Atlantic States Marine Fisheries Commission

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MEMORANDUM

TO: American Lobster Management Board

FROM: GOM/GBK Subcommittee

DATE: July 24, 2017

SUBJECT: Recommendations to Board Regarding Management of GOM/GBK Stock

The Gulf of Maine/Georges Bank (GOM/GBK) Subcommittee met in New Hampshire on July 13th to continue their discussion on ways to build resiliency into the GOM/GBK stock. This was the second meeting of the Subcommittee and expanded upon the preliminary recommendations discussed at their April 13th meeting. The American Lobster Management Board (Board) established the GOM/GBK Subcommittee in response to continued low settlement values in the stock. Membership on the Subcommittee includes Board members, industry organization leaders, TC members, and fishermen.

Below is a recommendation for a multi-phase approach to increase the resiliency of the GOM/GBK stock. Phase one is a proactive management response which seeks to standardize management measures in the GOM and GBK in order to build a biological buffer through the protection of spawning stock biomass. This phase would require the Board to initiate an addendum. Phase two seeks to address the fact that economic effects will likely be felt before reference points trigger management action. The Subcommittee recommends early and frequent conversations with industry members to field goals and gain consensus that waiting to trigger management action until abundance drops below the current reference points will result in substantial economic declines, particularly if fixed costs remain the same and lobster prices only marginally increase. Should the ventless trap surveys, trawl surveys, or landings show a significant decline during the development of phase one, the GOM/GBK Subcommittee will re-convene to evaluate the timing of further management action.

Need for Proactive Management Response

The American lobster fishery is one of the largest and most valuable fisheries along the Atlantic coast. In 2016, over 158 million pounds were landed totaling $666.7 million dollars in ex-vessel value (Source: ACCSP). This was the highest ex-vessel value of any species landed along the Atlantic coast in 2016. The vast majority of landings are concentrated in the GOM/GBK stock, with 87% of lobster landed in Maine and New Hampshire. Many Massachusetts and Rhode Island fishermen also participate in the GOM/GBK fishery, adding to its significance. The concentration of lobster landings, and value, in a few states underscores the economic importance of the lobster fishery to many New England coastal communities. In Maine, total economic impact of the lobster fishery (including catch and associated dock side commerce) is

estimated at over $1 billion[1]. The lack of other economic opportunities, both in terms of species to fish and employment outside the fishing industry, compounds the economic reliance of some coastal communities on GOM/GBK lobster – particularly in Maine[2].

As a result, the Subcommittee is recommending a multiple phase approach to increase the resiliency of the GOM/GBK stock. This recommended action is in response to signs of reduced settlement, particularly in the young-of-year surveys, as well as the combination of the GOM and GBK stocks following the 2015 Stock Assessment.

Phase One: Standardize Management Measures in the GOM/GBK Stock

The first phase is a proactive management response which seeks to standardize management measures (including gauge sizes, v-notch requirements, etc.) and other plan provisions in the GOM/GBK stock. At their April 13th meeting, the Subcommittee discussed lessons learned from the Southern New England stock decline, including the need implement standardized regulations in order to address enforcement challenges and improve the biological impact of management tools. Accordingly, the intent of action in the GOM/GBK stock is to develop a uniform set of regulations, to the extent possible, in order to build an additional biological buffer through the protection of spawning stock biomass across management areas. Currently, disparate management measures allow for some lobsters protected in one LCMA to be harvested in another LCMA, undermining the effectiveness of the measures in place. In addition, this action addresses concerns regarding the enforcement of biological management measures in the lobster fishery, particularly rules regarding lobster chain-of-custody across state lines. The Subcommittee recommends the Board initiate an addendum to consider these management changes, thus charging the PDT with developing management alternatives which consider different sets of uniform regulations, considering the time period over which these changes occur, and starting the public-process outlined by the Commission. Development of an addendum should include analyses which estimate changes in catch number, catch weight, and spawning stock biomass as a result of standardized management measures.

Phase Two: Develop Indicators to Address Economic Concerns

The second phase seeks to address the fact that substantial economic effects will be felt before the reference points trigger management action. Management action is not required by the Board until the GOM/GBK stock falls below the abundance threshold. Given the 2015 Stock Assessment showed the stock to be at record high abundance (248 million lobsters), allowing the stock to decline to the 25th percentile (66 million lobsters) could lead to severe economic losses in many coastal communities, particularly if fixed costs remain constant and lobster prices only marginally increase. As a result, the Subcommittee recommends triggers be

[1] Gulf of Maine Research Institute (GMRI), 2014. Understanding Barriers and Opportunities to Profitability in the Maine Lobster Industry.

[2] GMRI, 2014; Steneck, R. S., Hughes, T. P., Cinner, J. E., Adger, W. N., Arnold, S. N., Berkes, F., Boudreau, S. A., Brown, K., Folke, C., Gunderson, L., Olsson, P., Scheffer, M., Stephenson, E., Walker, B., Wilson, J., and B. Worm. 2011. Creation of a Gilded trap by the High Economic Value of the Maine Lobster Fishery. *Conservation Biology,* 25(5):904-912.

developed which require management action at a higher abundance. The nature of the trigger (ie: whether it is based on a change in landings, value, ventless trap surveys, etc.) as well as the management response (ie: what action is taken) still needs to be developed; however, the Subcommittee recommends Board members initiate conversations with industry early in the phase two process to field potential goals and gain consensus that the current reference points will result in severe economic consequences. Given the next benchmark stock assessment is scheduled for August 2020, this may provide an opportunity for the Board, during phase two, to consider additional reference point options which better reflect the current status of the fishery.

Atlantic States Marine Fisheries Commission

DRAFT ADDENDUM XXVI TO AMENDMENT 3 TO THE AMERICAN LOBSTER FISHERY MANAGEMENT PLAN

Harvester Reporting and Biological Data Collection

This draft document was developed for Management Board review and discussion. This document is not intended to solicit public comment as part of the Commission/State formal public input process. However, comments on this draft document may be given at the appropriate time on the agenda during the scheduled meeting. Also, if approved, a public comment period will be established to solicit input on the issues contained in the document.

ASMFC Vision Statement: Sustainably Managing Atlantic Coastal Fisheries

July 2017

Public Comment Process and Proposed Timeline

In January 2017, the American Lobster Management Board initiated Draft Addendum XXVI to improve harvest reporting and biological data collection in the American lobster fishery. This draft Addendum seeks to utilize the latest technology to improve reporting, increase the spatial resolution of harvester data, collect greater effort data, and advance the collection of biological data offshore. This document presents background on the Atlantic States Marine Fisheries Commission's management of lobster, the addendum process and timeline, a statement of the problem, and management measures for public consideration and comment.

The public is encouraged to submit comments regarding the proposed management options in this document at any time during the addendum process. The final date comments will be accepted is **Month, Day 201X at 5:00 p.m**. **EST.** Comments may be submitted by mail, email, or fax. If you have any questions or would like to submit comments, please use the contact information below.

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(Subject line: Lobster Draft Addendum XXVI)

February-July 2017	Draft Addendum for Public Comment Developed
TBD	Board Reviews Draft and Makes Any Necessary Changes
TBD	Public Comment Period Including Public Hearings
TBD	Management Board Reviews Public Comment, Selection of Management Measures, Final Approval of Addendum XXVI
TBD	Implementation of Provisions in Addendum XXVI

Executive Summary

Recent management action in the Northwest Atlantic, including the protection of deep sea corals, the declaration of a national monument, and the expansion of offshore wind, have highlighted deficiencies in the current lobster reporting requirements. These deficiencies include a lack of spatial resolution in harvester data and a significant number of fishermen who are not required to report. As a result, efforts to estimate the economic impacts of these various management actions on the lobster fishery have been hindered and states have been forced to piece together information from harvester reports, industry surveys, and fishermen interviews to gather the information needed. In addition, as the fishery continues to move further offshore, there is a greater disconnect between where the fishery is being prosecuted and where biological sampling is occurring. More specifically, while most of the sampling occurs in state waters, an increasing portion of lobster is being harvested in federal waters. This can impede effective management of the species as biological information on the offshore portion of the fishery is lacking.

The Board initiated Draft Addendum XXVI to improve harvester reporting and biological data collection in state and federal waters. The goals of this addendum are to: 1) utilize the latest technology to improve reporting; 2) increase the spatial resolution of harvester data; 3) collect greater effort data; and 4) advance the collection of biological data offshore.

The Draft Addendum includes three issues. The first issue asks what percentage of harvesters should be required to report in the lobster fishery. The Addendum recommends, but does not require, the implementation of electronic reporting by the states as a cost-effective method to increase harvester reporting. The second issue asks whether the data elements currently collected should be expanded and/or altered to improve the spatial resolution of data and address concerns of the Atlantic Large Whale Take Reduction Team. The third issues asks whether a pilot program should be established to test electronic tracking technology in the lobster fishery. In additional, Draft Addendum XXVI provides several recommendations to NOAA Fisheries, including implementation of 100% federal harvester reporting, creation of a fixed-gear VTR form, and expansion of a biological sampling program offshore.

