Commonwealth of Massachusetts
Division of Marine Fisheries
251 Causeway Street, Suite 400
Boston, Massachusetts 02114
(617)626-1520
fax (617)626-1509

Daniel J. McKiernan
Acting Director

Charles D. Baker
Governor
Karyn E. Polito
Lieutenant Governor
Kathleen Theoharides
Secretary
Ronald Amidon
Commissioner
Mary-Lee King
Deputy Commissioner

March 6, 2020

Michael Pentony, Regional Administrator
NOAA Fisheries, GARFO
55 Great Republic Drive
Gloucester, MA 01930

RE: Massachusetts Right Whale Conservation Plan 2020

Dear Mr. Pentony,

The Massachusetts Division of Marine Fisheries offers the following proposal to amend the Atlantic Large Whale Take Reduction Plan and provide protection for right whales in Massachusetts coastal waters (see attachment titled Massachusetts Right Whale Conservation Plan 2020). The Division has been a committed member of the TRT since its inception. We are committed to developing a comprehensive strategy to reduce the risk of entanglement and serious injury and mortality to North Atlantic right whales that maintains a safe, efficient, and profitable lobster fishery in Massachusetts.

Sincerely,

Daniel J. McKiernan

ATTACHMENT A

2020 Massachusetts Right Whale Conservation Plan

Background

Over the last several months, the Massachusetts Division of Marine Fisheries (DMF) has worked closely with the National Marine Fisheries Service and the Massachusetts lobster industry to develop conservation measures to augment protections for right whales under the Atlantic Large Whale Take Reduction Plan. We understand the challenge in identifying conservation measures that meet the 60% risk reduction target but are still workable for the fishing industry. Given the current trajectory of the right whale population and the high abundance of whales observed in Massachusetts waters each year, we are committed to achieving an overall goal of 60% risk reduction in our waters.

However, meeting that goal is especially complicated in Massachusetts because we are the only state with multiple lobster management areas (LMA) in our waters. Each area has their own unique lobster management strategy, level of fishing effort, and trends in effort. In addition, each area has varying patterns of whale distribution and abundance.

In our deliberations about conservation measures, we considered three categories; measures that address acute entanglement risk, measures that address dispersed entanglement risk, and measures that mitigate for serious injury and mortality (SIM) and sub-lethal effects. Acute entanglement risk is that posed to a dense, consistent, and largely predictable aggregation of whales. Whereas dispersed entanglement risk is that posed to single whales or small groups of whales whose movements are unpredictable and observed distribution occurs infrequently. Mitigating the risk of SIM and sub-lethal effects is focused on reducing harmful impacts to whales in the event that an entanglement occurs.

Acute Entanglement Risk

We feel that the appropriate management tool to address acute entanglement risk at this time is the elimination of risk through a seasonal closure to fixed fishing gear. Approximately 65% of the known right whale population visits Cape Cod Bay each year. This is the largest known aggregation of North Atlantic Right whales in the world. In a single day in April 2017, a total of 179 right whales were observed in Cape Cod Bay. This represents a peak observed density of 10 right whales/cubic mile of water. To put this in perspective, the Gulf of St. Lawrence, an area which hosts large aggregations of right whales in recent years and has been the epicenter of an Unusual Mortality Event since 2017, has only ever reached a known peak density of 0.012 whales per cubic mile of water, in June 2018. This underscores the importance of the Massachusetts Bay Restricted Area (MBRA) as an effective means of eliminating entanglement

risk and subsequent serious injury and mortality to right whales. The MBRA closure likely represents the single most important conservation measure to right whales in the United States.

The Division of Marine Fisheries (DMF) has been proactive in ensuring the effectiveness of the state waters portion of the MBRA closure. We have done this by implementing a dynamic extension of the fixed gear closure in the state waters portions of the Mass Bay Restricted Area if the presence of right whales extends past the closure end date. The size, location and duration of the closure extensions are created by DMF through the director's authority using data on whale distribution and abundance from the Provincetown Center for Coastal Studies (PCCS) aerial surveillance team. Furthermore, with help from the Massachusetts Environmental Police we regularly patrol Cape Cod Bay to identify and remove any derelict or abandoned fishing gear to further reduce the risk of entanglement.

