Summary of November-December 2022 ALWTRT Meeting

Considering recommendations on measures that would modify the ALWTRP

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1. Introduction

Objectives

The Atlantic Large Whale Take Reduction Team (ALWTRT or the Team) met virtually for six days during November and early December with an extraordinarily challenging mandate - to develop recommendations for the National Marine Fisheries Service (NMFS) that will reduce the coastwide risk that U.S. trap/pot and gillnet commercial fisheries pose to North Atlantic right whales by 88 to 93 percent. This risk reduction range is the amount NMFS estimates is needed to reduce mortality and serious injury of North Atlantic right whales to a level below the Potential Biological Removal level (PBR), which is currently 0.7 individuals per year, as required under the Marine Mammal Protection Act.

A rule implemented in 2021 achieved about half of that risk reduction (47%) for the fisheries managed under the Atlantic Large Whale Take Reduction Plan (ALWTRP). The outcome of recent litigation requires that NMFS finalize a new rule that meets the full risk reduction requirement by December 9, 2024. *NMFS asked the Team to deliberate and provide its best recommendations by December 2, 2022, on how to address the remaining risk.*

The recommendations below represent an overview of these conversations and the Team's best thinking, based on the best available information. Through hard work, effective dialogue, and creativity, the Team found many areas of agreement; however, there were challenging issues where Team member perspectives continued to diverge.

Team members repeatedly emphasized how much was at stake in these deliberations. The North Atlantic right whale population has declined rapidly, in part due to mortalities and serious injuries caused by entanglements in U.S. commercial fishing gear. Reduction of those mortalities and injuries to legally required levels requires dramatic action. At the same time, many livelihoods and the economic engines of coastal communities will be substantially impacted by these actions.

Meeting structure

The structure of the meetings over the course of November and December was a mix of presentations, plenary discussion, and breakout discussions in caucus or working groups focused on regions or gear types. Discussions centered around risk reduction measures discussed by the Team in previous meetings and collected by NMFS and some state managers during scoping. Specifically, on Monday, November 14, the NMFS team gave a presentation on regional package analyses, presented an example of a coastwide risk reduction package made up of regional elements that would meet the required minimum risk reduction needed to achieve PBR and provided an opportunity for an initial reaction from the Team. In the following days (November 15, 17, and 18), the Team participated in small group breakout discussions to refine coastwide packages, and then reported out on their discussions in plenary afterwards to help further package discussion.

In the break between November and December, informal group discussions were held among Team members in preparation for the December meeting dates. On December 1, small regional groups shared their progress towards risk reduction in the initial plenary session. The afternoon was dedicated to regional breakout groups (with the option for Team members to flow between breakout groups if desired). The day ended with an overall plenary discussion on package development based on the day's discussions. On Friday, December 2, the Team reviewed an emerging coastwide approach generated by combining regional packages. The rest of the day focused on caucus/regional discussions on the emerging package, with the day ending in a test for consensus.

Participants

53 of 60 Team members or their alternates (in parentheses) participated during the meeting:

1. Regina Asmutis-Silvia, NGOs
2. David Borden, Trap/Pot (Heidi Henninger)
3. Colleen Bouffard, State
4. Barbie Byrd, State
5. Dwight Carver, Trap/Pot
6. Beth Casoni, Trap/Pot
7. Karson Cisneros, Fishery Management
8. Colleen Coogan, Federal
9. Alex Costidis, Academics/Scientists
10. Jane Davenport, NGOs (Sierra Weaver)
11. Greg DiDomenico, Trap/Pot and Gillnet
12. Cindy Driscoll, State (Amanda Weschler)
13. Jay Driscoll, Gillnet
14. Erica Fuller, NGOs
15. Clay George, State
16. Robert Glenn, State (Erin Burke)
17. Mike Greco, State
18. Sonny Gwin, Trap/Pot and Gillnet
19. Dennis Heinemann, Federal (Dee Allen)
20. Robert Kenney, Academics/Scientists
21. Toni Kerns, Fishery Management (Caitlin Starks)
22. Raymond King, Trap/Pot
23. Amy Knowlton, Academics/Scientists (Heather Pettis)
24. Mike Lane (Alt), Trap/Pot
25. Charles Locke, Gillnet
26. Kristy Long, Federal
27. Bob Lynch (Alt), Academics/Scientists
28. Greg Mataronas, Trap/Pot (Peter Brodeur)
29. Charles Mayo, Academics/Scientists
30. Patrice McCarron, Trap/Pot (Ben Martens)
31. Chris McDonough, State
32. William McLellan, Academics/Scientists
33. Richard Merrick, Academics/Scientists
34. Kristen Monsell, NGOs
35. Grant Moore, Trap/Pot
36. Robert Nudd, Trap/Pot (Damon Frampton)
37. Scott Olszewski, State
38. Cheri Patterson, Fishery Management (Terry Alexander)
39. Charlie Phillips, Fishery Management
40. Tom Pitchford, State
41. Kristan Porter, Trap/Pot (Virgina Olsen)
42. Chad Power, State
43. Jeff Putnam, Trap/Pot
44. Nicholas Record, Academics/Scientists