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1.0 Introduction

The Atlantic States Marine Fisheries Commission (ASMFC) has coordinated the interstate management of American lobster (*Homarus americanus)* from 0-3 miles offshore since 1996. American lobster is currently managed under Amendment 3 and Addenda I-XXV 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 Virginia. Within the management unit there are two lobster stocks and seven management areas. The Gulf of Maine/Georges Bank (GOM/GBK) stock spans the northern portion of the lobster fishery and is comprised of part, or all, of four Lobster Conservation Management Areas (LCMAs). The Southern New England (SNE) stock generally includes waters south of Cape Cod and is comprise of part, or all, of five LCMAs. There are ten states (Maine to Virginia) which regulate American lobster is state waters and regulate the landings of lobster in state ports.

The Board initiated Draft Addendum XXVI to improve harvester reporting and biological data collection in state and federal waters. Under Addendum X (2007), states are required to implement, at a minimum, 10% active harvester reporting and 100% dealer reporting. Addendum X also requires states to complete fishery dependent and independent biological sampling. Specifically, states are required to conduct sea and/or port sampling as well as a fishery-independent survey, such as an annual trawl survey, a ventless trap survey (VTS), or a settlement survey. *De minimis* states are exempt from the biological sampling requirements in Addendum X.

While Addendum X established a coastwide baseline for harvester reporting and biological data collection, recent management action has highlighted several data deficiencies in the lobster fishery. One of the foremost deficiencies is the lack of spatial data collected in the lobster fishery. While harvesters are required to report the statistical area in which they fish, this information is too coarse to respond to the increasing number of marine spatial planning efforts which require fine-scale data. Another deficit in the current reporting system is that not all lobstermen are required to report landings to either the state or NOAA Fisheries. Currently, only 10% of active harvesters in Maine are selected to submit landings reports each year and vessels which are only issued a federal lobster permit are exempt from Vessel Trip Reports (VTRs). Given that over 83% of lobster is landed in Maine and the fishery continues to move further offshore, the lack of harvester reporting in these areas results in critical data gaps in the fishery. Deficiencies in the collection of biological data were also highlighted in a January 2016 report by the American Lobster Technical Committee (TC) which noted that while inshore waters are adequately sampled, little biological sampling occurs offshore. This is a growing problem given that an increasing percentage of lobster is being harvested from federal waters.

This Addendum seeks to address these issues by improving the resolution and quality of data collected in the lobster fishery. The goals of this addendum are to: 1) utilize the latest technology to improve reporting; 2) increase the spatial resolution of harvester data; 3) collect greater effort data; and 4) advance the collection of biological data offshore.

2.0 Overview

2.1 Statement of Problem

Recent management action in the Northwest Atlantic, including the protection of deep sea corals, the declaration of a national monument, and the expansion of offshore wind, have highlighted the fact that current harvester reporting requirements do not provide the level of information needed to respond management issues. Furthermore, while the lobster fishery continues to move further offshore, the majority of biological data is collected inshore. This disconnect hinders effective management of the species. The Board initiated Draft Addendum XXVI in order to improve harvester reporting and biological data collection in state and federal waters. The management measures in this addendum are intended to utilize the latest technology to improve the spatial resolution of harvester data, increase the collection of fishery effort data, and promote the collection of biological data offshore.

2.2 History of Reporting Requirements

American lobster is currently managed under Amendment 3 and its subsequent addenda. Amendment 3, which was finalized in 1997, required states to, at a minimum, maintain their current reporting and data collection programs. At the time of implementation, the Atlantic Coastal Cooperative Statistics Program (ACCSP) was still being developed and data collection standards had not been completed for lobster. As a result, action to specify monitoring and reporting requirements was deferred until completion of a coastwide statistics program by ACCSP.

By 1999 data collection standards for ACCSP were nearly complete and Addendum I (1999) established data collection guidelines in the lobster fishery. Importantly, while it encouraged states to adopt monitoring and reporting standards, state agencies were not required to make any changes to their current reporting system. It wasn't until Addendum VIII (2006) that a consistent set of reporting requirements were implemented in the lobster fishery. Specifically, states were required to collect trip-level data from at least 10% of the lobster fishery. This included information on landings (i.e: catch in pounds) and effort (i.e: trap hauls, soak time, number of trips, total traps set, number of traps fished per trip). All dealers were required to report lobster landings, by weight, on a trip level basis. States were also required to implement fishery dependent data programs, such as sea sampling and port sampling, to collect information on lobster length, sex, and cull status.

2.3 Current Reporting Requirements

2.3.1 State Reporting Requirements

Addendum X (2007) outlines the current reporting requirements in the lobster fishery. These requirements built upon those established in Addendum VIII and ensure that the collection programs meet ACCSP standards. For catch reporting, Addendum X requires a two-ticket system in which states must implement at least 10% active harvester reporting, with the expectation of 100% harvester reporting over time, and 100% dealer reporting. All states have implemented 100% harvester reporting, with the exception of Maine which has 10% harvester reporting (Table 1). Harvester reports are required to include information such as vessel number, trip start date, statistical area, number of traps hauled, number of traps set, pounds of

lobster harvested, and trip length. Dealer reports are required to include information on the species landed, the pounds harvested, the state and port of landing, market grade, areas fished, and price per pound.

Addendum X also requires biological sampling from fishery independent and dependent sources. States are required to conduct sea sampling to characterize commercial catch and collect data on length, sex, v-notch, egg-bearing status, discards, cull status, and traps sampled. Port sampling is also required to collect information on length, sex, cull status, and market category. Sufficient sea sampling can replace port sampling. In addition, Addendum X requires states to implement fishery-independent sampling programs, with each state conducting either an annual trawl survey, a ventless trap survey (VTS), or a settlement survey. The VTS is designed to sample lobster habitats that may not be accessible to a trawl survey and provides information regarding the abundance of sub-legal lobsters (<53mm CL). Settlement surveys provide information on the youngest life stages of lobster (Stages IV and V). Several states carry out multiple fishery-independent sampling programs including Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut (Table 1). *De minimis* states (DE, MD, and VA) are not required to complete the biological collection programs prescribed in Addendum X.

2.3.2 Federal Reporting Requirements

For many federally permitted fisheries, catch information (including species caught and discarded, gear quantity, fishing location, and depth) is collected on a trip-level basis through Vessel Trip Reports (VTRs). However, a federal lobster permit does not contain a federal reporting requirement. This means that if a vessel is issued a federal lobster permit and that vessel has no other federal permits, the vessel is not required to fill out a VTR. As a result, a portion of the lobster fleet which fishes in federal waters is not required to submit landings reports; this portion varies spatially, with a smaller percentage reporting in nearshore waters of the GOM and a higher portion reporting in SNE and the Mid-Atlantic. For example, only 10% of all Maine federal permit holders and 3% of the total Maine lobster fleet report through VTRs. In statistical area 514 (Massachusetts coast), 25% of permits report with VTRs. This percentage increases with distance from shore as roughly 63% of the lobster fleet which fishes in statistical area 537 (south of Cape Cod) reports through VTRs and 98% of the fleet in statistical area 515 (near Hague line) reports with VTRs. A higher portion of vessels in the southern portion of the lobster fleet also report through VTRs as 95% of vessels hailing from New Jersey through Virginia submit VTRs. To avoid double reporting, states often accept VTRs in place of state reporting forms for those federally permitted vessels required to report.

The NMFS Northeast Fisheries Science Center also conducts a bottom trawl survey which has collected data on lobster abundance since 1967 (Table 1). The bottom trawl survey is conducted twice a year, in the spring and fall, and extends from the Scotian Shelf to Cape Hatteras, including the GOM and GBK. The survey uses a random sampling design and stratifies the survey area by depth. Data from the bottom trawl survey has been consistently incorporated into the lobster stock assessments and provides important information regarding lobster abundance offshore.

Table 1: 2016 harvester reporting, dealer reporting, and biological data collection programs. New Hampshire and New York's trawl surveys are conducted in conjunction with Maine and Connecticut, respectively. *De minimis* states are not required to implement biological data collection programs.

