



Massachusetts Lobstermen's Association, Inc.

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February 25, 2021

Via email: michael.pentony@noaa.gov &

Online: <https://www.regulations.gov/commenton/NOAA-NMFS-2020-0031-0006>

Michael Pentony, Regional Administrator
National Marine Fisheries Service,
Greater Atlantic Regional Fisheries Office
55 Great Republic Dr.
Gloucester, MA 01933

RE: NOAA-NMFS-2020-0031-0006

Dear Mr. Pentony,

On behalf of its 1800 members, the Massachusetts Lobstermen's Association (MLA) respectfully submits this letter of comment with great concern and reservation to National Marine Fisheries Service (NMFS) regarding the proposed amendments to the regulations implementing the Atlantic Large Whale Take Reduction Team Plan (TEAM/PLAN), NOAA-NMFS-2020-0031, to reduce the incidental mortality and serious injury to North Atlantic Right whales and other protected species in the northeast commercial lobster and crab trap/pot fisheries to meet the goals of the Marine Mammal Protection Act (MMPA) and the Endanger Species Act (ESA).

Established in 1963, the MLA is a member-driven organization that accepts and supports the interdependence of species conservation and the members' collective economic interests. The MLA continues to work conscientiously through the management process with the MA Division of Marine Fisheries (MADMF), Atlantic States Marine Fisheries, National Marine Fisheries Service (NMFS), and Atlantic Large Whale Take Reduction Team (ALWTRT) to ensure the continued sustainability and profitability of all the resources in which our members are engaged in.

The cooperation put forth by the Massachusetts commercial lobster industry is a true testament that we can collectively work together with managers to reduce the potential risk for right whales all the while preserving the viable and historic commercial lobster fishery here in the Commonwealth.

Massachusetts Right Whale Conservation Timeline

1935- International ban on hunting whales goes into effect

1970- North Atlantic Right Whales listed as endangered

1996- NOAA implements the Large Whale Take Reduction Plan

1997-MA requirement for “breakaway” features in gillnets and trap/pot buoy lines

Seasonal ban in Cape Cod Bay for gillnets and on use of floating rope between pots

1997-Dedicated aerial surveys begin in Cape Cod Bay

2000- Year-round gear marking is implemented

2004 – Year-round ban on floating rope between traps in Cape Cod Bay

2007 - Year-round ban on use of floating rope between traps statewide

2014- MA Restricted Area is created – A three-month closure Feb-April to 3,071 sq. miles

2015 - 3 month (Feb/Apr) closure to all pots/traps in the MA Restricted Area

2016 – 3 month (Feb/Apr) closure to all pots/traps in the MA Restricted Area

2017 – 3 month (Feb/Apr) closure to all pots/traps in the MA Restricted Area **PLUS** 4-day extension of the gear closure in Cape Cod Bay

2018 - 3 month (Feb/Apr) closure to all pots/traps in the MA Restricted Area **PLUS** a 15-day extension of the gear closure and speed restriction (10 mph) for small vessels in Cape Cod Bay

2019- 3 month (Feb/Apr) closure to all pots/traps in the MA Restricted Area

2020 - 3 month (Feb/Apr) closure to all pots/traps in the MA Restricted Area, MLA members deploy 700 coils of whale safe 1700lb weak red rope.

2021 – MFAC implements 73.6% risk reduction conservation measures

Proposed Rule Changes

Modify gear marking to introduce state-specific marking colors

The **MLA SUPPORTS** increasing the number of the area color for vertical lines markings. By using a state by state color scheme it will help to identify the origin of an interaction should there be one. Currently, the limited markings on the vertical lines drastically hinders NMFS’s ability to truly identify the origin of the interaction to sanction the appropriate risk reductions.

However, the MLA is greatly concerned about the dual permit holders who will have markings indicative of state waters fishermen should the top 2 fathoms of vertical line be missing upon retrieval which is where the one federal green mark is located. NMFS needs to seriously reevaluate how these dual permit holders will mark their endlines in federal waters.

