008 – April 30, 2009).

The qualification criteria for each of the three alternatives are summarized in Figure 4.1, while the number of permit holders that would be eligible and ineligible under each alternative is summarized in Figure 4.2.

Figure 4.1. Summary of Qualification Criteria by Alternative

Alternative	**Area 1 Trap Fishery Eligibility Criteria by Alternative**		
	Permit Requirement	**Permit Renewal Requirement**	**Trap Tag Requirement**
Alt 1 (Status Quo)	Possession of a valid Federal limited Access Lobster Permit	Annual Renewal with A1 Designation	None needed to qualify but need tags to fish traps
Alt 2 (Commission's Alternative)	Possession of a valid Federal limited Access Lobster Permit	Renewed with Area 1 designation by January 2, 2009 for 2008 Fishing Year	Purchased any number of tags for Area 1 in any year 2004-2208, inclusive
Alt 3 (Modified Commission's Alternative - *Preferred*)	Possession of a valid Federal limited Access Lobster Permit	Renewed with Area 1 Designation at any time during 2008 Fishing Year	Purchased any number of tags for Area 1 in any year 2004-2208, inclusive

Figure 4.2. Summary of Area 1 Qualifiers and Non-Qualifiers by Alternative

Alternative	Permits with Area 1 Designation in Fishing Year 2008				Permits without Area 1 Designation in 2008		Total Permits	
	Qualified[23]	% Qualified	Not Qualified	% Not Qualified	Qualified	Not Qualified	Qualified	Not Qualified
Alt 1	1,867	100.00%	0	0.00%	1,285	0	3,152	0
Alt 2	1,611	86.29%	256	13.71%	0	1,285	1,611	1,541
Alt 3	1,643	88.00%	224	12.00%	0	1,285	1,643	1,509

*Percentages for Alts 2 and 3 are based on a universe of 1,867 Federal permits which elected Area 1 in FY 2008.

4.1 Alternative 1: Status Quo

Alternative 1, the status quo alternative, would allow all Federal lobster permit holders to elect to fish for lobster in Area 1 with trap gear. There are approximately 3,152 Federal limited access lobster permits (Figure 4.2). If this alternative is selected, then all of those permits would be eligible to elect Area 1 for trap fishing in the future, regardless of whether the permit has any prior history of fishing traps in Area 1. Of the total universe of Federal lobster permits (n=3,152), 1,867 of those, about 59 percent, elected Area 1 as a trap fishing area and were renewed[24] during the 2008 Federal fishing year. Under the status quo alternative, all 1,867 permits that designated Area 1 for trap gear during the 2008 fishing year would be eligible for trap fishing in Area 1. Additionally, the remaining 1,285 Federal lobster permits (41 percent of all Federal lobster permits) without an Area 1 designation in 2008, would remain eligible to enter into the trap fishery by designating Area 1 on the annual permit renewal application in the future.

[23] Number of qualifiers for Alternative 1 assumes that all permits with an Area 1 designation in 2008 would become active in the Area 1 fishery. However, this number could be higher since it would allow all 3,152 permits to migrate into Area 1 in the future. For Alternative 1, there is no actual qualification process. All Federal lobster permits would be eligible for Area 1 trap fishing.

[24] All limited access permits such as Federal lobster permits, must be renewed at some point during each Federal fishing year to remain eligible as a valid Federal permit history. A vessel is not eligible to fish with a permit that has not been renewed for the current fishing year. If the permit is not renewed at some point during the fishing year, it is cancelled and no longer eligible for renewal or transfer. See Chapter 3 for additional information on limited access permits.

4.1.1 Impacts to the Lobster Industry

In evaluating the effects of the three alternatives in this EA on the lobster industry, this analysis has identified, and will evaluate, the industry impacts on four sub-groups of potentially impacted constituents. The breakdown of the sub-groups of potentially impacted constituents addresses ownership of a Federal lobster permit, authorization to fish with trap or non-trap gear, and the geographical location of the permit's owner. The four sub-groups are:

1) ***Federal Area 1 Lobster Trap Fishermen*** possess a Federal lobster permit with a 2008 Area 1 lobster trap designation;
2) ***Federal Lobster Non-Trap, GOM (Area 1) Port Fishermen*** possess a Federal lobster non-trap permit without an Area 1 trap designation during the 2008 fishing year, and reside in a state adjacent to Area 1;
3) ***Federal Lobster Trap and Non-Trap, Outside Area 1 Fishermen*** possess a Federal lobster non-trap permit and/or possess a Federal lobster trap permit without authorization to fish with traps in Area 1, and do not reside in a state adjacent to Area 1; and,
4) ***Non-Federal Lobster Trap or Non-Trap Fishermen, GOM (Area 1) Port*** may possess a state license to fish with trap or non-trap gear in Area 1, but do not possess a Federal lobster permit, and reside in a state adjacent to Area 1.

The positive and negative effects of the status quo alternative on various lobster fishing sectors are summarized in Figure 4.3 and discussed in more detail in this section.

Because under the status quo alternative, participation in the Federal lobster fishery remains broadly defined to a universe of 3,152 permits, it is difficult to measure and thus manage, fishing effort within the fishery. Under Alternative 1, anywhere from 1,867 permits (2009 data) to over 3,000 permits (based on total number of Federal permits) could be fishing up to 800 traps per permit – meaning that managers would have to assume that anywhere from 1.5 million traps (1,867 permits X 800 traps) to 2.5 million traps (3,152 permits X 800 traps) could be fished in any given year. While it is unlikely that all 3,152 Federal lobster permit holders would designate Area 1 on their Federal permit, managers face the difficult challenge under the status quo alternative of understanding the level of real participation in the fishery and this makes it difficult to respond with any precision to problems facing the resource.

Figure 4.3 Lobster Industry Impact Analysis for Alternative 1 – *Status Quo*

Industry Sub-Group	Positive Implications	Negative Implications
Federal Area 1 Lobster Trap Fishermen	Continued opportunity for participation. Non-active participants allowed future access. No short-term adjustments in fishing practices needed.	Fishing practices and income may change over time for traditional/current participants if fishing effort increases due to lack of entry controls.
Federal Lobster Non-Trap, Gulf of Maine (Area 1) Port	Continued opportunity to transition to trap fishing under same permit and same port (with some exceptions) if economic conditions warrant.	Potential for increased trap effort may increase incidence of gear conflicts and available bottom for non-trap gear.
Federal Lobster Trap and Non-Trap, Outside Area 1	Continued opportunity to transfer permit or fishing operations to Area 1. May add value to permit if permit has low trap allocation (or no allocation) for another area, or is limited by other fishery restrictions.	Potential for increased trap effort may increase incidence of gear conflicts and available bottom for non-trap gear. May experience net loss in revenue over time with increased competition.
Non-Federal Lobster Trap or Non-Trap Fishermen, Gulf of Maine (Area 1) Port	Continued opportunity to purchase a Federal lobster permit and expand scope of lobster fishing in home area. Any Federal permit can be purchased and applied to Area 1. May keep permit prices low to prospective entrants.	Fishing practices and income may change over time for traditional/current participants who rely on GOM stock if fishing effort increases due to lack of entry controls. May lead to increased gear conflicts.

Federal Area 1 Lobster Trap Fishermen

Under Alternative 1, the status quo alternative, there would be no further restrictions on access to fish with traps in Area 1. All Federal lobster trap fishermen who designated Area 1 on their 2008 permit, regardless of whether they actively fished traps or not, would qualify for future access to the Area 1 lobster trap fishery. This subset of the fishery represents 1,867 Federal lobster permits, or 59 percent of all Federal lobster permits. Maine-based vessels

represent 71 percent of the 2008 Area 1 trap permits, with Massachusetts-based and New Hampshire-based vessels comprising 21 percent and four percent, respectively (Figure 4.4).

Under Alternative 1, the status quo alternative, active vessels from the Federal Area 1 Lobster Trap Fishermen sub-group could continue fishing without any short-term changes to their fishing practices. Federal lobster permit holders who elected Area 1, but are not active lobster trap fishermen, could opt into the trap fishery, likely from their current home port, barring any state restrictions.

The number of Area 1 Federal lobster trap permits has remained stable over the last ten years, ranging from a low of 1,763 in 2000 and a high of 1,878 in both 2006 and 2007, with the overall average equal to the 2008 figure of 1,867[25] (Figure 4.4). Consequently, no significant changes in the number of Federal permits participating in the Area 1 lobster trap fishery are expected in the near future. However, the status quo alternative would allow all 3,152 Federal lobster permits to participate in the Area 1 fishery, including the 1,285 permits which did not designate Area 1 for trap fishing on the 2008 permit. Therefore, if the status quo yields a rise in the number of Area 1 trap permits over time, historical participants – active Area 1 trap fishermen – may be negatively affected. Specifically, more permits could mean more traps in the water which, in turn, could escalate the prevalence of gear conflicts between trap fishers and between trap and non-trap fishers. Further, if catch rates are negatively impacted by increased traps, historical participants may suffer economic losses due to decreased landings.

If landings increase as a result of more traps, lobster price could be negatively affected if increased seasonal lobster supplies drop the ex-vessel prices. If all Federal permits are eligible for the Area 1 trap fishery, prices paid for a Federal Area 1 permit may stay constant or could decrease, which may affect those historical participants who have short-term plans to exit the fishery. Overall, a lack of restriction on the Area 1 trap fishery may destabilize the fishery by allowing unchecked levels of effort into the fishery, with negative impacts to fishermen and fishing communities which have historically relied on the GOM lobster resource as a major source of income.

[25] Note the total number of Area 1 designees for 2008 (1,867) is the same as the average annual number of Area 1 designees from 2000-2009.

Figure 4.4 Federal Area 1 Permits by Year and State, 2000-2009[26]

Year	ME	NH	MA	Other State	Total (All States)
2000	1,195	61	475	32	1,763
2001	1,211	69	491	39	1,810
2002	1,232	69	473	43	1,817
2003	1,261	70	459	68	1,858
2004	1,303	73	431	77	1,884
2005	1,304	73	409	70	1,856
2006	1,331	69	403	75	1,878
2007	1,335	72	399	72	1,878
2008	1,327	71	400	69	1,867
2009	1,309	73	387	69	1,838

*Trap tag data analyzed for 2004-2008 which is the period adopted by the Commission in Addendum XV as the qualification period for the trap tag purchasing criterion. Source: NMFS Northeast Region Permit Data.

Federal Lobster Non-Trap Fishermen Fishing in Area 1

In fishing year 2008, 201 Federal lobster permits hailing from Area 1 ports designated non-trap gear as their only gear type, including those Federal lobster permit holders with other Federal fishery permits (multispecies, Atlantic herring, scallop) who have traditionally fished in the GOM with non-trap gear such as gillnets, otter trawls, and scallop dredges. Although not traditional Area 1 trap participants, under Alternative 1, the holders of these permits would maintain the opportunity to switch into the Area 1 trap fishery if desired.

Maintaining the option to fish with traps under the status quo alternative could be an economically beneficial option for non-trap lobster vessels, giving them two ways to potentially capitalize on the opportunity to switch into the trap fishery if desired. The most direct, and likely most economically beneficial, course of action for such permit holders is to sell the permit to someone seeking to enter into the lobster trap fishery. This option would provide the seller, should he be so inclined, the chance to divest from the fishery and avoid the costs of re-rigging a

[26] Permit data obtained from NMFS Northeast Region Permits Database. Trap Tag data obtained from trap tag vendor, Stoffel Seals, Inc., with review and quality control by relevant state fisheries agencies. Only 2004-2008 coast wide trap tag data was used since the Commission's plan identified these years for Area 1 lobster trap fishery eligibility in Addendum XV.

vessel, or purchasing a new vessel and the associated gear needed to transition into the lobster trap fishery.

The second approach is to switch from non-trap gear to the directed lobster trap fishery under the same permit. This option may be particularly appealing to the subset of those non-trap lobster vessels which are also in the common pool sector of the multispecies (e.g., groundfish) fishery, the component of the groundfish fleet that is allocated only about 10 percent of the overall groundfish quota (see Chapter 1 for more details on the Federal groundfish sectors management program). Of those 967 Federal vessels with both a multispecies and lobster permit, 355 vessels are in the common pool component of the multispecies fishery. This subset of common pool vessels may be those most likely to consider a transformation to trap gear fishing if restrictive groundfish quotas for the common pool fleet prove to be economically burdensome. Therefore, this small portion of the fleet could benefit by having an option, under the status quo alternative, of changing operations to trap fishing in the future if it is economically beneficial. However, since sector management is only finishing its first year of implementation, it is difficult to determine the extent to which various sectors of the groundfish fleet will be impacted and to what degree, if any, groundfish participants may alter their business practices to adjust to such impacts. Therefore, the potential for such vessels to switch into the lobster trap fishery cannot be estimated. In addition, the lobster trap fishery is a highly territorial fishery with aggressive industry self-policing, and new entrants may be challenged to establish and maintain a viable long-term business.

The ability to shift gear types or target species enhances business flexibility in times of increasing regulation on various fisheries. Given the increased commercial fishing operating costs due to high fuel prices and constrained economic conditions, switching from a non-trap operation such as a gill net or trawl set-up, to a trap fishing operation, may prove cost-prohibitive and operationally difficult for non-trap fishermen. To make such a transition means a complete change in how the fishing operation is conducted since it requires a shift in the target species sought, not to mention revisions to the vessel's fishing system and the associated capital costs of the change-over. Non-trap fishermen must incur the costs of either retooling their vessel or purchasing a new (different) vessel to effectively participate in the trap fishery. The costs of traps, rope, buoys, bait and other essentials may make such a venture economically infeasible, and success is tied to the experience of the fisherman. Years of successful fishing with trawls or gillnets doesn't guarantee a smooth transition to successful lobster trapping given the differences in how the gear is deployed, fishing locations, and other lobster-specific fishing factors.

To capitalize on the potentially increased value of a Federal lobster trap permit in the event of a status quo decision, a permit holder with a non-trap permit may be more likely to sell his permit to a current state-licensed lobster trap fisherman intent on expanding his trap fishing business into Federal waters, rather than retooling his operation and changing his mode of

fishing. For these reasons, a marked shift from non-trap to trap gear fishing by Area 1 non-trap Federal permit holders may not occur since Area 1 trap permits have remained relatively constant over the past decade, despite the continued opportunity for permit holders to switch modes and become lobster trap fishermen. As such, those intending to capitalize on the opportunity would likely have done so already.

Along with the capital costs and other economic factors, a lobsterman's ability to switch from non-trap gear to trap gear may be limited due to state restrictions. State restrictions on entry such as residency requirements, moratoria on landing permits for vessels without state lobster licenses, and entry/exit ratios intent on controlling effort would govern the feasibility of such action. As one example, the state of Maine allows new lobstermen into its state waters fishery though a strict entry/exit ratio process which is unique for each of the seven state lobster management zones (Appendix 6, Maine Lobster Management Zones A-G). After completing a mandatory apprenticeship program by working on the stern of a Maine-licensed lobster vessel, new lobster fishers are allowed into the state fishery when one or more of the lobster zone's participants leaves the fishery, depending upon that zone's entry/exit policy. Depending on the lobster zone and the state licensure status of the Federal permit holder, the wait for a state license may be a significant limiting factor in the ability of a fisherman to switch to a trap gear operation in Maine.

Selection of the status quo alternative may result in negative impacts to the lobster fleet due to a potential increase in gear conflicts. If the status quo alternative leads to an increase in the number of Area 1 trap fishermen, new entrants into the trap fishery will compete for open bottom with trap and non-trap fishermen. This situation could result in an expansion of the lobster trap fishing grounds into areas normally associated with non-trap gear, leading to increased gear conflicts and potential decreases in the bottom available for non-trap gear fishing. Gear conflicts between trap and non-trap fishermen and between trap fishermen and other trap fishermen, may also become more prevalent.

Overall, the effects of the status quo alternative on non-trap gear lobster fishermen fishing in Area 1 would be positive. Although the factors previously mentioned may not support a marked trend to shift into the lobster trap fishery, the opportunity to do so would be perpetuated and may help to sustain the long-term value of the Federal lobster permit as all other lobster management areas proceed with limited entry for their respective trap fisheries.

Federal Lobster Trap and Non-Trap Fishermen Outside of Area 1

Alternative 1, the status quo alternative, will maintain the opportunity for Federal permit holders without Area 1 trap fishing history to shift into the Area 1 trap fishery. This includes the

1,285 Federal lobster trap and non-trap permits that did not elect Area 1 trap gear on their 2008 Federal permit, equating to about 41 percent of all Federal lobster permits (n=3,152).

With all other lobster management areas either already restricted or under consideration for limited access (see Chapter 3.1 – Regulatory Environment), many lobster permit holders who did not qualify for participation in other lobster trap areas are limited in what they can do with their Federal lobster permits. They may opt to sell them to those fishermen already located near GOM ports who seek to expand their trap fishing into Federal waters. Or, with some limitation based on state restrictions on entry into state waters fisheries, the permit holders themselves could relocate their fishing operations, if not already there, to a GOM port, depending on state requirements which may restrict the extent to which this opportunity may be exercised. Although NMFS does not expect all such permit holders to move into the GOM, or transfer their permits to GOM based fishermen, there is the potential for a large increase in fishing effort compared to historic levels which have remained constant over the past decade (see Figure 4.4).

For Federal lobster permit holders who also hold other Federal fishing permits, the restrictive regulatory environment in many of the other traditional non-trap fisheries has resulted in adverse economic impacts to some traditional participants. Quota restrictions, particularly in the multispecies fishery, have limited the fishing capacity of Federal fishing vessels in this permit category. Approximately 967 Federal lobster vessels also have a multispecies permit. The status quo option would continue to allow these groundfish vessels, to switch their effort into the Area 1 trap fishery. If the quota limitations become too extreme, some multispecies fishermen may choose to switch to lobster trap fishing in Area 1 if the opportunity exists, although this trend has not been realized (NEFSC Personal Communication, 2011).

As previously noted, the Status Quo alternative may maintain or decrease the cost of obtaining an Area 1 permit since it would continue to allow all Federal lobster permits to be transitioned into Area 1. This could facilitate the transition of operations by non-historical Area 1 lobster trap participants into the Area 1 fishery.

Non-Federal Lobster Trap and Non-Trap Fishermen Fishing in the State Waters of Area 1

Status quo may benefit state-licensed lobster fishermen from GOM ports that do not hold a Federal lobster permit. Should these individuals seek to expand their fishing into Federal waters, limitations to access in the other lobster management areas may result in more permits available for transfer to Area 1, facilitating the expansion of state fishermen into Federal waters. Unrestricted permit availability could lead to a lower value and thus a lower price for an Area 1 permit if all Federal permits are eligible for Area 1 (the permits having less value if not qualified in other areas). As noted earlier, state restrictions on entry such as residency requirements, moratoria on landing permits for vessels without state lobster licenses, and entry/exit ratios may

temper this trend. But, in general terms, Federal lobster permits without Area 1 trap fishing history would continue to provide those intending to expand their fishing into Federal waters of Area 1 with a choice of permits that would otherwise not be available under Alternative 2 or 3.

Most fisheries and fishing communities have strong traditions which are passed down through the generations. This is even more evident in more rural coastal areas where fishing is the main source of employment. Downeast Maine, for example, is one area that is heavily reliant on lobster fishing as a long-term employment opportunity. The ability to expand fishing opportunities into Federal waters to the younger generation may augment the long-term social and economic stability of rural lobster-dependent communities.

Federal Lobster Permits in Confirmation of Permit History

Consistent with the current regulations, any permit eligible for issuance to a vessel that was in Confirmation of Permit History (CPH) status at any time before, during, or after the control date could be transferred to a vessel and designated for the Area 1 trap fishery; therefore, no Federal permits in CPH status would be impacted by the status quo alternative.

4.1.2 Impacts to the Lobster Resource

Although the number of Area 1 Federal lobster trap permits has remained stable over the last ten years (see Figure 4.4), Alternative 1, the status quo alternative, could increase traps in the future and may lead to increased fishing mortality. The latest lobster stock assessment (ASMFC, 2009) cautions that although the GOM lobster stock is not overfished and remains in good condition, a factor reflected by high abundance and record high landings in recent years. Limited recruitment and increased fishing mortality may negatively impact the stock should abundance levels return to lower, more historical, levels[27]. Consequently, increased effort could compromise stock rebuilding efforts. Trap numbers could almost double if all Federal permits continue to have the option to elect to fish with traps in Area 1. Although a doubling of effort is not expected, over time this alternative could lead to a progressive increase in permits and traps in Area 1. The concerns in the latest stock assessment regarding the potential negative impacts due to increased effort are especially worrisome since Area 1 is the most lucrative and productive lobster management area, with minimal control on effort shift into the area under the status quo option.

Federal lobster permits without a trap fishing history may be purchased and relocated to GOM ports and would be eligible for Area 1 trap fishing if the status quo is maintained. This

[27] ASMFC Lobster Stock Assessment Report, May 2009.

situation could result in an influx of trap fishing effort over time into Area 1 and, potentially, increased pressure on the GOM lobster stock. However, it is difficult to directly correlate fishing mortality with trap numbers, especially when trap levels are already high, as is the case in the GOM. Fishing mortality is more aligned with catch per unit effort associated with the number of trap hauls – the number of times a trap is hauled back and its contents harvested – than the number of traps in the water. Regardless, the potential for increased effort remains if the status quo option is selected. This could increase the number of participants in the fishery, exacerbating the situation in a fishery that has relatively high fishing effort under the current conditions.

Overall, the status quo option may result in more traps fished in Area 1 over time. It is unclear what the effect of a potential increase in trap gear in Area 1 would be on fishing mortality. The 2009 stock assessment peer review indicated that although stock abundance is high, recruitment may be lacking and effort increases could increase fishing mortality. The relative success of the GOM lobster fishery has, for years, baffled scientists since it continues to produce record high landings while relying on newly recruited lobster for about 90 percent of the catch.

The more direct threat to the resource and traditional trap fishery participants hinges upon whether traditional non-trap vessels opt into the lobster trap fishery. Currently, 967 Federal vessels have a multispecies (groundfish) permit and a Federal lobster permit. Seven hundred and fifty-eight vessels with lobster and groundfish permits will not qualify for the Area 1 trap fishery under either Alternative 2 or 3, meaning that these 758 that wouldn't qualify under the other alternatives would maintain their option to fish with traps in Area 1 if the status quo is maintained. In contrast, the status quo would allow all of these permit holders the opportunity to elect into the Area 1 lobster trap fishery in spite of the fact that the vast majority have not participated in the Area 1 trap fishery in the past.

It is difficult to determine how many Federal lobster permits would migrate into Area 1 over time. While it is unrealistic to expect all 3,152 Federal lobster permits to shift effort into the Area 1 trap fishery, as noted previously, at the extreme there is the potential of up to one million more traps to be set in Area 1. And, if trap fishing effort does increase as a result of permit migration, it could increase fishing mortality. It is not clear how fishing mortality would be affected or to the degree it would (or would not) increase. However, since trap fishing effort is already relatively high, even slight increases could have substantial negative effects on the resource and allowing such unchecked increases in fishing effort would be counter to the recommendations of the 2009 Stock Assessment Peer Review Report (ASMFC, 2009). In addition, because permit holders could elect Area 1 annually, managers would be less able to effectively define the universe of participation in the Federal Area 1 trap fishery, making it more difficult to measure, and thus manage, fishing effort and other parameters within this fishery.

4.1.3 Impacts to Habitat

Unrestricted entry of Federal lobster permits into Area 1 under Alternative 1, the status quo alternative, could lead to more traps fished in Area 1 and may have an impact on lobster habitat over time, although lobster traps have been shown to have a minor detrimental impact on lobster habitat, compared to trawl or other types of mobile gear which are dragged across the bottom.

Impacts on the sea floor vary based on the composition of the substrate that the traps come to rest on. Under current practice, inshore lobster traps are hauled, re-baited and then reset on the ocean bottom frequently, normally one to three times per week. Frequent hauling in areas of dense vegetation, such as kelp beds and eelgrasss, are more likely to result in some damage through rope entanglement or as traps are hauled back. Damage is most likely to occur through leaf shearing (cutting of leaves) and once sheared, the plant usually cannot re-grow the lost portion of the leaf, although the plant can produce a new leaf from undamaged meristems. However, even in areas of dense vegetation, the impacts are likely to be minor and of short duration.

Further, much of the GOM, especially in coastal and downeast Maine waters, consists of hard bottom granite or bedrock, which is fairly resistant to gear damage, as opposed to more fragile coral, cobble, mud or gravel bottom types. Overall impact on the lobster habitat cannot be accurately estimated since the extent to which trap numbers might change in Area 1 cannot be exactly determined. However, the no action alternative could increase the number of traps fished in Area 1 through the introduction of more permits in the absence of a limited entry program. Increased traps could lead to increased coverage of the bottom and the associated impacts of the gear on the bottom. More gear could mean more gear conflicts and more lost gear. Gear-on-gear entanglements could lead to more ghost gear, which could have a protracted negative impact on bottom habitat.