	De Minimis Status in 2016	% Dealer Reporting	% Harvester Reporting	Sea Sampling	Port Sampling	Trawl Survey	Ventless Trap Survey	Settlement Survey
ME		100%	10%	✓		✓	✓	✓
NH		100%	100%	✓	✓	✓	✓	✓
MA		100%	100%	✓		✓	✓	✓
RI		100%	100%	✓	✓	✓	✓	✓
CT		100%	100%	✓		✓		✓
NY		100%	100%	✓	✓	✓		
NJ		100%	100%	✓		✓		
DE	✓	100%	100%			✓		
MD	✓	100%	100%	✓		✓		
VA	✓	100%	100%					
NOAA Fisheries		100%	VTR if permitted for another species	✓	✓	✓	*	

**NOAA supports ventless trap surveys through grants.*

2.5 Deficiencies with Current Harvester Reporting

2.5.1 Deficiencies in Spatial Resolution of Data

While Addendum X established a consistent baseline for reporting, recent management actions have highlighted serious data deficiencies in the lobster fishery. These deficiencies have hindered the ability to assess the status of the offshore stock, effectively manage the resource, and respond to the growing use of marine spatial planning. One of the largest deficiencies is the lack of spatial information collected in the lobster fishery. While harvester reports are required to indicate statistical area fished, information regarding LCMA or depth are not consistently collected (Table 2). This can hinder management of the species as a single statistical area can span multiple LCMAs, each of which has a unique set of regulations. For example, statistical area 521 spans LCMAs 1, 2, 3, and Outer Cape Cod (OCC), each of which has a different combination of gauge size requirements. Furthermore, the coarse resolution of data collected by statistical area makes it difficult to determine potential impacts to the fishery from finer-scale marine spatial planning in the Northwest Atlantic. For example, recent action to protect deep-sea corals in GBK and the GOM required information on the magnitude of lobster fishing in specific areas in order to calculate potential economic impacts. Without this fine scale spatial information, impacts to the lobster and Jonah crab fisheries had to be estimated by piecing together information from harvester reports, industry surveys, and fishermen interviews. Moreover, as the ocean continues to be divided between user groups, the lack of spatial resolution in lobster harvester data collected has impeded the ability to accurately assess impacts to the lobster and Jonah crab industries.

Another deficiency is the lack of data collected on the depth at which the lobster fishery takes place. Recent management actions, including the establishment of a national monument, have considered a series of options which differ by depth. Given that information regarding the depth of lobster fishing activity is not consistently collected among the states (Table 2), it is challenging to respond to these management actions and illustrate potential economic

consequences to the lobster fishery. This situation is made worse by the poor spatial resolution of the data.

Table 2: Data components collected in current harvester reports along the coast.

	Reports Submitted	Electronic Option	Trip Length	# Of Crew	Traps Hauled	Active Traps Fished	Soak Time	Depth Fished	Stat Area	LCMA	Lat/ Long	Distance from Shore	Port Landed	Pounds Landed	Dispo-sition
ME	Monthly		✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	
NH	Monthly	SAFIS	✓		✓		✓		✓				✓	✓	✓
MA	Monthly	SAFIS	✓		✓	✓	✓		✓	✓			✓	✓	✓
RI	Quarter	SAFIS	✓	✓	✓	✓	✓		✓	✓			✓	✓	✓
CT	Monthly		✓	✓	✓	✓	✓		✓				✓	✓	✓
NY	Monthly	SAFIS	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
NJ	Monthly	SAFIS	✓	✓	✓		✓	✓	✓		✓		✓	✓	
Federal VTR	Weekly or Monthly*	eVTR	✓	✓	✓		✓	✓	✓		✓		✓	✓	

2.5.2. Deficiencies in Percentage of Harvester Reporting

In addition to the lack of spatial resolution of harvester data, the percentage of harvesters reporting, in some areas, limits the ability to assess trends in the entire fishery. Addendum X requires a minimum of 10% harvester reporting; however, the expectation was that, in time, all states would implement 100% harvester reporting. Currently, Maine is the only state which has not implemented 100% harvester reporting and this is largely due to the size of the fishery. For context, more trips are taken by Maine lobstermen each year than the combined number of trips taken for all species in the states of New Hampshire, Rhode Island, Connecticut, New York, New Jersey, Delaware, South Carolina, and Georgia. As a result, expanding the Maine harvester reporting program to all lobstermen could cost the state an additional $500,000 a year, under current reporting methods. Furthermore, not all federally licenses lobstermen are required to submit harvester reports as those vessels which only have a lobster permit are not required to complete VTRs.

The lack of fishermen and vessels required to report results in critical data gaps in the lobster fishery. While 100% dealer reporting along the coast provides information on the total amount of lobster landed in each state, information regarding the location of catch and effort data is not collected in dealer reports. As a result, it is unclear where these lobster are caught and what level of effort is required to harvest them. Furthermore, changes in the spatial distribution of, and level of effort in, the lobster fishery cannot be accurately summarized coastwide. These data gaps are particularly concerning given that Maine accounts for over 80% of lobster landed in the U.S. and the offshore portion of the lobster fishery in SNE is becoming increasingly scrutinized as lobster abundance continues to decrease inshore.

In order to determine the level of harvester reporting required to effectively assess trends throughout the entire fishery, the TC analyzed what percentage of harvester reporting represents a statically valid sample. A statistically valid sample of harvester reporting is needed to scale up a subset of trip level reports to the full fishery.

(Add TC analysis on statistically valid sample of harvester reporting)

2.5.3 Deficiencies in Data Collected Pertaining to ALWTRT

An important consideration in the management of American lobster is the fishery's interaction whales, particularly the North Atlantic right whale which is listed as endangered under the Endangered Species Act. In order to reduce the risk of serious injury and death of large whales due to entanglement in commercial fishing gear, the Atlantic Large Whale Take Reduction Team (ALWTRT) was established in 1996. The Take Reduction Plan (TRP), which was first published in 1997, specifies gear modifications and restrictions, such as weak links, gear markings, and seasonal prohibitions on locations where traps can be set.

The TRP continues to evolve as information regarding the spatial distribution of the North Atlantic right whale and fishing gear continue to improve. A critical component of the TRP is the co-occurrence model, which pairs information regarding the distribution of whales and commercial fishing gear to predict areas where whales may be prone to entanglement. In May 2016, a subset of the ALWTRT met to discuss ways to improve the collection of fishing effort data as it pertains to the co-occurrence model. As a result of this meeting, the ALWTRT identified current gaps in fishery effort data collected by the states and NMFS. This includes information regarding the number of traps per trawl, number of vertical lines, and length of vertical lines. In April 2017, the ALWTRT again met to discuss data gaps in fishery data and potentially consider ways to collect that data independent of the states. This addendum represents an opportunity for the Lobster Board to proactively address the concerns of the ALWTRT by enhancing current reporting methods.

2.6 Deficiencies in Current Biological Data Collection Programs

In a January 2016 report to the Board, the TC stated that while the biological collection programs currently administered are sufficient to characterize catch in states waters, the resolution of biological data is lacking in federal waters. Currently, states administer a suite of biological sampling programs (i.e. sea sampling, port sampling, VTS, larval surveys, trawl surveys) to assess the status of the lobster stocks; however, much of this effort is contained to state waters or takes place in nearshore waters which are accessible in a day trip. Table 3 and Appendix 2 show the location and depth of trawl surveys and VTS used in the 2015 Stock Assessment. While the surveys span a broad length of the coast, most state trawl surveys do not extend past the 12 mile territorial sea boundary. The deepest trawl survey is the NEFSC Bottom Trawl Survey which surveys depths up to 365m. VTS, which are conducted from Maine through Rhode Island, are split into three depth strata and typically do not sample areas greater than 60m. In addition, settlement surveys concentrate on coastal nursery areas from Jonesport, Maine to Long Island Sound. Given that much of the sampling takes place by scuba divers, the survey is limited to inshore areas. Finally, while NOAA Fisheries has an extensive fishery dependent observer program, the lobster fishery has not historically been considered a sampling priority.

Table 3: Location and depth of trawl surveys and ventless trap surveys by jurisdiction.