Modified Gear Configurations (Trawls and Weak Contrivances)

Trawls

Currently, there are less than 80,000 vertical lines deployed by the commercial lobster fleet in Massachusetts and a significant number of commercial lobstermen continue to convert their businesses to fish trawls. Their collective effort to further reduce vertical lines will be beneficial and the **MLA DOES NOT SUPPORT** the 50% increase in pots in the trawls for LMA 1, LMA2 and OC between 3-12nm. The fleet that fishes in these areas is limited by vessel size and available deck space, creating a significant safety concern.

The proposed gear configurations to reduce the number of vertical buoy lines by requiring more traps between buoy lines between LMAs is unfair as the LMAs beyond 12nm is only a 25% increase. The MLA requests the same 25% trawl length increase be applied to all the LMAs under consideration.

LMA	Current	Proposed
LMA1, 6–12 nm	10 traps/trawl	15 traps/trawl
LMA 2, OC 3-12 nm	10 traps/trawl	15 traps/trawl
LMA1, 2 beyond 12 nm	15-20 traps/trawl	25 traps/trawl

Massachusetts Vertical Line Reductions Underway

The MADMF has decades of data to back up the ongoing reduction of the lobster fishery here in Massachusetts with a 100% MANDATORY reporting. The MADMF can show the downward trend for the MA lobster fleet. Currently, in Massachusetts there are less than 747 active lobstermen fishing an average of 490 pots and most of them are fishing 5-30 pot trawls with an estimated 20-25 permits retiring every year.

The Massachusetts commercial lobster fishery in 2007 had 1,361 permits and as of 2019 there was only 1,066 permits issued of which 747 were fished. During this timeframe there has been a reduction of 295 commercial lobster permits with **NO NEW PERMITS** being issued. The commercial lobster industry in the Commonwealth deploys approximately 80,000 vertical lines and the numbers are going down as the new conservation management comes online in early 2021.

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

Massachusetts Ongoing Trap Reductions

Currently, Massachusetts commercial lobstermen are still reducing effort through the ongoing trap reductions in Lobster Management Area (LMA) 2 and LMA 3 and these real numbers in reduction that need to be quantified and given a conservation credit. Today, there are approximately 70 active lobstermen in MA LMA 2 and approximately 58 active lobstermen in Outer Cape Cod (OCC), how much further can they be reduced in effort to remain whole when they are continually paying a conservation tax every time a tag is transferred. It should also be noted that; every transfer in LMA 2, LMA 3 and OCC there is also a 10% conservation trap tax which also equates to even a further reduction in effort.

Weak Contrivances

On January 28th, the MFAC implemented a more restrictive rule for state waters weak insertions at every 60', the MLA is concerned that the frequency of weak insertions or weak rope into buoy lines will not be fair and equitable among states.

The **MLA SUPPORTS** that **EVERY** state **MUST HAVE THE SAME NUMBER** of weak contrivances in federal waters without any exceptions. The commercial lobstermen here in the Commonwealth will yet again be doing more than the rest of the lobster fishery and the weak contrivances for the vertical buoy lines need to be in line with the federal plan. Many MLA members fish both state and federal waters and these requirements need to lineup so they can move in and out of state waters into federal waters without changing out their entire endline.

State	Current	Proposed
LMA 1, 2, OCC beyond 12 nm	None	1 weak insertion 35% down the line
NH/MA/RI Coast-3 nm	None	1 weak insertion 50% down the line

1700lb Weak Red and Candy Cane Rope as a “Weak Contrivance”

In 2019, the Lobster Foundation of Massachusetts was granted a Massachusetts Environmental Trust grant to develop a 1700lb weaker whale safer red rope that was deployed during the 2020 fishing season for field testing. The ropes 1700lb breaking strength basis came from the New England Aquariums study *Effects of fishing rope strength on the severity of large whale entanglements* by Amy Knowlton et. al. where they “*found entangled in tested rope strengths below 7.56 kN or 1700 lbsf, implementation of RBS ropes would likely reduce the probability of mortality and suffering*” Kowlton et.al.

We are happy to report that over 700 coils of the first version were successfully distributed and deployed by several hundred commercial lobstermen in Massachusetts. MADMF also purchased 400 plus coils of the weak red rope that will be distributed to the commercial lobster industry in early March.

