Atlantic States Marine Fisheries Commission

ADDENDUM XX TO AMENDMENT 3 TO THE AMERICAN LOBSTER FISHERY MANAGEMENT PLAN FOR PUBLIC COMMENT

LCMA 3 Closed Area II Season

ASMFC Vision Statement:
Healthy, self-sustaining populations for all Atlantic coast fish species or successful restoration well in progress by the year 2015

Approved May 2013

1.0 Introduction

The Atlantic States Marine Fisheries Commission (ASMFC) has coordinated interstate management of American lobster (*Homarus americanus)* from 0-3 miles offshore since 1997. American lobster is currently managed under Amendment 3 and Addenda I-XX to the Fishery Management Plan (FMP). Management authority in the exclusive economic zone (EEZ) from 3-200 miles from shore lies with NOAA Fisheries. The management unit includes all coastal migratory stocks between Maine and North Carolina. Within the management unit there are three lobster stocks and seven management areas. Lobster Conservation Management Area (LCMA) 3 (subject of this Draft Addendum) includes all three biological stocks of Amercian Lobster. Management Authority for LCMA lies with NOAA Fisheries.

The Lobster Board initiated Draft Addendum XX at the November 2012 meeting with the following motion: Move to initiate the development of an addendum that would include measures outlined in the agreement between the offshore lobster fishery and sector trawl fishermen for bottom-sharing in Closed Area 2 in order to protect large concentrations of egg-bearing females and prevent gear conflicts. Limited changes to the agreement by the industry could be made through board action. This addendum establishes a bottom-sharing in Closed Area 2.

2.0 Background

2.1 statement of the Problem

Closed Area II was established in the 1969 through the International Convention of North Atlantic Fisheries. Its stated purpose was also to protect spawning. In 1977 it was added to the Atlantic Demersal Finfish Plan and stated purpose was to protect haddock spawning. In 1994 The New England Fishery Management Council (NEFMC) updated the purpose to reduce general groundfish mortality through Amendment 4. The original design of the closure was to link to or overlap with the habitat closures. While some parts of Closed Area II are complete closed to mobile gear, there are Special Access Programs that allow fishing in Closed Area II, primarily using selective gear such as separator and Ruhle trawls, which fishermen use to selectively target haddock. Closed Area II has been open to lobster trap fishermen and is fished by LCMA 3 lobstermen year-round.

In 2012 NEFMC considered Framework 48, which considers the opening of several areas that are closed to groundfish fishery including Closed Area II. The Council is considering opening of the closed areas to mitigate negative economic impacts to the groundfish fleet from low allocations of species such a Gulf of Maine cod. The framework allows sector to request exemptions from year round closure systems to allow greater access to groundfish species that are not impacted by low allocations such as Georges Bank haddock, Pollock and redfish. The Council is conducting additional analysis to determine the effectiveness of the closed area to their stated purpose. A preliminary look at economic data provided by NOAA Fisheries show that allowing access to Closed Area II will likely provide for increased revenue from haddock. The magnitude of this benefit is uncertain, and depends on the size and duration of the increase in catch per unit effort for this species, which cannot be quantified to any level of confidence. The second manner in which fishing revenues might be increased by sector exemptions is through access to areas where species assemblages are more valuable. For example, given two hauls equal in every metric other than one is inside and one outside the closed area, the non-target species such as lobster, skates, monkfish, and scallops could provide higher revenue in the closed area if these species are more valuable/more abundant there.

At the September 2012 Council meeting, NEFMC supported a measure that allows groundfish sectors, a type of harvesting cooperative established in 2010, to request exemptions from the longstanding prohibition on fishing in the year-round groundfish closed areas on a limited basis. These restrictions provide that: (1) Access would only be granted for the parts of areas that are not defined as habitat closed areas, or that have not been identified as potential habitat management areas currently under consideration in a habitat action that is currently in development. (2) Access to Closed Area I and Closed Area II (on Georges Bank) would only be granted for the period May 1 through February 15 to protect spawning fish.

As a second phase of the Councils work, alternatives will be developed to complement and augment the habitat management areas for consideration in the NEFMC's Essential Fish Habitat Omnibus Amendment. The latter phase includes consideration of rolling closures, spawning closures, as well as year-round closed areas. Should the closures be retained or eliminated. It is projected that the Council will take action these issues in April of 2014.