Ropeless fishing represents another possible means to mitigate acute entanglement risk. It is our belief that the technology and concomitant fisheries management framework necessary to execute ropeless fishing is not sufficiently developed at this time to allow it in a manner that is safe, cost effective, compatible with high gear densities, and compatible with important competing mobile gear fisheries for groundfish, sea scallops, and surf clams. DMF is committed to permitting and promoting experimental ropeless fishing in areas and times that do not have a high risk of conflict with other fisheries and do not pose substantial risk of interactions with right whales.

Dispersed Entanglement Risk

Dispersed entanglement risk is a more general risk posed by gear in times and places where whales are not aggregated. The primary way of mitigating this risk is reducing the amount of buoy lines deployed in all fixed gear fisheries. It is our opinion that to effectively reduce buoy lines it is first necessary to establish an accurate baseline of how many buoy lines are being fished. DMF has required all fixed gear fishermen who land in MA ports to report the number of buoy lines they deploy since 2011. This includes federally permitted fishermen as well. We are one of only two jurisdictions in the U.S. that currently requires this. With these data we can look at trends over time and can judge the effectiveness of management measures we have put into place to control fishing effort with empirical data. We do not have to rely solely on models, assumptions, and expert opinion to quantify buoy line numbers. Since 2011 we have observed declining trends in the number of buoy lines deployed in the lobster fishery by Massachusetts based fishermen (Table 1, Figures 1 – 4). This trend is apparent both statewide and in each individual lobster management area (LMA) within Massachusetts coastal waters. Buoy line trends from Massachusetts based LMA3 fishermen have increased in recent years, but the entirety of LMA3 falls outside or our jurisdiction.

Table 1: MA Lobster-pot Fishery, Total maximum buoy lines by LMA and Year, 2011-2018

LMA	2011	2012	2013	2014	2015	2016	2017	2018
LMA1	71,811	67,801	65,220	66,050	61,014	64,191	67,846	60,821
LMA2	10,952	10,828	8,560	7,803	7,333	7,167	7,002	6,188
LMA3	1,299	1,256	1,335	1,549	1,040	1,126	1,228	1,656
OCLMA	18,430	15,027	16,773	15,009	15,037	13,669	13,518	13,474
Total	102,492	94,912	91,888	90,411	84,424	86,153	89,594	82,139