The LFoM was also awarded a small grant to purchase the 1700lb breaking strength red and white (Candy Cane) rope to be field tested this spring (2021). We are looking forward to securing additional funding to purchase a large quantity of the weak ropes to be deployed during the 2021 fishing season.

These two weak ropes breaking at 1700lbs have been tested by Kevin Staples at the Maine Department of Resources and we are happy to report that they are breaking well within the acceptable tolerance ranges to significantly reduce the Serious Injury and Mortality to right whales:

New -Weak Red Rope (Small 3/8”)	New - Weak rope 3/8” Red and White (Candy Cane)
1700 lbs	1492 lbs
1736 lbs	1462 lbs
1747 lbs	1501 lbs
1740 lbs	1471 lbs
1675 lbs	1522 lbs



Ketcham Supply in New Bedford has been instrumental in getting these two 1700lb. weak ropes developed and manufactured. We are pleased to report that these weak ropes can be made in state specific colors and are hopeful that NMFS will utilize these weak ropes and various colorations for implementation as a default gear marking.

Furthermore, the MLA and LFoM is working tirelessly with the MADMF to develop and test a suite of acceptable weak contrivances that will be acceptable. We are hopeful that NMFS will adopt these and release a menu as soon as possible as the commercial lobstermen are looking for options to configure the endlines to be ready for the 2021 fishing season.

The LFoM is processing all the data that was collected from the first year of the weak red rope project. The consensus is that the weak red rope is a viable option for a weak contrivance and the MLA respectfully asks NMFS to accept the 1700lb. weak red rope as a weak contrivance.

The 1700lb. candy cane rope will be field tested this year and should also be accepted as a weak contrivance based on the manufacturers specifications and testing that has been done by the MEDMR all of which proves it to be well within the 1700lb., with acceptable tolerances, for a “weak contrivance” as the industry needs as many options as possible.

(See rope manufacturers specifications below)



Product Specifications

Low Tensile Marine Rope

Ketcham Supply is the exclusive distributor of this product

Part No:	R38SR
Description:	Low Tensile Marine Rope. Hard lay, sinking line. 100% Polyester, dyed red.
Uses:	This rope is used to attach and retrieve deep water fishing traps. The low tensile strength promotes quick release of whales or large sea mammals in the event of entanglement with the rope or fishing gear.
Tensile strength:	1700 lbs +/- 3%
Yield:	36 ft/lb
Dimensions:	3/8" dia. X 600 ft.
Manufacturer:	Rocky Mount Cord Company 381 N. Grace Street Rocky Mount, NC 27803 www.rmcord.com

Product Image:



Ketcham Supply Co

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Low Tensile Marine Rope

Ketcham Supply is the exclusive distributor of this product

Part Number	R38SCC
Diameter	3/8 Inch
Length	600 Foot Coils
Tensile Strength	1,700 Pounds, +/- 3%
Characteristics	Hard Lay, Sink Rope
Color	White with Dyed Red Strands
Yield	36 Feet per Pound
Material	100% Polyester
Manufacturer	Rocky Mount Cord Company 381 N. Grace Street Rocky Mount, NC 27803

Product Image



**Modify existing seasonal restricted areas to restrict buoy lines
(but allow ropeless (acoustic) fishing)**

The Massachusetts Lobstermen’s Association **DOES NOT SUPPORT** ropeless (acoustic) technology and the MLA **DOES NOT** support the ten-year timeline set forth in the BiOp which clearly indicates that ropeless (acoustic) fishing year round is the ultimate goal of NMFS.

LMA	Current	Proposed
All Restricted Areas	Closed to Fishing	Allow trap/pot fishing without buoy lines in existing and proposed restricted areas with an exempted fishing permit (EFP). EFP authorizations would likely include conditions to protect right whales (e.g. area restrictions, low vessel speed, observer monitoring, and reporting requirements.)

Ropeless (Acoustic) Fishing is NOT REAL

Today, there is a lot of misperception on what can and cannot be done in the commercial lobster fishery when it comes to the use of ropeless (acoustic) fishing. Over the last 5 years or so, there has been a major effort to make it mandatory for the commercial lobstermen and fixed gear fishermen to transition over to ropeless (acoustic) gear to further save the right whales.