45. Meghan Rickard, State (Jesse Hornstein)
46. Brian Sharp, NGOs (Kathleen Collins)
47. Somers Smott, State
48. Liam Sullivan (Alt), Gillnet
49. Erin Summers, State (Megan Ware)
50. Wes Townsend, Trap/Pot and Gillnet
51. Mason Weinrich, NGOs
52. Renee Zobel, State
53. Barb Zoodsma, Federal (Jessica Powell)

2. Key considerations[1]

During these deliberations, several themes emerged that shaped the Team's recommendations. These considerations are an important aspect of the guidance that Team members provided to NMFS as it moves into the next phase of developing rules. These perspectives, not in priority order, include:

1. *Level of ambition*: Some members urged the Team to be as ambitious as possible with its recommendations to ensure conservation targets will be met now and into the future. Other members stressed the importance of minimizing additional burdens on fishermen and coastal communities as much as possible.
2. *Gear severity vs. gear reduction*: Some Team members favored options to remove gear from the water, seeing these measures as more certain approaches for reducing risk and minimizing non-lethal health impacts on whales. Other members saw weak rope (or related measures) as a pathway to address diffuse geographic risk and reduce disruption to fisheries, and stressed that the fishery needs as much flexibility as possible to meet risk reductions.
3. *Targeted v. broad-based measures*: Team discussions strove to balance the need for broader measures that are likely to remain effective regardless of future shifts in whale distribution and behavior, with the desire for more targeted measures that address high-risk areas and minimize negative impacts to fisheries.
4. *Feasibility and implementability*: The Team's thinking was frequently shaped by considerations related to the feasibility and implementability of measures under discussion, with measures considered based not only on their ability to provide needed risk reduction but also by a weighing of implementation barriers and the aggressive rulemaking timeframe. To that end:
    a. Some Team members discussed the need for reliable and pre-identified fallback measures for options that have questions around feasibility.
    b. Some Team members called on fishery management councils and other decision-making bodies to quickly prioritize management changes needed to accelerate implementation of on-demand gear, one-endline trawls, line caps, and other measures that can remove lines from the water while supporting continued fishing.
5. *Dealing with uncertainty*:

[1] Note: key points discussed about ropeless fishing are captured separately in section 4 below

a. Some Team members found it challenging to recommend measures in the face of uncertainties, such as those related to shifting whale habitat use and the distribution of fishing effort in the face of climate change, as well as the model's current ability to estimate such uncertainties.
b. Some noted the uncertainties around how measures will be implemented in various fisheries management regimes. For some, this management uncertainty suggests that the Team should seek higher risk reduction to protect against underperformance of measures. For others, the ripple effects of changes to fisheries management suggests that measures may exceed risk reduction estimates. "Back up" measures were encouraged in the event that recommended measures could not be implemented.
c. Many emphasized the importance of instituting monitoring plans to address these uncertainties, particularly concerns about latent effort, shifting whale habitat use, or other variables that could change the intended impact of measures.