Data Source: MA Supplemental Reports and LMA permit declarations

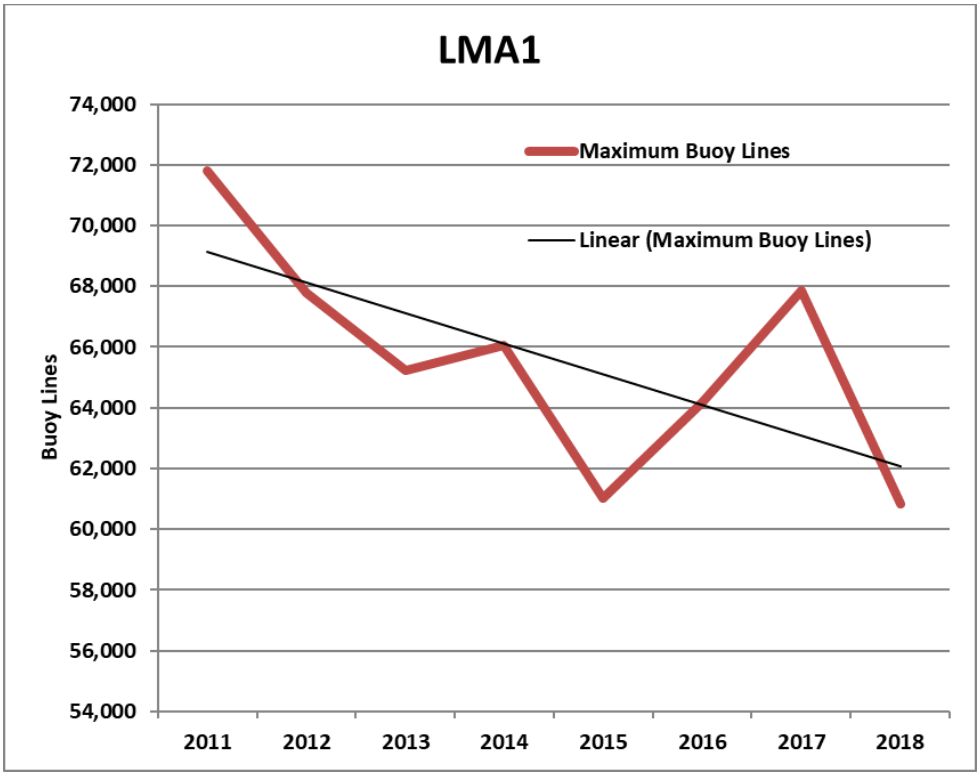

Figure 1. Total maximum buoy lines deployed in LMA 1 – 2011 - 2018

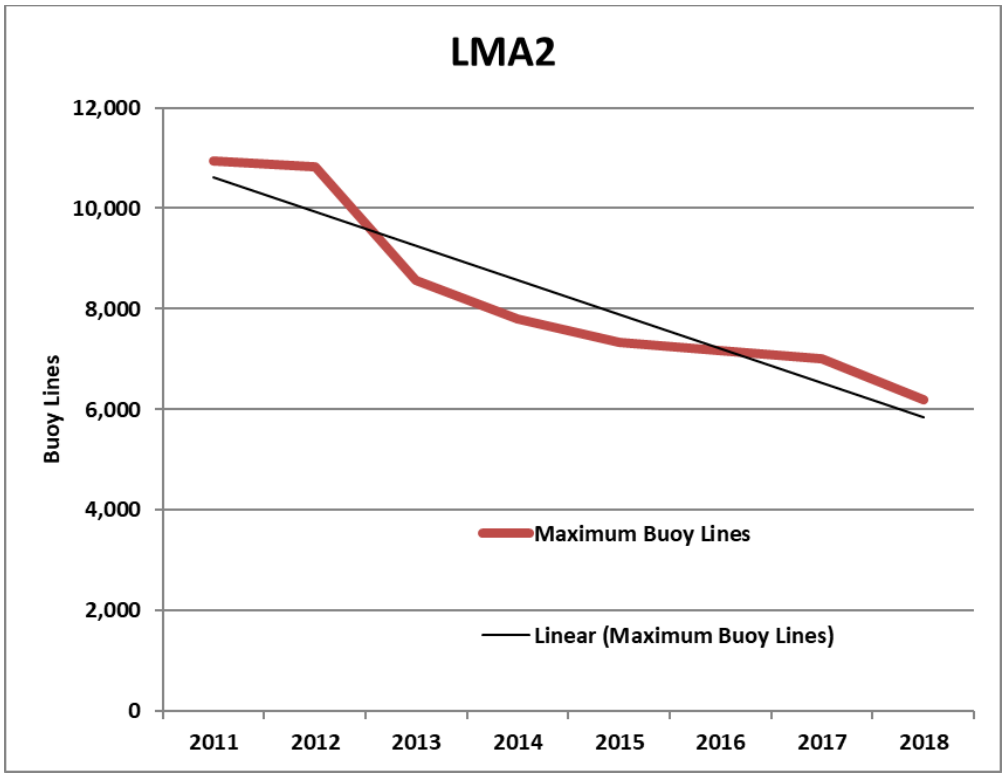

Figure 2. Total maximum buoy lines deployed in LMA 2 – 2011 - 2018

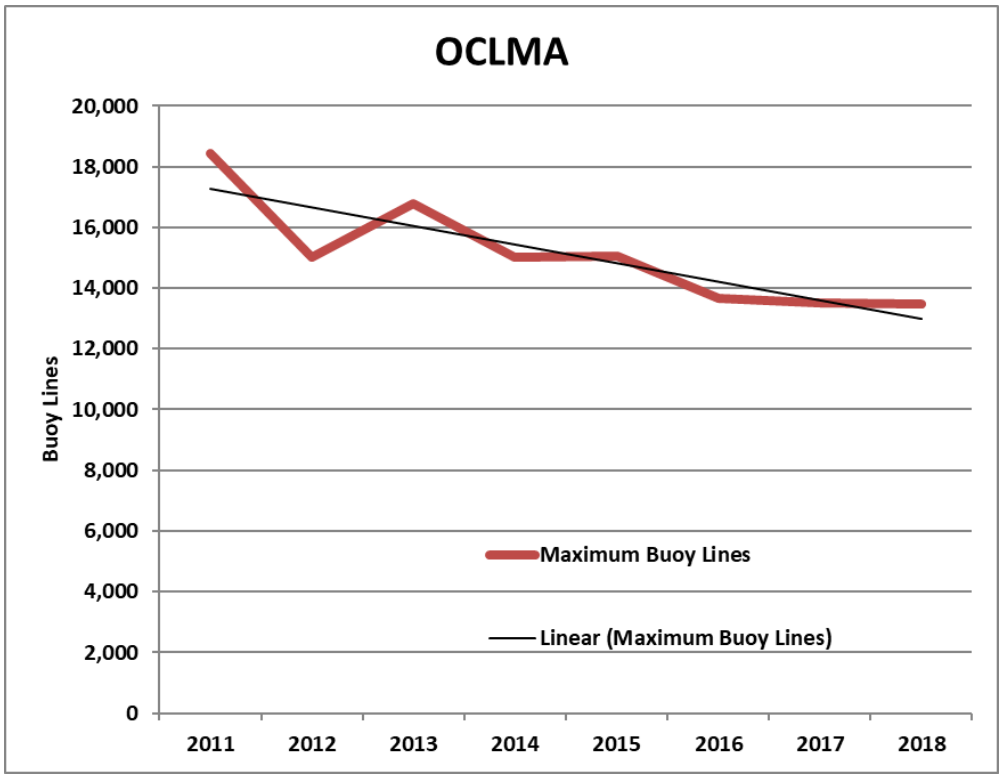

Figure 3. Total maximum buoy lines deployed in LMA OCC – 2011 - 2018

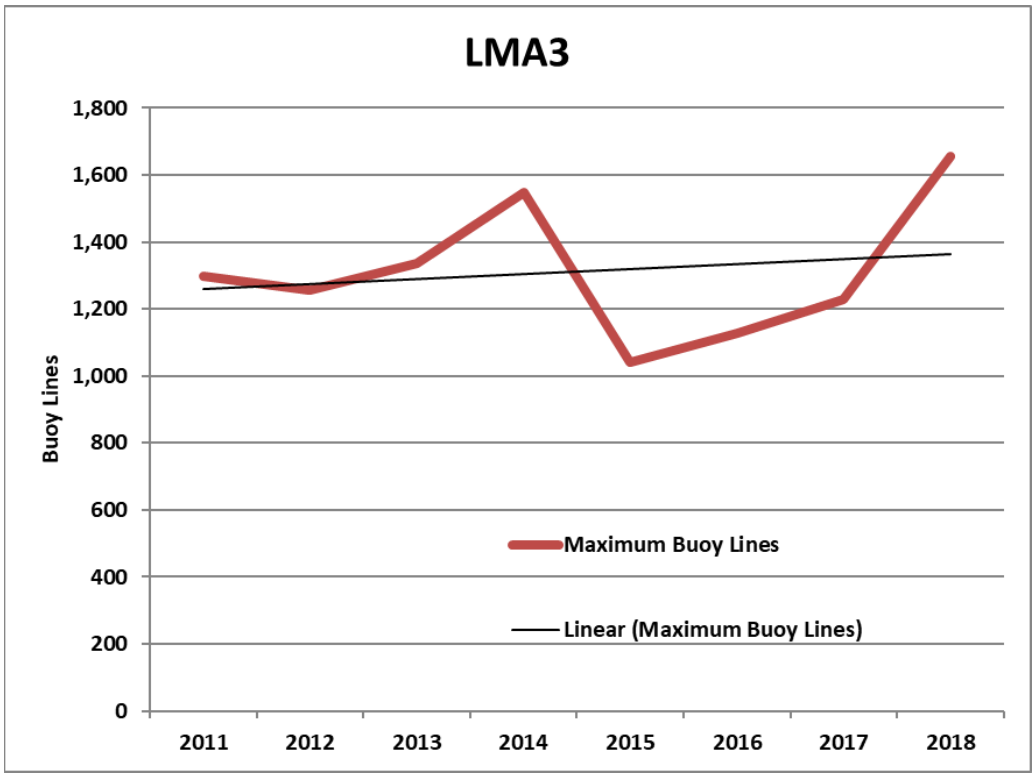

Figure 4. Total maximum buoy lines deployed in LMA 3 – 2011 – 2018

Over the long term we have proactively managed lobster fishing effort in the Massachusetts lobster fishery. We have had a moratorium on the issuance of new coastal lobster fishing permits since 1988 and a moratorium on the issuance of LMA 1 lobster landing permits since 2003. We allow the transfer of active coastal lobster permits (at least 1,000 lbs or 20 sales per year for 4 out of last 5 years) to qualified individuals (1-year full time or equivalent part-time experience in the lobster trap fishery or 2-years full-time or equivalent part-time experience in other commercial fisheries). This has resulted in a long-term reduction in the number of participants and the amount of fishing effort in the MA lobster fishery (Table 2 and 3).