With respect to non-trap gear such as gillnets and otter trawls, it is not known whether the status quo option would influence the utilization of non-trap gear for lobster or other species. If non-trap vessels with Federal lobster permits are adversely impacted by restrictions in other fisheries resulting in an increase in effort to more directly target lobster, then it could lead to increased use of non-trap gear types in areas known to harbor lobsters. Increased effort in known lobster grounds would increase trap and non-trap gear conflicts also, and would be expected to result in more lost and damaged gear on the bottom. In addition, unlike trap gear, mobile gear towed along the ocean floor, especially in areas of dense vegetation, is known to have a protracted negative impact on bottom habitat. At the same time, the status quo option would allow traditional non-trap vessels to fish with trap gear, so a need to target lobster more directly may result in higher trap levels, as opposed to more vigorous direction of non-trap gear

effort on lobster. Overall, it is not clear what the effects of the status quo alternative would be on the actions of the traditional non-trap industry, although it is clear that the status quo alternative would allow more trap effort to enter into the fishery. It is not known whether that would, in fact, occur and what the impacts of such actions would be on lobster habitat.

4.1.4 Impacts to Bycatch

In general, the traps used in commercial lobster fisheries are among the more selective types of fishing gear. As a result, overall levels of bycatch in traps are low in lobster fisheries relative to other marine fisheries, and fish and invertebrates landed in traps are likely to be discarded with lower mortality rates than those landed with other gear types such as trawls and dredges (Davis, 2002). The most common types of bycatch in lobster traps are juvenile lobsters and crabs. Types of fish occasionally caught in lobster traps include tautog, scup, black sea bass, cod, cusk, eels, and flounder. A variety of invertebrates is found in and attached to lobster traps including Jonah and rock crabs, red crabs, starfish, urchins, whelks, and conchs (ASMFC, 1997, Butler, 2004, Miller, 2005).

The discard mortality rates (the percentage of discarded animals that die) associated with animals caught in traps is low, particularly when compared against the mortality rates linked with mobile fishing gears such as trawls and dredges. To mitigate the bycatch mortality of lobster and other species in lost trap gear (ghost gear), Federal lobster regulations mandate that each lobster trap include a biodegradable ghost panel, a rectangular opening not less than 3 ¾ inches (9.53 cm) by 3 ¾ inches (9.53 cm) in the outer parlor of the trap, to allow lobsters and other species to escape ghost gear (see § 697.21(d)(1)). The number of animals that die after being caught and discarded in the American lobster fishery appears small compared to actual lobster landings.

Although compared to other gear types, overall impacts of trap gear are low. However, the lobster resource may be impacted if the status quo is maintained and unchecked trap fishing effort leads to increased lobster traps fished in Area 1. More traps would lead to an increase in regulatory discards – the discard of lobsters which cannot legally be kept due to size, v-notch or egg restrictions. Recently, the extent of lobster discard mortality in the trap fishery has become of interest. Some theorize that discarded lobsters may experience stress due to handling and changes in temperature and pressure associated with coming up in the trap, handled, kept on deck and then thrown overboard. Such stressors may lead to mortality as well as the increased potential for discarded lobster to be preyed upon by finfish such as striped bass as they descend to the bottom after being thrown overboard. The extent of such discard and predation mortality is unquantifiable but remains a concern.

Changes in fishing practices could occur with the status quo, if some traditional non-trap gear vessels opt into the trap fishery or if other trap permits migrate into Area 1. Bycatch of regulated and non-regulated finfish and crustaceans may increase if the status quo alternative results in increased trap levels. If the status quo changes traditional trap fishing practices, it could result in more gear conflicts and potentially a higher incidence of trap loss resulting in more ghost traps and potential increases in mortality to finfish and crustaceans caught in ghost traps. However, the extent to which changes in trap levels may lead to changes in catch rates of sub-legal or illegal lobster or non-target species, and the potential for changes in fishing-related mortality, is not known.

4.1.5 Impacts to Protected Species

Several endangered species are susceptible to entanglement in fishing gear. Johnson, et al., (2005), noted that any part of the trap gear (the buoy line, ground line, float line, and surface system line) creates a risk of entanglement. Many protected species exhibit feeding behaviors that increase their susceptibility to entanglement. For instance, right whales spend a substantial amount of time feeding below the surface, or feeding by swimming continuously with their mouths open. They also roll and lift their flippers about the water's surface, behaviors that may add to entanglement risk, especially from vertical buoy lines and surface system lines. Humpback whales commonly use their mouths, flippers and tails to aid in feeding. Thus, while foraging, all body parts are at risk of entanglement. Leatherback sea turtles seem to be the most vulnerable turtle to entanglement in fishing gear. This susceptibility may be a result of their body type (larger size, long pectoral flippers, and the lack of a hard shell). And their attraction to the gelatinous organisms and algae that collect on buoys and buoy lines at or near the surface.

As noted previously, over 99 percent of lobsters are harvested from lobster traps. Lobster traps may be set singly, each having its own surface line and buoy, or traps may be fished in trawls. Normally two to six traps per trawl in inshore areas, the trawls consist of a number of traps tied together by ground lines, with surface lines and buoys or high flyers usually at the first and last traps of the trap trawl (Sainsbury, 1971). Fishing practices by inshore vessels can vary by state and geographic location, with fishermen deploying various types of trap and trawl configurations along the New England coastline. In general, however, inshore vessels tend to fish single traps or trawls of ten traps or less, with offshore vessels fishing 20-40 traps per trawl. At its 2003 meeting, the ALWTRT identified two major sources of entanglement risk associated with trap and pot fisheries. The entanglement risk associated with groundline (lines in a lobster trap trawl that connect the traps to each other) and the vertical line or buoy line (line from surface buoy to trap). To address entanglement risk associated with groundlines, NMFS published a final rule in the Federal Register in April 2009, mandating sinking groundlines on all trap gear, to mitigate entanglements of large whales. However, vertical lines that tie the bottom-tending trap to the surface gear and buoys continue to pose an entanglement risk to protected

species. NMFS is currently working to find ways to reduce the risk of serious injury and mortalities of large whales resulting from vertical line entanglements. NMFS is committed to publishing a final rule to address this issue by 2014.

The risk of entanglement of endangered whale species associated with vertical lines does increase if there is some small but unquantifiable increase in the level of trap fishing effort in Area 1 under Alternative 1. However, the increased entanglement risk is not associated with the increase of trap gear in the area. Rather, the increased entanglement risk is associated with the increase in vertical lines needed to prosecute the trap and pot gear. Further, due to the strategic geographic location of Area 1 as a major transit area for the endangered North Atlantic right whales on their way to and from spring foraging grounds in Cape Cod Bay and in the GOM and southern Canada, buoy lines for trap gear set in this management area is likely to pose a greater risk of entanglement than if the same quantity of gear was set in almost any other lobster fishing area. Therefore, under Alternative 1, while any increase in trap fishing effort is likely to be very limited, any additional trap gear set in Area 1 does increase the risk of entanglement in the buoy lines of the trap gear.

Selecting the status quo alternative may pose additional threats to endangered and protected species such as whales, sea turtles, sea birds or protected fish species. The effects of continuing to allow all Federal lobster vessels access to the Area 1 lobster trap fishery could result in an increase in the presence of lobster traps over time, although the effects are not expected to be immediate. Even under the current scenario, the number of permits designated for trap fishing in Area 1 has stayed about the same for the past several years. However, a high potential for effort shift into Area 1 would continue to exist and increased vertical line and trap numbers could increase the incidence of endangered and protected species entanglement. Current gear modifications for the trap fishery mandated by the Atlantic Large Whale Take Reduction Plan would maintain a means of limiting impacts to large whales if an entanglement occurs, but the risk of entanglement may increase if traps, or more specifically, if vertical lines associated with traps, increase as a result of the status quo alternative and the associated increase in lines increases the entanglement risk to large whales.

4.1.6 Conclusion

If no action is taken to restrict the entry or movement of Federal lobster permits into Area 1, it will perpetuate the opportunity for those Federal lobster permits without Area 1 trap fishing history (via permit transfer or replacement – see Chapter 3.1- Regulatory Environment) to migrate into the Area 1 trap fishery and provide opportunities for fishermen to buy and sell Federal lobster permits and gain access to Area 1.

In contrast, the open nature of this fishery could increase competition between Area 1 fishermen, may impact the GOM lobster stock through increased fishing effort, and could increase the threat to endangered and protected species by increasing the number of vertical lines in the water column, thereby increasing the entanglement risk, associated with lobster trap gear in the GOM.

Further, this alternative does not effectively address concerns by the Commission's Lobster Board, the Lobster Technical Committee and the Area 1 lobster industry that unfettered access into Area 1 could lead to increased trap fishing effort. Specifically, although not all Federal permit holders would be expected to elect into Area 1, it could allow the potential for an additional one million traps to be authorized for Area 1 and would not effectively address the prevention of latent effort into this area.

The status quo alternative would maintain Area 1 as the only management area without a formal plan either in place or under review to control effort through historical participation. Its status as the most prolific lobster producing area may make a transition into the Area 1 trap fishery a tempting option for some Federal lobster permit holders intent on maintaining a sustainable business plan in the wake of continued restrictions in the lobster fishery and other Federally managed fisheries. In addition, because permit holders can elect Area 1 annually, managers would be less able to effectively define the universe of participation in the Federal Area 1 trap fishery, making it more difficult to measure, and thus manage, fishing effort within this fishery in the future.

4.2 Alternative 2: Commission's Alternative

Selection of Alternative 2, the Commission's Alternative, would require NMFS to make a determination regarding eligibility for the Area 1 trap fishery on Federal lobster permits based on strict adherence to the Commission's Area 1 qualification criteria established in Addendum XV. Under the Commission's Alternative, Area 1 eligibility has three requirements: A) possession of a valid Federal lobster permit; B) that the Federal lobster permit had an Area 1 trap gear permit designation prior to the control date of January 2, 2009, and; C) that one or more Area 1 trap tags were purchased for the vessel associated with the Federal permit during any one fishing year from 2004-2008, inclusive. If this alternative is chosen, approximately 1,611 Federal lobster permits would meet the Commission's qualification criteria and would, therefore, be qualified for future access to the Area 1 lobster trap fishery. Accordingly, the remaining 1,541 Federal lobster permits which do not meet the eligibility criteria under Alternative 2 would not be eligible for future access to the Area 1 lobster trap fishery.

4.2.1 Impacts to the Lobster Industry

As noted in Section 4.1.1, when reviewing the effects of the three alternatives in this EA, the analysis will evaluate the industry impacts on four sub-groups of potentially impacted constituents. The breakdown of the sub-groups of potentially impacted constituents addresses ownership of a Federal lobster permit, authorization to fish with trap or non-trap gear, and the geographical location of the permit's owner. The four sub-groups are: 1) *Federal Area 1 Lobster Trap Fishermen; Federal Lobster Non-Trap Fishermen, GOM (Area 1) Port; 3) Federal Lobster Trap and Non-Trap Fishermen, Outside Area 1; and Non-Federal Lobster Trap or Non-Trap Fishermen, GOM (Area 1) Port.* The estimated positive and negative impacts of the Commission's Alternative on these components of the lobster fishing industry are summarized in Figure 4.5 and discussed in further detail in this section.

Figure 4.5 Lobster Industry Impact Analysis for Alternative 2
Commission's Alternative

Industry Sub-Group	Positive Implications	Negative Implications
Federal Area 1 Lobster Trap Fishermen	Those who meet eligibility criteria are assured of future access. No adjustments in fishing practices needed. Limited entry will likely help to stabilize trap fishery by removing economic threats associated with unchecked effort. Permit value may increase. Maintains option for non-historical participants to purchase a Federal Area 1 trap permit.	Those who don't meet the eligibility criteria are restricted from the fishery, but likely were never historical participants. Result will limit business options and may diminish permit value for non-qualifiers.
Federal Lobster Non-Trap, Gulf of Maine (Area 1) Port	By maintaining historical trap numbers, gear conflicts would not increase. Non-trap fishermen could continue historical fishing practices without interruption or loss of available bottom.	No longer able to convert to directed lobster trap fishery in home area. Limits options for businesses that might have otherwise switched to trap fishing to offset other fishery restrictions; may diminish value of Federal permit for non-qualifiers.
Federal Lobster Trap and Non-Trap, Outside Area 1	None, but no direct or immediate impacts to current or historical fishing practices.	Permit permanently restricted from Area 1 trap fishery. No direct or immediate impact, since not a current participant. May limit business opportunities and may diminish permit value.
Non-Federal Lobster Trap or Non-Trap Fishermen, Gulf of Maine (Area 1) Port	No direct, immediate or long-term impacts to fishing practices. Capping the number of Federal Area 1 permits may benefit state waters fishermen by restricting the potential shift in effort to Area 1 ports.	Would limit pool of Federal Area 1 permits available for potential acquisition if Federal participation is desired. May increase cost of entry due to limited supply of permits.

For the purposes of analyzing this alternative, NMFS has interpreted criteria A and B together to mean that the valid[28] Federal lobster permit in question was renewed and designated[29] for Area 1 trap fishing for the 2008 fishing year[30] prior to the January 2, 2009 control date. Designating Area 1 means that the permit holder chose Area 1 as a trap fishing area on the 2008 Federal lobster permit renewal application. Under Federal lobster regulations, the lobster management area designations on the Federal fisheries permit, such as Area 1, denote trap gear fishing. Any Federal lobster permit holder may also elect any type of non-trap gear on their permit application. For criterion C, NMFS reviewed trap tag purchase data provided by the trap tag vendor and verified by the relevant states, as well as Federal trap tag records, to determine which vessels meeting the permit renewal criteria also met the trap tag purchase requirement.

A detailed review of the NMFS Northeast Region Vessel Permit System (VPS) data revealed that 1,824 Federal lobster permits with unique MRIs[31] were renewed prior to January 2, 2009 for the 2008 fishing year[32]. Of the 1,824 permits renewed during the period prior to the control date, 1,611 had a record of purchasing trap tags during at least one of the qualifying years from 2004-2008, inclusive; the trap tag purchase time frame adopted by the Commission in Addendum XV. Consequently, 1,611 Federal lobster permits would be eligible for continued future access to the Area 1 lobster trap fishery under the Commission's Alternative because they meet the permit renewal and trap tag purchase criteria.

Since 2000, all Federal lobster permit holders have had the option to designate Area 1 on their Federal permit and become eligible to fish in Area 1 with lobster traps. Despite this opportunity, Area 1 trap levels have remained relatively stable (average = 1,845 annual Area 1 permits, 1999-2009, see Figure 4.6), indicating that those permit holders who aren't eligible for the Area 1 trap fishery under the Commission's Alternative are likely engaged in the lobster fishery in other areas or with other gear types. Although those non-qualified permits will lose

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[28] § 697.4(a)(1) states that a vessel is eligible for the issuance of a Federal limited access lobster permit for the current fishing year if it was issued a Federal limited access lobster permit for the preceding fishing year, unless the permit was in Confirmation of Permit History status. Consequently, a valid Federal limited access lobster permit is one that has been issued or renewed for the current fishing year, as opposed to an eligible permit which is eligible for renewal but is not valid because it has not been renewed for the current fishing year.

[29] "Designated" refers to the election of a lobster trap fishing area on the permit renewal application. A Federal permit holder fishing with traps must elect or designate the trap areas fished, and gear types deployed, for the coming fishing year on the permit renewal application.

[30] The Federal fishing year begins on May 1 of each year and extends through April 30 of the following calendar year. Therefore, the 2008 fishing year, also referred to as the Federal fishing year and fishing year, began on May 1, 2008 and ended on April 30, 2009.

[31] A unique MRI, or moratorium right identifier, is a numerical code that represents a single lobster permit's history – tracking it over time with the various vessels (and permit numbers) it has been associated with.

[32] Federal permit holders begin renewing their permits for the coming year, which begins April 1, during February and March of each year. Therefore, NMFS queried permit renewal records beginning January 1, 2008 through January 2, 2009 to ensure that all renewals were captured.

the opportunity to fish with traps in Area 1 in the future if the Commission's Alternative is selected, they are not directly impacted by this alternative since they likely did not fish in Area 1 with traps in the first place, despite an annual opportunity to designate Area 1 on the permit during the last decade.

While 1,824 Area 1 permits were renewed prior to the control date, a grand total of 1,867 Area 1 permits were renewed during the entire permit year[33] (the additional 43 permits being renewed during the period between the control date and the end of the Federal fishing year, April 30, 2009). Of the 1,867 Federal permits that had an Area 1 designation in the 2008 fishing year, 256 will not qualify under the Commission's Alternative. These 256 Area 1 permits would not qualify because the permit holder did not renew the permit prior to the control date or did not purchase tags during the designated period, or both.

Figure 4.6 Federal Lobster Permits with a Trap Tag Purchase, 2004-2008

Year	ME	NH	MA	Other State	Total (All States)	# of Federal Area 1 Permits with Trap Tags*	% Purchasing Trap Tags 2004-2008
2000	1,195	61	475	32	1,763		
2001	1,211	69	491	39	1,810		
2002	1,232	69	473	43	1,817		
2003	1,261	70	459	68	1,858		
2004	1,303	73	431	77	1,884	1,554	82%
2005	1,304	73	409	70	1,856	1,515	82%
2006	1,331	69	403	75	1,878	1,653	88%
2007	1,335	72	399	72	1,878	1,605	85%
2008	1,327	71	400	69	1,867	1,553	83%
2009	1,309	73	387	69	1,838		

Of the 256 Area 1 permits that would not be eligible under the Commission's Alternative, 213 permits were renewed prior to the control date, but are ineligible because they were not associated with a trap tag purchase during the 2004-2008 period (Figure 4.7). The remaining 43 Area 1 permits would not be eligible because they were renewed after the control date. Eleven such permits, purchased trap tags during the 2004-2008 qualification period, while the remaining 32 did not. Those 11 may represent active lobster permits which, for business or other purposes,

[33] The entire Federal Fishing year for 2008 extends from May 1, 2008 through April 30, 2009.

did not choose to renew their permits prior to the control date, but did renew during the permit year and purchased tags.

In addition to the 256 Area 1 trap permits that would not qualify under Alternative 2, 1,285 Federal lobster permits that did not have an Area 1 designation during the 2008 fishing year would not be eligible to elect Area 1 in the future if this alternative is selected. However, since these permits did not designate Area 1 on their 2008 permit, they are not considered to be negatively impacted since they are not part of the overall pool of active Area 1 Federal lobster permits. Thus, the grand total of Federal lobster permits from all categories that would not qualify under the Commission's Alternative is 1,541 (Figure 4.7).

Figure 4.7 "Balance Sheet" - Eligible and Ineligible Area 1 Trap Permits; Alternative 2

Permit Category	Number of Permits
Total number of Federal lobster permits	3,152
Federal lobster permits that did not elect Area 1 trap gear on the 2008 permit (non-Area 1 permits)	(1,285)
Balance = All Area 1 permits renewed during entire (May 1, 2008 –April 30, 2009) 2008 fishing year and elected Area 1 trap gear	1,867
Area 1 permits that did not renew prior to January 2, 2009 control date	(43)
Balance = Lobster Permits renewed for 2008 prior to January 2, 2009 control date, and elected Area 1 trap gear on 2008 permit	1,824
Area 1 permits renewed for 2008 prior to control date but no record of tag purchase	(213)
Final Balance (Alt. 2 Qualifiers) = Area 1 permits that renewed prior to control date and had a trap tag purchase record during 2004-2008	1,611
Total Number of Non-qualifiers under Alternative 2	1,541

Rationale for the Use of Trap Tags as a Means of Determining Active Trap Fishing

Under Federal regulations lobster fishermen have been required to purchase lobster trap tags since 2000 and records of trap tag purchases remain the most consistent indicator of the real-time number of active lobstermen (and traps) in any given management area. Although any lobsterman with a valid Area 1 permit is eligible to purchase lobster trap tags, whether he or she ultimately fishes traps or not, the trap tag purchases capture the entire pool of current active Area 1 trap permits (tags aren't authorized for issuance unless the permit is renewed) and active trap fishermen (you can't fish traps without a tag). As Figure 4.7 indicates, about 1,553 Federal permit holders purchased Area 1 trap tags in 2008, with the yearly average equating to 1,576, during the 2004-2008 period identified in the Commission's eligibility criteria in Addendum XV.

This figure has ranged from a high of 1,653 permit holders in 2006 to a low of 1,514 in 2005. The most recent year with complete data at the time this analysis was completed is 2008, which fell close to the time series average for the trap tag qualification period, with 1,553 Federal permit holders purchasing Area 1 trap tags. These figures have remained relatively consistent over the 2004-2008 period and provide a strong and consistent indication of the number of active area 1 Federal permit holders.

In comparison, the NMFS analysis of qualified Area 1 permits, based on a current Area 1 permit as of the control date and a tag purchase associated with that permit during one of the five years from 2004-2008, found that 1,653 permits met both criteria. This figure falls within the range of the number of permit holders who purchased tags in any given year between 2004-2008[34]. It is expected that the number would be slightly higher than the average since some of the permits would be current for 2008 but may not have had a tag purchase for that year and thus were qualified based upon a purchase during one of the previous years in the designated time period.

Federal Area 1 Lobster Trap Fishermen

Alternative 2, the Commission's Alternative, caps the number of Federal lobster permits in Area 1 at about 1,611, effectively maintaining the permits demonstrating active participation in recent years based on the Commission's criteria in Addendum XV (purchased trap tags and had a valid Area 1 trap permit renewed by the control date). There were 1,867 Federal Area 1 trap fishermen during the 2008 fishing year, meaning that these permits had been renewed at some time during the 2008 fishing year and had an Area 1 trap gear designation. Since 1,611

[34] See Section 1.5 – At the industry's recommendation, the Commission adopted a five-year trap tag purchase period rather than a two-year period with military and medical exemptions.

meet the Area 1 eligibility criteria under the Commission's Alternative, the remaining 256 Area 1 permits would not qualify.

Those 1,611 lobster permits deemed eligible for the Area 1 trap fishery would qualify to fish up to 800 lobster traps in Area 1 and these permits, including the Area 1 trap eligibility, could be transferred to other vessels and employed in the Area 1 trap fishery. The majority of the qualifiers, as would be expected, hail from Maine, New Hampshire and Massachusetts ports, and account for more than 98 percent of the total number of permits that would qualify under the Commission's Alternative (Figure 4.8.). Maine-based vessels comprise nearly 78 percent of all qualifiers under the Commission's Alternative, followed by Massachusetts vessels (17.7 percent) and New Hampshire-based vessels (2.9 percent).

Figure 4.8. Number of Area 1 Qualifiers by State - Commission's Alternative

STATE	Total A1 Qualifiers Alternative 2 (Number)	Percent of Total Qualifiers (n=1,611)
ME	1,254	77.84%
NH	47	2.92%
MA	285	17.69%
RI	18	1.12%
Other*	7	0.42%
Total	1,611	100.00%

*Other includes vessels hailing from CT, NY, NJ and DE ports.

In addition to the northern New England-based vessels expected to qualify under the Commission's Alternative due to their close proximity to Area 1, about 1.5 percent of the qualifiers under this alternative include vessels hailing from Rhode Island, Connecticut, New York, New Jersey, and Delaware; states with ports that are not adjacent to Area 1. Although these vessels hailing from more southwesterly states likely did not fish in Area 1, they meet the qualification criteria for eligibility. Since the Federal codification of the lobster management areas, effective January 2000 (64 FR 68228) any Federal lobster permit holder has had the opportunity, on an annual basis, to elect to fish traps in Area 1 by designating it on the Federal permit renewal application. By doing so, and purchasing trap tags, vessels from outside the Area 1 locale are able to qualify under the Commission's Alternative, although such qualifiers represent less than two percent of all Area 1 qualifiers in this case (Figure 4.8).

NMFS considered the implications of qualifying permits associated with vessels that operate from home ports outside of Area 1. The Area 1 industry and the Commission agreed that trap tag purchase information represents the most consistent manner of verifying an active Area

1 lobster trap permit across all jurisdictions. Therefore, the Commission included the trap tag requirement as an eligibility criterion for Area 1 knowing that some eligible permits may not have actually fished traps in Area 1 (see Section 1.5). Consequently, less than two percent of all eligible Area 1 permits under the Commission's Alternative appear to hail from ports outside of Area 1, representing a very small fraction of the approximately 1.3 million traps that would be authorized under the Commission's Alternative.

The 1,611 eligible Area 1 trap permits would be assured of future access to the Area 1 lobster trap fishery. They can continue their current lobster fishing practices in Area 1 without interruption and without change. In the future they may benefit as part of the exclusive subset of Federal lobster permit holders with permits eligible for the Area 1 lobster trap fishery. Benefits could come from increased profits from lobster harvest if the cap on Area 1 permits helps to stabilize the fishery and trap fishing effort controls lead to improved stock and fishing conditions. With the number of Federal Area 1 permits capped, eligible permits may increase in economic value compared to non-eligible permits due to a limited supply and steady, if not rising, demand for Area 1 permits if the fishery remains profitable.

Those permits that do not qualify would not be eligible to enter into the Area 1 trap fishery. They may be used for trap fishing in any management areas not currently bound by limited entry, in areas for which the permit may have trap fishing history, or for non-trap gear fishing throughout the EEZ, including Area 1. Ineligible permits also may be transferred to another vessel, but may not migrate into the Area 1 trap fishery in any way. Those opting to fish with non-trap gear would be held to the lobster possession limits for non-trap gear as set forth in the Federal regulations.