6. *Consistency in measures across regions.* Some Team members emphasized the benefits of consistency across regions (equity, effectiveness, enforceability, etc.) when considering measures such as weak rope requirements. Calls for consistency were tempered by the need to account for unavoidable distinctions across areas and fisheries (vessel size, bottom types, etc.)
7. *Measuring risk reduction*: Team members sought guidance on how to consider ideas not easily modeled in the DST or how to use additional justifications for supplementing the DST's risk measurements. Some Team members were concerned that the DST implies a level of precision that is not possible. Some specific issues raised included:
    a. The role of opportunistic sightings and acoustics
    b. Considerations around whale behavior (eg. traveling vs. feeding) in certain locations
    c. Indirect changes to fishing practices and level of activity as a result of new regulations
8. *Valuing qualitative measures.* Related to the point above, Team members emphasized the value of recognizing and pursuing actions that are seen as likely to advance risk reduction or provide important data, even if they can't be measured in the model. Examples included: time-tension line cutters; new surveying data associated with possible dynamic management areas; actions more likely to protect whales of calf-bearing age.
9. *Monitoring and enforcement:* Team members noted the importance of future monitoring to understand the impact of the measures and opportunities to adapt them. Team members also urged robust enforcement.
10. *Future Appropriations:* Although not a charge to NMFS, Team members identified the need for Congressional appropriations to support further costs of gear changes and in particular ropeless fishing technology solutions, as well as to support buybacks for fishermen confronted with large closures.

3. Regional proposals

In the November and December meetings, small groups organized by region and fishery worked in depth on developing packages of measures. Team members from all four caucuses - fishing industry, conservationists/environmentalists, academic/scientific, and fishery managers - participated in the small group discussions. Below are the fullest regional packages they developed and summaries of the key discussions in each of those regional groups. In some cases, the regional small group agreed that their package captured below was their best option to advance to the full Team for consideration for inclusion in a coastwide package. In other cases, significantly differing views remained or variations of packages were put forward by the regional groups. While all packages drew on a range of risk reduction components, differences in the emphasis of risk reduction recommendations were often driven by the different determinants of risk in some areas. For example lines-out closures were preferred and estimated to achieve relatively high risk reduction in areas of very high whale use during months of low effort. It is more difficult to demonstrate high risk reduction in areas of high effort and low whale occurrence. In those areas, gear reduction measures contributed a large portion of the risk reduction.

LMA1 and Outer Cape Cod Trap Pot Regional Approach

LMA1 and Outer Cape Cod Trap Pot					
Region	**Fishery**	**Location**	**Measure**	**Component**	**Notes**
LMA 1	NE Lobster / OTP	Maine Lobster Zones	Gear cap of 400 traps	Line Reduction	
LMA 1	NE Lobster / OTP	Jeffrey's Ledge Polygon (LMA1A)	Gear cap of 400 traps	Line Reduction	
LMA 1	NE Lobster / OTP	Jeffrey's Ledge Polygon (LMA1A)	Line Cap at 30 Nov-Dec	Line Reduction	
LMA 1	NE Lobster / OTP	MA LMA 1 State waters	Min 10 traps per trawl Dec-Jan	Line Reduction	
LMA 1	NE Lobster / OTP	MA LMA 1 3-6 nmi	Min 15 traps per trawl	Line Reduction	
LMA 1	NE Lobster / OTP	MA LMA 1 6-12 nmi	Min 20 traps per trawl	Line Reduction	
LMA 1	NE Lobster / OTP	Maine Zone A	Lines out Jun-Jul	Closure	Included value for ramp down/up assuming movement prohibited from Zone A to B. DMR developing Dynamic Management Approach (DMA) as alternative to lines-out closure. To be discussed with NOAA