		Location	Depth
Trawl Surveys	**ME-NH Inshore Trawl Survey**	Downeast Maine to New Hampshire	4 strata: 5-20 fathoms, 21-35 fathoms, 36-55 fathoms, > 56 fathoms out to the 12 mile territorial limit.
	MA Trawl Survey	Cape Ann to Buzzards Bay	6 strata: 0-30ft, 31-60ft, 61-90ft, 91-120ft, 121-180ft, 191ft-12 mile territorial boundary
	RI Trawl Survey	Narragansett Bay, Rhode Island Sound, Block Island Sound	6 strata; Narragansett Bay: 10-20ft, >20ft; RIS/BIS: 10-30ft, 30-60ft, 60-90ft, 90-120ft, >120ft
	CT-NY Trawl Survey	Groton, CT to Greenwich, CT in both CT and NY waters	4 strata: 0-9m, 9.1-18.2m, 18.3-27.3m, and 27.4+ m
	NJ Trawl Survey	Sandy Hook, NJ to Cape Hemlopen DE	18-90ft
	NEFSC Bottom Trawl Survey	Scotian Shelf to Cape Hatteras	7 strata: <9m, 9-18m, >18-27m, >27-55m, >55-110m, >110-185m, and >185-365m.
Ventless Trap Surveys	**ME VTS**	SAs 511, 512, 513 excluding estuaries of Kennebec and Penobscot Rivesr	3 strata: 1-20m, 21-40m, 41-60m
	NH VTS	SA 513 excluding Great Bay, Piscataqua River, and Hampton Harbor	3 strata: 1-20m, 21-40m, 41-60m
	MA VTS	SA 514, 538 excluding the southwest corned of Cape Cod Bay, Vinyard Sound, and Nantucket Sound	3 strata: 1-20m, 21-40m, 41-60m
	RI VTS	539 excluding ester portion of Block Island Sound	3 strata: 1-20m, 21-40m, 41-60m

The dearth of biological sampling offshore is a growing concern given the increasing portion of lobster which is being harvested outside of state waters. In SNE, there has been a marked increase in the proportion of lobster harvester in offshore statistical areas. In 1998, 87% of lobster harvester in SNE where from the inshore portion of the stock; however, declines in the stock, particularly inshore, have led the fishery to be primarily executed offshore. In fact, 2011 was the first year in which a greater portion (55%) of lobster were landed offshore than inshore in SNE (Figure 1). A similar trend can be seen in the GOM where the percentage of trips occurring greater than 3 miles from shore is increasing. Specifically, in 2008, the number of trips that occurred between 0-3 miles from shore was 87%, while only 13% of trips occurred outside

of 3 miles from shore. In 2015, the percentage of trips that occurred between 0-3 miles from shore decreased to 80%, while the percentage of trips that occurred greater than 3 miles from shore increased to 20%.

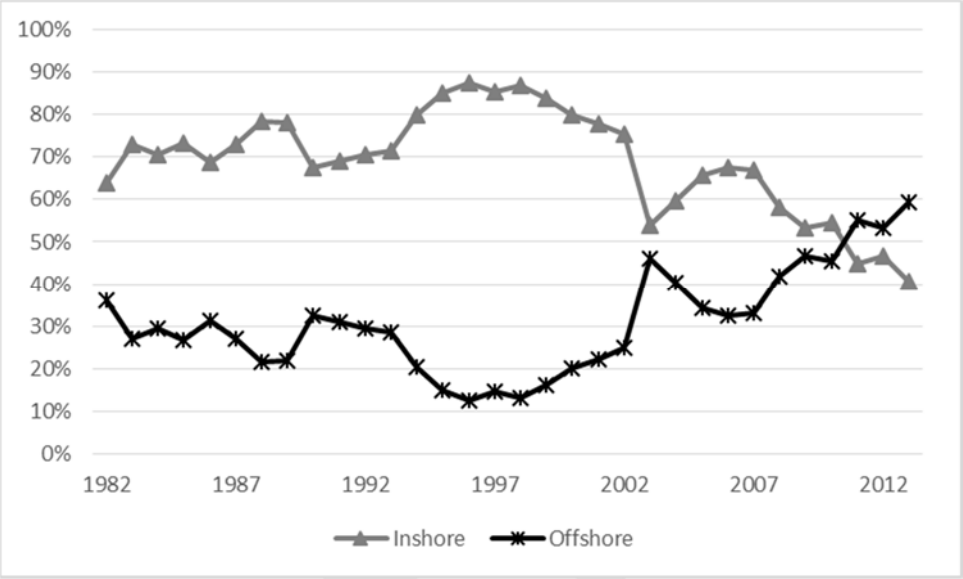


Figure 1: Percentage of landings in SNE occurring in the inshore and offshore fishery. The inshore fishery is defined as landings from statistical areas 538, 539, 611, 612, 613, 614, 621, 625, 631, and 635. The offshore fishery is defined as landings from statistical areas 533, 534, 537, 615, 616, 622, 623, 624, 626, 627, and 632.

2.6.1 External Biological Data Collection Programs

Given financial and geographic constraints on sampling conducted by states, external institutions have begun to implement their own fishery dependent sampling programs in order to collect greater information on the offshore lobster fishery. One example of this is the Commercial Fisheries Research Foundation (CFRF), a non-profit foundation which conducts collaborative fisheries research projects. Established by commercial fishermen, CFRF collaborates with industry members to collect biological data and support fisheries research. One of the programs conducted by CFRF has been their On-Deck Data Program, through which participating lobster vessels conduct at-sea sampling during specified trips each month. The On-Deck Data application randomly selects trawls to sample throughout a trip and fishermen collect biological information on carapace length, sex, shell disease, presence of eggs, v-notching, shell hardness, and disposition. Participating vessels also deploy ventless traps which expand the spatial extent of the state's ventless trap programs to areas further offshore. Currently, 17 vessels participate in the CFRF program and 94,325 lobsters have been sampled as of June 2017. Biological information collected from CFRF was incorporated into the 2015 Stock Assessment.

The geographic range of the CFRF program stretches from New Hampshire to New Jersey. Table 4 shows specific statistical areas in which CRFR participating vessels sample as well as the

magnitude of sampling in those areas. The largest amount of sampling occurs in statistical areas 537 and 539 (south of Cape Cod and Rhode Island) with additional sampling occurring in Georges Bank (statistical areas 525 and 526) and offshore Gulf Maine (statistical areas 464 and 512). Limited levels of sampling occurs off of Long Island (statistical area 613) (Table 4).

Table 4: The geographic distribution of CFRF lobster sampling, by statistical area, as of June 2017. Data provided by CFRF.

Statisitical Area	Commercial Lobster Sessions	Ventless Lobster Sessions	Lobsters Sampled
464	37	5	3872
465	10	9	1552
512	37	21	4793
515	13	20	1139
522	1	0	83
525	98	23	3196
526	52	17	3168
537	320	324	17353
539	651	994	38413
561	23	2	2265
562	95	162	8102
613	26	29	898
616	76	137	6357

2.6.2 Identification of Data Gaps In Offshore Sampling

In order to provide guidance on where additional biological sampling efforts should be conducted in the lobster fishery, the TC reviewed the spatial distribution of various sampling efforts, including state surveys, at-sea sampling, and CFRF data programs.

(*Add TC recommendations on where future sampling efforts should be concentrated and what sampling should occur in those areas)*

2.7 Lobster Reporting Work Group

Recognizing the need to assess current data collection in the lobster fishery, the Board established a Lobster Reporting Work Group to discuss data deficiencies in the lobster fishery and ways to improve them. The Work Group, which met in September 2016, was comprised of state agency staff, TC members, Board members, federal representatives, ACCSP staff, and ASMFC staff. As a part of their discussion, the Work Group developed five goals for reporting in the lobster fishery.

1) Improve the spatial resolution of harvester reporting
2) Utilize the latest technology to improve and increase reporting
3) Collect greater effort data in harvester reports
4) Define inshore vs. offshore areas in the lobster fishery
5) Proactively address data concerns of the ALWTRT

In order to achieve these goals, the Work Group compiled a list of recommendations to improve reporting in the lobster fishery (Table 5). The recommendations were categorized as short-term (less than 1 year), intermediate (1-2 years), and long-term (greater than 2 years). The short-term recommendations sought to maximize commercial harvester reporting under the current framework and provide a uniform set of definitions for inshore vs. nearshore vs. offshore areas. The intermediate recommendations intended to build upon the existing reporting programs by requiring increased harvester reporting and the collection of additional data components. The long term recommendations sought to incorporate new technology into the lobster fishery in order to efficiently and effectively report landings, monitor compliance, and identify critical areas for the lobster fishery. These goals and recommendations provided a basis for the development of this addendum.

Table 5: Recommendations from the Lobster Reporting Work Group on ways to improve reporting in the lobster fishery.

Short Terms Recommendations
-Maximize ME's 10% harvester reporting by only including commercial license holders who have actively fished in the past two years
-Defined the inshore fishery as 0-3 miles, the nearshore fishery as 3-12 miles, and the offshore fishery as >12 miles
Intermediate Recommendations
- Require 100% active harvester reporting for all state and federally permitted lobster license holders; for resource limited jurisdictions unable to achieve 100% harvester reporting, at a minimum, states should require reporting from a statistically valid sample of harvester reporting
- Add the following data components to current harvester reporting coastwide: number of trap hauls, soak time, catch disposition, gear configuration, number of vertical lines, LCMA, depth
- Further delineate NMFS statistical areas on harvester trip reports
Long Term Recommendations
- Establish an electronic swipe-card system for harvester and dealer reports
- Incorporate VMS or another locator beacon to all lobster vessels
- Establish an electronic fixed-gear VTR for all federal permit holders

2.8 Status of the Stock

The 2015 peer-reviewed stock assessment report indicated a mixed picture of the American lobster resource, with record high stock abundance throughout most of the GOM and GBK and record low abundance and recruitment in SNE.