The offshore lobstermen that fish within Closed Area II have reported large congregations of ovigerous females within the area. Industry and members of the Board are concerned that opening Closed Area II to mobile gear will have a negative impact on the local lobster population. The Commission's Lobster Technical Committee reviewed several studies that document the effects that bottom tending mobile gear have on lobster in their respective areas. The results suggest that opening Closed Area II to these types of gear will result in additional incidental damage to lobster. It's important to note that studies reviewed were done in areas where lobster are generally smaller than those found on Georges Bank, and thus incidental damage could be quite different in this area due to gear selectivity and size of lobster. The TC recommended additional surveys and studies should be completed to accurately assess the effects of mobile gear on lobster near Georges Bank (Appendix A).

In response to the action taken by the NEFMC, the American lobster offshore pot fleet fishing in Closed Area II developed an agreement with the groundfish sector to prevent gear conflicts. The two industries drafted an agreement that would give equal access to the area (Appendix B). This agreement is the basis for Addendum XX.

3.0 Management Tools

Closed Area II Season Closure (Industry Agreement)

For purposes of this measure closed area II is defined by straight lines connecting the following points in the order stated:

Point	**N. Lat**	**W. Long**
1	41°50'	67°20'
2	41°50'	66°50'
3	41°30'	67°20'
4	41°30'	66°35'

It is prohibitive to set or store lobster traps in Closed Area II from November 1 to June 15 annually. All Lobster trap gear must be removed from the water by midnight October 31st from closed area II area, except the HAPC area and no lobster gear will be set in the area until 12:01 a.m. on June 16th. Any gear set or stored in this area from November 1st through June 15th is considered derelict gear. In the case where an act of God may prevent the removal of fixed gear by October 31, the situation will be communicated immediately to qualifying sectors and gear removal will commence immediately upon the situation being resolved.

I**nitial period**: The sector operations plans are not in effect until May 1st, 2013. To start this agreement there will be the period May 1 to June 15, 2013 when Mobile gear Sector vessels will first enter the area for their six week spring season above 41° 30'. Should the opening of CAII not become effective until 2014, this agreement will remain in effect for initiation at that time (2014).

4.0 Compliance

All states must recognize Addendum XX through their approved management programs.

5.0 Recommendation for Federal Waters

The Atlantic States Marine Fisheries Commission believes that the measures contained in Amendment 3 and Addenda I-XX are necessary to limit the expansion of effort into the lobster fishery and to rebuild lobster stocks to recommended levels. ASMFC recommends that the Federal government promulgate all necessary regulations to implement the measures contained in Section 3 of this document.

Appendix A

Assessment of Trawl-Induced Damage to American Lobster

Report to the American Lobster Management Board
By the American Lobster Technical Committee
August 2012

At the May 2012 Lobster Board meeting the TC was tasked with looking at the effects of bottom tending mobile gear on lobster in response to management actions that could lift a prohibition on this type of gear in Closed Area II on Georges Bank. Lobstermen that fish in this area have reported large congregations of ovigerous females within Closed Area II and they're concerned that opening it to mobile gear will have a negative impact on the local lobster population. The studies cited below document the effects that bottom tending mobile gear have on lobster in their respective areas. These results suggest that opening Closed Area II to these types of gear will result in additional incidental damage to lobster. It's important to note that studies cited below were done in areas where lobster are generally smaller than those found on Georges Bank (ASMFC 2009), and thus incidental damage could be quite different in this area due to gear selectivity and size of lobster. Additional surveys and studies are needed to more accurately assess the effects of mobile gear on lobster near Georges Bank.

When a surge in trawl effort directed toward lobster caused substantial conflicts between the bottom trawl and lobster trap fishery in Long Island Sound in the early 1980s, the Connecticut legislature commissioned the Department of Environmental Protection to examine the impacts of mobile trawl gear on lobster. Agency biologists compared direct and delayed mortality from trawl nets versus trap gear (Smith and Howell 1987). Biologists made monthly trips aboard commercial stern trawlers (n=63 trips, 12-26m vessel size, tow duration 1-3 hrs) and lobster trap vessels (n=12 trips, 12-14m vessel size) from July 1983-January 1985 to examine lobster catches for immediate damage and mortality, and collected animals for transport to laboratory open circulating seawater tanks for extended examination over 14 days. Similar observations were also recorded from cruises made by a research stern trawler (13m vessel size, tow duration 0.5-2 hrs).