Figure 4.9 summarizes the combination of trap and non-trap gear designations on the 256 unique Federal lobster permits which elected Area 1 on the 2008 Federal lobster permit but would not qualify under the Commission's Alternative. Fifty-two of the 58 permits that elected Area 1 and no other designation hail from GOM ports. Given their geographic location these permit holders may be most impacted since they cannot fish with traps in Area 1 and likely don't qualify for, or are geographically unable to participate in, another area's trap fishery.

The permits with other area designations (non-Area 1) and non-trap gear may not be as disadvantaged as those with only an Area 1 designation since they likely have an economic stake in another lobster area or in another fishery of which lobster is only a bycatch commodity.

Figure 4.9 Alternative 2 Non-qualifiers with Area 1 Trap Gear Designation

Area Designation (all had Area 1)	Number of Permits	Area 1 Port
Area 1 Only	58	52
Area 1 and Non-trap, only[35]	74	64
Area 2	78	34
Area 3	3	3
Area 4	0	0
Area 5	0	0
Area 6	7	0
Outer Cape Area	47	20
Non-trap, Area 1 and another designation	62	30
n=256 unique Federal lobster permits		

The 64 GOM vessel owners whom designated Area 1 and non-trap gear, may be disadvantaged since they would be restricted from fishing with traps in Area 1 in the future. However, based on the qualification criteria, these vessels were clearly not fishing with traps and not part of the historical Area 1 lobster trap fishery. The 30 GOM vessels with non-trap gear, an Area 1 designation and some other area designation (Figure 4.9) are not expected to experience substantial negative impacts compared to the GOM vessels without another area designation since the former may still qualify for trap fishing in another area, within reasonable reach of their homeport, providing more potential opportunities in adjusting to Area 1 trap ineligibility. Overall, non-qualifiers will lose the flexibility to shift into the Area 1 trap fishery in the future. This is especially relevant to those hailing from a GOM port that would likely call Area 1 their "home area." However, the impacts are indirect since they did not meet the qualification criteria, are not part of the historical Area 1 lobster trap fleet and have focused their fishing on fisheries other than lobster.

Non-Qualifiers with Trap Gear Only From a Gulf of Maine Port (All Are Area 3)

Three-hundred and seventy-seven vessels that would not qualify under the Commission's Alternative elected to fish in a trap area other than Area 1 and also did not elect non-trap gear. Therefore, we can consider these vessels to exclusively be trap fishing vessels for the purposes of this analysis. As discussed in the previous paragraphs, it is likely that the majority of these vessels are gainfully engaged in lobster trap fishing in their respective management areas and,

[35] Non-trap considers category 1 non-trap for lobster which is the commercial non-trap category. The only other non-trap gear category is Category 2, reserved for party and charter vessels that do not sell the catch commercially and are limited to no more than 6 lobster per person on board. There are less than 5 category 2 vessels.

due to business plans or geographic location, are not inclined to switch to the Area 1 trap fishery even if the opportunity was available to them. Clearly, they have not chosen to do so as of 2008 and so it is assumed that they are involved in the fishery outside of Area 1.

NMFS evaluated the implications of the Commission's Alternative on one such group, the permit holders in this category who did not elect Area 1 but work traps from a GOM port, since non-qualification in the Area 1 fishery might be considered tempting given their location. There are nineteen vessels from hailing from GOM ports which elected an area other than Area 1 that would not qualify for Area 1 under the Commission's Alternative. However, it was revealed that all of these vessels are qualified for the offshore Area 3 trap fishery and are working out of GOM ports. Therefore, these vessels are not expected to be disadvantaged by not qualifying for Area 1 because their vessels and businesses are geared for operation in the offshore fishery.

Vessels with Area 1 Trap Gear Designation and Non-trap Gear Designation

Figure 4.10 shows that 96 of the 136 non-trap vessels (71 percent) that designated Area 1 on the 2008 permit, but don't qualify under the Commission's Alternative, hail from GOM ports. This subgroup would no longer have the opportunity to switch to trap fishing in their home area of operation – a potential disadvantage. Even if they did not intend to switch into the Area 1 lobster trap fishery in the future, they would lose the opportunity to sell a Federal permit with Area 1 eligibility to another entity interested in pursuing the Area 1 trap fishery. Under the approved Area 1 eligibility criteria in Addendum XV, these permits are not considered part of the active Area 1 lobster trap fleet. These ineligible permits may lose some value and flexibility since they could no longer be sold to another fisherman and worked as lobster trap permits in Area 1. To summarize, although these permits had an Area 1 trap designation and the majority worked out of Area 1 ports, they were most likely non-trap fishermen. Thus, their current or historical fishing practices are not expected to be disrupted due to ineligibility for the Area 1 trap fishery.

Figure 4.10 Alternative 2 Non-qualifiers with an Area 1 Trap Gear Designation and Non-trap Gear Designation by State

State	Number of Permits	Area 1 port
ME	21	21
NH	14	14
MA	71	61
RI	5	0
CT	5	0
Other	20	0
TOTAL	136	96

Federal Lobster Non-Trap Fishermen Fishing in Area 1

Of the 256 permits with an Area 1 trap gear designation that would not qualify under the Commission's Alternative, 136 permits, representing more than half (53 percent) of the non-qualifiers with an Area 1 designation, had non-trap gear associated with their permit. These vessels, although designating Area 1 for trap gear, are not considered to be Area 1 trap vessels under the Addendum XV eligibility criteria since they don't meet one or more of the eligibility requirements. Therefore, these non-trap gear vessels are likely targeting fisheries other than lobster and relying on lobster only as a bycatch species. So, despite the loss of an opportunity to either sell the permit to someone who may use it for Area 1 trap fishing, or switch into the trap fishery themselves, Area 1 ineligibility is not likely to impact the manner in which these fishermen are operating their businesses since they were not actively participating in the Area 1 lobster trap fishery.

Massachusetts-based vessels represent the highest percentage of non-qualifiers under the Commission's Alternative, representing about 44 percent of the pool of non-qualifiers that had an Area 1 trap gear designation during the 2008 fishing year (n=112 of 256 permits, see Figure 4.11). About 64 percent (n=71) of the non-qualified Massachusetts permits had a non-trap gear designation. The Commonwealth of Massachusetts requires state-permitted vessels (including those that also have Federal permits) to designate a management area on their state license even if they are not fishing traps. Therefore, the high percentage of Massachusetts-based Area 1 vessels that would not qualify likely represents traditional non-trap vessels that have indicated Area 1 on their Federal permit to be consistent with the designations required on their state landing license and not because they intended to fish with traps.

Further, about 30 percent (n=42 of 112 permits) of the Massachusetts non-qualifiers with an Area 1 designation in 2008 designated another management area, in addition to Area 1, on the Federal permit. This suggests that these permits could have history in other management areas and would have other opportunities to fish with traps if the Commission's Alternative is selected, even though they would not qualify for the Area 1 trap fishery. Since these vessels have elected non-trap gear and in some cases, another management area, it is expected that ineligibility for Area 1 trap fishing would not create a major disruption in their business practices since they likely were not part of the historical Area 1 lobster trap fleet. And, they may have designated this other management area as a non-trap fishing area consistent with their state landing license as an indicator of their non-trap fishing and not as an indicator of trap fishing.

Figure 4.11 Area 1 Non-Qualifiers by State - *Commission's Alternative That Elected Area 1 on the 2008 Federal Lobster Permit.*

State	Number	Non-Qualifiers as Percent of All 2008 A1 Permits (n=1,867)	Non-Qualifiers as Percent of Non-Qualified A1 Permits (n=256)	Non-Trap Gear	Other LMA
ME	73	3.91%	28.5%	21	8
NH	24	1.29%	9.38%	14	2
MA	112	6.00%	43.75%	71	42
CT	6	0.32%	2.34%	5	6
RI	12	0.64%	4.69%	5	7
NY	6	0.32%	2.34%	5	4
NJ	14	0.75%	5.47%	11	11
VA	3	0.16%	1.17%	2	2
NC	2	0.11%	0.78%	2	2
Other	4	1.65%	1.56%	0	1
Total	256	13.72%	100%	136	85

Seventy-three Maine-based vessels accounted for about 29 percent of the non-qualifiers with an Area 1 designation on their 2008 Federal permits, compared to 112 vessels from Massachusetts, equating to nearly 44 percent of the non-qualifiers that designated Area 1 (Figure 4.11). Of those 73 vessels, about 28 percent (n=21) designated non-trap gear as a gear type, suggesting that they may be focused on other fisheries besides lobster. Comparatively, more than 50 percent of the non-qualified New Hampshire-based vessels selected non-trap gear on their 2008 Federal lobster permit. Overall, 209 of the 256 non-qualified vessels (82 percent) were from Maine, New Hampshire and Massachusetts ports and 106 of those had non-trap gear as a gear type, suggesting that these are likely engaged in fisheries other than the Area 1 lobster trap fishery and would not be substantially disadvantaged if they don't qualify for the Area 1 trap fishery. Ineligible vessels from other states make up the remaining 14 percent of ineligible Area 1 designees and 30 of the 47 vessels (64 percent) designated non-trap gear, suggesting that they are likely involved in other fisheries besides lobster and operating outside of Area 1. Therefore, they are not expected to endure significant economic impacts due to Area 1 trap fishery ineligibility.

This section has discussed the ineligible permits that had an Area 1 designation and fish in Area 1, but there are other non-qualifiers who did not designate Area 1 on the 2008 Federal lobster permit: those who fish in Area 1 with non-trap gear and those who don't fish in Area 1 at all. These two groups make up the 1,285 permit holders who did not elect Area 1 on the 2008 permit and won't qualify under the Commission's Alternative, in addition to the 256 Area 1 electees that also would not qualify.

Of the 702 vessels that had non-trap gear as one of their permit designations, there were 201 vessels that designated non-trap gear as their only gear type (did not elect a trap area) and hailed from a GOM port (Figure 4.14). These vessels would be disadvantaged since their ability to switch from non-trap to trap fishing in their "home area" would be lost if Alternative 2 is selected. However, all had a multispecies permit indicating that they are in some capacity, groundfish vessels and thus, not reliant on lobster as a major component of their catch. NMFS concludes that these permit holders, although losing an opportunity to fish with traps in the future in Area 1, will not have their ongoing fishing practices impacted or interrupted by selection of the Commission's Alternative, despite working out of a GOM port

Vessels with a Federal Lobster and Multispecies Permit Hailing from a Gulf of Maine Port

Vessels with Federal Multispecies permits and Federal lobster permits make up a large number of the non-trap vessels fishing in Area 1. The Sector management program implemented by Amendment 16 to the Northeast Multispecies Fishery Management Plan allows Federally-permitted Multispecies vessels (also referred to as groundfish vessels) to form groups called Sectors. Within each Sector the participating vessels manage their allocations as a group and combine their respective historical groundfish quotas, allowing them to share and manage the cumulative quota of their Sector. The program allows quota to be leased to and from other vessels in the fishery outside the Sector. Those vessels with Federal multispecies permits whose owners have not chosen to participate in a Sector may harvest groundfish on an individual basis as part of the common pool, but must adhere to strict trip-based catch limits. It is estimated that of the 1,473 Federal groundfish vessels, nearly half, or 714, participate in the common pool which accounts for less than 10 percent of the overall quota for all groundfish species combined. With about 50 percent of the fleet allowed only 10 percent of the quota, common pool vessels are much more restricted with respect to allowable catch than multispecies permit holders who participate in a Sector.

NMFS considered that some in the common pool, those not in a Sector and subject to relatively low trip limits for groundfish, may be those most susceptible to restrictions in the multispecies fishery, with those hailing from Area 1 ports perceived as the sub-group which would be most negatively impacted by Area 1 trap fishery ineligibility. Consequently, this EA analyzes the impacts of the Area 1 alternatives on common pool vessels that would not qualify for the Area 1 trap fishery under the Commission's Alternative, including those hailing from an Area 1 port.

The Sectors Program began in 2009, so minimal information is currently available regarding the impacts of the program on common pool participants, making it difficult to quantify the level of impact on common pool participants that don't qualify for the Area 1 trap fishery. Despite the lack of a long time series of data on the Sectors Program, some assumptions

can be made on the effects of the Commission's Alternative on Federal lobster vessels with multispecies permits. Nine-hundred and sixty-seven vessels have a Federal lobster permit and a Federal multispecies permit. Indirect impacts of the Commission's Alternative may be realized by the 763 such vessels that would not qualify for the Area 1 lobster trap fishery under the Commission's Alternative. Of those, 56 permits are in the common pool category and hail from Area 1 ports (Figure 4.12). With the Commission's Alternative, these permit holders would no longer be able to switch into the Area 1 lobster trap fishery if restrictions on groundfishing such as low trip limits for common pool vessels, necessitate a change in operations over to the lobster trap fishery.

The subset of common pool participants that don't qualify for the Area 1 trap fishery and hail from Area 1 ports would likely be the group most negatively impacted by this action, however, these vessels would only be deprived of the opportunity to fish in Area 1 in the future since they were not Area 1 trap fishery participants to begin with.

Figure 4.12 Area 1 Non-Qualifiers under Alternative 2 with Federal Multispecies and Lobster Permits Hailing from Area 1 Ports

Alternative 2 Non-Qualifiers with Multispecies Permits			
STATE	**Non-Qualifiers with a Multispecies and Lobster Permit**	**Number of Permits from Area 1 Ports**	**Common Pool from Area 1 Port**
ME	94	94	20
NH	49	49	8
MA	369	173	28
Other	251	0	0
Total	763	316	56

NMFS believes that the inability to switch into the trap fishery in Area 1 would only have indirect and non-significant impacts on these common pool participants since they don't have a previous history of fishing with traps based on the Commission's criteria, because refitting their vessels for trap fishing may be cost prohibitive, and since they had not taken advantage of the opportunity to opt into the Area 1 trap fishery in the past. The Commission and the Area 1 lobster industry developed Addendum XV to prevent migration of lobster trap fishing effort into Area 1 to conserve the sustainability of the GOM lobster fishery from those fishermen in other areas or in other fisheries who may be inclined to switch into the Area 1 lobster trap fishery. Therefore, the Commission's Alternative would effectively preclude common pool vessels operating in the GOM from making a transition into the lobster trap fishery out of speculation

that such an action would offset the economic restrictions imposed by limited catch allocations in the multispecies common pool.

Of the 967 vessels with both a multispecies and lobster permit, 204 would qualify for the Area 1 trap fishery under the Commission's Alternative, with about half being common pool participants and half belonging to a Sector (Figure 4.13). These permit holders would retain the ability to fish for lobster with traps in Area 1 while also remaining in the multispecies fishery. These qualifiers would not endure any negative impacts associated with the adoption of the Commission's Alternative.

Figure 4.13 Area 1 Qualifiers under Alternative 2 with Federal Multispecies Permits

Alternative 2 Qualifiers with Multispecies Permits				
STATE	**Number**	**% of All A1 Qualifiers for Alt. 2 (1,611)**	**Common Pool**	**Other Sector**
ME	84	5.2%	38	46
NH	21	1.3%	9	12
MA	96	6.0%	52	44
RI/NY	3	0.2%	2	1
Total	204	12.7%	101	103

Federal Lobster Trap and Non-Trap Fishermen Outside of Area 1

In addition to the Federal permits with an Area 1 designation that would not qualify for the Area 1 trap fishery under Alternative 2, the Commission's Alternative, there are 1,285 non-qualifying Federal lobster permits which did not designate Area 1 on their 2008 Federal permit.

This subset of permits would not be eligible to elect Area 1 for traps in the future if the Commission's Alternative is selected. The impacts of the Commission's Alternative on this subset of all Federal lobster permits, representing about 41 percent of the total number of lobster permit histories, are considered to be merely indirect impacts since these permits are not representative of either the historical or current Area 1 lobster trap fleet. Non-qualification may present an opportunity cost for some in this subset of non-qualifiers since they no longer have the opportunity to switch their permit to an Area 1 trap permit. However, the nature of their permits mitigates the impacts of not qualifying for the Area 1 trap fishery. Specifically, the majority of non-qualifiers in this group are not from a GOM port, are engaged in other fisheries for which lobster is only a bycatch (non-trap gear), or are qualified to participate in the trap fishery in a management area other than Area 1 and, consequently, have focused their harvesting on a different sector of the lobster fishery.

Areas 3, 4 and 5

Of the total pool of Federal lobster permits that would not qualify for Area 1 under Alternative 2, 377 selected trap gear only (and did not select non-trap gear) for a trap area other than Area 1. Those selecting Area 3, 4 or 5 have completed a Federal qualification program which allocated a specific number of traps to these permits based on historical participation. Therefore, the vessels associated with these permits are likely involved in the trap fishery in their respective qualified areas and are unlikely to have interest in switching their operations to Area 1, an option that they would no longer have if Alternative 2 is chosen. Further, holders of permits qualified for Areas 4 and 5 are unlikely to switch to Area 1 given the chance, since these areas are at the southern end of the fishery, in contrast to the northeast location of the Area 1 fishery and the permit holders whom qualified for Area 4 or 5 are likely using the Federal lobster trap allocations as part of their fishing businesses.

The offshore Area 3 fishery is open to only 137 qualified permits (93 of which elected Area 3 on their permit in 2008) making it the most exclusive fishery, with respect to number of participating vessels, of any other lobster trap fishery. Therefore, those with an Area 3 permit are not expected to switch to Area 1 since the Georges Bank stock, the lifeblood of the offshore fishery, is in favorable condition. The favorable stock conditions, large geographic area and exclusivity of the Area 3 fishery make these permits relatively valuable. Further, the large range and geographic variability of Area 3 make it a workable ground from nearly any port along the coast, which allows options to permit holders since they can relocate if needed and offshore fishery speculators may purchase Area 3 permits without necessarily relocating to a different region.

Area 6

Area 6 consists of the state waters of Connecticut and New York in LIS. Although exclusively in state waters, 47 Federal lobster permit holders elected to fish in this area during the 2008 fishing year. There is no limitation on which Federal permits may select this area, but fishermen are required to have a state license from either New York or Connecticut to fish in Area 6. All the permit holders in Area 6 are therefore, likely to remain in that area due to their geographic location and would not be directly impacted if they were no longer able to elect into the Area 1 trap fishery. As with all other permit holders that do not qualify, they will lose the chance to sell their permit to another entity whom may have chosen to elect Area 1 in the event of status quo.

Area 2 and the Outer Cape Area

Area 2 and the Outer Cape Area, like Area 1, are management areas which may be elected for trap fishing by any Federal lobster vessel. However, as discussed in Chapter 3 (regulatory environment) NMFS is in rulemaking to consider a limited access program in Area 2 and the Outer Cape Area, but in the absence of any new rules, these areas remain open to Federal lobster vessels. However, the states adjacent to these areas have already taken action, consistent with the requirements for states under the Commission's ISFMP, to qualify state lobster license holders into these areas based on specific historical participation criteria set forth by the Commission. Many of these state licensees are Federal permit holders. Those who qualified under the state process are eligible to fish in the state waters and Federal waters of these areas subject to the more restrictive of state and Federal trap limits for these areas. Those who did not qualify for a state allocation may still elect these areas on their Federal permit but are not recognized as eligible fishermen under the state programs. If they have a state permit and do not qualify, they likely are not fishing there since the states issue the trap tags to dual state and Federal permit holders for these areas.

It is not clear of these Area 1 non-qualifiers who would ultimately qualify for access to these areas should NMFS move forward for a consistent historical participation action in Areas 2 and the Outer Cape. However, an analysis conducted by NMFS estimated that, based on state information, approximately 207 Federal permit holders from Massachusetts south to New Jersey could qualify for Area 2 and approximately 26 permit holders from Massachusetts could qualify for the Outer Cape. In consideration of these figures, approximately 100 permits that elected Area 2 in 2008 and will not qualify for the Area 1 trap fishery if Alternative 2 or Alternative 3 is selected, may also not qualify for Area 2 if future action is taken. Therefore, these permit holders may be more directly impacted than others if they have no other area selected other than Area 2. Similarly, with the Outer Cape, 65 of the 91 permit designated for the Outer Cape in 2008 that will not qualify for Area 1 under Alternative 2, would also not qualify for the Outer Cape, depending on the future action for these areas. If so, these 65 permit holders may have limited trap fishing options if they are not already qualified for another trap area or dedicated to another fishery or gear type.

Non-trap Gear

All 867 Federal lobster vessels that had a non-trap gear designation in 2008 are a subset of the 1,285 vessels that did not elect Area 1 for trap fishing in 2008, had a multispecies permit and most also had at least one other Federal fisheries permit. Consequently, these non-qualifiers would not be shut out of fishing due to Area 1 ineligibility because their businesses have been directed on fisheries other than lobster. Of those, 702 elected non-trap gear as their only gear type (Figure 4. 14). Of the 702, 501 hail from ports outside the GOM, indicating that their businesses are focused on species other than lobster and based outside of Area 1. Therefore, these permit holders are not expected to be impacted as negatively as those non-qualifying non-trap permits from a GOM port. The rationale is that they have not chosen to elect Area 1 as of the 2008 control date year, and they are likely operating on other fisheries outside of the GOM. However, their ability to sell their permit to another entity for use in the Area 1 fishery would be lost if the Commission's Alternative is selected.

Figure 4.14 Area 1 Non-Qualifiers Who Did Not Elect Area 1 on the 2008 Permit

Impacted Group	Number of Ineligible Permits
TOTAL*	1,285
Area 2	307
Area 3	93
Area 4	71
Area 5	48
Area 6	47
AOC	91
Non Trap	867
Non Trap Only	702
Non-Trap only and GOM port	201
Trap Only (area other than A1)	377
Trap Only GOM Port	19

*All categories don't add up to the total (1,285) since many permits overlap several categories.

Non-Federal Lobster Trap and Non-Trap Fishermen Fishing in the State Waters of Area 1

Each Area 1 state has regulatory measures in place that influence the ability for Federal permits currently outside of Area 1 to migrate into the area. For example, the state of Maine allows new lobstermen into its state waters fishery through a strict entry/exit ratio process which is unique for each of the seven state lobster management zones (A-G). After completing a mandatory apprenticeship program by working on the stern of a Maine-licensed lobster vessel,

new lobster fishers are allowed into the fishery when one or more fishermen leave the zone, depending upon that zone's entry/exit policy.

Often, new entrants into the Maine lobster fishery are interested in expanding their fishing opportunities by purchasing a Federal lobster permit to allow them to fish over a greater range and into the colder months when lobsters migrate offshore. This has created a market for Federal permits in Maine and those Federal lobster permits that did not previously qualify under limited entry programs based on historical trap fishing, are one way Maine fishermen can enter into the Federal fishery. Conversely, much of the lobster resource, particularly in the GOM, is harvested in state waters, where these vessels are fishing whether they have Federal permits or not. However, unqualified Federal lobster trap permits with limited value in more southerly locations (did not qualify for trap fishing in an area other than Area 1), may provide a relatively inexpensive way for Maine state-licensed fishermen to enter into the Federal fishery and expand their fishing operations on a spatial and temporal basis, since Federal lobster permits without an Area 1 trap fishing history are likely to be less expensive to purchase compared to those with Area 1 trap history. If the Commission's Alternative is selected, these state licensees seeking entry in the Federal Area 1 trap fishery, may be required to spend more for a Federal permit since the pool of eligible permits would be lowered from all Federal permits (3,152 under the Status Quo) to no more than 1,611. Therefore, the Commission's Alternative may restrict the ability of a state fisherman to expand into the Federal fishery.

In New Hampshire, citizens intending to acquire a state commercial lobster permit must prove at least 5 years of residency in the state. This restriction limits the ability of a Federal permit holder from outside of New Hampshire with a Federal lobster permit from outside of Area 1, to take up residency in New Hampshire, acquire a state permit and transfer his lobster fishing operation into Area 1. However, this does not preclude those state licensees from New Hampshire from acquiring a permit from outside of Area 1 and activating it for use in the EEZ. In Massachusetts a moratorium on new landing permits was implemented to prevent vessels from migrating from one management area to another. Massachusetts also requires non-trap lobster vessels to declare a trap area which is not required under Federal lobster regulations, so both trap and non-trap vessels are limited to specific management areas when fishing.

Federal Lobster Permits in Confirmation of Permit History

If a Federal lobster permit was in Confirmation of Permit History (CPH) status during the entire 2008 fishing year, the permit holder would not have elected Area 1 since the permit is not in an active status. There were five permits that went into CPH status prior to the start of the 2008 fishing year that remained in CPH throughout the entire fishing year. Only one of these permits had a history of purchasing an Area 1 trap tag during the eligibility period; the tags were purchased in 2005. Consequently, the permit's CPH status in 2008 did not result in the

disqualification of an otherwise active Area 1 trap gear permit, since the permit did not have a trap tag purchase for more than three years prior to the permit cut-off year, 2008. NMFS concluded that our criterion requiring that a permit have an Area 1 trap gear designation during the 2008 fishing year did not create a substantial group of non-qualifying permit holders, particularly those whose permits were in CPH status during that year. An in-depth analysis of the impacts of this action on permits in CPH status is provided in Appendix 6A.