The assessment found the GOM/GBK stock is not overfished and not experiencing overfishing. GOM and GBK were previously assessed as separate stock units; however, due to evidence of seasonal migrations by egg-bearing females between the two stocks, the areas were combined into one biological unit. While model results show a dramatic overall increase in stock abundance in the GOM/GBK, population indicators show young-of-year estimates are trending downward. This could indicate a potential decline in recruitment and landings in the coming years.

Conversely, the assessment found the SNE stock is severely depleted. Recruitment indices show the stock has continued to decline and is in recruitment failure. The inshore portion of the SNE stock is in particularly poor condition with surveys showing a contraction of the population. This decline could impact the offshore portion of the stock if it is dependent on recruitment from inshore areas. Landings in SNE are expected to decline since the extremely poor year classes which have settled since 2008 have yet to recruit to the fishery.

2.9 Status of Commercial Fishery

The American lobster fishery has seen incredible expansion in effort and landings over the last 40 years, with coastwide landings rising from roughly 39 million pounds in 1981 to over 158 million pounds in 2016. Ex-vessel value in 2016 set a new record at over $660 million. Much of this increase can be attributed to high landings in the Gulf of Maine, and in particular, the state of Maine; since 1981, Maine lobster landings have risen over 500% from 22.6 million in 1981 to 131.9 million in 2016. In contrast, landings in states such as Connecticut and New York have dramatically decreased from their peak in the 1990s. In 1996, New York lobster landings were 9.4 million pounds but in 2016, only 218,354 pounds were landed in the state. A similar trend can be seen in Connecticut. These rapid decreases in landings are the result several factors including warming waters, increased predation, and continued fishing pressure.

3.0 Management Options

This section proposes to replace Section 4.1 of Addendum X to Amendment 3. The intent of these management options is to improve harvester reporting and biological data collection.

3.1 Dealer and Harvester Reporting

The following outline the requirements for dealer reporting in the lobster fishery.

1. There is 100% mandatory dealer reporting. Dealer reports include: unique trip ID (link to harvester report), date, species, quantity (lbs), state and port of landing, price per pound, and market grade and category.
2. There is a two-ticket system for dealer and harvester reports. This is used to provide verification between the two landings information. Harvester report trip data and catch estimates (in pounds) and dealers report landing weights (in pounds).
3. Harvester and dealers are require to report standardized data elements for each trip on a monthly basis.
4. Permit holders are linked to federal vessel or individual permit/license level reporting for lobsters using ACCSP protocol (http://www.accsp.org/cfstandards.htm).
5. ACCSP stores lobster landings information.

3.1.1 Electronic Reporting

This document considers increases in the percent of active harvester reporting in the lobster fishery (see *Issue 1*). Given increases in harvester reporting under the current methodology (ie: paper reports) may result in large costs to some states, it is highly recommended that states implement electronic reporting in the lobster fishery. Electronic reporting represents a cost effect method to collect data in the lobster fishery since it reduces the need for staff to convert paper reports into an electronic format. Furthermore, electronic reporting provides the

flexibility to collect expanded data elements. Currently, electronic reporting is not widely used throughout the lobster fishery.

Should states implement electronic reporting, it is recommended that states use the SAFIS application eTrips, or eTrips Mobile given this platform can be implemented at little to no cost to the states or fishermen, it is approved by GARFO as a platform to submit eVTRs, and there is a well-established working relationship between ASMFC and ACCSP. States may choose to use an electronic reporting platform other than eTrips; however, this platform must implement the ACCSP Data Standards and be compatible with the eTrips Application Programming Interface (eTrips API), in order for the data to be seamlessly consolidated with other sources.

States wishing to use a different platform may submit a proposal to the Board which outlines why the state is pursuing a different electronic reporting platform and demonstrates that the platform meets the reporting requirements of this Addendum. Furthermore, states must demonstrate that the alternative electronic reporting platform can accommodate the large scale of the lobster fleet. Proposals must be reviewed and approved by the Board.

(Insert table which shows current percentage of lobster harvester that report electronically)

Issue 1: Percent Harvester Reporting
This issues asks what the minimum percentage of harvester reporting should be in the lobster fishery. States are encouraged to use electronic reporting as a cost-effective method to increase harvester reporting. Section 3.1.1. outlines the requirements for electronic reporting.

Option A: Status Quo
Under this option, at least 10% of active commercial harvesters are required to report trip level landings. States which currently require greater than 10% harvester reporting are required to maintain that higher level of reporting. An active harvester is defined as an individual who landed lobster, in any amount, at some point during the past two calendar years.

Option B: X% Harvester Reporting
Under this option, at least X% of active commercial harvesters are required to report trip level landings. This percentage was identified by the TC as being a statistically valid sample of harvester reporting. States which currently require greater than X% active commercial harvester reporting are required to maintain that higher level of reporting. States which currently require less than X% active commercial harvester reporting may phase-in the higher level of reporting over X years. An active harvester is defined as an individual who landed lobster, in any amount, at some point during the past two calendar years.

Option C: 100% Harvester Reporting
Under this option, 100% of active commercial lobster permit holders are required to report trip level landings. States which currently require less than 100% active commercial harvest reporting may phase-in the higher level of reporting over 5 years, such that in year 1 there is a minimum requirement of 20% active commercial harvester reporting, in year 2 there is a

minimum requirement of 40% active commercial harvester reporting, in year 3 there is a minimum requirement of 60% active commercial harvester reporting, in year 4 there is a minimum requirement of 80% active commercial harvester reporting, and in year 5 there is 100% active commercial harvester reporting. An active harvester is defined as an individual who landed lobster, in any amount, at some point during the past two calendar years.

Issue 2: Harvester Reporting Data Components
This issue asks what data elements must be collected in harvester reports.

Option A: Status Quo
Harvester reports must include: a unique trip ID (link to dealer report), vessel number, trip start date, location (NMFS Statistical Area), number of traps hauled, traps set, quantity (lbs), and trip length.

Option B: Expanded Data Elements
In addition to the data components listed in Option A, harvester reports must report on an expanded set of data elements. These include location (based on a 10' square resolution), depth (most common depth fished at during trip), bait type, total number of traps in water, and number of vertical lines in water. The intent of this additional information is to provide greater spatial resolution to harvester reporting and proactively address concerns of the ALWTRT. Electronic tracking (Issue 3) can replace the need to provide information on location and depth.

(The PDT is still working to develop Issue 2, including how additional data is collected. Staff are planning to have conversations with NOAA Protected Resource staff to better understand the data needs of the ALWTRT so that the Board can be proactive in addressing these needs and avoid double reporting requirements on fishermen.)

Issue 3: Electronic Tracking
This issue asks whether electronic tracking pilot program should be adopted in the lobster fishery. A pilot program provides an opportunity for various technologies to be tested in the lobster fishery.

Option A: Status Quo
Under this option, there is no electronic tracking pilot program in the lobster fishery.

Option B: Pilot Program for Electronic Tracking
Under this option, a one year pilot program is established to test electronic tracking devices on lobster fishing vessels. To design and implement the pilot program, a Subcommittee of Board members, PDT members, industry, and law enforcement will be convened. Fishermen interested in participating in the program will be identified through state agencies and industry associations. Ideally, fishermen from different states, fishing grounds, and with varying boat sizes will participate in the pilot program so that technologies can be tested in a variety of conditions. Multiple technologies can be tested when conducting the pilot program; however, the systems must have a fast ping rate (at least 1 ping every minute) and be a low cost device.

The PDT recommends that specific technologies, including the Pelagic Data Systems solar powered device and tracking through the eTrips Mobile application, be explored. Fishermen who participate in the pilot program will not be required to purchase the technology; the Subcommittee will identify outside funding sources to support the pilot program.

Success of the tracking technology will be evaluated by looking at the ease of compliance (or non-compliance), ability to determine trap hauls from steaming, industry feedback, and law enforcement feedback. Following the one year pilot program, results of the program (including successes, challenges, and participant perspectives) will be presented to the Board. At that time, the Board may decide, through Board action, to end the pilot program, extend the pilot program for another year, or consider adoption of electronic tracking devices in part, or all, of the fishery. Should the Board consider adoption of electronic tracking in part, or all, of the fishery, a second round of public comment will be held.

3.2 Fishery Dependent Sampling

Non *de minimis* states are required to conduct fishery dependent sampling. It is recommended that states conduct, at a minimum, 5 sea and/or port sampling trips per year; however, states with substantial landings are encouraged to conduct one port or sea sampling trip per 100,000 pounds of lobster. Sufficient sea sampling can replace port sampling.

3.2.1 Port Sampling

The following outlines the requirements of port sampling.

1. In order to characterize commercial catch, the following data elements must be collected: length, sex, v-notched, egg bearing status, cull status.
2. In addition, the following data elements are recommended for collection, but not required: tissue for genetic or toxicity analysis, stomach contents for food habit assessments, gonads for maturity schedule data.
3. The number of port sampling trips, as well as the number of lobsters sampled, will be reported in Annual State Compliance Reports.