Furthermore, this gear transition to ropeless (acoustic) is being pushed for year round implementation when it is not needed as the 3-month closure is in effect when the right whales are present. The MA Restricted Area has a 0% chance of an entanglement happening and to think there will be zero failures of this technology is knowingly putting the right whales at risk.

The sheer magnitude of the economic undertaking would be well over 150 million dollars to outfit the commercial lobster industry here in the Commonwealth the first year. The individual cost would be an estimated \$190,000 per fishermen to outfit their gear to go fishing. Not to mention there is an average of 10% gear loss each year and this would have to be replaced year in and year out and the gear loss would likely increase dramatically as the technology has yet to be tested on large scale multi-disciplined fisheries. This transition would take hundreds of millions of dollars and decades to implement and outfit every commercial fishing vessel that is on the water.

The unintended consequences of gear conflicts between traditional and ropeless (acoustic) gear in the fisheries would be grave if not thought through to the end. Fixed gear commercial fishing and the

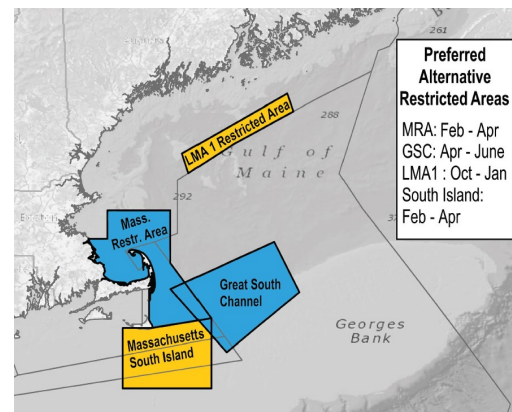
mobile gear industry do not fish in one hypothetical box for a species and this is where the gear conflicts would be catastrophic given that the technology is not readily available nor do individual brands talk to each other.

Here is a scenario for comparison when technologies do not communicate with each other; What would happen if AT & T, Verizon, Singular, Sprint, and Metro PCS cellphones did not communicate with each other? The consumers would have to carry several cell phones to stay connected and this would be the same for the ropeless (acoustic) technology. As of today, February 23, 2021, these technologies do not communicate with each other; Desert Star, Edge Tech, Lobster Lift, Smelts and more, do not interact with each other so each commercial fisherman would have to have multiple boxes, screens, and transducers on their vessel to see where all the gear is on the bottom.

As stated by MLA, Secretary Treasurer, Dave Casoni during the North Atlantic Right Whale Consortium meeting in 2019; “We’re at the Model T today and they expect us to be at the Tesla tomorrow.” Remember it took 100 plus years to get there with tens of thousands of people working on the technology.

New seasonal buoy line closures

The MLA **DOES NOT** support ANY new closures as a conservation risk reduction measure. The proposed closure in LMA 2/3 and overlap is almost the size of Connecticut and unjustly too large and must be reduced dramatically. The opportunistic sightings data that was used needs to be excluded as it was not collected in a systematic or timely manner.



The month of April should also be removed from the proposed SNE closure timeframe for the same reasons as noted above, the low number of historic opportunistic right whale sightings data does not warrant this month being closed. There just aren't the high aggregations and this month would be economically devastating to the commercial trap/pot fleet (lobster, crab & gillnet).

To evade a closure, even with the low number of fishermen fishing and the low number of right whale sightings, the LMA 2/3 overlap commercial lobstermen would be willing to fish 45 pot trawls with both endlines weakened to further reduce risk.

The LMA2 commercial lobstermen have been eviscerated through years of trap reductions and there is so few fishermen fishing in this area and for them to lose yet even more profitable fishing would be economically devastating to these fishermen.

The MLA further requests that a 5-year review and sunset provision be added to ANY closure as the ecosystem is rapidly changing and the right whales are moving.