4.2.2 Impacts to the Lobster Resource

The selection of the Commission's Alternative would likely have a minor beneficial biological impact on the Northwest Atlantic American lobster resource when compared to the status quo alternative. The action would more effectively cap and enforce both the total number of Federal lobster permits which can fish with lobster traps in Area 1 at 1,611, as well as the number of traps authorized to fish in Area 1. The result would be a stabilization of potential effort in the Area 1 lobster trap fishery which could not exceed 800 traps per permit (or less, if state regulations apply in some cases). This would effectively limit trap fishing effort to 2008 levels, less the potential or real-time effort associated with the 43 permits that designated Area 1 on the permit in 2008 but did not renew the permit prior to the January 2, 2009, control date.

Changes in lobster fishing mortality based on trap numbers are difficult to quantify and in situations of high trap numbers, such as in Area 1, fishing mortality may be best estimated through catch per unit effort. However, for the purposes of this analysis, the fishing effort is expected to be the same for this alternative as it is currently in the fishery, since this alternative would take all of the current active vessels that renewed their permit by January 2, 2009, and qualify them into the fishery. It would provide some benefit to the resource by limiting the potential effort that could enter the fishery if the status quo option was selected and effort was left unchecked in the fishery. So, although minor beneficial effects on the lobster resource are not expected to be immediate, the resource is likely to benefit from a cap on current effort levels, consistent with the advice of the 2009 stock assessment which cautioned against the allowance of additional effort into the GOM fishery.

Under the current Federal rules, all Federal lobster permits would remain eligible to fish in Area 1, regardless of prior participation in the trap fishery, trap tag purchases, Area 1 designation on the Federal permit, or any other criteria. Although the number of Area 1 permits and the number of lobster trap fishermen purchasing trap tags has remained consistent over the past several years, some factors could influence the direction and scale of lobster fishing effort into Area 1, such as increased restrictions on groundfish vessels holding Federal multi-species permits and the marginalization of some Federal lobster permits due to trap fishing eligibility programs in other lobster management areas. The prospect of non-trap fishermen converting to trap fishing has not been evident despite the option to do so over the last decade and may be

cost-prohibitive. However, the potential remains for trap fishing effort to migrate into Area 1 if left unchecked. This potential for trap fishing effort to enter into the fishery is counter to the advice of the 2009 stock assessment.

Theoretically, the state regulatory measures like the Maine state entry/exit policy, would keep the number of fishermen constant. But, new entrants to the fishery are more likely to fish harder and with more impact to the resource than those leaving the fishery, who are likely older and not fishing as hard as they were years ago.

4.2.3 Impacts to Habitat

While there have been few studies (Eno, et al, 2001) on the effect of lobster traps on the ocean floor, available information suggests trap gear, including the lobster traps used in the commercial lobster fishery, tend to have limited long-term adverse impacts on the seafloor habitat, particularly when compared with mobile fishing gears such as trawls and dredges. Frequent hauling in areas of dense vegetation is more likely to result in some damage from rope entanglement, however, even in areas of dense vegetation, the impacts are likely to be minor and of short duration.

The selection of the Commission's Alternative would cap the number of Federal lobster trap permits for Area 1 at a level consistent with the participation over the last several years, and stabilize fishing effort in the future by imposition of the cap. Therefore, there are expected to be negligible to minor beneficial impacts on marine habitat. Over time, there may be some benefit by excluding the introduction of additional trap fishing effort into Area 1.

This alternative does not restrict the use of non-trap gear, such as otter trawl, gillnet, or dredge by vessels with a Federal lobster permit. With respect to non-trap gear such as gillnets and otter trawls, it is not known whether the Commission's Alternative would influence the utilization of non-trap gear for lobster or other species, beyond that expected if the status quo was maintained. If non-trap vessels with Federal lobster permits are adversely impacted by restrictions in other fisheries resulting in an increase in effort to more directly target lobster, then it could lead to increased use of non-trap gear types in areas known to harbor lobsters. Increased effort in known lobster grounds would increase trap and non-trap gear conflicts also, and would be expected to result in more lost and damaged gear on the bottom. In addition, unlike trap gear, mobile gear towed along the ocean floor, especially in areas of dense vegetation, is known to have a protracted negative impact on bottom habitat.

4.2.4 Impacts to Bycatch

Under Alternative 2, a cap on Federal lobster permits would reduce the potential for additional traps in the water, producing minor beneficial impacts on bycatch species as a result. In general, the traps used in commercial lobster fisheries are among the more selective types of fishing gear. Consequently, overall levels of bycatch in traps are low in lobster fisheries relative to other marine fisheries, and fish and invertebrates landed in traps are likely to be discarded with lower mortality rates than those landed with other gear types such as trawls and dredges (Davis, 2002). The most common types of bycatch in lobster traps are juvenile lobsters and crabs. Types of fish occasionally caught in lobster traps include tautog, scup, black seas bass, cod, cusk, eels and flounder. A variety of invertebrates is found in and attached to lobster traps, including Jonah and rock crabs, red crabs, starfish, urchins, whelks and conchs (ASMFC, 1997, Butler, 2004, Miller, 2005).

The discard mortality rates (the percentage of discarded animals that die) associated with animals caught in traps is low, particularly when compared against the mortality rates linked with mobile fishing gears such as trawls and dredges. To mitigate the bycatch mortality of lobster and other species in lost trap gear (ghost gear), Federal lobster regulations mandate that each lobster trap include a biodegradable ghost panel, a rectangular opening not less than 3 ¾ inches (9.53 cm) by 3 ¾ inches (9.53 cm) in the outer parlor of the trap, to allow lobsters and other species to escape ghost gear (see § 697.21(d)(1)). The number of animals that die after being caught and discarded in the American lobster fishery appears small compared to actual lobster landings.

Those with permits that do not qualify under the Commission's Alternative may opt to pursue non-trap gear (as some of these permits may have done all along) and more directly fish on lobster in the GOM or elsewhere. This could be an option for those holding both a multispecies and lobster permit since lobster may assist in bolstering revenues if groundfish catches due to sector limitations or other restrictions are realized. An increase in non-trap effort on lobster would be constrained by catch limits on the non-trap gear sector. Under current regulations, non-trap lobster vessels may retain up to 100 lobsters per day, or up to 500 lobsters per trip of five or more days. However, an increase in non-trap effort on lobster could increase economic discards depending on where, when, and how these non-trap vessels pursue lobster.

4.2.5 Impacts to Protected Species

Under Alternative 2, a number of factors will reduce the potential for additional traps in the water, yielding minor beneficial impacts on protected species as a result. First, the cap on new Federal lobster permits in Area 1 would prevent additional entrants and traps in to the Area 1 fishery in the future and thus the threat from additional vertical lines in the water and the

potential for entanglements is reduced relative to the status quo. Second, through enhanced administrative and regulatory coordination, all jurisdictions would be bound under the state-Federal trap tag MOU to restrict trap fishing access only to Federal lobster permit holders who are qualified to fish with traps in Area 1. Third, coordinated state-Federal enforcement would be consistent in application, both dockside and at sea.

4.2.6 Conclusion

Overall, Alternative 2 is consistent with Commission's recommendations for Federal action and may effectively address industry concerns about increased fishing effort by capping the number of permits at recent levels. Based on the analysis in this EA, Alternative 2 would qualify more than 86 percent of all permits that elected Area 1 during the 2008 fishing year. This action may provide economic benefits to qualifiers over time and could yield biological benefits to the lobster resource and protected resources through effort controls. Those that don't qualify would potentially suffer decreased permit value and lost income due to business decisions and investment in the Area 1 trap fishery after the January 2, 2009, control date. Those fishermen intending to gain access to the Area 1 lobster trap fishery who do not qualify under the Commission's Alternative would still maintain the ability to purchase an Area 1 vessel and Federal permit, but they would be limited to the pool of eligible Area 1 permits, rather than a potentially larger pool of Federal permits that could be transitioned to Area 1 trap fishing under the Status Quo alternative. The limitation on the number of eligible Area 1 permits may increase the cost of buying into the fishery.

The number of Federal lobster permit holders would be capped in accordance with the qualification criteria approved by the Commission under Addenda XV. To fish with traps in Area 1, permit holders would have to first qualify under the Commission's criteria, eliminating the practice of simply electing or checking off Area 1 on their annual permit renewal application. The total number of traps allocated would be capped at a level based on the historical fishing practices of those fishers who are determined to qualify for Area 1, providing a more accurate accounting of fishing effort in Area 1 which will facilitate fishery management and stock assessment. If future management action is warranted in Area 1 to maintain the sustainability of the GOM stock and fishery, the Commission's Alternative will provide an important baseline of fishing effort that can be used as a point of reference for further management of the fishery.

Compared to the Status Quo alternative, this alternative may help to mitigate entanglement risks to marine mammals and large whales since it will cap and control fishing effort in Area 1. Similarly, it would limit the number of traps that could potentially be fished in this area which may stabilize any impacts to benthic habitat associated with lobster trap gear. Bycatch of lobster and other species would remain constant since this action would cap trap fishing at historical levels and would likely result in less bycatch mortality than the Status Quo

since it would cap trap numbers in Area 1. Unlike the status quo, this option would restrict lobster permit holders without an Area 1 trap fishing history from fishing with traps in Area 1. Non-qualifiers with multispecies permits that operate in the restrictive common pool and hail from GOM ports may be most impacted since they would not be able to offset economic restrictions from the groundfishery through transition into the Area 1 trap fishery. However, these impacts are indirect since the non-qualifiers were not historic Area 1 lobster trap participants and precluding access to the fishery is consistent with Commission's intent to stabilize the Area 1 trap fishery and prevent effort migration.

4.3 Alternative 3: Modified Commission Alternative – *Preferred*

Alternative 3, the Preferred Alternative, is not substantially different from Alternative 2, the Commission's Alternative. Alternative 2 criteria required all Area 1 permit holders to have renewed their 2008 Federal lobster permit prior to the January 2, 2009, control date. By comparison, Alternative 3 qualifies an additional 32 permits into the Area 1 lobster trap fishery by expanding the permit renewal eligibility period to include the entire 2008 Federal fishing year (May 1, 2008 – April 30, 2009). Despite the more liberal permit renewal time frame, including the period from January 3, 2009 – April 30, 2009 that is not included in Alternative 2, it is NMFS's opinion that this option is consistent with the intent of the Commission's Addendum XV which aims to cap effort at current levels by restricting the transfer of Federal lobster permits into Area 1 from other areas.

The Commission purposefully adopted the January 2, 2009 control date into the Addendum XV qualification criteria since it acknowledged that Federal action alone is necessary in capping the movement of Federal lobster permits into Area 1 and to effectively limit the entry of speculators into the Area 1 lobster trap fishery. By incorporation of the Federal control date in to the draft Addendum prior to public hearings, it further ensured the public was effectively notified that NMFS was considering a limited entry program in Area 1 at the Commission's recommendation. NMFS interpreted Addendum XV's intent to capture the current level of Area 1 participants and acknowledges that some fishermen, for various reasons, may not have renewed their Federal permit prior to the control date. A review of the additional permits that would be eligible under Alternative 3 revealed that the permits did not appear to have been renewed for speculative reasons and, in fact, represented primarily Maine-based trap permits that were simply renewed after the control date. Alternative 3 was chosen as the preferred alternative since it allows in a small number of additional permits while maintaining consistency with the Commission's intent to cap trap fishing in Area 1 at current levels. Although this alternative expands the permit renewal period to include all Area 1 permits renewed during the 2008 fishing year, including the period from January 3, 2009 – April 30, 2009 that was not in the

Commission's recommendations, it adheres strictly to the 2004-2008 trap tag purchase requirement adopted by the Commission in Addendum XV.

Alternative 3, the Preferred Alternative, would qualify 1,643 Federal lobster permits into the Area 1 lobster trap fishery, compared to the 1,611 that would qualify under the Commission's Alternative. The Preferred Alternative will qualify a slightly higher percentage of the overall universe of Area 1 lobster permit holders which designated Area 1 on their Federal lobster permit during the 2008 fishing year. Specifically, it would qualify 88 percent of the pool of 1,867 Area 1 lobster permits renewed in the 2008 fishing year; a slightly higher percentage when compared to the 86.3 percent estimated to qualify under the Commission's Alternative, Alternative 2 (Figure 4.15). When Federal permits without an Area 1 designation are considered (n=1,285), coupled with those permits with an Area 1 designation in 2008, but no record of a trap tag purchase (n=224), the total number of non-qualifying Federal lobster permits under the Preferred Alternative would be 1,509 (Figures 4.15, 4.16).

Figure 4.15 Summary of Qualified and Non-Qualified Area 1 Permits by Alternative

Alternative	Permits with Area 1 Designation in 2008				Permits without Area 1 Designation in 2008		Totals	
	Qualified	% Qualified	Not Qualified	% Not Qualified	Qualified	Not Qualified	Qualified	Not Qualified
Alt 1	1,867	100.00%	0	0.00%	1,285	0	3,152	0
Alt 2	1,611	86.29%	256	13.71%	0	1,285	1,611	1,541
Alt 3	1,643	88.00%	224	12.00%	0	1,285	1,643	1,509

Figure 4.16 "Balance Sheet" - Eligible and Ineligible Area 1 Trap Permits; Alternative 3

Permit Category	Number of Permits
Total number of Federal lobster permits	3,152
Federal lobster permits that did not elect Area 1 trap gear on the 2008 permit (non-Area 1 permits)	(1,285)
Balance = All Area 1 permits renewed during entire (May 1, 2008 –April 30, 2009) 2008 fishing year and elected Area 1 trap gear.	1,867
Area 1 permits renewed for during entire 2008 fishing year but no record of tag purchase.	(224)
Final Balance (Alt. 3 Qualifiers) = Area 1 permits that renewed any time during the 2008 fishing year and had a trap tag purchase record during 2004-2008.	1,643
Total Non-Qualifiers Under Alternative 3	1,509

4.3.1 Impacts to the Lobster Industry

As noted in the previous sections of Chapter 4, in reviewing the effects of the three alternatives in this EA, the analysis evaluates the industry impacts on four sub-groups of potentially impacted constituents. The breakdown of the sub-groups of potentially impacted constituents addresses ownership of a Federal lobster permit, authorization to fish with trap or non-trap gear, and the geographical location of the permit's owner. The four sub-groups are: 1) *Federal Area 1 Lobster Trap Fishermen; 2) Federal Lobster Non-Trap Fishermen, GOM (Area 1) Port; 3) Federal Lobster Trap and Non-Trap Fishermen, Outside Area 1; and 4) Non-Federal Lobster Trap or Non-Trap Fishermen, GOM (Area 1) Port.* The estimated positive and negative impacts of the Preferred Alternative on these components of the lobster fishing industry are summarized in Figure 4.17 and discussed in further detail in this section.

Figure 4.17 Lobster Industry Impact Analysis for Alternative 3 *Modified Commission's Alternative* (*Preferred*)

Industry Sub-Group	Positive Implications	Negative Implications
Federal Area 1 Lobster Trap Fishermen	Those who meet eligibility criteria are assured of future access. No adjustments in fishing practices needed. Limited entry will likely help to stabilize trap fishery by removing economic threats associated with unchecked effort. Permit value may increase. Maintains option for non-historical participants to purchase a Federal Area 1 trap permit.	Those who don't meet the eligibility criteria are restricted from the fishery, but likely were never historical participants. Result will limit business options and may diminish permit value for non-qualifiers.
Federal Lobster Non-Trap, Gulf of Maine (Area 1) Port	By maintaining historical trap numbers, gear conflicts would not increase. Non–trap fishermen could continue historical fishing practices without interruption or loss of available bottom.	No longer able to convert to directed lobster trap fishery in home area. Limits options for businesses that lose the opportunity to switch to trap fishing to offset other fishery restrictions; may diminish value of Federal permit for non-qualifiers.
Federal Lobster Trap and Non-Trap, Outside Area 1	None, but no direct impacts to current or historical fishing practices.	Permit permanently restricted from Area 1 trap fishery. No direct or immediate impact, since not a current participant. May limit business opportunities and may diminish permit value.
Non-Federal Lobster Trap or Non-Trap Fishermen, Gulf of Maine (Area 1) Port	No direct or immediate impacts to fishing practices. Capping the number of Federal Area 1 trap permits may benefit state waters fishermen by restricting the potential shift in effort to Area 1 ports from other areas.	Would limit pool of Federal Area 1 permits available for potential acquisition if Federal participation is desired. May increase cost of entry due to increasingly limited supply of permits.

Of the 1,643 qualifiers in Alternative 3, about 78 percent hail from Maine ports, about 17 percent hail from Massachusetts and less than three percent hail from New Hampshire. The remaining 25 permits, representing less than two percent of the qualified permits, are linked to vessels hailing from states which are not adjacent to Area 1 (Figure 4.18), including Rhode Island, Connecticut, New York, New Jersey and Delaware.

Figure 4.18 Alternative 3 Qualifiers by State

Alternative 3 -Total Qualifiers = 1,643		
STATE	**Total A1 Qualifiers Alt. 3**	**Percent of Total Qualifiers (n=1,643)**
ME	1,279	77.85%
NH	48	2.92%
MA	291	17.71%
RI	18	1.10%
Other	7	0.42%
Total	1,643	100.00%

Two hundred and twenty-four Federal lobster permits of the 1,867 which renewed their Area 1 lobster trap permits during the complete 2008 Federal fishing year (May 1, 2008 – April 30, 2009), would not qualify under this alternative because they have no record of purchasing trap tags during the 2004-2008 period specified in the Addendum XV qualification criteria. About 60 percent of the non-qualifiers with an Area 1 trap permit also elected non-trap gear and about 40 percent elected an area other than Area 1. This shows that the majority of non-qualifiers with an Area 1 trap designation focused their businesses on other fisheries or in other lobster management areas.

Of the non-qualifiers, 175 (78 percent) represent vessels based in Maine, New Hampshire or Massachusetts (Figure 4.19). Massachusetts had the highest number of non-qualifiers at 106, with about 67 percent of the Massachusetts non-qualifiers having selected non-trap gear as a gear type during 2008. Maine non-qualifiers total 46 with almost half selecting non-trap gear on their permit. Fourteen of the 23 New Hampshire non-qualifiers were also non-trap gear vessels. Therefore, a high number of these non-qualifiers from Area 1 states are most likely focused on non-trap gear fishing and not trap fishing. States south of Massachusetts accounted for 49 of the 224 non-qualifiers (22 percent). None of the states south of Massachusetts are adjacent to Area 1. It is likely that these vessels will not be directly impacted by this alternative since they are not reliant on the Area 1 lobster trap fishery and may have elected Area 1 because the option was available to them, not because they were fishing there. None of the non-qualifiers were deemed eligible because they had not purchased a trap tag during the 2004-2008 period set forth in

Addendum XV and thus could not have been legitimately fishing traps in Area 1 during that time.

Figure 4.19 Summary of Alternative 3 Non-Qualifiers by State

	Alternative 3 -Non Qualifiers with A1 Permit in 2008 (n=224)				
State	**Number of Non-Qualifiers**	**Non-Qualifiers with Area 1 Designation as Percent of All Area 1 Permit Holders (n=1,867)**	**Non-Qualifiers as a Percent of Total (n=224)**	**Non-Trap Gear**	**Other LMA**
ME	46	2.5%	20.5%	21	8
NH	23	1.2%	10.3%	14	2
MA	106	5.7%	47.3%	71	45
CT	6	0.3%	2.7%	5	6
RI	12	0.6%	5.4%	5	8
NY	6	0.3%	2.7%	5	4
NJ	14	0.7%	6.3%	11	11
VA	3	0.2%	1.3%	2	2
NC	2	0.1%	.89%	2	2
Other	6	0.3%	2.7%	0	1
Total	224	11%	100%	136	89

Overall, the Preferred Alternative will qualify a slightly higher percentage of Area 1 permit holders than the Commission's Alternative (88 percent versus 86 percent). Compared to the Commission's Alternative, the Preferred Alternative would allow 32 more permits to participate in the Area 1 lobster trap fishery by extending the qualification period to include the entire 2008 fishing year. This is a negligible increase in the number of permits compared to the Commission's Alternative that would allow potentially 25,600 more traps into Area 1. Realistically, these traps are likely already accounted for in the fishery as these 32 permit holders are Area 1 participants under current conditions. Therefore, the Preferred Alternative effectively considers the Commission's and industry's intent to cap effort at 2008 levels by qualifying all 2008 participants.

To realistically capture all current Area 1 trap participants, Alternative 3 considers those permits which were renewed after the control date. To meet the qualification criteria, in addition to the renewal of the Federal lobster permit after the control date, the permit must have also

purchased Area 1 trap tags in any one year during the 2004-2008 fishing years. Additionally, Federal Area 1 permit holders who were contemplating the timing of their permit renewal for the 2008 fishing year would not likely have anticipated the publication of a control date in the middle of the fishing year and how that action could affect the future of their permit, especially since Federal permit holders have had, for decades, the entire fishing year to renew their limited access permits without penalty.

Although the potential for migration of Federal lobster permits into the Area 1 trap fishery has existed since the lobster trap areas and trap tag requirements were adopted into the Federal regulations in 1999, the number of permits with an Area 1 designation has fluctuated slightly, but has not significantly changed. In 2000, 1,763 permits elected Area 1. That number increased steadily over the next few years, reaching a time-series high of 1,884 in 2004. Since then, the number of Area 1 permits has decreased overall but has not exhibited substantial change over the time series. In 2008 and 2009, the total number of Area 1 permits continued a downward trend to reach the lowest levels since 2001, totaling 1,838 permits in 2009; a four percent increase overall since 2000 (see Figure 4.6).

The number of Area 1 vessels that purchased trap tags also has followed a consistent trend. Federal Area 1 permit holders purchasing tags during the 2004-2008 period ranged from 1,554 to 1,654, averaging 1,576 Area 1 permits annually with a trap tag purchase. This equates to a range of 82-88 percent of Area 1 permit holders purchasing trap tags annually. The number of eligible Area 1 permit holders under the Preferred Alternative falls generally within this range, but slightly higher than the annual average, at 1,611 permits. However, a higher than average annual number of qualifiers is expected in this case since eligibility allows for a permit with an Area 1 designation in 2008 to qualify based on trap tag purchases from a multi-year period and not just a specific fishing year. Therefore, in consideration of the trends in numbers of Area 1 permits and trap tag purchases, the Preferred Alternative is intended to maintain the current pool of active Federal Area 1 trap vessels, a number consistent with recent historical trends.

Federal Area 1 Lobster Trap Fishermen

The Preferred Alternative mitigates the impact to the Area 1 lobster trap sector by expanding the timing for the permit renewal to include the entire Federal fishing year for 2008. NMFS logic is based, in part, on the long-standing requirement that Federal limited access permits, such as American lobster permits, can be renewed at any time during the fishing year to remain valid. The control date is an important date which represents the first time that Federal permit holders were notified, through the publication of the ANPR, that NMFS would consider a limited entry program for the Area 1 lobster trap fishery at the recommendation of the industry and Commission. However, Federal permit holders would not have known what the actual control date was until the day the ANPR published, or in other words, on the control date itself.

Therefore, some Federal permit holders would be displaced simply because they had not yet renewed their permit when the ANPR was published. Allowing this expansion of the permit renewal date is a fair approach for the determination of an eligible Area 1 permit, while not substantially increasing the number of qualified permits. On balance, consistent with Addendum XV's intent, the Preferred Alternative captures the full number of active Area 1 trap permits during the 2008 fishing year, which also had a record of a trap tag purchase during any year from 2004-2008. Consequently, the Preferred Alternative qualifies an additional 32 Area 1 trap permits compared to the Commission's Alternative.

Under Alternative 2, the Commission's Alternative, a vessel which never fished traps in Area 1 could qualify so long as the permit holder renewed the permit prior to the control date and purchased tags, while some fishermen who historically fished traps in Area 1 would not qualify because they did not renew their 2008 Federal lobster permit prior to the control date. Accordingly, under the Commission's Alternative, some legitimate Area 1 trap vessels, which purchased tags as required under the criteria, but did not renew the Federal permit until after the control date, for business or other reasons, could be eliminated from future participation as a consequence of the Commission's selection of the NMFS control date of January 2, 2009, rather than the end of the Federal fishing year (April 30, 2009), as one of the qualification criteria.

To address this situation, the Preferred Alternative, Alternative 3, expands the Area 1 permit renewal date to include the entire 2008 Federal fishing year. Consequently, it allows those 32 permit holders who renewed their permits in 2008 after the control date and purchased tags to be considered for Area 1 eligibility. Overall, 88 permit holders who had an Area 1 trap gear designation on the 2008 Federal permit, but did not purchase trap tags during the 2004-2008 period, and did not designate non-trap gear, would not be eligible to fish in Area 1 with traps under the Preferred Alternative, compared with 120 such vessels under the Commission's Alternative.

NMFS investigated the permits that would qualify under the Preferred Alternative, but would not have qualified under the Commission's Alternative, in an effort to determine if speculators opted into the Area 1 trap fishery after the control date hoping to establish fishing history in Area 1 by electing Area 1 on their Federal permit and purchasing trap tags. Upon review, it was revealed that all but one vessel were from an Area 1 port and all but two had elected only Area 1 and no other trap or non-trap designation on their 2008 Federal permit. Therefore, it appears that these vessels clearly represent an active, historical component of the Area 1 lobster trap fleet. If NMFS correctly interpreted the intent of the Commission to capture all current Area 1 trap fishermen, these permits would represent historically active Area 1 vessels if they had renewed their permits prior to the control date.