3.2.2. Sea Sampling

The following outlines the requirements of sea sampling.

1. In order to characterize commercial catch, the following data elements must be collected: length, sex, v-notch, egg bearing status, cull status, fishing location (NMFS Statistical Area, and total trawls or traps sampled.
2. In addition, the following data elements are recommended for collection, but not required: tissue for genetic or toxicity analysis, stomach contents for food habit assessments, gonads for maturity schedule data.
3. The number of sea sampling trips, as well as the number of lobsters sampled during sea sampling will be reported in Annual State Compliance Reports.

3.3 Fishery Independent Sampling

Non-de minimis states are required to conduct at least of the following fishery dependent surveys each year: an annual trawl survey, a ventless trap survey, and/or a young-of-year

survey. It is recommended that all statistical areas in the lobster fishery be sampled by at least one of the above fishery independent survey methods, including statistical areas in federal waters.

4.0 Compliance

If the existing lobster management plan is revised by approval of this draft addendum, the American Lobster Management Board will designate dates by which states will be required to implement the addendum. A final implementation schedule will be identified based on the management tools chosen.

5.0 Recommendations for Actions in Federal Waters

The management of American lobster in the EEZ is the responsibility of the Secretary of Commerce through the National Marine Fisheries Service. The Atlantic States Marine Fisheries Commission recommends that the federal government promulgate all necessary regulations in Section 3.0 to implement complementary measures to those approved in this addendum. In addition, ASMFC recommends the following be adopted in federal waters:

- 100% harvester reporting for all federal lobster permit holders – There is currently no federal permitting requirement attached to a federal lobster permit. One of the deficiencies identified in this Addendum is that not all lobster harvesters are required to complete trip level reports. This impedes effective management of the stock as it is unclear where lobster is being harvested and what effort is associated with that catch. As ASFMC works to improve harvester reporting and data collection, it is recommended that NOAA Fisheries implement 100% harvester reporting for all federal lobster permit holders.
- Creation of a fixed gear VTR for federal permit holders – As identified by the Lobster Reporting Work Group, one of the major hurdles in federal lobster reporting is that a single VTR form is used by a wide variety of gear types. This limits the amount of information that can be collected and can create confusion on how specific data elements apply to the lobster fishery. ASMFC recommends that a fixed-gear VTR form be established to fulfill the data needs specific to these fisheries, including information on soak time, number of hauls, and total gear in water.
- Implementation of a lobster sampling program in federal waters – As outlined in Section 2.6 of this Addendum, the biological sampling programs currently conducted in federal waters are insufficient to characterize commercial catch or understand the biological conditions of the offshore stock. This is particularly concerning given an increasing portion of the lobster fishery is being executed in federal waters. ASMFC recommends NOAA Fisheries support biological sampling offshore, whether this be through the expansion of existing sampling programs or adoption of a federal sampling program. Appendix 4 outlines a potential sampling program for federal waters, including areas where future sampling efforts should be focused and specific surveys which should be extended offshore.

6.0 References

Atlantic States Marine Fisheries Commission (ASMFC). 1997. Amendment 3 to the Interstate Fishery Management Plan for American Lobster.

ASMFC. 1999. Addendum I to Amendment 3 to the American Lobster Fishery Management Plan.

ASMFC. 2006. Addendum VIII to Amendment 3 to the American Lobster Fishery Management Plan.

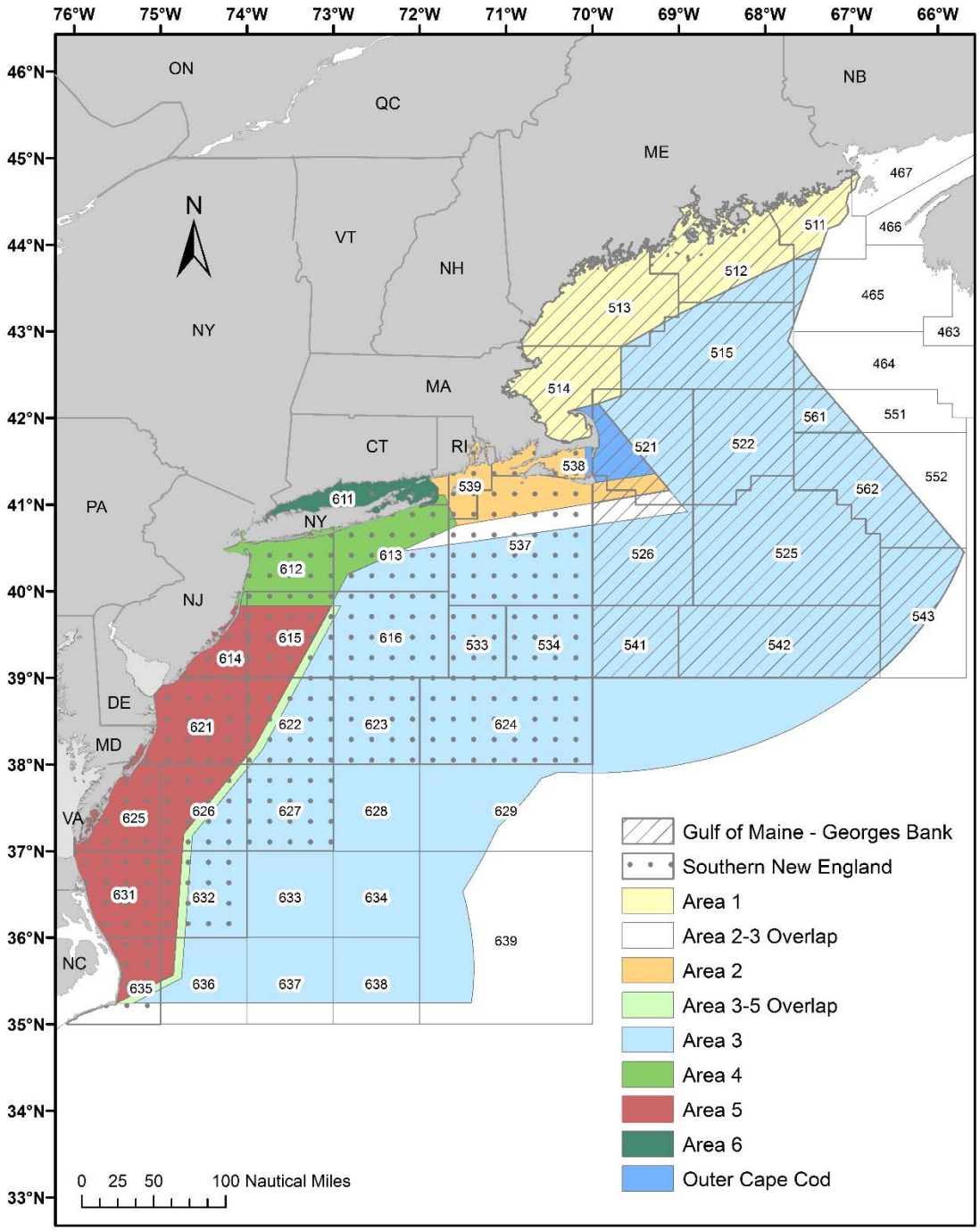
ASMFC. 2007. Addendum X to Amendment 3 to the American Lobster Fishery Management Plan.

ASMFC. 2015. American Lobster Benchmark Stock Assessment and Peer Review Report.

Atlantic Large Whale Take Reduction Team. Work Group Key Outcomes. May 12-18, 2016. Gloucester, MA. Found at: https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/docs/2016%20Monitoring%20Subgroup%20Meeting/key_outcomes.pdf

NOAA Fisheries. Atlantic Large Whale Take Reduction Plan: Northeast Trap/Pot Fisheries Requirements and Management Areas. Found at: https://www.greateratlantic.fisheries.noaa.gov/protected/whaletrp/docs/Outreach%20Guides%20Updated%20May%202015/northeast_trap_pot___2015_2.pdf

Appendix 1: American lobster biological stocks and lobster conservation management areas.