Table 2: MA Lobster-pot Fishery, Active Permit Count by LMA and Year, 2011-2018

LMA	2011	2012	2013	2014	2015	2016	2017	2018*
LMA1	669	650	628	624	627	627	634	651
LMA2	77	78	73	64	71	78	73	71
LMA3	21	26	25	28	25	26	26	27
OCLMA	69	67	71	67	65	61	60	63
Total	836	821	797	783	788	792	793	812

Data Source: MA Trip-level reports and NOAA Fisheries VTRs
*Preliminary, subject to change

Table 3: MA Lobster-pot Fishery, Issued Permit Count by Permit type and Year, 2011-2018

Issued Permits	2011	2012	2013	2014	2015	2016	2017	2018
Coastal Lobster	1,245	1,214	1,188	1,170	1,139	1,116	1,088	1,081
Offshore Lobster	189	175	161	163	159	154	171	156
Seasonal Lobster	98	78	79	76	86	88	96	100
Total	1,532	1,467	1,428	1,409	1,384	1,358	1,355	1,337

Data Source: MA Permitting database

All Massachusetts fishermen who fish in LMA1, LMA2, and LMAOCC have been subject to a maximum trap limit of 800 since 1992. In addition to this LMAOCC and LMA2 have been subjected to a historically based trap allocation plan in 2004 and 2007 respectively. These plans allocated individual transferable trap allocations based on historical participation and also include a 10% trap tax on any partial trap allocation transfer. NMFS has adopted complimentary measures to these plans and your agency is integral to the administration of these plans. The implementation of the effort capping and effort reduction measures in Massachusetts have greatly contributed to the reduction in traps and the reduction of buoy lines we have observed.

We anticipate that the declining trends in participation, traps, and buoy lines will continue to decline. The median age of fishermen in Massachusetts has steadily increased over time and is rapidly approaching the age at which many fishermen retire or downscale their effort (Figure 5).

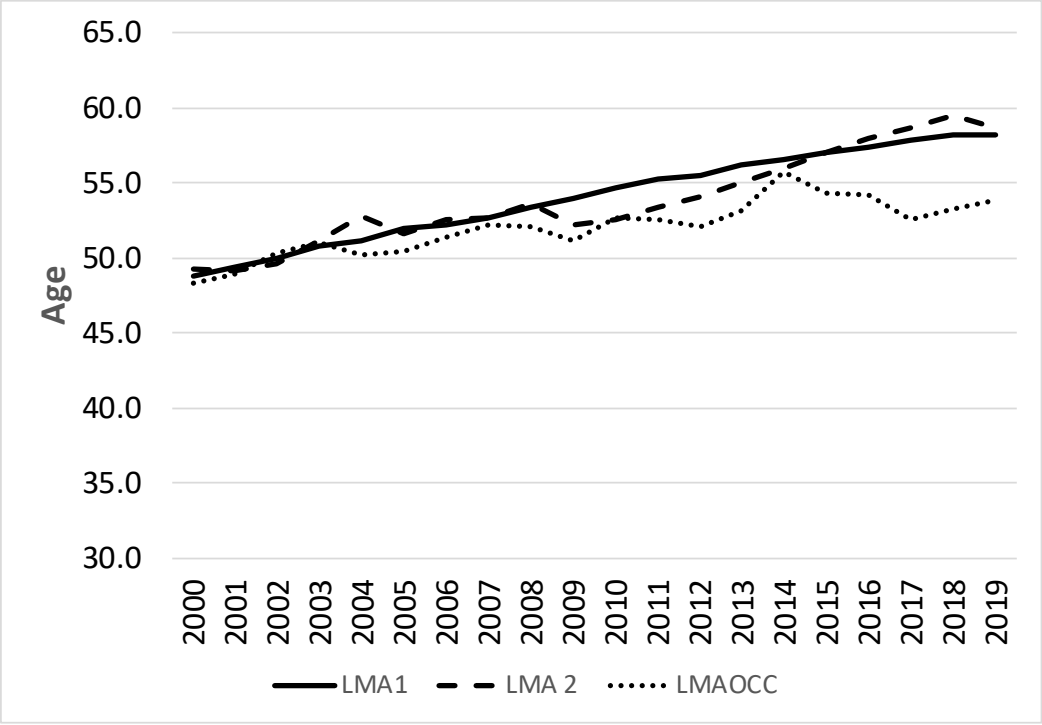

Figure 5. Median age of lobster permit holder in LMA1, LMA2, and LMAOCC – 2000 to 2019.