Additional Comments and Concerns

Massachusetts commercial lobstermen have remained at the forefront of conservation measures for the right whales for over two decades. Unfortunately, the Biological Opinion (BiOp) clearly indicates an aggressive timeline for the implementation of more conservation measures implemented above and beyond ALL the conservation measures that are in place today. While NMFS's BiOp found "no jeopardy", they are basing everything on their contingency plan to implement a Conservation Framework over the next 10 years leaving the federally permitted commercial lobstermen in Massachusetts in limbo yet again.

Phase 1: Implementation of the Proposed Rule to reduce risk to right whales from the northeast lobster and Jonah crab fisheries by at least 60% in 2021.

Phase 2: Implementation of rules (to be determined) to reduce mortality and serious injury (M/SI) in federal gillnet and other Atlantic coast trap/pot fisheries by 60% in 2023.

Phase 3: Implementation of rules (to be determined) for an additional 60% risk reduction in all federal fixed gear fisheries in 2025

Phase 4: Implementation of rules (to be determined) for additional 87% risk reduction in all federal fixed gear fisheries in 2030. This could be reduced to 28% if M/SI from Canada or vessel strikes are reduced.

The BiOP is setting an unrealistic and unattainable timeline for upwards of a 98% risk reduction conservation, what does that really mean to the commercial lobstermen in Massachusetts when we are at 73.6% today, this would be upwards of a 100% risk reduction by 2030. How is this even remotely

feasible when Massachusetts commercial lobstermen have ZERO mortalities and or serious injuries attributed to their fishery!

The unrealistic, idealistic and aggressive “phased” in approach on the Massachusetts commercial lobster fleet will cause even more economic hardship regardless of them being at the forefront on ALL the right whale conservation measures to date.

Massachusetts Marine Fisheries Advisory Commission (MFAC)

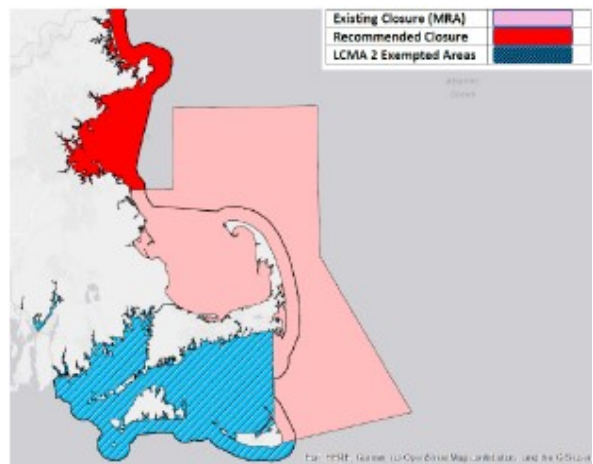
The MFAC at their January 28, 2021 voted on and passed an aggressive suite of additional conservation measures for a 73/6% risk reduction for right whale protection will be implemented in Massachusetts by March 5, 2021. These conservation measures are as follows;

Commercial Fixed Gear Closures

The MFAC voted to:

- Expand the existing seasonal state waters commercial trap gear closure in both space and time.

The existing closure occurs from February 1 – April 30 within Cape Cod Bay, Stellwagen Bank, and the Outer Cape Cod Lobster Management Area. The closure area will extend north in state waters from Scituate Harbor to the New Hampshire maritime border and the closure duration will extend through



May 15. However, during the May 1 – May 15 period, the closure will occur on a dynamic basis allowing DMF to lift the closure (or parts thereof) if whales no longer remain in state waters. The closure will not extend into those southern state waters in Lobster Conservation Management Area 2.

- Geographically expand the existing January 1 – May 15 gillnet closure in Cape Cod Bay to include a discrete area along the South Shore between Plymouth and Scituate.

Commercial Trap Gear Modifications. The MFAC voted to:

- Require commercial trap fishermen to fish buoy lines that break when exposed to 1,700 pounds of tension beginning on May 1, 2021. This may be achieved by fishing specially manufactured buoy lines with a custom 1,700 pound breaking strength or by inserting NOAA Fisheries approved

contrivances into the top 75% of the buoy line every 60'. At this time, the only approved contrivance is the so-called "South Shore Sleeve."

- Require commercial trap fishermen fish buoy lines with a maximum diameter of 3/8".