As Figure 4.20 shows, 25 of the 32 vessels that would qualify under the Preferred Alternative but not under the Commission's Alternative hail from Maine ports, one hails from New Hampshire and the remaining six hail from Massachusetts ports. Two of the Massachusetts vessels designated an area other than Area 1 and one of those vessels hailed from a port outside the GOM (southern Massachusetts). None of the 32 vessels elected non-trap gear on the permit, suggesting that they represent active Area 1 lobster trap vessels.

Figure 4.20 Area 1 Alternative 3 Qualifiers That Would Not Qualify Under Alternative 2

State	Area 1 Trap Designation During 2008 Fishing Year	Trap Area Designation other than Area 1	Non-trap Gear	Area 1 Port
Maine	25	0	0	25
New Hampshire	1	0	0	1
Massachusetts	6	2	0	4
Other	0	0	0	0
Total	32	2	0	30

The highlighted section of Figure 4.21 shows that 52 of the 58 permits that elected Area 1 and no other designation hail from GOM ports. This is a subset of the 224 Federal lobster permits that elected Area 1 on their permit in 2008 but would not qualify under the Preferred Alternative. Therefore, given their geographic location they may be disadvantaged since they cannot fish with traps in Area 1 and likely don't qualify, or are geographically unable to participate in, another area's trap fishery. The permits with other area designations and non-trap gear may not be as disadvantaged as those with only an Area 1 designation since they likely have a stake in another lobster area. Although those with only a non-trap gear designation and hailing from a GOM port may be negatively impacted due to a lost opportunity to switch into the Area 1 trap fishery in their "home area," they likely were not Area 1 trap fishers to begin with since they did not purchase the trap tags required for qualification.

Figure 4.21 All Non-Qualifiers by Gear type

Alt. 3 non-qualifiers with Area 1 designation		
Area Designation	**Number of Permits**	**Subset from Area 1 port**
Area 1 and no other designation	58	52
Area 1 and non-trap cat 1 only	74	64
Area 2	76	35
Area 3	3	3
Area 4	0	0
Area 5	0	0
Area 6	6	0
Outer Cape Area	47	20
Non-trap (Cat 1)	136	74
n=224		

Trap Gear Only and Hailing from a Gulf of Maine Port (All Are Area 3 Vessels)

Consistent with the Commission's Alternative, three-hundred and seventy-seven vessels elected to fish in a trap area other than Area 1 and also did not elect non-trap gear. Therefore, we can consider these vessels to exclusively be trap fishing vessels working outside of Area 1 for the purposes of this analysis. As discussed in the previous paragraphs, the majority of these vessels are likely gainfully engaged in lobster trap fishing in their respective areas and, due to business plans or geographic location, would not be inclined to switch to the Area 1 trap fishery even if the opportunity was available to them. Clearly, they have not chosen to do so as of 2008, so it is assumed that they are involved in the fishery outside of Area 1.

NMFS evaluated the implications of the Preferred Alternative on the permit holders in this category who did not elect Area 1 but work from a GOM Port, since non-qualification in the Area 1 fishery might be considered tempting given their location. There are nineteen vessels hailing from GOM ports which elected an area other than Area 1 and would not qualify for Area 1 under either the Commission's Alternative or Preferred Alternative. However, it was revealed that all of these vessels are qualified for the offshore Area 3 trap fishery and are working out of GOM ports. Therefore, these vessels are not expected to be disadvantaged by not qualifying for Area 1 because their vessels and businesses are geared for operations in the offshore fishery.

Federal Lobster Non-Trap Fishermen Fishing in Area 1

The impacts on this segment of permit holders, Federal lobster non-trap fishermen fishing in Area 1, due to the selection of Alternative 3, are nearly identical to those outlined for this same segment of the permit holders for Alternative 2. There are two sub-groups of impacted permit holders: those non-trap vessels fishing in Area 1 that have an Area 1 trap designation, and; those non-trap vessels fishing in Area 1 that did not have an Area 1 trap designation.

Of the 224 Area 1 designees that would not qualify under the Preferred Alternative, 136 permits, representing more than half (about 61 percent) of the non-qualifiers, had non-trap gear associated with their permit, indicating that these vessels, although designating Area 1 for trap gear, are non-trap gear vessels targeting on fisheries other than lobster. This is the same number of non-trap fishermen in this category that would not qualify under the Commission's Alternative. However, in the case of the Preferred Alternative, these non-trap vessels represent a higher percentage of the Area 1 non-qualifiers with an Area 1 designation compared to Alternative 2, since Alternative 3 results in more trap vessels being eligible. Despite the loss of an opportunity to either sell the permit to someone who may use it for Area 1 trap fishing or switch into the trap fishery themselves, Area 1 ineligibility is not likely to impact the manner in which this subset of non-qualifiers (Area 1 designation and non-trap gear) are operating their businesses since they were not actively participating in the Area 1 lobster trap fishery.

Figure 4.22 Non-trap Non-qualifiers by State

Alt 3 non-qualifiers non-trap by state	number of permits	Subset from Area 1 port
ME	21	21
NH	14	14
MA	71	61
RI	5	0
CT	5	0
Other	20	0
TOTAL	136	96

Massachusetts-based vessels represent the highest percentage of non-qualifiers under this alternative, representing about 47 percent (n=106) of the pool of non-qualifiers that elected Area 1 on the 2008 permit (n=224, see Figure 4.19). About 67 percent (n=71) of the non-qualified Massachusetts permits had a non-trap gear designation and 61 of those (86 percent) hailed from an Area 1 port (Figure 4.22). The Commonwealth of Massachusetts requires state-permitted vessels (including those that also have Federal permits) to designate a management area on their state license even if they are not fishing traps. Therefore, the high percentage of Massachusetts-based Area 1 vessels that would not qualify may represent traditional non-trap vessels that have

indicated Area 1 on their Federal permit, consistent with the designations required on their state landing license. Further, about 42 percent of the Massachusetts non-qualifiers designated another management area, in addition to Area 1, on the Federal permit. This suggests that these permits could have history in other management areas and their holders would have the opportunities to fish with traps outside of Area 1 if the Preferred Alternative is selected.

Maine-based vessels accounted for about 21 percent of the non-qualifiers and about 46 percent of which designated non-trap gear as a gear type, suggesting that they may be focused on other fisheries besides lobster. Comparatively, more than 61 percent of the non-qualified New Hampshire-based vessels selected non-trap gear on their 2008 Federal lobster permit. Overall, 175 of the 224 non-qualified vessels (78 percent) were from Maine, New Hampshire and Massachusetts ports. All the non-trap non-qualifiers from New Hampshire and Maine hailed from an Area 1 port (Figure 4.22).

All 867 Federal lobster vessels that had a non-trap gear designation on their 2008 Federal lobster permit and are a subset of the 1,285 vessels that did not elect Area 1 for trap fishing in 2008, had a multispecies permit and most also had at least one other Federal fisheries permit. Of these, 201 elected non-trap gear only (did not elect a trap area) and hailed from a GOM port. The holders of these permits would no longer have the option to switch from non-trap to trap fishing in their "home area" if the Preferred Alternative is selected. However, all had a multispecies permit indicating that they are in some capacity, groundfish vessels. Thus, these vessels are not reliant on lobster as a major component of their catch, leading NMFS to conclude that these permit holders, although losing an opportunity to fish with traps in the future in Area 1, will not have their ongoing fishing practices impacted or interrupted by selection of the Preferred Alternative.

Vessels with a Federal Lobster and Multispecies Permit Hailing from a Gulf of Maine Port

The Sector management program implemented by Amendment 16 to the Northeast Multispecies Fishery Management Plan allows Federally-permitted groundfish vessels to form groups called Sectors. Within each sector the participating vessels combine their respective historical groundfish quotas allowing them to share and manage the cumulative quota of their Sector. The program allows quota to be leased from other vessels in the fishery outside the Sector. Those vessels that do not participate in a sector may harvest groundfish on an individual basis, but must adhere to strict trip-based catch limits. This component of the fleet, known as the common pool, includes about half of the groundfish fleet sharing less than 10 percent of the overall groundfish quota for all species combined. Of the 1,473 Federal groundfish vessels, nearly half, or 714, participate in the common pool.

It was considered that some in the common pool, those not in a sector and subject to relatively low trip limits for groundfish, may be those most susceptible to restrictions in the

multispecies fishery. Due to the harvest limitations of the common pool on these vessels, this EA has considered the impacts of the Area 1 alternatives on the vessels with a Federal lobster permit and a Federal multispecies permit which participate in the common pool and would not qualify for the Area 1 trap fishery. There is very little information available on the impacts of the Sectors program on the common pool vessels given the relatively short time since its implementation. Furthermore, the manner in which common pool vessels may be impacted by a limited entry program in the Area 1 lobster trap fishery is difficult to quantify. However, some assumptions can be made on the effects of the Preferred Alternative on Federal lobster vessels with multispecies permits.

Indirect impacts of the Preferred Alternative may be realized by the 758 lobster permit holders that also have a Federal multispecies permit and would not qualify for the Area 1 trap fishery under the Preferred Alternative, a subset of the 967 vessels that have both a Federal lobster and multispecies permit. Of this subset of non-qualifiers, 51 permits are in the common pool category and hail from Area 1 ports (Figure 4.23). With the Preferred Alternative, these permit holders would no longer be able to switch into the Area 1 lobster trap fishery if restrictions on groundfishing, particularly those impacts on the more vulnerable common pool vessels, necessitate a change in fishing operations from groundfishing to the lobster trap fishery. Regardless, NMFS believes that the inability to switch into the trap fishery in Area 1 due to ineligibility will result only in indirect negative impacts on these common pool participants since they do not have a previous history of fishing with traps, refitting their vessels for trap fishing may be cost prohibitive, and because they had not taken advantage of the opportunity to opt into the Area 1 trap fishery in the past although an option.

Figure 4.21 shows that 74 of the 136 non-trap vessels (54 percent) that do not qualify for this alternative hail from GOM ports which may impact these vessels more than others since they would no longer have the opportunity to switch to trap fishing in their home area. Those non-trap non-qualifiers from states that are not adjacent to the GOM likely wouldn't have switched given their geographic location. In both cases, none of these non-qualifiers are losing anything in the short term since they did not purchase tags during the required time frame which indicates they are not part of the active Area 1 lobster trap fleet. Further, this outcome is consistent with the Commission's intent in Addendum XV to prevent the migration of trap effort into Area 1 from other areas and other fisheries.

Figure 4.23 Area 1 Non-Qualifiers with a Multispecies (Sector) Permit

STATE	Fed Vessels with both Multispecies and Lobster Permit	Permits from Area 1 Ports	Number in Common Pool from Area 1 Port
ME	91	91	17
NH	49	49	8
MA	367	171	26
Other	251	0	0
TOTAL	758	311	51

As discussed in the industry impacts section for Alternative 2, it is not known whether those Federal multispecies permit holders in the common pool with lobster permits that do not qualify for Area 1, would be adversely affected in the future should further groundfish restrictions warrant a change in business or fishing practices. Therefore, due to the relatively novel nature of the sector rules in the multi-species fishery and uncertainty of the future impacts of that management regime on common pool participants, the impacts of not qualifying into the Area 1 trap fishery on common pool participants cannot be accurately determined.

In contrast to the number of dual multispecies and lobster permits that would not qualify for the Area 1 trap fishery under the Preferred Alternative, 209 vessels with both a Federal lobster and multispecies permit would qualify. Compared to the Commission's Alternative, five more Federal lobster permits with a multispecies permit would qualify under the Preferred Alternative; two from Massachusetts and three from Maine (Figure 4.24). All five are in the common pool and hail from GOM ports, thus the Preferred Alternative decreases the number of affected common pool participants hailing from the GOM ports since the extension of the eligibility period would allow these vessels to qualify for the Area 1 trap fishery.

Figure 4.24 Alternative 3 Qualifiers with Sector Permits

Alternative 3 Area 1 Qualifiers with Sector Permits				
STATE	Number	% of all A1 qualifiers for Alt 3 (1,643)	Common Pool	Other Sector
ME	87	5.3%	41	46
NH	21	1.3%	9	12
MA	98	6.0%	54	44
RI	2	0.1%	1	1
NY	1	0.1%	1	0
Total	209	12.7%	106	103

Federal Lobster Trap and Non-Trap Fishermen Outside of Area 1

The impacts on this segment of permit holders due to the selection of Alternative 3 are the same as those outlined for this same segment of the permit holders under Alternative 2. In addition to the 224 Federal permits with an Area 1 designation that would not qualify for the Area 1 trap fishery under the Preferred Alternative there are 1,285 non-qualifying Federal lobster permits which did not designate Area 1 on their 2008 Federal permit. Since 19 are trap only and from GOM ports and 201 are non-trap only and from a GOM port, 1,065 of the vessels that don't qualify are already operating outside of Area 1 (Figure 4.25).

This subset of permit holders would not be eligible to elect Area 1 for traps in the future if the Preferred Alternative is selected. The impacts of the Preferred Alternative on this subset of all Federal lobster permits, representing about 41 percent of the total number of Federal lobster permits, are considered to be indirect impacts since these permits are not representative of either the historical or current Area 1 lobster trap fleet. Non-qualification may present an opportunity cost for some in this subset of non-qualifiers since they no longer have the option to switch their permit to an Area 1 trap permit. However, the majority of non-qualifiers in this group are not from a GOM port and are either engaged in other fisheries for which lobster is only a bycatch (non-trap gear), or they are qualified to participate in the trap fishery in a management area other than Area 1. Under either scenario, these permit holders have shaped their fishing operations on something other than the Area 1 lobster trap fishery. This lack of reliance on the Area 1 lobster trap fishery mitigates the negative impacts, since it represents not a change in fishing practices but rather a lost opportunity to convert the permit for Area 1 trap fishing in the future.

Figure 4.25 Area 1 Non-Qualifiers that did not elect Area 1 on the 2008 permit

Impacted Group	Number of Ineligible Permits
TOTAL*	1,285
Area 2	307
Area 3	93
Area 4	71
Area 5	48
Area 6	47
AOC	91
Non Trap	867
Non Trap Only	702
Non-Trap only and GOM port	201
Trap Only (area other than A1)	377
Trap Only GOM Port	19

*All categories don't add up to the total since many permits overlap several categories.

Areas 3, 4 and 5

Of the total pool of Federal lobster permits that would not qualify for Area 1 under Alternative 3, 377 selected trap gear only (and did not select non-trap gear) for a trap area other than Area 1. Those selecting Area 3, 4 or 5 have completed a Federal qualification program which allocated a specific number of traps to these permits based on historical participation. Therefore, the vessels associated with these permits are likely involved in the trap fishery in their respective qualified areas and are unlikely to have interest in switching their operations to Area 1, an option that they would no longer have if Alternative 3 is chosen. Further, holders of permits qualified for Areas 4 and 5 are unlikely to switch to Area 1 given the chance, since these areas are at the southern end of the fishery, in contrast to the northeast location of the Area 1 fishery.

The offshore Area 3 fishery is open to only 137 qualified permits (93 of which elected Area 3 on their permit in 2008) making it the most exclusive fishery, with respect to number of participating vessels, of any other Federal lobster trap fishery. Therefore, those with an Area 3 permit are not likely candidates to switch to Area 1 since the Georges Bank stock, the lifeblood of the offshore fishery, is in favorable condition. The favorable stock conditions, large size and exclusivity of the Area 3 fishery make these permits relatively valuable in comparison to other Federal lobster permits. Further, the large range and geographic variability of Area 3 make it a workable ground from nearly any port along the coast, providing flexibility to permit holders since they can relocate their base of operations, to an extent, without disrupting their ability to fish in Area 3. This also facilitates their ability to sell their permit since someone could potentially work in Area 3 from nearly any northeast port.

Area 6

Area 6 consists of the state waters of Connecticut and New York in Long Island Sound. Although exclusively in state waters, 47 Federal lobster permit holders elected to fish in this area during the 2008 fishing year. There is no limitation on which Federal permits may select this area, but fishermen are required to have a state license from either New York or Connecticut to fish in Area 6. All the permit holders in Area 6 are likely to remain in that area due to their geographic location and would not be directly impacted if they were no longer able to elect into the Area 1 trap fishery. As with all other permit holders that don’t qualify; however, they will lose the chance to sell their permit to another entity who may have chosen to elect Area 1 in the event of status quo.

Area 2 and the Outer Cape Area

Area 2 and the Outer Cape Area, like Area 1, are management areas which may be elected for trap fishing by any Federal lobster vessel. However, as discussed in Chapter 3 (regulatory environment) NMFS is in rulemaking to consider a limited access program in Area 2 and the Outer Cape Area, but in the absence of any new rules, these areas remain open to trap fishing by Federal lobster vessels. However, the states adjacent to these areas have already taken action, consistent with the requirements for states under the Commission's ISFMP, to qualify state lobster license holders into these areas based on specific historical participation criteria set forth by the Commission. Many of these state licensees are Federal permit holders. Those who qualified under the state process are eligible to fish in the state waters and Federal waters of these areas subject to the more restrictive of state and Federal trap limits for these areas. Those who did not qualify for a state allocation may still elect these areas on their Federal permit but are not recognized as eligible fishermen under the state programs. If they have a state permit and do not qualify, they likely are not fishing there since the states issue the trap tags to dual state and Federal permit holders for these areas and could deny issuance of trap tag to a Federal permit holder without a qualified state license for the area.

Of these Area 1 non-qualifiers, it is unclear who would ultimately qualify for access to the Outer Cape and Area 2 should NMFS move forward for a consistent historical participation action for those areas. However, an analysis conducted by NOAA Fisheries estimated that, based on state information, approximately 207 Federal permit holders from Massachusetts south to New Jersey could qualify for Area 2 and approximately 26 permit holders from Massachusetts could qualify for the Outer Cape. In consideration of these figures, approximately 100 permits that elected Area 2 in 2008 and will not qualify for the Area 1 trap fishery if Alternative 2 or Alternative 3 is selected, may also not qualify for Area 2 if future action is taken. Therefore, these permit holders may be more directly impacted than others if they have no other area selected other than Area 2. Similarly, with the Outer Cape, 65 of the 91 permit designated for the Outer Cape in 2008 that will not qualify for Area 1 under Alternatives 2 and 3, would also not qualify for the Outer Cape, depending on the future action for these areas. If so, these 65 permit holders may have limited trap fishing options if they are not already qualified for another trap area or dedicated to another fishery or gear type.

Non-trap Gear

Of the 867 non-qualifiers that did not elect Area 1 on the 2008 permit, 501 hail from ports outside the GOM. These permit holders are not expected to be impacted as negatively as those non-qualifying non-trap permits from a GOM port. The rationale is that they have not chosen to elect Area 1 yet, or at least as of the 2008 fishing year, and they are likely operating on other fisheries outside of the GOM. However, their ability to sell their permit to another entity for use in the Area 1 fishery would be lost if any option other than the status quo is selected.

Non-Federal Area 1 Lobster Permit Holders with State Lobster Licenses

The impacts to non-Federal Area 1 trap fishermen with state lobster licenses are essentially the same for the Preferred Alterative as they would be for the Commission's Alternative. State lobstermen would be disadvantaged due to a restriction on the number of Area 1-qualified permits available for sale, and consequently, a more expensive price tag, than if the Status Quo Alternative was selected and any Federal lobster permit could be purchased and employed for Area 1 trap fishing regardless of prior history.

Compared to the Commission's Alternative, the Preferred Alternative may be less burdensome with respect to availability and costs of an eligible permit due to supply and demand principles since the Preferred Alternative would qualify an additional 32 Federal permits for the Area 1 trap fishery compared to the Commission's Alternative. Therefore, the Preferred Alternative may alleviate some of the restrictions to entry for those non-Federal lobster trap fishermen who are interested in expanding their operations into the Federal waters of Area 1. With more permits eligible for the Area 1 fishery, a state lobsterman from Area 1 would have more options for purchasing a Federal Area 1 trap permit. These additional permits may present benefits to these individuals looking to expand their fishing operations since it may lower the price of an Area 1 lobster permit by increasing the overall supply and it could result in less time spent waiting for a permit to become available for sale.

State licensees not intending to purchase Federal lobster trap permits would have no negative impacts and could continue fishing in state waters without any changes. They may benefit in the future if, through the selection of the Preferred Alternative, the fishery and lobster resource become more stable which result in higher profits and more consistent markets.

Federal Lobster Permits in Confirmation of Permit History

If a Federal lobster permit was in Confirmation of Permit History (CPH) status during the entire 2008 fishing year, the permit holder would not have elected Area 1 since the permit is not in an active status. There were five permits that went into CPH status prior to the start of the 2008 fishing year that remained in CPH throughout the entire fishing year. Only one of these permits had a history of purchasing an Area 1 trap tag during the eligibility period; the tags were purchased in 2005. Consequently, the permit's CPH status in 2008 did not result in the disqualification of an otherwise active Area 1 trap gear permit, since the permit did not have a trap tag purchase for more than three years prior to the permit cut-off year, 2008. We concluded that our criterion requiring that a permit have an Area 1 trap gear designation during the 2008 fishing year did not create a significant group of non-qualifying permit holders, particularly those whose permits were in CPH status during that year. An in-depth analysis of the impacts of this action on permits in CPH status is provided in Appendix 6A.

Federal Area 1 Eligibility Review Process

NMFS analyzed Federal vessel permits data and records of lobster trap tag purchases to determine which Federal permits would qualify under the Commission's criteria (Alternative 2) and a more liberalized interpretation of the Commission's criteria, called the Preferred Alternative (Alternative 3). Alternative 1, the status quo alternative, would continue to allow all Federal lobster permits to be designated for the Area 1 trap fishery into the future regardless of whether the permit has any lobster trap fishing history associated with Area 1. For Alternatives 2 and 3, eligible permits would need to be linked with a trap tag purchases during one of the years between 2004 and 2008, inclusive. However, under Alternative 2, the Commission's Alternative, the permit must have been designated for Area 1 prior to the January 2, 2009 control date. Alternative 3, the Preferred Alternative, expands the eligibility period to include any Federal lobster permit renewed by the end of the 2008 fishing year which ended on April 30, 2009.

Once a vessel is assigned a Federal permit number, the vessel retains that same permit number for as long as it holds a Federal fisheries permit, regardless of which Federal fisheries permit(s) it holds. Furthermore, limited access or moratorium fisheries permits are forever linked together and cannot be separated and, if transferred to another vessel, must transfer as a bundle. American lobster permits are such an example of a limited access or moratorium fisheries permit. The terms "permit" and "permit history" are often intertwined. A permit history is essentially the single or multiple fishery permits and their respective fishing histories, such as landings and other relevant data associated with the fishing activities of the vessel or vessels of which the permit has been linked to over time. Permit histories, or in a sense, permits themselves, can be transferred from one vessel to another, with some limitations, such as a length and horsepower upgrade restrictions in the Federal multispecies fishery, for example. Since permits may be transferred from one vessel to another, and since a vessel retains a single Federal vessel permit number throughout its lifetime, even if the vessel holds different permits over time, a single Federal permit history cannot be accurately tracked exclusively through querying the Federal permit number, since a permit might be associated with multiple permit numbers if it is subsequently transferred to different vessels.

NMFS' need to track permit histories continues to increase in significance as Federal fisheries permits become increasingly constrained through the implementation of limited access or moratorium fisheries that restrict participation based on historical fishing practices associated with a particular permit such as landings, effort, and other data elements. Therefore, NMFS developed a moratorium rights qualification system (MQRS) to track the permit histories. The MQRS system assigns a five-digit numerical moratorium right identifier (MRI) to each permit history. The MQRS system creates a record for each vessel the permit history is associated with.

Since permits may be transferred from vessel to vessel it is essential to the Area 1 qualification process that histories, or MRI's, be the result of eligibility, as opposed to the Federal permit number. Therefore, the MQRS database was queried to determine which MRI's were associated with Federal lobster permits which were renewed, as required during each Federal fishing year (May 1 – April 30) from the earliest possible renewal date until the control date which is January 2, 2009, a date that falls during the 2008 Federal fishing year. NMFS chose January 1, 2008 as the starting date for the query since permit renewal applications are sent out to Federal permit holders in February of each year to allow for renewal of the permits that become effective the following May of the same year. Therefore, by selecting January 1, the query would clearly capture even the earliest permit renewals for the 2008 Federal fishing year. The end date of the query for Alternative 2 is the control date, January 2, 2009, which falls in the middle of the Federal fishing year. The end date for Alternative 3 is April 30, 2009, the last day of the 2008 fishing year and the final day that the holder of a Federal lobster permit can renew his permit in order to maintain eligibility for the continuance of a limited access Federal permit. If the permit is not renewed by the end of a permit year, the permit becomes ineligible for renewal in the future and is essentially removed from the universe of Federal fisheries permits. As such the permit holder loses all fishing rights and fishing history associated with the permit.

The next step, once the list of MRI's was extracted to address Addendum XV criteria 1 and 2 (the vessel has a current valid Federal Area 1 lobster permit and renewed the permit as of the control date), was to determine whether each MRI was associated with a trap tag purchase during at least one of the years between 2004-2008, inclusive (Criterion C, see Section 2.2.2).