As these fishermen reach retirement and leave the fishery, we expect that only a portion of their permits will be transferred. In LMA2 and LMAOCC this has and will continue to promote partial trap allocation transfers which are subject to a 10% trap tax. DMF will continue to monitor participation and efforts trends over time and is committed to making necessary adjustments to our management framework to ensure long term stability in participation in our lobster fishery with continued reductions in buoy lines. We believe our track record in this area speaks for itself.

Mitigating for Serious Injury and Mortality and Sub-Lethal Effects

The vast majority of buoy lines fished in Massachusetts state waters are comprised of either 5/16" or 3/8" line. Prior to 2010, these smaller diameter lines were also the most common size removed from entangled right whales. However, in recent years, the majority of rope removed from and seen on right whales has been heavy, large diameter rope not used in the inshore US lobster fishery. This gear is typical of the offshore lobster fishery and the Canadian snow crab fishery. This heavy line also has a higher breaking strength and is most likely to cause severe entanglement injuries and mortality. An analysis of entanglement cases found only severe injuries resulting from higher breaking strength line (Knowlton et al. 2016). That same analysis concluded that the broadscale use of reduced breaking strength ropes (1,700 pounds or less) would reduce the number of life-threatening whale injuries by 72%. Some scientists also believe that sub-lethal effects of minor entanglements are putting additional stress on the already declining right whale population and further suppressing their ability to recover. To address disperse entanglement risk during times when whales are not aggregating, Massachusetts managers and fishermen have been pursuing potential weak rope options for vertical lines. DMF and the Massachusetts Lobstermen's Association are partnering on a state-wide effort to test weak rope options beginning in summer 2020. In addition, the South Shore Lobstermen's Association has successfully developed a weak sleeve that can be used on traditional buoy lines to create 1,700-pound weak links. Massachusetts is committed finding effective weak rope solutions to make vertical lines less harmful to right whales while sufficiently safe for the commercial fishermen.

The Division of Marine Fisheries proposes the following management strategies:

Acute Entanglement Risk

*Continue the ongoing MBRA seasonal fixed gear closure from February 1st through April 30th.

*Dynamic closure extension of the state waters portion of the MBRA using state authority to extend the closure in portions of state waters, as necessary based on up to date whale surveillance.

*Establishment of a new South of Nantucket Restricted Area (SNRA) fixed gear closure from February 1st through April 30th (Figure 6a and 6b). We propose using utilizing 2017 to 2019 right whale sightings data to evaluate this closure. We also suggest that the size, shape, and timing of this closure be re-evaluated ever three years and modified as necessary.