					Fisheries
LMA 1	NE Lobster / OTP	LMA1 Closure Expansion	Closure Oct-Jan	Closure	
LMA 1	NE Lobster / OTP	Jeffrey's Ledge Polygon (LMA1A)	Closure Jan-May	Closure	
LMA 1	NE Lobster / OTP	NH State and adjacent fed waters	Closure Mar-Apr	Closure	Added value for ramp down/ramp up before / after gear-out closures (one week full value) in NH state waters only
LMA 1	NE Lobster / OTP	MA 514 federal waters	Closure Feb-May	Closure	Added value for ramp down/ramp up before / after gear-out closures (one week full value) for all Stat Area 514
LMA 1	NE Lobster / OTP	Cape Cod Bay East	Closure Dec-May	Closure	Added value for ramp down/ramp up before / after gear-out closures (one week full value) in MA state waters only
LMA 1	NE Lobster / OTP	0-50 fa	100% weak at 1700 lb max breaking strength for both endlines	Weak Rope	*100 percent weak (weak inserts every 60 feet or weak rope down to bottom 30 feet)
LMA 1	NE Lobster / OTP	50-100 fa	Hauling line: 100% weak* at 1700 lb max breaking strength Tag line: 100% weak at 600 lb max breaking strength	Weak Rope	*100 percent weak (weak inserts every 60 feet or weak rope down to bottom 30 feet)
LMA 1	NE Lobster / OTP	100 fa or greater	Hauling line: 33% weak at 1700 lb max breaking strength Tag line: 100% weak at 600 lb max breaking strength	Weak Rope	*100 percent weak (weak inserts every 60 feet or weak rope down to bottom 30 feet)
OCC	NE Lobster / OTP		Min 10 traps per trawl Dec 1-31	Line Reduction	
OCC	NE Lobster / OTP	OCC federal waters	Closure in federal waters Jan-May 15	Closure	
OCC	NE Lobster / OTP		100% weak at 1700 lb max breaking strength for both endlines	Weak Rope	

LMA 1 and OCC Regional Package Statistics			
Regional risk reduction:	Portion of coastwide risk reduction:	Regional co-occurrence reduction:	Regional line reduction:
LMA: 89.8%* Maine: 88.6% NH: 90.9% Mass: 91.8%	27% (out of region's 34%)	LMA: 80.0% Maine: 77.6% NH: 80.1% Mass: 84.3%	34.7%
OCC: 63%	OCC: 0.3 (out of 0.5)	OCC: 38%	OCC 4.6%

*State caucuses in New England Lobster Management Area 1 (LMA1) found that state-level risk reduction estimates provided important context when developing and testing risk reduction ideas with their fishing industry members.

Discussion

The LMA1 trap-pot group had extensive discussions – both in full Team meetings and offline working groups – to identify strategies to reach the Agency's 88 to 93 percent risk reduction target. Discussions were particularly challenging given a number of factors:

- Given the large proportion of remaining risk in the Gulf of Maine, it is imperative for LMA1 to deliver strong and reliable risk reduction if the coastwide package is to achieve the 88 to 93% percent risk reduction needed to get below the potential biological removal level (PBR). Much of the risk off the coast of Maine is due primarily to the density of lines in the water (as opposed to concentrated whale presence), which makes risk reduction challenging to achieve through targeted measures.
- Strong interest among Maine fishermen to avoid large-scale static closures. This was a particularly significant concern for proposed closures that would affect large areas and high-value fishing months, and was felt especially strongly for coastal communities that often lack other significant economic opportunities today.
- Equity concerns among Maine, Massachusetts and New Hampshire fishermen and between Maine and Canadian fishermen (i.e., ensuring no one state's fishermen contributing substantially more to risk reduction than the others or being asked to accept restrictions not being equally imposed on all fishermen in a zone.)

The eventual LMA1 trap-pot package put forward for the Team's consideration relied on a mix of line reduction, closures to vertical buoy lines and weak rope configurations and was projected to achieve a nearly 90 percent risk reduction (with risk by state ranging from 88.6% for Maine to 90.9% for New Hampshire and 91.8% for Massachusetts). Below is a brief summary of key discussion points that shaped the package.

- Team members developed a regional package that relied on a number of measures to reduce risk, including a mix of trap caps, seasonal line caps, trawling up requirements, new or expanded closures, and weak rope. Many of the measures garnered broad

support. The most challenging conversations centered around a handful of issues – dynamic vs. static closure in LMA1 Zone A; valuing the Massachusetts Restricted Area; trap-cap limits in Maine waters, including concerns that they were inequitable; and weak rope.