Summary of Results

- Monthly incidence of major damage and immediate mortality varied seasonally from 0-14% in the trawl fishery (n=6,174 lobster) and 0-4% in the trap fishery (n=4,762 lobster). There was no difference in damage/mortality rate by vessel size.
- Delayed mortality occurred only in trawl-caught animals and almost exclusively in animals that sustained major damage (broken or crushed body or claws) or were newly molted (new-shell).
- Trawl-induced damage occurred at similar rates in cold-water versus warm-water intermolt periods (2% January-June versus 3% August-September)) and between cooling and warming postmolt periods (12% October-December versus 13% July).
- The above results suggest that damage due to trawling is more a function of shell condition than water temperature. The importance of shell condition points to the effects of compression in the trawl net on recently molted animals.
- Sub-legal size new-shell lobster incurred significantly greater damage rates than legal-size lobster caught by trawl. Hard-shell animals, and those captured in traps, showed no size differences in damage rate.

- Trawl-caught egg bearing females (n=909) incurred no greater damage/mortality rates than non-egg bearing females or males. Egg loss attributable to either harvest technique was not examined.

Two other studies also documented similar damage rates and an increase in damage immediately following molting periods with lower rates during intermolt periods. In Rhode Island waters, Ganz (1980) reported an overall 9% major damage rate estimated from biweekly experimental trawl tows (n=105 tows, tow duration 1 hr, 5228 lobster). However, injury rates increased to 16-21% during the molt in June-July and October-November while averaging 0-5% in all other months. Spurr (1978) also found trawl-induced injury to be greater in July than in September based on experimental tows taken in New Hampshire waters.

These damage rates must be expanded by the relevant bottom trawl fishing effort in order to assess the total effect of trawl gear on the affected population. For example, damage to 14% of lobster contacted by bottom trawls (as indicated by the Connecticut study) during the 3-6 month season when lobster are molting and most vulnerable would be of little consequence to the health of the population if trawl effort during the same time period is relatively low. Similarly, damage due to trawling may be minor relative to damage by lobster traps (4% during the period of greatest vulnerability) if effort in the lobster fishery is high. Other factors to consider include: The seasonal distribution of mobile gear fishing effort, trawl/dredge design, mortality of lobster contacted by mobile gear but not landed, and the size selectivity of bottom trawl gear. All of these factors would substantially change the total damage to lobster by these types of mobile gear.

The proposed regulation changes will also include lifting the prohibition on scallop dredges. Jamieson and Campbell (1980) looked at the impacts of scallop dredges on lobster in the Gulf of Saint Lawrence in areas with and without commercial scallop fishing. They found that 1.3% of lobster in the fished areas were either injured or retained and 11.7% of lobster in the non- fished areas were retained/injured by experimental scallop dredge. SCUBA divers followed behind the dredge and observed lobster in the drag path during and after the tow. Injured lobster were not found in the drag path though some were observed to retreat into burrows in front of a moving dredge and the damage/mortality associated with those animals is unknown.

The authors concluded that damage to American lobster in the research area was minimal from the observed drags of sea scallop dredge. They noted that seabed substrate was generally smooth and most lobster were able to avoid the gear. Though this study provides useful information, one needs to exert caution when trying to draw parallels between this study and interactions of scallop dredges and lobster on Georges Bank. The selectivity of the gear is very dependent on the physical terrain and speed of the tows. Additionally, the mean size of the lobster in this study was 72mm which is less than the 25th percentile for the lobster population around Georges Bank (average 80-115mm, ASMFC 2009). Lobster size will affect damage rates as well as retention rates in the gear.

Applying the results of these studies to assess potential effects of opening a closed area of Georges Bank to bottom tending mobile gear would require 3-5 years of the following information:

- Monthly or seasonal proportion of newly-molted versus hard-shelled lobster for sub-legal and legal size classes from experimental trawls and lobster traps that capture all size classes and sexes present on Georges Bank
- Monthly or seasonal estimates of major damage rates (i.e. broken or crushed body or claws exclusive of culls and old damage) from commercial or experimental trawling and lobster traps on Georges Bank or the Gulf of Maine where shell development is comparable
- Data characterizing tow duration, net size, and deck handling practices for the proposed mobile gear fishery(s) for comparison to data describing fishing effort in the lobster trap fishery.
- Characterization of the amount of spatial overlap between the area exposed to bottom trawling and known lobster habitat.

Literature Cited

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