Federal lobster trap tags are tracked by Federal permit number and are not housed in a query-able database. Therefore, NMFS requested trap tag purchase information from the coast-wide trap tag vendor, Stoffel Seals, since the vendor is the best source of trap tag purchase data. Upon receipt of the data from the vendor, NMFS disseminated each state's respective list of tag purchasing permit holders. The intent of providing the list to each state was to allow the states to review and ground-truth the information on which licensees were authorized to purchase tags by the state agency and to provide a means of quality control to the data if any information appeared to be inconsistent with state trap tag records. The states were asked to resubmit the data to NMFS in a consistent format which include Federal permit number when available. The Federal permit number serves as the universal identifier since states issue tags and license individuals, while NMFS issues permits and authorized trap tag allocations to Federally-permitted vessels. The inclusion of the Federal permit number, therefore, ensures that the individual who purchased the tags can be linked to the Federally-permitted vessel through the Federal permit number.

NMFS will consider the 1,643 eligible permit holders to be exempted from having to document the three qualification criteria (in a sense, something akin to being pre-qualified for an Area 1 permit). They will be notified by NMFS that sufficient evidence exists to qualify the permit and when the permit holder returns the signed, pre-printed application form indicating their request for eligibility, NMFS will confirm the records on hand and qualify the permit for Area 1 access. Those permit holders whose permits do not meet the eligibility requirements based on the NMFS review of permit and trap tag data available, will be so notified and asked to submit an application form along with documentation to support the qualification criteria, should they decide to apply for Area 1 eligibility. NMFS will review all applications and render a decision on the eligibility. In notifying those permit holders whose applications are denied, NMFS will inform them how to appeal as described in more detail in the following subsection. Additional details on the qualification process and associated burdens to the Federal Government and the public are provided in Appendix 7, Paperwork Reduction Act Analysis. We conducted a data quality control review that checked the data and methods used to determine whether a permit would qualify. The review affirmed that the data and methods are sound. That analysis is provided as Appendix 7A.

Appeals Process – Area 1 Qualification Program

NMFS expects that some Federal lobster permit holders whose permits do not qualify for future access to Area 1, if a limited entry program is implemented, may wish to appeal the Federal Government's decision. NMFS will allow appeals based on very narrowly defined criteria, that is, that the Federal Government erred in interpreting the information on hand in making the eligibility determination.

Federal permit holders whose permits do not qualify will have a one-time opportunity to appeal the denial decision within a specified time frame. The applicant will submit a letter of appeal indicating the reason they believe that NMFS erred in concluding that the permit did not qualify for access to Area 1 and include documentation to support the appellant's claim that the permit in question meets the established eligibility requirements. The information provided by the appellant will be reviewed by an appeals officer designated by the Administrator of the NMFS Northeast Region (Regional Administrator) who will provide a recommendation to the Regional Administrator of whether the appeals package provides sufficient information to override the initial denial decision. The appellant's permit will remain eligible to fish in Area 1 while the appeal is under review.

4.3.2 Impacts to the Lobster Resource

The impacts of this preferred alternative are essentially the same as those that would be expected from the Commission's Alternative, Alternative 2. Like the Commission's Alternative, the selection of the Preferred Alternative would likely have a minor beneficial biological impact

on the Northwest Atlantic American lobster resource when compared to the status quo alternative. Consistent with the Commission's recommendations in Addendum XV, the Preferred Alternative would more effectively cap and enforce both the total number of Federal lobster permits which can fish with lobster traps in Area 1 at 1,643, as well as the number of traps authorized to fish in Area 1. The result would be a stabilization of potential effort in the Area 1 lobster trap fishery which could not exceed 800 traps per permit (or less, if state regulations apply in some cases). This would effectively limit trap fishing effort to 2008 levels, but allow the 32 vessels that renewed their 2008 Federal lobster permits between January 2, 2009 and April 30, 2009, and purchased trap tags, to qualify for access to the Area 1 lobster trap fishery.

The allowance of 32 additional vessels under the Preferred Alternative would result in a maximum of 25,600 more traps allocated for Area 1 than would be allowed under the more restrictive Commission's Alternative. Compared to the number of traps authorized under the Commission's Alternative (approximately 1.3 million traps) the additional traps authorized under the Preferred Alternative would amount to an increase of less than 0.02 percent. Therefore, these additional traps are not expected to result in a substantial negative impact to the lobster resource and would maintain effort at the 2008 level of potential trap fishing effort. Changes in lobster fishing mortality based on trap numbers are difficult to quantify and in situations of high trap numbers, such as in Area 1, fishing mortality may be best estimated through catch per unit effort. However, for the purposes of this analysis, the fishing effort is expected to be the same for this alternative as it is currently in the fishery, since this alternative would take all of the current active vessels that renewed their permit by April 30, 2009, and qualify them into the fishery. It would provide some benefit to the resource by limiting the potential effort that could enter the fishery if the status quo option was selected and effort was left unchecked in the fishery. So, although minor beneficial effects on the lobster resource are not expected to be immediate, the resource is likely to benefit from a cap on current effort levels, consistent with the advice of the 2009 stock assessment which cautioned against the allowance of additional effort into the GOM fishery.

Under the current Federal rules, all Federal lobster permits would remain eligible to fish in Area 1, regardless of prior participation in the trap fishery, trap tag purchases, Area 1 designation on the Federal permit, or any other criteria. Although the number of Area 1 permits and the number of lobster trap fishermen purchasing trap tags has remained consistent over the past several years, some factors could influence the direction and scale of lobster fishing effort into Area 1, such as increased restrictions on groundfish vessels holding Federal multi-species permits and the marginalization of some Federal lobster permits due to trap fishing eligibility programs in other lobster management areas. The prospect of non-trap fishermen converting to trap fishing has not been evident despite the option to do so over the last decade and may be cost-prohibitive. However, the potential remains for trap fishing effort to migrate into Area 1 if

left unchecked. This potential for trap fishing effort to enter into the fishery is counter to the advice of the 2009 stock assessment.

Theoretically, the state regulatory measures like the Maine state entry/exit ratio, would keep the number of fishermen constant. But, new entrants to the fishery are more likely to fish harder and with more impact to the resource than those leaving the fishery, who are likely older and not fishing as hard as they were years ago.

4.3.3 Impacts to Habitat

The impacts of this preferred alternative are essentially the same as those that would be expected from the Commission's Alternative, Alternative 2. While there have been few studies (Eno et al, 2001) on the effect of lobster traps on the ocean floor, available information suggests trap gear, including the lobster traps used in the commercial lobster fishery, tend to have limited long-term adverse impacts on the seafloor habitat, particularly when compared with mobile fishing gears such as trawls and dredges. Frequent hauling in areas of dense vegetation is more likely to result in some damage from rope entanglement; however, even in areas of dense vegetation, the impacts are likely to be minor and of short duration.

The selection of the Preferred Alternative would cap the number of Federal lobster trap permits for Area 1 at a level consistent with the participation over the last several years, and stabilize fishing effort in the future by imposition of the cap. Therefore, there are expected to be negligible to minor beneficial impacts on marine habitat. Over time, there may be some benefit by excluding the introduction of additional trap fishing effort into Area 1.

This alternative does not restrict the use of non-trap gear, such as otter trawl, gillnet, or dredge by vessels with a Federal lobster permit. With respect to non-trap gear such as gillnets and otter trawls, it is not known whether the Preferred Alternative would influence the utilization of non-trap gear for lobster or other species, beyond that expected if the status quo was maintained. If non-trap vessels with Federal lobster permits are adversely impacted by restrictions in other fisheries resulting in an increase in effort to more directly target lobster, then it could lead to increased use of non-trap gear types in areas known to harbor lobsters. Increased effort in known lobster grounds would increase trap and non-trap gear conflicts also, and would be expected to result in more lost and damaged gear on the bottom. In addition, unlike trap gear, mobile gear towed along the ocean floor, especially in areas of dense vegetation, is known to have a protracted negative impact on bottom habitat.

4.3.4 Impacts to Bycatch

The impacts of this preferred alternative are essentially the same as those that would be expected from the Commission's Alternative, Alternative 2. Under Alternatives 2 and 3, a cap on Federal lobster permits would reduce the potential for additional traps in the water, producing minor beneficial impacts on bycatch species as a result. In general, the traps used in commercial lobster fisheries are among the more selective types of fishing gear. Consequently, overall levels of bycatch in traps are low in lobster fisheries relative to other marine fisheries, and fish and invertebrates landed in traps are likely to be discarded with lower mortality rates than those landed with other gear types such as trawls and dredges (Davis, 2002). The most common types of bycatch in lobster traps are juvenile lobsters and crabs. Types of fish occasionally caught in lobster traps include tautog, scup, black seas bass, cod, cusk, eels and flounder. A variety of invertebrates is found in and attached to lobster traps, including Jonah and rock crabs, red crabs, starfish, urchins, whelks and conchs (ASMFC, 1997, butler, 2004, Miller, 2005).

The discard mortality rates (the percentage of discarded animals that die) associated with animals caught in traps is low, particularly when compared against the mortality rates linked with mobile fishing gears such as trawls and dredges. To mitigate the bycatch mortality of lobster and other species in lost trap gear (ghost gear), Federal lobster regulations mandate that each lobster trap include a biodegradable ghost panel, a rectangular opening not less than 3 ¾ inches (9.53 cm) by 3 ¾ inches (9.53 cm) in the outer parlor of the trap, to allow lobsters and other species to escape ghost gear (see § 697.21(d)(1)). The number of animals that die after being caught and discarded in the American lobster fishery appears small compared to actual lobster landings.

As with the Commission's Alternative, those with permits that do not qualify under the Preferred Alternative may opt to pursue non-trap gear (as some of these permits may have done all along) and more directly fish on lobster in the GOM or elsewhere. This could be an option for those holding both a multispecies and lobster permit since lobster may assist in bolstering revenues if groundfish catches due to sector limitations or other restrictions are realized. An increase in non-trap effort on lobster would be constrained by catch limits on the non-trap gear sector. Under current regulations, non-trap lobster vessels may retain up to 100 lobsters per day, or up to 500 lobsters per trip of five or more days. However, an increase in non-trap effort on lobster could increase economic discards depending on where, when, and how these non-trap vessels pursue lobster.

4.3.5 Impacts to Protected Species

The impacts of this preferred alternative are essentially the same as those that would be expected from the Commission's Alternative, Alternative 2. A number of factors will reduce the potential for additional traps in the water, yielding minor beneficial impacts on protected species as a result. First, the cap on new Federal lobster permits in Area 1 would prevent additional entrants and traps in to the Area 1 fishery in the future and thus the threat from additional vertical lines in the water and the and the potential for entanglements is reduced relative to the status quo. Second, through enhanced administrative and regulatory coordination, all jurisdictions would be bound under the state-Federal trap tag MOU to restrict trap fishing access only to Federal lobster permit holders who are qualified to fish with traps in Area 1. Third, coordinated state-Federal enforcement would be consistent in application, both dockside and at sea.

4.3.6 Conclusion

The Preferred Alternative differs from the Commission's Addendum XV recommendation only in that the proposed rule extends the qualification period cut-off date from January 2, 2009 to April 30, 2009. The April 30th date makes sense because it coincides with the Federal lobster fishing year (May 1st to April 30th) and because it provides added months for those permit holders who were in the process of conducting business at the January 2, 2009 Control Date to have settled their affairs and renewed their Federal lobster permits. NMFS' analysis of the data suggests that speculation did not occur to the extent feared by the Commission during this time period (January 2nd to April 30th) and that the effort from the additional potential qualifiers (predicted to be approximately 32 additional qualifiers) would provide negligible added impact on the stock.

The impacts to the lobster resource, bottom habitat and protected resources are essentially the same as those associated with the Commission's Alternative given the minimal allowance of 32 additional vessels into the Area 1 trap fishery. On balance, the Preferred Alternative is consistent with the Commission's intent to cap lobster trap fishing effort at current levels and would mitigate any negative impacts to the environment that could occur if no action was taken and trap levels remained unchecked. The direct and indirect impacts of the alternatives as described and analyzed in sections 4.1 - 4.3 on the VECs are summarized in Figure 4.26.

Table 4.26 Impacts of Alternatives on Valued Ecosystem Components (VECs) – Area 1 Lobster Trap Fishery Limited Entry Program

VEC	**Impact of *Alternative 1 – Status Quo* (Non-preferred)**	**Impact of *Alternative 2 – Commission's Alternative* (Non-Preferred)**	**Impact of *Alternative 3 – Modified Commission Alternative* (Preferred)**
Lobster Resource	Negative to Neutral	Positive	Positive
Bycatch Species	Negative to Neutral	Neutral to Positive	Neutral to Positive
Habitat	Negative to Neutral	Neutral to Positive	Neutral to Positive
Protected Species	Negative to Neutral	Neutral to Positive	Neutral to Positive
Lobster Fishing Industry	Short-term-Neutral; Long-term-Negative	Short-term-Neutral to Positive; Long-term-Positive	Short-term-Neutral to Positive; Long-term-Positive

4.4 Cumulative Effects Analysis

A cumulative effects analysis (CEA) is required by the Council on Environmental Quality (CEQ) (40 CFR part 1508.7). The purpose of CEA is to consider the combined effects of many actions on the human environment over time that would be missed if each action were evaluated separately. CEQ guidelines recognize that it is not practical to analyze the cumulative effects of an action from every conceivable perspective, but rather, the intent is to focus on those effects that are truly meaningful. The following remarks address the significance of the expected cumulative impacts as they relate to Federal permit holders in the American lobster fishery.

4.4.1 Consideration of the VECs

In section 3.0 (Description of the Affected Environment), the VECs that exist within the American lobster fishery environment are identified, and the basis for their selection is established. The direct and indirect impacts of the alternatives as described and analyzed in sections 4.1 - 4.3 on the VECs are summarized in Figure 4.26. The analysis and rationale for these impacts are provided in sections 4.1 - 4.3 and not repeated in this section. The impacts of past, present and reasonably foreseeable future actions are discussed in detail in this section in relation to the VECs listed below and summarized in Figure 4.27 – 4.28. The cumulative effects are summarized in Table 4.29.

1. Managed resource (American lobster)
2. Non-target species (Bycatch)
3. Habitat including Essential Fishing Habitat (EFH) for the American lobster resource and non-target species
4. Endangered and protected species
5. Lobster Fishing Industry (specifically Federally-permitted lobster harvesters)

4.4.2 Geographic Boundaries

The analysis of impacts focuses primarily on access to the Area 1 lobster trap fishery in the GOM stock area based on historical participation. The core geographic scope for the managed resource, non-target species, habitat, and endangered and protected resources can be considered the overall range of these VECs in the lobster management area 1, located in the western and northern portions of the GOM. Area 1 waters include the coastal waters of New Hampshire and Maine as well as those coastal areas of Massachusetts north of Cape Cod such as Cape Cod and Massachusetts Bays. Area 1 extends seaward of the Maine and New Hampshire coastline to the 25600 LORAN C line, originating in its northeast point where it bisects the Hague Line (eastern Area 1 boundary) and following it south westerly to where it bisects the LORAN C 13400 line at approximately 69 degree 45 minutes west longitude. Then the boundary extends south to a point at approximately 42 degrees 15 minutes north latitude. The

boundary then proceeds southwesterly to a point north and west of the tip of Cape Cod. The Area 1 boundary extends slightly south and then easterly again until it intersects with the shoreline just south of Provincetown, Massachusetts at point on the western side of Cape Cod. Area 1 shares the portion of Cape Cod Bay and around the tip of Cape Cod with the Outer Cape Cod Management Area (Appendix 4, Area 1 Boundaries).

The geographic boundaries for the lobster fishing industry are the U.S. fishing communities in coastal areas in Atlantic coastal states within which Federal lobster permit holders reside; however, the focus is on states that directly border Area 1, specifically Maine, New Hampshire and Massachusetts (see section 3.3.1—Community Overview), which are directly involved in the harvest, purchase or processing of the American lobster resource, particularly those from the GOM.

4.4.3 Temporal Boundaries

The temporal scope of past and present actions for the American lobster resource, non-target species, habitat and human communities is based on the actions since the establishment of a control date for the Federal American lobster fishery by the NEFMC. A notice published in the Federal Register on March 25, 1991 (56 FR 12366), subsequently established that date as a qualification date to determine eligibility for future access to the Federal lobster fishery. For endangered and other protected resources, the scope of past and present actions is on a species-by-species basis (section 3.4—Description of Protected Resources) and is largely focused on the 1980s and 1990s through the present, when NMFS began generating stock assessments for marine mammals and turtles that inhabit waters of the U.S. EEZ. The temporal scope of future actions for all five VECs, including the measures proposed by this amendment, extends five years into the future. This period was chosen because of the relatively high frequency of adoption of new addenda to the ISFMP by the Commission's lobster management board. Such action by the Board can have impacts on the VECs associated with the managed resource, making it difficult to predict the potential impacts beyond a five-year period.

4.4.4 Actions Other Than Those Proposed in this Action

The figures that follow provide a qualitative summary of the relevant past (P), present (Pr), or reasonably foreseeable future (RFF) actions that may or have affected the VECs identified in this assessment, not including those management measures considered in this environmental assessment.

Past and Present Actions

Lobster Fishing and Fishery Management Actions

NMFS has worked with the states, the Commission and the NEFMC since 1978 to manage the lobster resource in Federal waters. Numerous actions have been taken over time to manage the commercial lobster fishery through the Council process until 1997, and through the Commission process after authority for Federal management of the resource was transferred from the MSA to the Atlantic Coastal Fisheries Cooperative Management Act (ACA or Act) (see section 1.2 Legal and Historical Context). The ACA gives the Secretary the authority to promulgate lobster regulations that are compatible with the Commission's recommendations for Federal action in the ISFMP and consistent with the National Standards included in the MSA.

Cooperative state and Federal management actions for lobster conservation are based on the development of Addenda and Amendments to the Commission's ISFMP which are often initiated to address concerns set forth in regularly scheduled lobster stock assessments. Addendum XV of the ISFMP was one such instance wherein the Commission's Lobster Board acted to curb the potential for increased trap fishing effort in Area 1 given the results of the 2009 American Lobster Stock Assessment and Peer Review. The assessment determined that stock conditions are relatively favorable in the GOM and GBK, with both stocks exhibiting high abundance and recruitment. One exception is statistical area 514 (Massachusetts Bay) which has exhibited low recruitment and abundance along with high fishing mortality; a trend which has continued since the previous assessment in 2006. In SNE, the assessment determined that the stock abundance and recruitment are depleted with follow up review by the Commission's technical committee calling for a five year fishing moratorium to protect the stock. These concerns with the stock stemming from biological assessments are the catalyst for cooperative state-Federal action to maintain stock sustainability.

Consequently, due to the proactive and cooperative approach of the interjurisdictional lobster management program, the cumulative impacts of past and present Federal lobster management actions have been mostly positive. To the degree with which this regulatory regime is complied, the cumulative impacts of past, present, and reasonably foreseeable future Federal fishery management actions on the VECs should generally be associated with positive long-term outcomes. Constraining fishing effort through regulatory actions, such as those evaluated in this environmental assessment, can often have negative short-term socio-economic impacts. These impacts are usually necessary to bring about long-term sustainability of a given resource, and as such, should, in the long-term, promote positive effects on human communities, especially those that are economically dependent upon the lobster resource.

Active industry participation in 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 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 NEFMC and Mid-Atlantic Fishery Management Council (MAFMC), newly created 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 Fisheries Cooperative Management Act in 1993. The 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 percent 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 GOM; 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 clarified 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 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 reduced the eligible number of lobster permit holders and maximum trap allocations. Upon completion, this action substantially capped and reduced lobster trap fishing effort in these management areas and set the stage for future management measures to rebuild stocks that had previously been assessed as overfished. The program reduced the number of Area 4 vessels was reduced to 81, with an overall allocation of about 80,000 traps. In Area 5, 42 vessels qualified to fish an overall allocation of about 32,000 traps. Similarly, the program reduced the number of eligible lobster

trap vessels in Area 3 to 139, authorized to fish an overall allocation of approximately 172,000 traps after a four-year trap reduction schedule that ended in 2006. A subsequent rulemaking action (72 FR 56935, October 5, 2007) implemented additional trap reductions for Area 3. Specifically, it reduced trap allocations by 5 percent during both the 2007 and 2008 fishing years, with 2.5 percent reductions during both 2009 and 2010. The final maximum allocation any one vessel could fish after this last round of reductions is 1,945 traps, although trap allocations vary by vessel based on historical participation.

In a final rule published in the Federal Register on March 14, 2006, (71 FR 13027) NMFS implemented several new lobster broodstock management measures in response to the recommendations of the Commission in the ISFMP. Specifically, this rule, in part, revised the egg-per-recruit overfishing target timeline and increased the minimum carapace limit from 3 ¼ inches (8.26 cm) to 3 3/8 inches (8.57 cm) in all LCMAs except Area 1, which remains at 3 ¼ inches. The rule also increased the rectangular and circular escape vent sizes in all LCMAs, with the exception of Area 1. It also established a Federal maximum size for female lobster in both Areas 4 and 5, required mandatory v-notching of female egg-bearing lobsters in Area 1, established an overlap zone between Area 5 and Area 3, and required a zero tolerance definition of v-notching in Area 1.

In 2007, NMFS implemented broodstock protection measures for the offshore Area 3 lobster fishery (72 FR 56935, October 5, 2007) that included trap reductions, an increase in the minimum legal carapace length for lobster to 3 ½ inches, and an increase in the escape vent size for lobster traps in this area. Despite the short-term impacts to the industry associated with these regulations, the majority of Federal lobster vessels were already subject to these requirements as implemented at the state level. Therefore, these measures, similar to the situation with the proposed actions in this assessment, directly impacted a relatively small component of the industry and resulted in a framework of reasonably consistent regulations at both the state and Federal levels. Ultimately, these measures are expected to enhance the condition of lobster broodstock and facilitate egg production to the long-term benefit of the industry and resource.

The Atlantic Large Whale Take Reduction Plan (ALWTRP) is designed to protect three endangered species – the western North Atlantic stock of right whales, the GOM stock of humpback whales, and the western North Atlantic stock of fin whales – from the risk of serious injury and death associated with entanglement in commercial gillnet and trap/pot gear (e.g., American lobster). Since implementation of the ALWTRP in 1997, NMFS has modified the plan on several occasions to address the risk of entanglement in commercial fishing gear. The most recent amendments, finalized in October 2007, expanded the scope of the plan to regulate additional fisheries, established new gear modification and marking requirements, and implemented a number of other regulatory changes (72 FR 57104, October 1, 2007; 73 FR 19171, April 9, 2008). With one major exception, these modifications are now in effect. The

exception is a requirement that fisheries subject to the plan employ sinking and/or neutrally buoyant groundline. This requirement is scheduled to take effect 12 months after publication of the final rule; i.e., October 5, 2008. The estimated increase in annualized ALWTRP compliance costs for the lobster trap/pot fishery based on these modifications is $12,288,000 (NMFS, 2007). Vessels operating in Southern Nearshore waters (LMCAs 4, 5 and a portion of 6) would account for 64 percent of compliance costs; vessels operating in Offshore waters (LCMAs 3, 2/3 Overlap, 3/5 Overlap) would account for 21 percent; those in Northern Inshore waters (states waters from Maine through Rhode Island) would account for 10 percent; and those in Northern Nearshore waters (Federal waters of LCMAs 1, 2 and Outer Cape) would account for six percent.

NMFS issued a proposed rule which would provide an additional six months (to April 5, 2009) for trap/pot fishermen along the Atlantic coast to comply with the sinking groundline requirement (72 FR 57104, October 1, 2007; 73 FR 19171, April 9, 2008). Additionally, NMFS proposed to delete reference to "neutrally buoyant line" from the regulations, so that the rule specifically would require the use of sinking line. The six-month delay in the effective date of the sinking groundline standard did not eliminate the costs of complying with this requirement. However, those who had yet to complete the conversion were able to extend the process for an additional six months. The delay helped to reduce compliance costs, since more line could be converted when it ordinarily would need to be replaced, avoiding the costs associated with accelerating gear replacement. The additional time also reduced the possibility of a disruption in fishing effort during the summer and early fall of 2008, which would have had an adverse impact on the catch and revenues of affected fishermen. The final rule was published in October 2008 and with the six-month delay, the sinking groundlines became effective in April 2009 (73 FR 51228).

Overall, the past and present fishery management actions summarized in this section have had a generally positive impact on the managed resource and the associated VECs. The fishing industry has likely endured some short-term economic impacts due to potentially lost revenue from minimum and maximum size increases and the loss of access for some trap fishermen to Areas 3, 4 and 5 when that program capped the number of vessels that could fish in those areas. However, for the most part, Federal lobster permit holders were subject to such restrictions at the state level before compatible measures were implemented at the Federal level; a concept that has reduced the overall impact of Federal lobster regulations on Federal lobster permit holders over the temporal scope of this analysis.

Non-fishing Activities

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 U.S.' 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 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. However, most replenishment activities and water quality impacts occur within 3 nm of the beach, and lobster abundance at the southern end of the range is generally much farther offshore. 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 substantial 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 Rhode Island beaches and were collected from Point Judith to Charlestown Beach, Rhode Island, between January 21 and February 2, 1996. The majority of the stranded lobsters were under 40 mm 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, 1999).