Recreational Lobster and Crab Trap Measures. The MFAC voted to:

- Establish a recreational lobster and crab trap haul-out period of November 1 – May 15 (beginning on November 1, 2021) throughout all of state waters. This haul-out period will not apply to unbuoyed recreational lobster trap gear fished in the Cape Cod Canal.
- Require recreational trap fishermen fish buoy lines with a maximum diameter of 5/16".

https://www.mass.gov/doc/january-28-2021-mfac-meeting-summary/download?utm_medium=email&utm_source=govdelivery

Massachusetts commercial lobstermen are repeatedly burdened with economic hardships and the MOST restrictive conservation regulations in the United States commercial lobster industry, it is NO LONGER the sole responsibility of the Massachusetts commercial lobstermen to do ANY more "risk reduction or conservation" until other regions step up to the SAME draconian risk reduction and conservation effort levels that are in place right here in the Commonwealth.

Unknown Takes

NMFS has determined that under these baseline conditions (baseline 2000-2019) predict that the *"right whale population will continue to decline over the next 50 years, even if all U.S. federal fixed gear fisheries are shut down."* <https://www.greateratlantic.fisheries.noaa.gov/public/nema/PRD/DraftFisheriesBiOp011421.pdf>

Right whales continue to change their movement patterns, resulting in their emergence in areas at times of year where they haven't been traditionally observed. In 2017, right whales appeared in the Gulf of St. Lawrence, around busy shipping lanes and areas of a high abundance of unregulated Canadian snow crab gear.

In 2017-2018 in Canada alone there were 12 right whales killed in the Gulf of St Lawrence; 5 to ship strikes, 2 to entanglements and 5 unknown causes. There were 5 additional live entanglements in this area. In 2018, a dead right whale was found off the Southeast U.S. in gear consistent with the Canadian snow crab fishery.

Per the ALWTRT proposal, there have been, with certainty, 0.2 takes per year attributed to the U.S. fisheries and 0.7 to Canadian fisheries. The 0.5 difference is significant between the countries and seeing Canada is only limited to spatial and temporal protections for right whales ONLY for the snow crab fishery leaving thousands of unregulated endlines being deployed in Canada.

When a word like “IF” is used to describe how much time right whales spend in the waters of the U.S. vs. Canada, one would think tagging these animals would be critical in saving them?! While survey flights religiously track right whales in Massachusetts, there seems to be less of an interest in tracking them throughout the region. Right whales need to be tagged today!

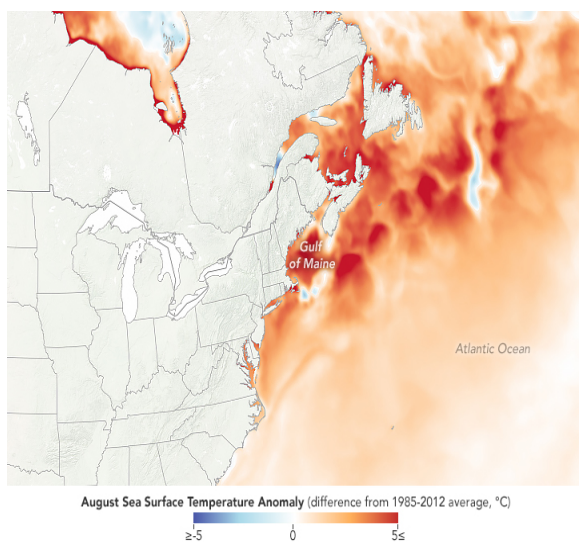
The staggering amount of deaths endured by the right whales in Canadian waters is unfathomable. The Canadians have killed on average 8 right whales per year over the last three years. NOAA could take ALL of the vertical lines out of the water along the East Coast and the Potential Biological Removal (PBR) would still be exceeded and the U.S commercial lobstermen would still be found 50% at fault! How is the U.S. commercial lobster fishery ever supposed to achieve the PBR goal when it is truly unattainable?

Currently, there are no regulations on the Canadian lobster fishery prohibiting the use of floating line at the surface which is deadly to right whales. Whereas, ALL U.S. commercial lobstermen are prohibited from using floating line at the surface, this conservation measures can make a difference and it should be implemented in Canada without further delay.