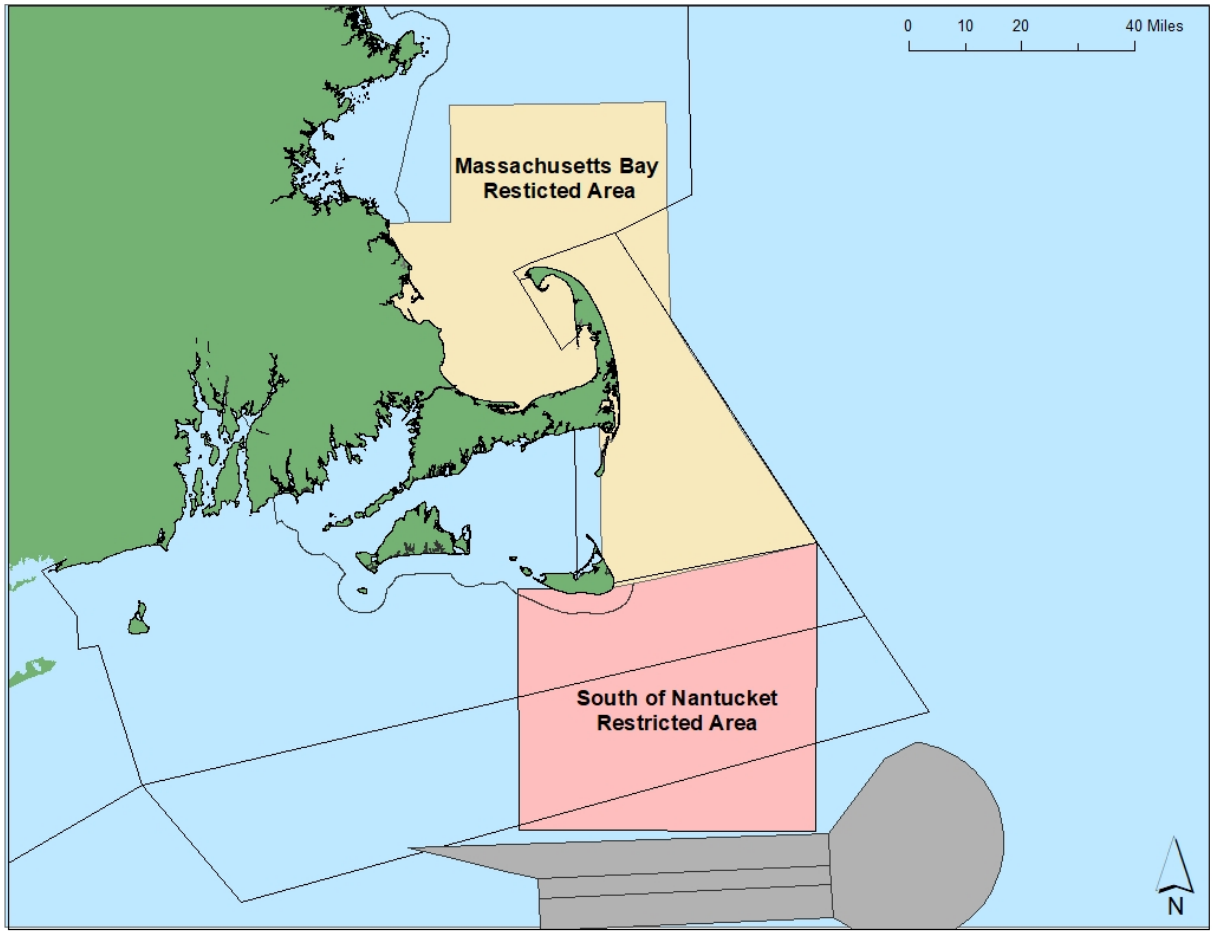

Figure 6a. Map of the Massachusetts Bay Restricted Area and newly proposed South of Nantucket Restricted Area.