There were substantial impacts to the lobster fishery when a lobster resource disaster occurred in LSI in 1999. As described in the lobster SFEIS (67 FR 68128), dated November 8, 2002, a number of fishing operations in LSI 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 LSI. 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 LSI 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 LSI 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 red-tail (*Gaffkemia*) and shell disease. 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 LIS 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 Connecticut and New York 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.

An economic recession tied to the global collapse of major financial institutions and markets is a non-fishing factor that has affected, and will continue to affect, lobster fishermen since 2008. High petroleum prices have increased the expenses that fishermen must incur in harvesting lobster by increasing the costs of diesel fuel for fishing vessels. Higher fuel prices and shortages in the availability of Atlantic herring, an important bait species for Area 1 lobster trap fishery, has also increased the price of this bait product, thereby contributing to the increased costs of doing business for GOM lobstermen. The Maine Lobstermen's Association reported that the cost of bait for Maine lobstermen in 2010 consumes approximately 20 percent of a lobsterman's revenues, a marked increase from the two percent it consumed in the mid-1990's (CNN, 2010).

The implosion of the Icelandic banking system in 2009, a network of banks that have served as a major source of financing to the Canadian lobster processing sector, severely affected Maine lobster prices by closing off a major export market to Canada. Three of Iceland's banks, representing 85 percent of the nation's banking system, collapsed during the same week in October 2008, in the midst of faltering global capital markets and the failure of Lehman Brothers a month earlier (OECD, 2009). Canadian processors routinely purchase up to one half of the Maine lobster catch. The lobsters are processed in Canadian facilities and shipped to varied markets worldwide. The lack of Icelandic financing available to Canadian processors led to a collapse in the Canadian export market for U.S. wholesalers. Poor economic conditions have further led to a drop in domestic demand for New England lobster which in turn has led to extremely low wholesale and retail lobster prices. Despite record high landings, increased costs of doing business combined with low prices have hurt many lobstermen, especially in rural areas such as Maine where other employment opportunities are scarce (Maine Lobsterman's Association, 2010 as reported in CNN, 2010). In the wake of decreased revenues from low prices and high operating costs, many fishermen have struggled to pay for loans to finance capital expenditures such as vessels, trucks and equipment (Maine Lobsterman's Association, 2010 as reported in CNN, 2010). Although ex-vessel lobster prices have improved, with the average price per pound paid to Maine lobstermen increasing to $3.31 in 2010, high fuel prices and limited markets may continue to negatively impact the lobster industry in the short-term.

It is not known how lobstermen may or may not alter their fishing operations to adjust to these difficult economic factors. They could fish harder, potentially hauling gear more often in an attempt to increase revenues. However, increased operating costs may make this ineffective unless prices proportionately. Conversely, some may fish less, reducing their operating costs and potentially increasing profits if revenues are not substantially reduced. A more likely scenario, particularly for businesses that rely solely or principally on lobster revenue, may be to continue in a consistent fashion, hoping that prices adjust and operating costs decrease over time. If this proves to be the case, the impacts on protected species, managed resources, bycatch species and habitat are expected to remain neutral. Given the economic climate, lobster businesses and lobster-reliant communities will likely continue to experience negative economic impacts for the reasonable foreseeable future due to low ex-vessel prices, diminished markets and high operating costs.

Non-fishing activities that introduce chemical pollutants, sewage, changes in water temperature, (e.g., global warming phenomenon), salinity, dissolved oxygen, and suspended sediment into the marine environment pose a risk to all of the identified VECs. As previously discussed in section 3.1.3, water temperatures exert significant influence on reproductive and developmental processes of lobster. Thus, a global change in sea water temperature related to anthropogenic increases in greenhouse gas emissions may have a direct impact on the lobster resource as well as other VECs. Human-induced non-fishing activities tend to be localized in

nearshore areas and marine project areas where they occur. Examples of these activities include, but are not limited to: agriculture, port maintenance, beach nourishment, coastal development, marine transportation, marine mining, dredging and the disposal of dredged material. Wherever these activities co-occur, they are likely to work additively or synergistically to decrease habitat quality and, as such, may indirectly constrain the sustainability of the managed resource, non-target species, and protected resources. Decreased habitat suitability would tend to reduce the tolerance of these VECs to the impacts of fishing effort. Mitigation of this outcome through regulations that would reduce fishing effort could then negatively impact human communities. The overall impact to the affected species and their habitats on a population level is unknown, but likely neutral, since a large portion of these species have a limited or minor exposure to these local non-fishing perturbations.

In addition to guidelines mandated by the ACA and MSFMCA, NMFS reviews these types of effects through 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 in "waters of the U.S." and includes both riverine and marine habitats.

Reasonably Foreseeable Future Actions

In terms of RFF Actions that relate to the American lobster fishery (Table 4.9), several warrant additional discussion. Primarily another Federal rulemaking and associated environmental impact analysis is underway to address the fishing effort control measures associated with Addenda II through VI to Amendment 3 in the Commission's ISFMP. NMFS notified the public of its intent to conduct this rulemaking in a Federal Register notice published on May 10, 2005, (70 FR 24495) to request comments from the public on a variety of fishing effort control measures, including: Limits on future access based on historical participation criteria; procedures to allow trap transfers among qualifiers and impose a trap reduction or conservation tax on any trap transfers; evaluation of trap reduction programs to meet the goals of the ISFMP; revision to "Most Restrictive" trap limits rule and other management area trap limits; and requirements to permanently designate each active Management Area. The extent of the impacts of this rulemaking on the resource and associated VECs are unknown and are currently being analyzed in an Environmental Impact Statement (EIS). The extent to which these or related effort control measures are implemented at both the state and Federal level will affect the overall impacts of any relevant Federal action.

The assessment determined that stock conditions are relatively favorable in the GOM and GBK, with both stocks exhibiting high abundance and recruitment, and the stock is not depleted and overfishing is not occurring. However, although the GOM stock abundance has reached record high levels, the assessment cautioned that since the GOM fishery is highly-reliant on the

harvest of new recruits, future declines in recruitment indices could jeopardize the sustainability of the fishery. Along with landings, GOM fishing effort is the highest observed in three decades, both in numbers of traps fished and trap soak time. Consequently, the assessment cautioned against further increases in fishing effort in the GOM. Further, the assessment determined that the Area 514 (Massachusetts Bay) component of the GOM stock is in poor condition with low recruitment and abundance and high fishing mortality; a trend that has continued over the course of the last two assessments.

Like the GOM stock, the GBK stock is in favorable condition based on the recommended biological reference points. The stock is not depleted and overfishing is not occurring, with abundance at a record high and exploitation rates at a record low. In contrast, the assessment determined that the SNE stock abundance and recruitment are depleted with high fishing mortality and dependence on newly recruited individuals. SNE abundance is at its lowest level since the 1980's with recruitment on the decline since 2000, warranting further restriction. Given the dire news regarding the SNE stock, the Lobster Board directed the Lobster Technical Committee to provide recommendations for management measures, with particular concern for the SNE stock. The Technical Committee's subsequent report which also included more recent data than the assessment, indicated that the SNE stock is experiencing recruitment failure and recommended that the Board take action to reduce pressure on the stock by implementing a five-year moratorium on lobster fishing.

The report was controversial and the Board held a special meeting in Warwick, RI on July 22, 2010 to discuss the issue, review the available data, and listen to public comment. The Board was concerned about the sensitivity of the model used to generate the updated stock projections and voted to have the report reviewed by an independent panel of experts. The independent panel generally concurred with the Technical Committee report. The Commission's lobster board has since asked the plan development committee to develop a suite of management alternatives to address the SNE situation in light of the findings of the stock assessment, technical committee review and independent expert review. The approaches are aimed at reducing the exploitation rate in the fishery by 50 percent, and by 75 percent and present an option for status quo, in consideration of a wide range of management options including size limitations, closed seasons and areas, trap reductions and quotas.

In 2009, the ALWTRT agreed on a schedule to develop conservation measures for reducing the risk of serious injury and mortality of large whales that become entangled in vertical lines. As provided in the schedule, NMFS committed to publishing a final rule to address vertical line entanglements by 2014. Unlike the broad-scale management approach taken to address entanglement risks associated with groundlines, the approach of the vertical line rulemaking will focus on reducing the risk of vertical line entanglements in finer-scale high impact areas. Using fishing gear characterization data and whale sightings per unit effort data,

NMFS developed a model to determine the co-occurrence of fishing gear density and whale density to serve as a guide in the identification of these high risk areas.

In order for many of the non-fishing actions proposed in Table 4.15 to be permitted under other Federal agencies (such as beach nourishment, offshore wind facilities, etc.), those agencies would conduct examinations of potential biological, socioeconomic, and habitat impacts. The MSFMCA (50 CFR 600.930) imposes an obligation on other Federal agencies to consult with the Secretary of Commerce on actions that may adversely affect EFH. The eight Fishery Management Councils are engaged in this review process by making comments and recommendations on any Federal or state action that may affect habitat, including EFH, for their managed species.

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

Figure 4.27: Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Fishery Management Actions on the five VECs (*not including those actions considered in this action*)

Action	Description	Impacts on Lobster Resource	Impacts on Bycatch Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Lobster Industry
P, Pr Original Lobster FMP; Commission ISFMP and subsequent Amendments and Addenda to the ISFMP (1991 to 2011)*	Established commercial management measures	**Direct Positive** Regulatory tool available to rebuild and manage stocks	**Indirect Positive** Limits bycatch through size and gear requirements.	**Direct Positive** Capped numbers of vessels and traps.	**Direct Positive** Capped numbers of vessels and traps consistent with ALWTRP measures.	**Direct Positive** Benefited domestic businesses.
P,Pr.RFF American lobster broodstock protection measures to address Addenda II and III to Amendment 3 of the ISFMP 2006	Increased minimum carapace length and escape vent size in all LCMAs except Area 1. Implemented maximum size in Areas 4 and 5. Established Area 3/5 overlap zone and clarified other regulations	**Direct Positive** Protects broodstock and benefits egg production by increasing minimum size and establishing maximum size limit.	**Direct Positive** Protects more smaller-sized lobster through minimum size and escape vent size increases.	**Neutral** Not likely to affect habitat.	**Neutral** Not likely to affect protected species.	**Indirect positive** Short-term costs due to size limitations and new gear requirements offset by increased egg production in the future. Area 5 fishermen benefit from Area 3/5 overlap area.
P,Pr,RFF Area 3 Lobster Broodstock Protection Measures and Trap Reductions – Final Rule 2007	Annual trap reductions through 2010; min. carapace size increase to 3 ½" by 2008; escape vent size increase in 2010	**Neutral to Positive** May increase egg production and abundance by protecting broodstock, with some potential conservation benefits from trap reductions.	**Neutral** Not likely to affect non-target species.	**Neutral** Not likely to affect habitat.	**Neutral to Positive** Trap reductions may decrease likelihood of incidental takes of cetaceans.	**Short-term Negative to Positive; Long-term positive**

Figure 4.27: *Continued*. Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Fishery Management Actions on the five VECs (*not including those actions considered in this action*)

Action	Description	Impacts on Lobster Resource	Impacts on Bycatch Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Lobster Industry
RFF Area 2 and Outer Cape Trap Fishery Eligibility Program	Considers ISFMP measure to cap and control trap fishing effort in, Area 2 and the Outer Cape qualifying eligible vessels against yet unspecified criteria	**Uncertain-Pending** NMFS is in rulemaking and impact analysis is incomplete.	**Uncertain** NMFS is in rulemaking and impact analysis is incomplete.	**Uncertain** NMFS is in rulemaking and impact analysis is incomplete.	**Uncertain** NMFS is in rulemaking and impact analysis is incomplete.	**Uncertain-Pending** NMFS is in rulemaking and impact analysis is incomplete.
RFF Intertransferable Trap Program for Area 2, Area 3 and the Outer Cape Area	Transfer of all or part of a trap allocation from one vessel to another.	**Uncertain- Pending** NMFS is in rulemaking and impact analysis is incomplete.	**Uncertain-Pending** NMFS is in rulemaking and impact analysis is incomplete.	**Uncertain-Pending** NMFS is in rulemaking and impact analysis is incomplete.	**Uncertain- Pending** NMFS is in rulemaking and impact analysis is incomplete.	**Uncertain- Pending** NMFS is in rulemaking and impact analysis is incomplete.
RFF Southern New England Lobster Stock Recruitment Failure – Management Measures Under Development	Considers ISFMP measures to allow the full and partial transfer of trap allocations among permit holders.	**Uncertain- Pending** The Commission is currently working to develop management measures to address this issue.	**Uncertain-Pending** The Commission is developing management measures for this issue.	**Uncertain-Pending** The Commission is developing management measures for this issue.	**Uncertain- Pending** The Commission is currently working to develop management measures to address this issue.	**Uncertain- Pending** The Commission is currently working to develop management measures to address this issue.

Figure 4.28: Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Non-fishing Actions on the five VECs (*not including those actions considered in this amendment*)

DISCLAIMER: *The potential impact descriptions below are made on a conceptual level since most or all of these actions would likely require NMFS review and analysis on a case by case basis. To avoid any premature judgments on existing or future evaluations, the impacts described below are made in general terms and represent "Potential" positive, negative, neutral or uncertain impacts.*

Action	Description	Impacts on Lobster Resource	Impacts on Bycatch Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Lobster Industry
P, Pr, RFF Port maintenance	Dredging of wetlands, coastal, port and harbor areas for port maintenance	**Uncertain** Dependent on mitigation effects	**Uncertain** Dependent on mitigation effects	**Uncertain** Dependent on mitigation effects	**Uncertain** Dependent on mitigation effects	**Uncertain-Likely Positive** Dependent on mitigation effects
P, Pr, RFF Offshore disposal of dredged materials	Disposal of dredged materials	**Potentially Negative** Reduced habitat quality	**Potentially Indirect Negative** Reduced habitat quality	**Potentially Negative** Reduced habitat quality	**Potentially Negative** Reduced habitat quality	**Potentially Negative** Reduced habitat quality negatively affects resource viability
P, Pr, RFF Beach nourishment	Offshore mining of sand for beaches	**Potentially Indirect Negative** Localized decreases in habitat quality	**Potentially Indirect Negative** Localized decreases in habitat quality	**Potentially Direct Negative** Reduced habitat quality	**Potentially Indirect Negative** Localized decreases in habitat quality	**Potentially Mixed** Positive for mining companies, possibly negative for fisheries

Figure 4.28 *Continued*. Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Non-fishing Actions on the five VECs (*not including those actions considered in this amendment*)

Action	Description	Impacts on Lobster Resource	Impacts on Bycatch Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Lobster Industry
P, Pr, RFF Beach nourishment	Placement of sand to nourish beach shorelines	**Potentially Indirect Negative** Localized decreases in habitat quality	**Potentially Indirect Negative** Localized decreases in habitat quality	**Potentially Direct Negative** Reduced habitat quality	**Potentially Indirect Negative** Localized decreases in habitat quality	**Potentially Positive** Beachgoers generally like sand
P, Pr, RFF Marine transportation	Expansion of port facilities, vessel operations and recreational marinas	**Potentially Indirect Negative** Localized decreases in habitat quality	**Potentially Indirect Negative** Localized decreases in habitat quality	**Potentially Direct Negative** Reduced habitat quality	**Potentially Indirect Negative** Localized decreases in habitat quality	**Potentially Mixed** Positive for some, potential displacement for others
P, Pr, RFF Installation of pipelines, utility lines and cables	Transportation of oil, gas and energy through pipelines, utility lines and cables	**Uncertain** Dependent on mitigation effects	**Uncertain** Dependent on mitigation effects	**Potentially Direct Negative** Reduced habitat quality	**Uncertain** Dependent on mitigation effects	**Uncertain** Dependent on mitigation effects

Figure 4.28 *Continued*. Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Non-fishing Actions on the five VECs (*not including those actions considered in this amendment*)

Action	Description	Impacts on Lobster Resource	Impacts on Bycatch Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Lobster Industry
RFF Offshore Wind Energy Facilities (within 5 years)	Construction of wind turbines to harness electrical power (Several facilities proposed from ME through NC, including off the coasts of MA, NY/NJ and VA)	**Uncertain** Dependent on mitigation effects	**Uncertain** Dependent on mitigation effects	**Potentially Direct Negative** Localized decreases in habitat quality possible	**Uncertain** Dependent on mitigation effects	**Uncertain** Dependent on mitigation effects
RFF Liquefied Natural Gas (LNG) terminals (within 5 years)	Transportation of natural gas via tanker to terminals located offshore and onshore (Several LNG terminals are proposed, including MA, RI, NY, NJ and DE)	**Uncertain** Dependent on mitigation effects	**Uncertain** Dependent on mitigation effects	**Potentially Direct Negative** Localized decreases in habitat quality possible, but potential no fishing zone could create refuge.	**Uncertain** Dependent on mitigation effects	**Uncertain-Likely Positive** Dependent on mitigation effects

Figure 4.28 *Continued*. Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Non-fishing Actions on the five VECs (*not including those actions considered in this amendment*)

Action	Description	Impacts on Lobster Resource	Impacts on Bycatch Species	Impacts on Habitat and EFH	Impacts on Protected Species	Impacts on Lobster Industry
P, Pr, RFF Atlantic Large Whale Take Reduction Measures	Gear and area restrictions on lobster fishing to reduce takes of whales in lobster gear.	**Uncertain- Neutral** Not likely to affect lobster resource	**Uncertain- Neutral** Not likely to affect bycatch of non-targeted species	**Uncertain** Sinking groundline may have some unknown impact on hard-bottom habitat	**Potentially Positive** Gear and area restrictions may decrease takes of cetaceans	**Potentially Negative** Some short and long-term economic impacts to industry may occur to comply with new gear requirements
P, Pr, RFF 1999 Long Island Sound Lobster Die-off	Die-off of lobster due primarily to lobster parasite (*Paramoeba* spp.), brought on or exacerbated by other environmental stressors.	**Direct Negative –** Resulted in lobster mortality	**Neutral - Uncertain**	**Neutral - Uncertain**	**Neutral - Uncertain**	**Direct Negative –** Resulted in short-term and unquantifiable long-term economic losses

Figure 4.28 *Continued*. Impacts of Past (P), Present (Pr), and Reasonably Foreseeable Future (RFF) Non-fishing Actions on the five VECs (*not including those actions considered in this amendment*)

Action	Description	Impacts on Lobster Resource	Impacts on Bycatch Species	Impacts on Habitat and EFH	Impacts on Protected Resources	Impacts on Lobster Industry
P, Pr, RFF Agricultural runoff	Nutrients applied to agricultural land are introduced into aquatic systems	**Indirect Negative** Reduced habitat quality	**Indirect Negative** Reduced habitat quality	**Direct Negative** Reduced habitat quality	**Indirect Negative** Reduced habitat quality	**Indirect Negative** Reduced habitat quality negatively affects resource viability
P, Pr, RFF Economic Recession, Loss of Markets	Global economic recession and severe weakening of Canadian export market have decreased ex-vessel prices and increased operating costs for lobstermen.	**Neutral** Lobstermen will not likely change fishing style and may wait for economic factors to re-adjust	**Neutral** Lobstermen will not likely change fishing style and may wait for economic factors to re-adjust	**Neutral** Lobstermen will not likely change fishing style and may wait for economic factors to re-adjust	**Neutral** Lobstermen will not likely change fishing style and may wait for economic factors to re-adjust	**Negative** High operating costs and reduced prices will negatively impact businesses and communities with major reliance on lobster

4.4.5 Preferred Actions on all the VECS

Because this action would continue to support the goals of the ISFMP, direct and indirect impacts of the measures identified as the preferred alternatives in Chapter 4, when combined with other past, present, and reasonably foreseeable future actions, are expected to be positive on the American lobster resource, as summarized below. The cumulative effects of the range of actions considered in this document can be considered to make a determination if significant cumulative effects are anticipated from the preferred action.

Figure 4.29 Magnitude and significance of the cumulative effects, the additive and synergistic effects of the proposed action, as well as past, present, and future actions

VEC	Net Impact of P, Pr, and RFF Actions	Impact of the Proposed Action Alternative 3 (Preferred)	Significant Cumulative Effects
Lobster Resource	Positive	Positive	None
Bycatch Species	Positive	Neutral	None
Habitat	Neutral to positive	Neutral	None
Protected Species	Positive	Neutral	None
Lobster Fishing Industry	Positive	Short-term-Negative to Positive; Long-term-Positive	None

The impacts of this proposed action on the VECs are described in sections 4.1 through 4.3. The magnitude and significance of the cumulative effects, the additive and synergistic effects of the proposed action, as well as past, present, and future actions, have been taken into account throughout this section (4.4). The action proposed in this document builds off action taken in with respect to the interjurisdictional management program for the American lobster resource. When this action is considered in conjunction with all the other pressures placed on fisheries by past, present, and reasonably foreseeable future actions, it is not expected to result in any significant impacts, positive or negative. Based on the information and analyses presented in

these past Federal actions and this document, there are no significant cumulative effects associated with the action proposed in this document. Rationale for this determination for each VEC is provided below.

Lobster Resource

Overall, the past and present fishery management actions summarized in this section have had a generally positive impact on the American lobster resource. Several actions have resulted in the implementation of broodstock protection measures such as minimum and maximum size increases and more restrictive v-notch definitions which serve to protect sexually mature lobsters and foster egg production. This proposed action may sustain efforts to protect lobster stocks by maintaining trap fishing effort at current levels and deflecting the potential for the migration of trap fishing effort into the most lucrative lobster stock area, the Gulf of Maine. The combined effects of the previous actions and this proposed action on the lobster resource are expected to be positive and non-significant.

Bycatch Species

Cumulative impacts of the past Federal fishery management actions on bycatch have been relatively positive as limitations on the numbers of traps fished may be associated with fewer interactions with non-targeted species in the lobster trap fishery. It is not expected that historical participation in the Area 1 lobster trap fishery would lead to negative impacts on non-target species through more intense non-trap fishing effort, although the degree to which federal permit holders who do not qualify for the Area 1 trap fishery would alter their fishing practices in response to an ineligibility determination is uncertain. Since the intent of the proposed action is to cap trap fishing at historical levels, the majority of trap fishermen are expected to qualify for future participation and traditional non-trap lobster vessels will continue in their historical capacity, without further increases in non-trap fishing effort that would lead to increased catches of lobster (as a bycatch in the non-trap sector) or non-target species. Thus, the past and present impacts, combined with proposed and future actions will likely provide neutral to positive non-significant impacts to bycatch species in the long term.

Habitat

The combined impacts of past Federal fishery management actions have reduced trap fishing effort on lobster, and therefore have been positive for habitat protection. In addition, better control of non-fishing activities has also been positive for habitat protection. However, both fishing and non-fishing activities continue to decrease habitat quality. The proposed action is expected to have neutral impact on habitat or EFH as it caps fishing effort at historical levels.

The past and present impacts, combined with the proposed action and future actions is expected to reduce fishing effort and hence reduce damage to habitat; however, it is likely that fishing and non-fishing activities will continue to degrade habitat quality. This should yield neutral to positive non-significant impacts to habitat/EFH in the long term.

Protected Species

Limited access programs have served to cap and control lobster fishery participation since the moratorium on lobster permits was initiated in the mid-1990's. Since that time, no new Federal lobster permits have been issued and the moratorium has been continued indefinitely. Subsequent Federal actions, in cooperation with the states, have capped the number of traps and trap fishing vessels in nearly every lobster management area. Although some latent trap fishing effort remains, it will likely be reduced over time as area-specific trap fishery management programs evolve. The cap on traps and vessels has benefitted protected species by lowering the risk of entanglement, especially for large whales, in lobster trap gear.

Trap gear modifications such as sinking groundline and potential modifications to vertical lines under development will provide protections to large whales and other protected species that interact with the lobster trap fishery. Overall, the lobster management and whale protection measures implemented over time have had a positive net effect on protected species. This action is expected to have a neutral effect on protected species by capping traps and participants at 2008 levels and over the long-term, the cumulative effects of all actions combined with have a neutral to positive result on protected species.

Lobster Fishing Industry

The lobster fishing industry likely endured short-term economic impacts due to lost revenue resulting from minimum and maximum size increases over the past several years. The loss of access to Areas 3, 4 and 5 when Federal action capped the number of vessels that could fish in those areas resulted in a lost fishing opportunity and loss of permit value for those that did not qualify for access to these areas. However, for the most part, Federal lobster permit holders were subject to such restrictions at the state level before compatible measures were implemented at the Federal level; a concept that has reduced the overall impact of Federal lobster regulations on Federal lobster permit holders over the temporal scope of this analysis.

Over time, it is expected that short term economic losses from management actions would lead to long-term benefits to the industry through stock rebuilding, especially in the Gulf of Maine stock area where strong abundance indices yield near-record landings. As with previous management actions the proposed action will impact those permit holders who don't

qualify for access to the Area 1 trap fishery. However, it would not impact historical participants and would not displace any business that meets the basic requirements for eligibility. Therefore, the proposed action is expected to have some short-term negative to neutral impacts while offering long-term positive non-significant impacts for eligible participants in the future.