For decades now the commercial lobster industry has asked to tag these animals with great push back. Now more than ever we need real-time data on where these animals are so to reduce further harm as these animal’s swim into unprotected water. The days of assuming where they swim need to stop and tagging them for real-time data needs to be realized without further delay.

We cannot save the species without significant Canadian action TODAY! We need to demand more action from Canada as right whales are more frequently traveling from Florida to the Gulf of St. Lawrence into unregulated Canadian gear and vessel activity. When the right whales leave the safest waters of Cape Cod Bay in the spring they are very well fed and very much alive until they arrive in the unprotected water in the Gulf of St. Lawrence where they continue to die.

Habitat Degradation



As the ecosystem in the Northeast continues to deteriorate, right whales continue to chase the copepods into the unprotected waters in Canada leaving the U.S commercial lobstermen continue to pay the price for the right whales' failure to thrive. The right whales are using more energy searching for food leaving them thinner than their relatives in the Southern Hemisphere.

“The heatwave of 2018 fits with a much longer trend in the region, which is among the fastest-warming parts of the global ocean. In the past three decades, the Gulf of Maine has warmed by 0.06°C (0.11°F) per year, three times faster than the global average. Over the past 15 years, the basin has warmed at seven times the global average. The Gulf has warmed faster than 99 percent of the global ocean.”

<https://climate.nasa.gov/news/2798/watery-heatwave-cooks-the-gulf-of-maine>

There is no denying that the ongoing, [Watery heatwave cooks the Gulf of Maine](https://climate.nasa.gov/news/2798/watery-heatwave-cooks-the-gulf-of-maine), and is driving the right whales and their food of choice, copepods, northward where they continue encounter large diameter endlines and heavy fishing gear. *“The populations of copepods, a key food source for endangered Northern Right Whales, also seem to be moving with the changing conditions.”*

<https://climate.nasa.gov/news/2798/watery-heatwave-cooks-the-gulf-of-maine>

Moreover, the negative implications of [Projecting the effects of climate change on Calanus finmarchicus distribution within the U.S. Northeast Continental Shelf](#), Brian D. Grieve^{1,2}, Jon A. Hare³ & Vincent S. Saba⁴, (Grievet et. al.), do not look good for the recovery efforts set forth in the BiOp or the proposed ALWTRT rule for the right whale.

“Calanus finmarchicus is vital to pelagic ecosystems in the North Atlantic Ocean. Previous studies suggest the species is vulnerable to the effects of global warming, particularly on the Northeast U.S. Shelf, which is in the southern portion of its range. In this study, we evaluate an ensemble of six different downscaled climate models and a high-resolution global climate model, and create a generalized additive model (GAM) to examine how future changes in temperature and salinity could affect the distribution and density of C. finmarchicus. By 2081–2100, we project average C.

finmarchicus density will decrease by as much as 50% under a high greenhouse gas emissions scenario. These decreases are particularly pronounced in the spring and summer in the Gulf of Maine and Georges Bank.

Furthermore, the “trained GAM was used to project *C. finmarchicus* densities into the future under different climate scenarios. By the 2041–2060 period, there is expected to be similar decreases in *C. finmarchicus* density under the RCP 4.5 and RCP 8.5 scenarios, down 22% and 25% of present day density over all regions and seasons, respectively.” <https://www.nature.com/articles/s41598-017-06524-1.pdf> This timeline clearly indicates that ALL the right whale conservation efforts by the lobster fishery will not help these animals to thrive as they are starving and unable to thrive in an ecosystem that is failing them.