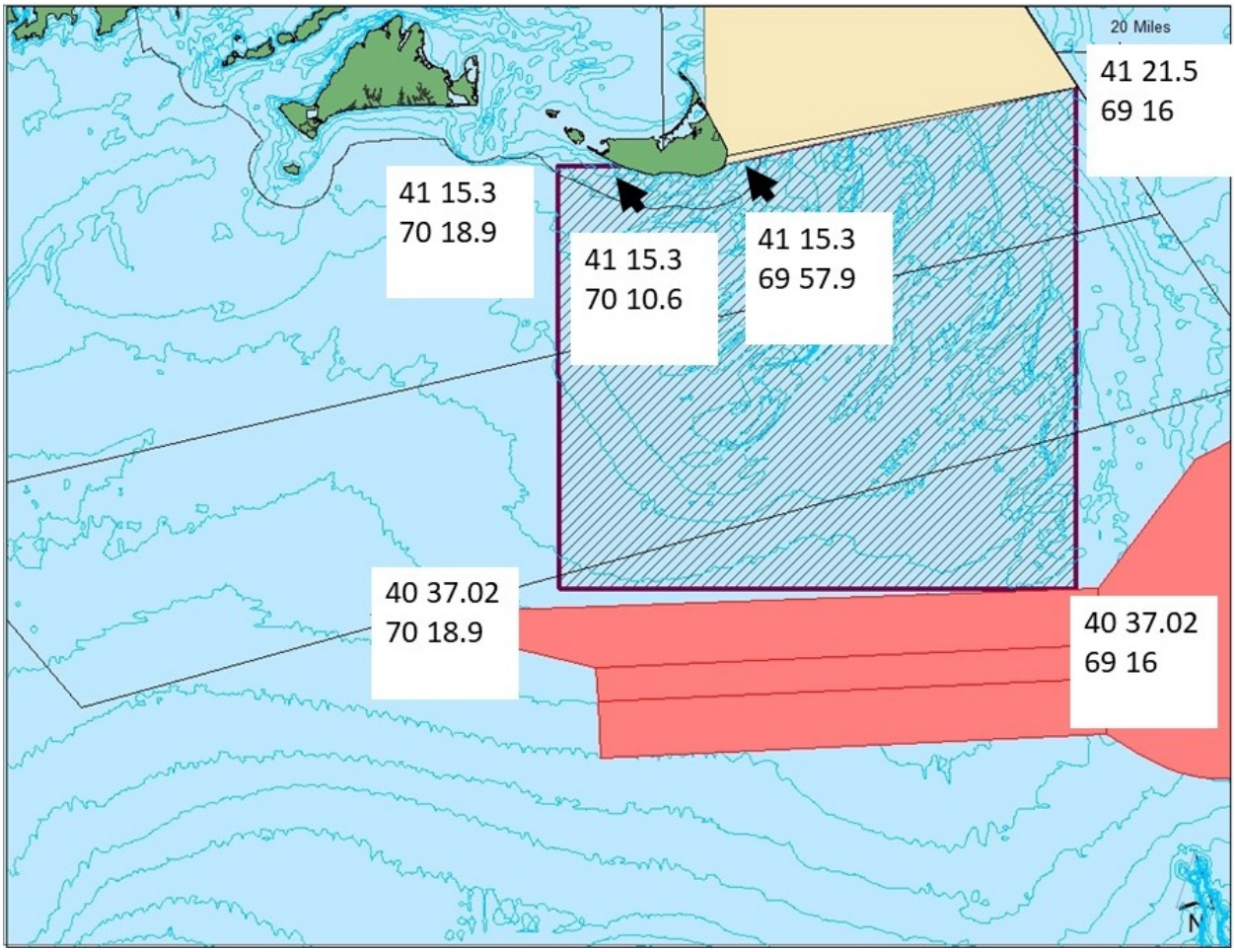

Figure 6b. Close up map of the proposed South of Nantucket Restricted Area with coordinates of each corner.

<u>Dispersed Entanglement Risk</u>

1.) Trawling up requirements – We expect these to be applied to all fishermen in the EEZ regardless of state of origin.

i. LMA 1
    1. 3 to 6 miles - 10 trap per trawl minimum
    2. 6 to 12 miles - 15 trap per trawl minimum
    3. 12 + miles – 25 traps per trawl

ii. LMA 2
    1. 3 to 12 miles – 15 trap per trawl minimum
    2. 12 + miles – 25 traps per trawl

iii. LMA OCC
    1. 3 miles to LMA 3 boundary – 15 trap per trawl minimum

2.) Ban on fishing singles on vessels greater than 29' in all MA LMA's on permits transferred after 1/1/2020

3.) Continue the ongoing 50% trap allocation reduction in LMA2 through 2021

i. 2016 – 25% reduction
ii. 2017 – 5% reduction
iii. 2018 - 5% reduction
iv. 2019 – 5% reduction
v. 2020 - 5% reduction
vi. 2021 - 5% reduction

Mitigation of SIM and Sub-lethal Effects

1.) Requirement for all fishermen in all LMA's to utilize 1,700 lb. breaking strength rope or an approved 1,700 lb. contrivance as follows;

i. Coast to 3 miles – One weak contrivance at 50% down buoy line.
ii. 3 miles to 12 miles – Two weak contrivances in topper at 25% at 50% down.
iii. 12 miles to the LMA 3 border – One weak contrivance in topper at 35% down.
iv. Ban on all rope greater than 3/8" diameter in Massachusetts coastal waters.

Summary

Based on preliminary evaluations and discussions with NMFS staff we are confident that the measures we have proposed will achieve the required 60% risk reduction for the Massachusetts lobster fishery. We encourage NMFS to utilize a combination of the risk evaluation tool, empirical data, expert opinion, and common sense when evaluating our proposal. We also urge NMFS to utilize more recent right whale sightings data instead of relying solely on a long time series. To date the risk evaluation tool has relied on right whale sightings data from 2010 through 2017. Time series of sightings data make sense for demonstrating historic usage of habitat, however in a rapidly changing environment with documented broadscale changes in right whale distribution, they likely do not accurately reflect current density and distribution of whales. This has the potential to overestimate the effectiveness of risk reduction measures in some areas and underestimate it in others.

In closing, we are committed to developing a comprehensive strategy to reduce the risk of entanglement and serious injury and mortality to North Atlantic right whales that maintains a safe, efficient, and profitable lobster fishery in Massachusetts.