Appendix 2: Maps of Trawl Surveys Conducted by Jurisdictions

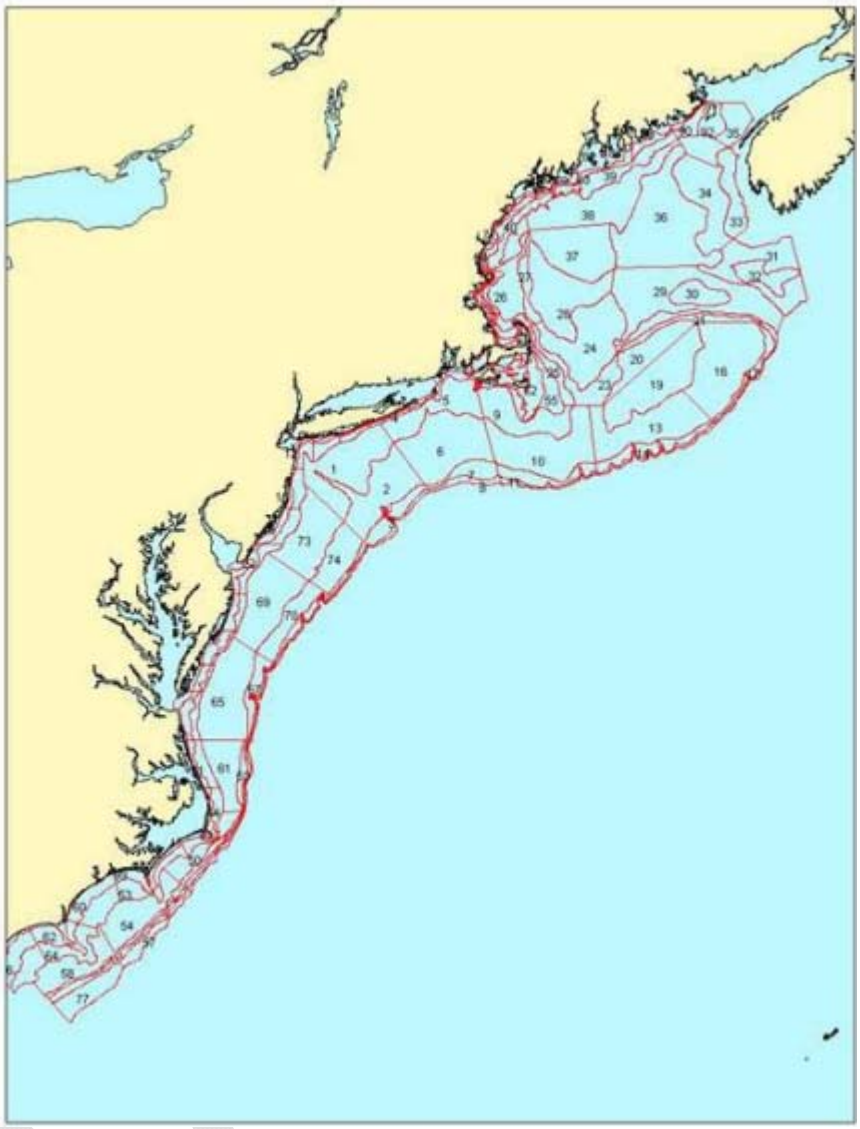


Figure 1: Map of area sampled by the NEFSC Bottom Trawl Survey. The survey is stratified by depth (<9m, 9-18m, >18-27m, >27-55m, >55-110m, >110-185m, >185-365m) and stations are randomly selected within each strata. (Source: NEFSC)

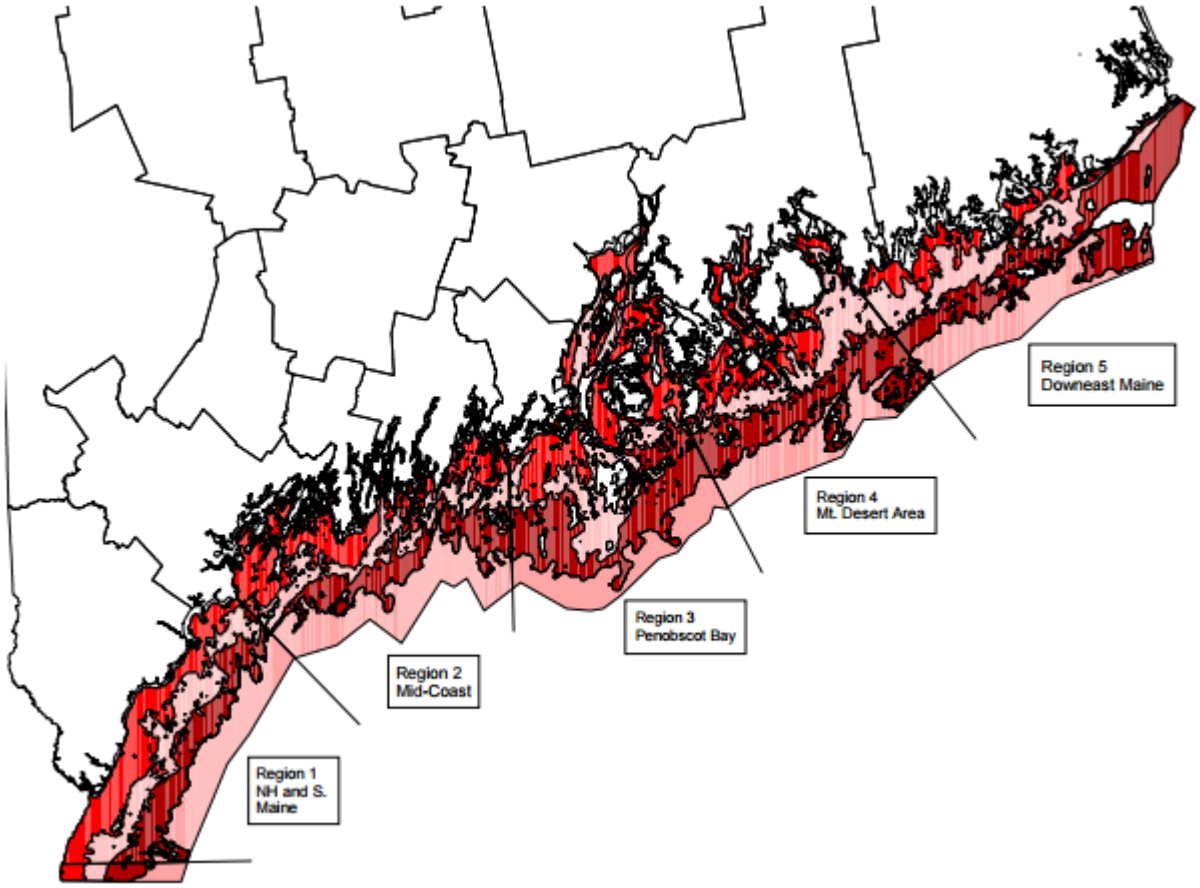


Figure 2: Map of area sampled by the Maine-New Hampshire Inshore Trawl Survey. The survey samples five regions and is stratified by four depth strata (5-20 fathoms, 21-35 fathoms, 36-55 fathoms, and greater than 56 fathoms to the 12 mile line). (Source: ME DMR)

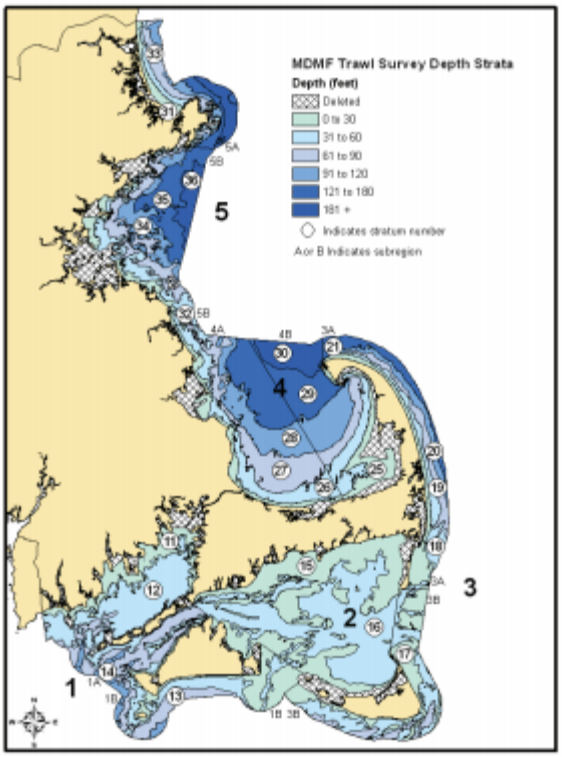


Figure 3: Location of the Massachusetts Trawl Survey. The survey is stratified based on five regions and six depth zones (0-30ft, 31-50ft, 61-90ft, 91-120ft, 121-180ft, >181ft out to 12 mile line).