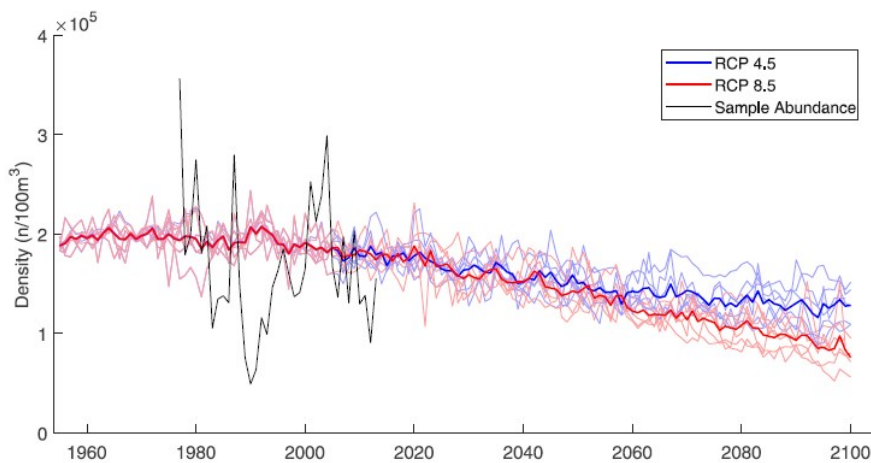
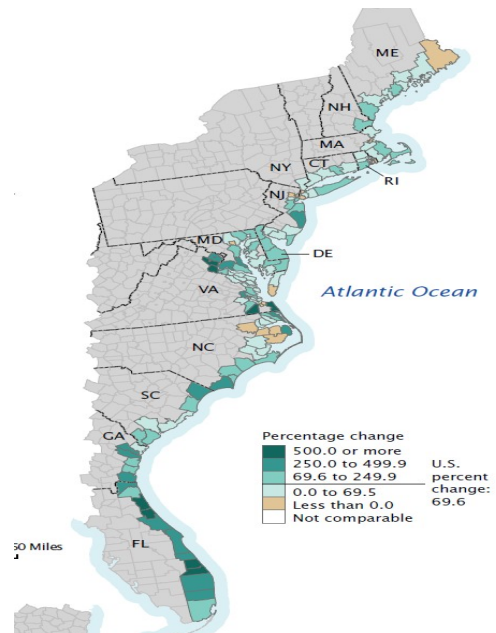


Figure 3. Projected density of *C. finmarchicus* on the Northeast U.S. Shelf. Individual climate model runs are indicated by thin colored lines while the ensemble average is bolded.

With all the modeling, speculations, and conservation efforts being expended on “saving” the right whales, maybe we should all be looking at saving the Calanus. Without enough food, calanus, to feed on, by 2100 will there be any right whales left? Based on the BiOp 50 year predictions and the projected calanus density model, most likely there will not be any right whales left.



Additionally, the BiOp clearly stated; the ecosystem is changing and the species is shifting northward into unprotected waters. Per the United States Census Bureau's, **Coastline Population Trends in the United States: 1960 to 2008** the growth along the eastern seaboard of the United States "Between 1960 and 2008, the percentage increase in population along the coastline (84 percent) was greater than that of the United States (70 percent)." Unfortunately, the majority of that growth on the eastern coastline was based on "new coastline residents in the 1990s and post 2000 periods."

<https://www.census.gov/prod/2010pubs/p25-1139.pdf>

With upwards of a 500% increase in coastal populations along the eastern seaboard, has a real detrimental impact on the marine ecosystem. Without ecosystem safeguards in place, there seems to be an equally disproportionate amount of conservation mandates put on the commercial lobster industry without any conservation repercussions being put on the population along the eastern seaboard. Are we all doing our part to save a species that may not be able to be saved or are we killing the most historic and iconic fishing industries in the United States, the American lobster fishery?

In closing, the Massachusetts Lobstermen's Association thanks you for the opportunity to comment and your thoughtful deliberation on our points of concern. Also we respectfully ask you to please remember, that OUR commercial fishermen are stewards of the sea and without a healthy marine ecosystem, collectively, they will not be able to continue earning a living in the historic and iconic commercial lobster fishery.

Sincerely,

Beth Casoni

MLA, Executive Director

cc.

Sen. E. Warren

Sen. E. Markey

Cong. W. Keating

Cong. S. Moulton

Gov. C. Baker

Lt. Gov. K. Polito

EEA, Sec. K. Theoharides

FWE, Com. R. Amidon

DMF, Dir., D. McKiernan

MAFAC