- Measures to reduce risk during two months in Maine Zone A were a particular focus of attention due in large part to the economic reliance of coastal communities in this area on the fishery, the impacts of the proposed summer closure on key portions of the fishing fleet, and the overlap with Canadian fishermen within this zone. The State of Maine proposed moving forward with a Dynamic Management Area (DMA) in LMA1 Zone A to supplant a proposed 100% lines-out closure in June and July. Maine's proposal (which would need to be fleshed out and confirmed by NOAA Fisheries prior to the Agency putting out a proposed rule) included a closure outside of 12 miles, but dynamic management within 12 miles of shore. Maine DMR presented a detailed but not yet finalized monitoring plan – using both aerial/visual and acoustic monitoring – to spot right whales and trigger dynamic closures (see attached presentation prepared by the State of Maine). Some Team members strongly supported the proposal, seeing it as a realistic and precautionary way to protect right whales while still preserving the important coastal fishery. Other Team members expressed concerns about the risks, given limitations associated with sightings data (e.g., poor weather that can ground planes, uncertain acoustic data) and delays in getting gear out of the water once a whale is spotted. These Team members preferred lines-out measures that provide a more certain outcome by fully eliminating risk. Maine DMR offered to develop a combination of a monitoring strategy and additional risk reduction measures that would achieve at least 80 percent of the value of a static closure. Team members did not agree as to whether the dynamically managed or the static lines-out closure should serve as the primary measure in any proposed package (with the other considered a "fallback" option.)
- Team members had a range of views on trap caps versus single endlines or closures. While single endlines were seen by some as the most reliable way to reduce gear (and thereby risk) from the water, single endlines were not considered viable by fishing representatives in areas with rocky bottoms or high gear conflict zones, and therefore were not included in the regional package. Maine saw gear caps as a preferred method for reducing risk as opposed to widespread seasonal closures that would mean a steep hit to coastal economies. Given the seasonal nature and abundance of right whale distribution in their waters, New Hampshire and Massachusetts industry members preferred targeted closures to new trap caps. Team members discussed at length how to address overlapping areas, such as federal waters included in Maine's lobster Zone G, as well as the unintended consequences of having different approaches to trap caps. The following approach sought to address those concerns: maintain a 400 trap cap for all vessels (regardless of port of origin) fishing in federal waters included in Maine's Zone G, extended with a new polygon around Jeffrey's Ledge. In addition, Maine would limit trap tags to their vessels to allow 400 traps regardless of where they fished.
- LMA1 stakeholders considered the merits and possible implementation strategies related to weak rope. Team members had significantly different views on the merits of a

weak rope strategy, with some seeing it as one of the more viable precautionary ways to reduce risk of mortality and serious injury while others saw it as an unproven strategy that avoided tackling the key risk to whales: vertical lines in the water column. Concerns were also expressed regarding the inability to find weak rope of the right diameter for vessels fishing ½-inch rope and greater and the inability to haul up rope. Discussions centered on finding the weakest rope configurations possible at varying depths; this included recommending fully weak (1700 lb rope or weak insertions every 60 feet down to bottom 30 feet) within 50 fathoms, a weak "hauling" rope as well as a 100% weak "tag" line @ 600 pounds (likely by the insertion of inline plastic links that break at 600lbs of force inserted every 60 feet in the buoy line) in depths between 50 and 100 fathoms, and the same tag line and a hauling line that is weak on the top 33% outside of 100 fathoms.

- The Agency sought the Team's guidance on valuing the risk reduction achieved through the Massachusetts Restricted Area (MRA) implemented in 2015. Team members in the LMA1 breakout group discussed two possible estimates for valuing the MRA in the current rulemaking. One approach would award the full value of the MRA; a second approach would award a value based on the increased value since 2016 to right whales - a 20% value only (based on reflecting the 20% increase in the percent of whale population protected within Cape Cod Bay since implementation). In terms of risk reduction, using the first approach would result in a 1.3% risk reduction value for the MRA coastwide; using the other approach would yield a 0.26% risk reduction coastwide. Some Team members strongly supported giving full or partial credit given that the important contribution of that closure was not previously accounted for. Others voiced concern that the credit be applied only on top of achieving the target risk reduction. The full Team's discussion of this topic was fairly limited and it was not included in the package that the Team voted on.
- Team members had differing views regarding extending the 514 closure to include the months of December and January. Some Team members strongly supported including the extra months given the higher risk associated with that time period and their interest in hitting the upper bounds of the Agency's risk reduction target. Others suggested a closure in those months was not warranted given (1) the significant economic hit to MA fishermen of a closure during that lucrative time period, and (2) the fact that MA fishermen are already providing regional risk reduction over 90%.
- Consistent with discussions across all the regions, Team members had differing views on how to incorporate incentives towards ropeless fishing in these measures. Discussions on this point are summarized below in Section 4.