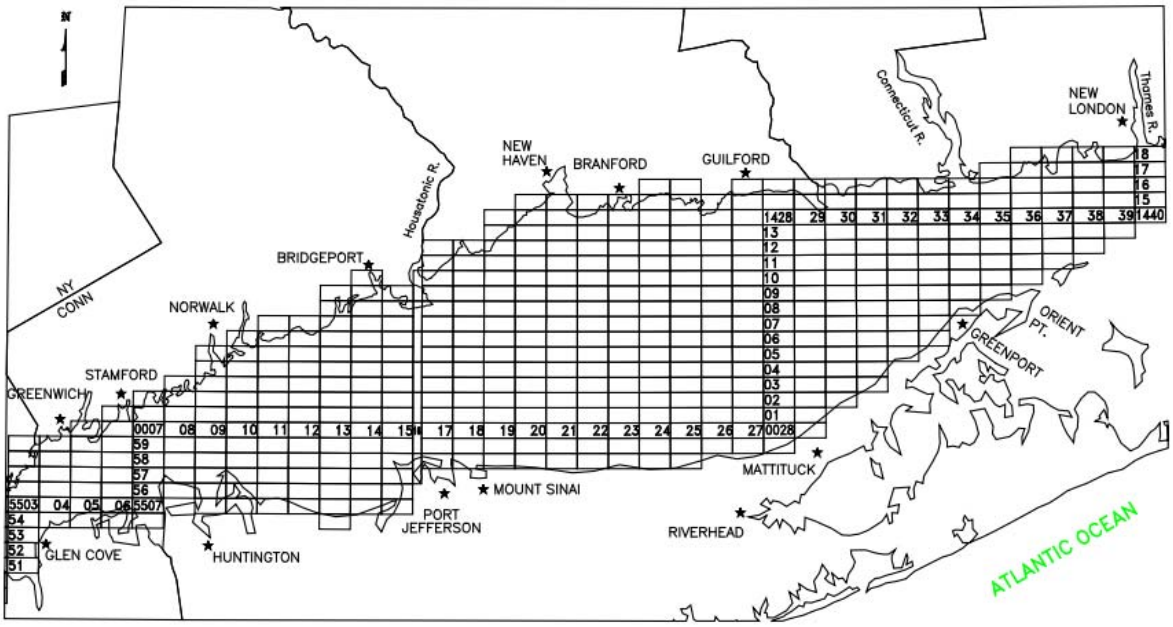


Figure 4: Connecticut – New York trawl survey grid. Each sampling site is 1x2 nautical miles with the first two digits representing the row number and the last two digits representing the column number. (Source: CT DEP)

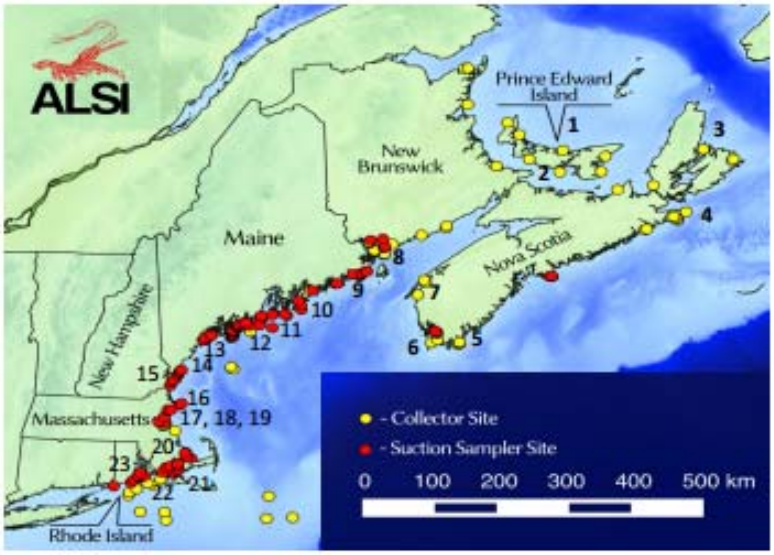


Figure 5: Locations sampled as a part of the 2015 American Lobster Settlement Index. Sites span New Brunswick, Canada down to Rhode Island. (Source: ALSI)

Appendix 3: Sea sampling timing, location, and data components for each jurisdiction.

		ME	NH	MA	RI	CT	NY	NJ	MD	NOAA Observer
Sampling Information	**Timing**	May- Nov. w/ limited sampling in Dec. - Apr.	May-Nov	May-Nov	Monthly in inshore LCMT 2, quarterly in offshore LCMT 2	19 trips per year, scaled back in 2013	Sporadic	May - Oct. w/ limited sampling in winter		Year round
	Location	7 zones in LCMA 1	SA 513	State waters, Cape Ann to Buzzards Bay	Narragansett Bay, RI Sound, canyon areas (70-200 fathom)	Long Island Sound	SA 611, 612, 613	LCMAs 4 and 5		Atlantic coast
Biological Data	**Carapace Length**	Y	Y	Y	Y	Y	Y	Y		Y
	# Lobsters	Y		Y						Y
	Weight									Y
	Sex	Y	Y	Y	Y	Y	Y	Y		Y
	Shell Hardness	Y	Y	Y	Y	Y		Y		Y
	Cull Status	Y	Y	Y	Y	Y		Y		Y
	V-Notch	Y		Y	Y			Y		Y
	Egg stage	Y	Y	Y	Y	Y	Y	Y		Y
	Shell Disease	Y	Y	Y	Y	Y	Y			Y
Trip Data	**Catch**	Y	Y	Y	Y		Y			Y
	Depth		Y	Y	Y					
	Bottom Type				Y					
	Fishing Location		Y	Y	Y		Y			Y
	Bait			Y	Y					Y
Gear Data	**Escape Vent Size**	Y			Y					Y
	# Traps	Y		Y			Y			Y
	# Traps in Trawl		Y		Y					
	# Endlines	Y								

Appendix 4: Offshore Biological Sampling Program for American Lobster

The following was prepared by the American Lobster Technical Committee to highlight data needs in the offshore lobster fishery. It is intended to provide guidance on where data gaps exist and how they can be addressed.

(Work is on-going by the TC)

ATLANTIC OFFSHORE LOBSTERMEN'S ASSOCIATION

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July 24, 2017

Bob Beal, Executive Director
Atlantic States Marine Fisheries Commission
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Arlington, VA 22201

Dear Bob,

I'm writing as the Chair of the Area 3 Lobster Conservation Management Team and President of Atlantic Offshore Lobstermen's Association to express my dismay in the Technical Committee's (TC) "review of LCMT Proposals for Addendum XXV" (June 29, 2017). While I take issue with the TC's findings, my primary concern is one of process. It is dismaying to have taken the time and effort to respond to the Lobster Board's solicitation for plans only to find that those plans were evaluated, not based on the parameters set forth by the Board during their June action, but rather by a different set of standards. It is unfair and frustrating to again and again respond to the requests of the managers, many times acting proactively to try to be stewards of the resource, to later be told that our efforts don't count, aren't enough, or are no longer valid because the rules of the game have changed.

The TC's findings are not entirely unexpected given prior statements, however it is frustrating to have this memo come out so late in the Addendum XXV process. While I agree that trap numbers don't correlate directly to fishing effort and, subsequently, egg production, the TC's precautionary assumptions continue to be overly biased toward less conservation impact. They rightly worry about changes in fishing behavior, but, as repeatedly noted by industry members, the scientific experts have not properly considered operational constraints that make it uneconomical, or physically impossible, to reduce soak time or otherwise increase fishing power in response to less traps. Similarly, the discussion of reactivation of latent effort continues to ignore the constraints inherent in transferring multi-area permits, for example more than 25% of permits with Area 3 designations also qualify for other LCMAs; the market for traps, i.e. in Area 3 the limited traps still on the market are selling for 70% more than in the first year of federal transferability; and the conservation tax on transfers, including transfers owners makes between their existing permits. These realities serve to draw down the amount of potential fishing effort inherent in transferred traps and shelved permits.

In regards to the TC's findings specific to Area 3, the TC makes an honest effort to look at trap reductions and transferability to date, but an analysis of Massachusetts' state water permits is certainly not a correlate for Area 3. A major flaw in the MA analysis is that crab effort was not distinguished from lobster effort. Both are mixed in the analysis which make it virtually impossible

to reach any conclusions regarding effort changes. Although the TC noted that specific major flaw, they seem to totally disregard its impact when considering the Area 3 and Area 2 recommendations. As noted by the TC, a trap reduction of 25% results in up to a 13% increase in egg production, so the industry recommendation is vastly more conservative than the analysis and the Board requirements. For Area 3, NOAA GARFO can provide Area 3 specific transfer information, and permit history and fishing reports are available to categorize traps as active or latent and, perhaps, better categorize trips based on target species.

In closing, as the Board has readily acknowledged, the stock collapse in SNE is primarily a climate issue, not a fishing issue. We can't use fishery management to solve this problem and, frankly, it would be more appropriate to allow economic drivers to dictate fishing in SNE. We have already seen a shift toward Jonah crabs and this approach shouldn't be punished because data is lacking to properly categorize effort. I, therefore, ask that a good faith effort be initiated to distinguish crab effort from lobster effort well in advance of the next benchmark stock assessment, as this issue will surely come up during that process. I also request that the Board approve the Area 3 proposal as submitted.

Thank you for your time and consideration.

J. Grant Moore
Chair, Area 3 LCMT
President, Atlantic Offshore Lobstermen's Assn.