5.0 NATIONAL ENVIRONMENTAL POLICY ACT

NEPA provides a mechanism for identifying and evaluating environmental issues associated with Federal actions and for considering a reasonable range of alternatives to avoid or minimize adverse environmental impacts. This document is designed to meet the requirements of NEPA.

5.1 Environmental Assessment

The required elements of an Environmental Assessment are specified in 40 C.F.R. 1508.9(b) and are included in this document as indicated below:
Need for Action: Section 1.1
Alternatives Considered: Section 2.0
Environmental Impacts of Proposed Action: Section 4.0
Agencies and Persons Consulted on This Action: Section 9.0

5.2 Finding of No Significant Impact

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 final fishery management 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, in this case preferred Alternative 3, the modified Commission Alternative, is not expected to jeopardize the sustainability of any target species that may be affected by the action. The intent of the proposed actions is limit the escalation of lobster trap fishing effort in Area 1 by capping effort at relatively recent levels. Through adoption of the preferred alternative, NMFS would implement regulations to determine which Federal lobster permits meet eligibility criteria consistent with such criteria set forth by the Commission in Addendum XV and recommended for Federal implementation. The measures will address the Commission's concern for the potential increase in lobster trap fishing effort that could occur in the absence of this action since Area 1 would remain open to all Federal lobster permits if no action is taken. Failure to

implement controls on the introduction of Federal permits into Area 1 would be inconsistent with advice from the most recent stock assessment which warned that additional increases in trap fishing effort in the GOM could threaten the sustainability of the stock.

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 preferred alternative is consistent with the objectives of the Commission's ISFMP for American lobster. The proposed action would cap and control effort at current levels and is expected to have a neutral impact non-target species.

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 preferred alternative would cap fishing effort in Area 1 at historical levels and is expected to have neutral impacts on the associated environment and habitat.

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

This proposed American lobster action is not expected to impact adversely public health or safety. By capping effort at historical levels, the preferred alternative would allow the Area 1 lobster trap fishery to continue in a relatively consistent manner without the risk of unsustainable increases in fishing effort which could negatively impact the GOM lobster stock and fishery.

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?**

The proposed limited entry program for the Area 1 lobster trap fishery is not expected to adversely impact protected species, marine mammals or critical habitat of such species. The selection of the preferred alternative would maintain the lobster trap fishery in this area at current levels and would have neutral impacts on endangered or threatened species, marine mammals and the critical habitat of such species. Further, the action is

not expected to alter fishing practices outside of Area 1 to the point where negative impacts to such resources would be expected.

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.?**

No. The proposed action would not have a substantial impact on biodiversity or ecosystem function within the affected area. The preferred alternative would allow the Area 1 trap fishery to continue at current effort levels and would not increase the potential for negative impacts on biodiversity or ecosystem function within Area 1 in the GOM. Therefore, any impacts to biodiversity or ecosystem function would likely be positive in the long-term by potentially preventing increases in fishing mortality that may be associated with unchecked lobster trap fishing effort in Area 1.

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

The proposed action would potentially provide some positive biological effects by protecting the lobster resource from negative impacts associated with the allowance of unchecked trap fishing effort. Some relatively small economic impacts could affect those Federal lobster permit holders who would not qualify, but those non-qualifiers are likely not historical participants and would therefore not suffer direct changes to their historical fishing practices. The proposed action would keep trap fishing effort stable in Area 1 which would stabilize the fishery and likely provide positive impacts to historical participants. Although fishing mortality cannot be directly linked to trap effort, it is expected that limiting entry into the fishery could have long-term biological benefits to the GOM lobster stock, thereby, providing a more solid economic foundation for historical participants.

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

The proposed action is not expected to be highly controversial. As a preliminary matter, the science upon which this action is based, such as the most recent lobster stock assessment, has been peer reviewed, accepted by the lobster management board, and is straight-forward and non-controversial. Although the potential for marked increases in trap fishing effort would otherwise exist in Area 1, the number of trap fishing permits in Area 1 has been relatively stable for the past decade or more. The majority of Area 1 Federal lobster permits would qualify for future access to the Area 1 trap fishery because

they meet the eligibility criteria for an active historical permit in this area. The proposed action would eliminate the opportunity to fish in Area 1 in the future for those who don't qualify but it would not significantly impact the current fishing practices of those eligible or ineligible as a consequence of this action. Some who do not qualify for access under the proposed action may object since their opportunity to fish in Area 1 would no longer remain. However, this action was requested by the Commission and the Area 1 lobster fishing industry and is consistent with the manner in which the Commission's ISFMP has, over the last decade, moved to limit trap fishing effort in all other management areas for the purposes of lobster conservation and industry stabilization.

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?

No. The proposed action cannot be reasonably expected to result in substantial impacts to unique areas or ecologically critical areas. There are no known parkland, prime farmlands, wetlands, or wild and scenic rivers in the study area. Vessel operation around the unique historical and cultural resources encompassed by the Stellwagen Bank National Marine Sanctuary would not likely be altered by this action. The gears used by lobstermen are traditional gears used in the lobster fishery. As a result, no substantial impacts are expected from this action.

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

No. The proposed action would qualify the vast majority of Area 1 permit holders, a number which has not substantially changed in over a decade. Those who don't qualify for access to the Area 1 trap fishery are those who are not historical participants in the fishery and although those non-qualifiers will no longer have the opportunity to direct their effort in the Area 1 trap fishery, their current fishing practices would not be affected. The proposed action would not substantially change the current fishing practices of those who qualify or those who do not so the overall character of the fishery is not expected to change. Therefore, there are no unknown or unique risks associated with the implementation of the proposed action.

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 4.4 — Cumulative Impacts Assessment, the

proposed measures are not expected to result in a change in fishing activity or fishing effort, or to significantly impact lobster landings.

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

The fishing operations of the proposed action would take place on ocean waters and would not affect any human communities on the adjacent shoreline. There are no known districts, sites, or highways in the area of the proposed action. The proposed action is not likely to affect objects listed in the National Register of Historic Places or cause loss or destruction of significant scientific, cultural or historic resources. While there are several National Register shipwrecks located in the area of the proposed action, vessels typically avoid fishing near these wrecks to avoid tangling their gear. Therefore, this action would not result in any adverse effects to these wrecks.

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

No. The proposed action is not expected to result in the introduction or spread of non-indigenous species because it would not result in any vessel activity outside the Northeast Region.

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 represent a decision in principle about a future consideration. Area 1 is the last lobster management area for which the Commission's ISFMP has adopted a program for limited entry in the trap fishery sector. Therefore, this action follows a decade of similar limited entry programs adopted into the ISFMP and implemented in Federal waters. 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 those who qualify are largely representative of the current and historical Federal lobster fishery participants in Area 1.

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. Although this action would restrict the applicability of certain Federal permits, it would not impact any fishing access privilege at either the state or local level. Federal implementation of these measures is not expected to result in a significant change to fishing practices or fishing effort, because the number of directly-impacted Federal permit holders is very limited.

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 cap and control lobster trap fishing effort in Area 1, consistent with scientific advice to avoid a potential for increased trap fishing effort, and consistent with the recommendations of the affected fishing industry to prevent new entrants into the fishery which could hamper stock sustainability and destabilize the fishery.

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 for this action is not necessary.

Regional Administrator, NMFS Northeast Region

5/8/12
Date

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 environmental assessment do contain new collection-of-information requirements subject to the PRA.

A paperwork reduction act analysis, including a revised Form 83i and supporting statement, as well as the final rule for this action, were reviewed and approved by OMB. The reporting requirements relate to the application and appeals process for those Federal permit holders who apply for access to the Area 1 lobster trap fishery. The PRA submission evaluates the burden on Federal lobster permit holders and the Federal Government resulting from the application process.

There are two types of applicants evaluated in the PRA analysis as summarized here – applicants whose permits meet the eligibility requirements based on NMFS data, and applicants whose permits for which NMFS has insufficient data on hand to qualify. The former category of applicants needs only to sign and remit an application form to NMFS, while the latter category of applicants would need to remit an application form along with documentation to support the qualification criteria. NMFS will notify the approximately 1,643 permit holders for whom there is sufficient evidence to show that the permit would qualify for Area 1 access should the permit holder decide to return a pre-printed letter with their signature. The estimated burden for each of these applicants is 2 minutes and the cost is estimated at $0.74 to mail the letter. NMFS expects all such permit holders to submit an application, with a total burden of 54.8 hours and $1,216 to the permit holders.

The remaining permit holders, approximately 1,509, will be sent a letter indicating that insufficient information is on-hand to qualify the permit. NMFS estimates that 288 permit holders in this category will apply. The burden is estimated at 22 minutes to allow for the search for documents to support the qualification criteria and sign the application. The estimated cost per applicant is $1.14. The cumulative cost for this category of applicants is 105.6 hours and $328. NMFS expects that 28 applicants whom are denied will appeal. The estimated appeals burden on each appellant is 30 minutes and $4.22. The cumulative burden on all appellants is 14 hours and $118. Overall, the total program burden on permit holders is calculated at 174 hours and $1,662.

Burden on the Federal Government to implement the program includes the labor and material costs of communicating with the applicants, reviewing and making a determination on the applications, and processing appeals. The total burden of the program on the Federal Government is 941 hours of labor amounting to $26,814.72. When the material costs of $3,677.85 are considered, the overall costs to the Federal Government are estimated at $30,493.

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 to be consistent with that state's approved coastal management program, to the maximum extent practicable. NMFS provided a draft copy of this 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; those states include Maine, New Hampshire, Massachusetts and Rhode Island. Each state had sixty days in which to agree or disagree with the determination regarding consistency with that state's approved coastal management program. The State of New Hampshire was the only state to respond. Their response, dated December 30, 2011, concurred with our assessment that this action is consistent with New Hampshire's Coastal Management Program. Those states that did not respond are considered to concur with our assessment that the action is consistent with their respective coastal management programs.

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 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 final rule and the regulations that will accompany this EA will be made available in printed publication and on the website for the Northeast Regional Office. Both 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 final rule and the EA address measures for implementation in the American lobster fishery. The documents are based on the most current information available and were subject to public comment through proposed rulemaking as required under the Administrative Procedures Act.

The final rule will be made available to the public as a publication in the Federal Register and the EA and final rule will be available in hard copy format and electronically on the NMFS Northeast Regional Office web site at www.nero.noaa.gov.

6.3.2 Integrity of Information Product

All electronic information disseminated by 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 final 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 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 vessel permit data, state and Federal trap tag purchase 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, 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 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 regulatory action involves the Northeast Fisheries Science Center (Center), the Northeast Regional Office, and NMFS headquarters. The Center's 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. 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 effort control measures in Area 1 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.

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 2009 Commission Stock Assessment Report provides the basic underpinnings of this action. In addition, current NMFS vessel, permit, dealer and trap tag data is incorporated in the assessment of impacts for this action. Further, the measures address the management and policy guidance provided by the

scientists on the Lobster Stock Assessment Review Panel regarding the measures recommended for facilitating the assessment and sustainability of the lobster resource.

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 this 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. The measures associated with this action support the coast-wide management program for the American lobster resource.

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 regulations 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 affect their state's fishery. Further, 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.

The preferred action would qualify those Federal lobster permit holders who have demonstrated historic participation in lobster management area 1. The outcomes of this qualification program, favor those lobster fishers from GOM ports in Maine, New Hampshire and Massachusetts since they are geographically located adjacent to this lobster management area. Not surprisingly, the majority of those permit holders whose permits would not qualify for Area 1, do not hail from GOM ports. However, the qualification criteria allow for consideration of those permits outside the GOM and some vessels will qualify which hail from ports outside of the GOM. The majority of non-qualifiers from GOM ports are those that fish with traps in another lobster management area or fish predominantly with non-trap gear. Therefore, although they will not be granted future access to the Area 1 trap fishery, their historical fishing practices will not be altered since they did not participate in the Area 1 trap fishery to begin with.

National Standard 5 requires that, where applicable, conservation and management measures promote efficiency in the utilization of fishery resources. The action is consistent with such a standard. The preferred alternative will capture and qualify the current participants in the

Area 1 lobster trap fishery, consistent with advice from the most recent lobster stock assessment which cautioned that unchecked trap fishing effort could threaten the sustainability of the GOM lobster stock. This action also considers the recommendations of the Area 1 lobster trap fishing industry and the Commission, by implementing a long-term effort control plan, consistent with those adopted by the Commission in every other lobster management area coast-wide, to stabilize the fishery and maintain opportunities for historical participants.

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. Additionally, the measures enact the recommendations of the scientists of the American Lobster Stock Assessment Peer Review Panel which advised that such measures be implemented to facilitate the management and sustainability of the lobster resource.

National Standard 7 requires that, where practicable, conservation and management measures minimize costs and avoid unnecessary duplication. The implementation of the selected measures ensures that Federal regulations are compatible with the Commission's ISFMP and will not result in additional confusion by industry participants, compliance problems or 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 action, consistent with the Commission's plan, is intended to cap and control fishing effort in the Area 1 lobster trap fishery. The selected measures are consistent with scientific advice and the advice of the Area 1 lobster industry. The action will maintain the historical participants in the fishery and preclude encroachment of potential effort from sources outside of Area 1 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. The selected measures will maintain the Area 1 trap fishery at

historical and recent levels and will not alter fishing practices. Therefore, this action will not result in increased bycatch or bycatch mortality.

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 significant changes in fishing practices.

6.4.2 Essential Fish Habitat

Section 305(b) of the Magnuson-Stevens Act requires all Federal agencies to consult with Review of this action by the NMFS' Habitat Conservation Division found that the activities associated with this action would have no adverse impact on EFH. The activities will occur in areas that have been designated as EFH for the species associated with the Federal fishery management plans in the table below.

Council/Management Authority	FMPs
New England Fishery Management Council (NEFMC)	Northeast Multispecies; Sea Scallop; Skates; Monkfish; Atlantic Herring; and Spiny Dogfish.
Mid-Atlantic Fishery Management Council	Squid, Atlantic Mackerel, and Butterfish; Surf Clam and Ocean Quahog
NMFS	Atlantic Highly Migratory Species

The measures identified in this action are also not expected to adversely impact EFH. This action would restrict the entry of Federal lobster permits into the Area 1 lobster trap fishery and would qualify permits for the Area 1 trap fishery based on criteria consistent with those adopted by the Commission and recommended for Federal implementation. The criteria are such that those permits which, as recently as the 2008 Federal fishing year, had an Area 1 trap gear designation and also had a record of purchasing lobster trap tags in any year between or including 2004-2008 which NMFS found to be consistent with estimated numbers of participants in 2009 and 2010. The preferred action would cap and control fishing effort at historic and recent levels, and therefore, will not result in significant changes to fishing practices. Consequently, the proposed action is not expected to yield additional adverse impacts to EFH.

6.5 Executive Order 12630

The action will not result in a regulatory taking. As a preliminary matter, there is no physical taking of actual property. Additionally, there would be no taking of any intangible property, e.g., 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 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 action is consistent with past regulations. Finally, the action is not expected to substantially alter the fishing practices of Federal permit holders. Finally, any Federal lobster permit, even those that do not qualify for Area 1 trap fishing access, may still fish for lobster in Area 1 without traps and thus still have value in Area 1 and in other Lobster Management Areas.

6.6 Executive Order 12866

Determination of Economic Significance for E.O. 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.

The action would implement a limited entry program to Area 1 of the EEZ lobster fishery to federally permitted vessels. The limited entry program would apply to vessels that may use trap gear to harvest American lobster and would not prevent vessels that may use non-trap gear to harvest lobster in Area 1.

Gross revenues from the lobster fishery from all sources were valued at nearly $300 million during 2009. In the absence of mandatory harvester reporting an estimate of the gross revenues associated with the Area 1 trap fishery in general and the value of lobsters landed by affected federal lobster permits holders cannot be reliably calculated. However, since the proposed action would 1) adopt a set of qualification criteria that would enable nearly all Federally permitted vessels (88 percent) with a current Area 1 trap designation to continue fishing with traps in Area 1 and 2) would not implement any other regulatory measures affecting the use of traps or the landing of lobsters the economic impact of the proposed action is

anticipated to be negligible. The 12 percent of permit holders who elected Area 1 on their permit but would not likely qualify for Area 1 trap fishery access under the proposed action were either deemed to be participating in the fishery using non-trap gear or had no evidence of Area 1 trap activity (defined in terms of purchasing trap tags) during any year from 2004 to 2008.

Whether the net economic benefit of taking no action would differ appreciably from that of the proposed action is uncertain. The potential that effort could be transferred from other areas as limited entry programs are implemented in other LCMAs, as a response to an economic opportunity, or increasingly restrictive regulatory measures in other fisheries were motivating factors to the Commission's development of Addendum XV. The extent to which such concerns may be realized is difficult to assess. To date there is no indication that a substantial transfer of effort by Federal permit holders into the Area 1 trap fishery has occurred. Nevertheless, even though assessment of stock status for the GOM lobster stock indicates that it is neither overfished nor is overfishing is occurring, additional effort is not recommended and the stock status could change. In the absence of the proposed limited entry program achieving effective effort control would be challenging since any potential gains from reduced effort could be wiped out by new entrants. This places current Area 1 trap fishery participants at a competitive disadvantage and provides no incentive to support effort reduction should any such measures by necessary in the future.

The action would qualify nearly all Federally permitted vessels that are currently participating in the Area 1 lobster trap fishery and would implement no regulatory changes affecting how these vessels operate or what lobsters may be harvested. Furthermore, while the proposed action would preclude vessels that would not qualify for limited entry from switching to the Area 1 trap fishery it would not change their ability to harvest lobster using non-trap gear and would have no impact on their ability to participate in a trap fishery in other LCMAs for which they may be qualified. For these reasons the proposed action is expected to have no appreciable impact on the capability to fish for lobsters in Area 1 or elsewhere and would not; therefore, result in an annual economic impact of $100 million or more nor would it be expected to have an adverse effect on the economy, a sector of the economy, productivity, jobs, the environment, public health or safety, or State, local, or tribal governments or communities.

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 (E.O.) 13211

E.O. 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 these criteria, the regulatory actions identified in this EA do not require a Statement of Energy Effects, since these regulatory actions are not likely to have a significant adverse effect on the supply, distribution, or use of energy.

6.9 Atlantic Coastal Fisheries Cooperative Management 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 measures evaluated in this EA are in keeping with the Atlantic Coastal Act regulatory standard to develop compatible regulations to the Commission's lobster ISFMP, and, as stated in section 6.4.1, be consistent with the National Standards set forth in the Magnuson-Stevens Act.

7.0 LIST OF PREPARERS OF THE ENVIRONMENTAL ASSESSMENT

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8.0 FINAL REGULATORY FLEXIBILITY ACT ANALYSIS

Analysis of Impacts on Small Entities

The action would limit entry to the LCMA 1 lobster trap fishery for any small entity engaged in the harvesting of lobsters that hold a Federal limited access lobster permit. During FY2008 there were a total of 3,152 such permitted vessels. Note that FY2008 data were used in the assessment of economic impacts in the Environmental Assessment. A review of FY2009 and FY2010 permit application data found that there was no change in either gear (trap/non-trap) or LCMA designations for more than 98 percent of all valid permits issued during FY2008, FY2009, and FY2010. For this reason, FY2008 permit data are considered reasonably representative of FY2009 and FY2010 permit status and are used herein for purposes of analysis.

Under current regulations any fishing business may fish for lobsters with trap gear in LCMA 1 provided it has been issued a valid limited access lobster permit, it designates LCMA 1 as part of the annual permit renewal process, and it purchases LCMA 1 trap tags. However, of the 3,152 limited access permit holders 1,867 permits elected to fish using trap gear in LCMA 1 while the remainder either elected to fish for lobster with non-trap gear or did not designate LCMA 1 on their 2008 permit application. Thus, while the option to fish in LCMA 1 with trap gear sometime in the future would be curtailed for about 40 percent of limited access lobster permit holders, the proposed action would have a more immediate impact on permitted vessels that may already be participating in the LCMA 1 trap fishery. Note that the proposed action would only limit entry to the LCMA 1 lobster trap fishery. Any vessel that may not qualify would still be able to fish for lobster in LCMA 1 using non-trap gear.

The Small Business Size standard for businesses engaged in a commercial fishing activity is $4 million in gross sales. The number of regulated entities most likely to be affected by the proposed action is expected to be 1,867 limited access permit holders that designated LCMA 1 on their 2008 permit application. The number of these entities that may be above or below the SBA size standard is indeterminate. Unlike most other federally managed fisheries the lobster fishery is not subject to mandatory reporting. This means that gross sales for entities that possess only a Federal limited access lobster permit, which is the case for a majority of permitted vessels particularly in LCMA 1, cannot be reliably determined. For purposes of further analysis all 1,867 regulated entities are considered small entities.

The action would qualify any Federal permit holder that designated LCMA 1 on their 2008 permit application at any time during the 2008 fishing year (May 1, 2008 – April 30, 2009), and that had a record of purchasing LCMA 1 trap tags in any year during 2004-2008. The proposed action qualification criterion regarding the date of when the 2008 permit application had to be received is less restrictive than that recommended by the Commission. Specifically,

the Commission alternative would have required that FY2008 permits be renewed by January 2, 2009. Consequently, the action would be less burdensome for regulated small entities than the Commission alternative, because it provides an opportunity for more affected entities to qualify for limited access to the LCMA 1 trap fishery.

Based on the action qualification criteria 1,643 (88 percent) of the 1,867 affected small entities would qualify for the LCMA 1 trap fishery. Note that the Commission alternative would have qualified 32 fewer regulated small entities. The 224 non-qualifiers had no record of having purchased LCMA 1 trap tags in any year from 2004 to 2008 which would have been necessary to set traps in LCMA 1. Further analysis of these non-qualifiers suggests that the majority had selected non-trap as a gear type during 2008, had selected other LCMA's in addition to LCMA 1, or based their fishing operation in states that do not border the GOM and likely elected LCMA 1 on their permit because they could, not because they were fishing there. Specifically, 49 of the 224 non-qualifiers listed a homeport state of Rhode Island, New York, New Jersey, Virginia, North Carolina, or other state. Of the 175 non-qualifiers from Maine, Massachusetts, or New Hampshire, 106 selected non-trap gear on their permit and 55 had elected to use trap gear in an LCMA other than LCMA 1. Thus, available data are suggestive that 92 percent of the non-qualifiers may not be economically affected by the action because they are not engaged in the LCMA 1 trap fishery. The potential economic impact on the remaining 14 non-qualifiers is uncertain. These non-qualifiers did not select non-trap gear nor did they select an alternative to LCMA 1. Given the absence of any indication of trap fishing in LCMA 1 these 14 vessels may not be actively fishing for lobster at all.

The action would not implement any regulatory measures that would affect the manner in which qualifiers prosecute the LCMA 1 trap fishery and would not; therefore, have any direct economic impact on qualifying entities. As noted above, the majority of non-qualifiers that listed LCMA 1are most likely using non-trap gear to fish for lobster or are engaged in a lobster trap fishery in other LCMAs. The direct economic impact on these non-qualifying vessels is likely to be negligible in terms of their gross sales or profitability. However, these non-qualifiers as well as the 1,285 permit holders that did not elect LCMA 1 on their 2008 permit (most of which did not select LCMA 1 in other years since) may suffer some economic loss in terms of the value of their fishing vessel. That is, the value of a fishing vessel depends on the condition of the physical asset itself, its fishing history, and the suite of limited access permits, i.e., an open access permit conveys no added value since there is no scarcity, that are attached to the vessel. To the extent that limited access fishing permits may themselves be considered assets, any change in the rights or conditions affecting the current or future use of the permit affects its asset value. Limiting access to the LCMA 1 trap fishery will restrict the future use of a limited access lobster permit for non-qualifiers, hence some diminution of the contribution of the lobster permit to the value of the fishing business may occur. Notably, the permit value of LCMA 1qualifiers may increase since these permits would retain the access rights that would no longer be available

to non-qualifiers. The magnitude of any such changes in permit value to either non-qualifiers or qualifiers is highly uncertain. There certainly is no indication or available data to suggest that the action would have anything other than a small, if any, impact on permit values.

9.0 PERSONS AND AGENCIES CONSULTED

NMFS consulted with the Maine Department of Marine Resources, New Hampshire Fish and Game Division, Massachusetts Division of Marine Fisheries, Connecticut Department of Environmental Protection, the Rhode Island Division of Fish and Wildlife, and the Atlantic States Marine Fisheries Commission in preparing the analyses in this document. No other persons or agencies were consulted during the development of this action.

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11.0 APPENDICES

LIST OF APPENDICES

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Appendix 2 - Area 1 Control Date/ ANPR -74 FR 67, January 2, 2009

Appendix 3 - ASMFC Comment Summary for Draft Addendum XV

Appendix 3A - Public Comments Received in Response to ANPR, January 2009

Appendix 4 - Chart of Lobster Conservation Management Areas and Coordinates

Appendix 5 - Gulf of Maine Chart

Appendix 6 - Maine Lobster Management Zones A-G

Appendix 6A – Analysis of Impacts of Permits in Confirmation of Permit History Status

Appendix 7 - Paperwork Reduction Act Analysis

Appendix 7A – Area 1 Trap Permit Eligibility Process – Data Quality Control Review

Appendix 8 - List of Acronyms