LMA 2 and 2/3 Overlap Trap Pot Regional Approach

LMA 2 and 2/3 Overlap Trap Pot					
Region	**Fishery**	**Location**	**Measure**	**Component**	**Notes**
LMA 2 and 2/3 Overlap	NE Lobster / OTP	LMA 2 to 41°	Min 15 traps per trawl	Line Reduction	
LMA 2 and 2/3 Overlap	NE Lobster / OTP	LMA 2 south of 41°	Min 30 traps per trawl	Line Reduction	
LMA 2 and 2/3 Overlap	NE Lobster / OTP	LMA 2 and LMA 2/3 Overlap	Fish with one endline (hauling line) year round	Line Reduction	
LMA 2 and 2/3 Overlap	NE Lobster / OTP	LMA 2 and LMA 2/3 Overlap	Closure Jan 15-Apr 30	Closure	Added value for ramp down/ramp up before / after gear-out closures (one week full value) for LMA 2
LMA 2 and 2/3 Overlap	NE Lobster / OTP	South Island Restricted Area	Closure Jan 15-Apr 30	Closure	
LMA 2 and 2/3 Overlap	NE Lobster / OTP	LMA 2 and LMA 2/3 Overlap	Hauling line: 100% weak at 1700 lb max breaking strength	Weak Rope	

LMA 2 and 2/3 Overlap Regional Package Statistics			
Regional risk reduction:	Portion of coastwide risk reduction:	Regional co-occurrence reduction:	Regional line reduction:
87%	2.7% (out of region's 3.6%)	73%	45%

Discussion

The LMA2 and 2/3 overlap trap-pot group agreed to put forward a proposed regional package to the full Team for consideration for inclusion in a coastwide recommendation. This approach, shown above, employed a combination of trawling up, seasonal closures, and 100 percent weak rope.

Key issues the small group grappled with included the following.

- How much to rely on weak rope. Similar tensions to those occurring in discussions coastwide over the role of weak rope manifested in the LMA 2 discussions:
    - Industry members supported an approach to use 100% weak rope. (Fishermen noted this would pose challenges, and implementation would require fishermen adjusting to a learning curve to use weaker rope.)

    - Some conservation and scientist caucus members reiterated concerns raised in plenary discussions about the risk reduction value placed on weak rope and sublethal effects. They used the factor of co-occurrence reduction as a proxy to consider the value of different options.
- What would be an appropriate use of closures. Mirroring plenary discussions, industry members wanted to minimize closures in time and space to minimize impacts on fisheries effort, especially during the most productive months of the fishing season (e.g., May.) Conservation and scientist members considered closures to be the most reliable approach to risk reduction. Most closures considered in the group included January 15 - April 30 in the whole region, with some options extending earlier to January 1. Industry members considered more geographically limited options for May, including SIRA East and south of 41 degrees as options.
- How hard to push and how feasible it was to achieve risk reduction above 86%. The group grappled with how to address diminishing returns with layering additional measures to reach final risk reduction points. Conservation and scientist members urged the group to reach for at least 88%, and some signaled they may not support a regional approach below that level. Industry members expressed frustration that costly measures such as adding an additional month of closure did not reduce risk more significantly, when layered over other risk reduction measures. Industry members felt that the additional pain to get minimal additional risk reduction was not reasonable.
- When and how to deploy single-endline fishing. Though the group ultimately favored single-endline fishing year-round, industry members initially expressed interest in modeling the inclusion of a second endline during only the most productive months to make fishing more viable. Options floated included using a very weak tagline as a second line (with the first line being 100% weak at 1700-pound breaking strength) during some months. However, given the additional risk this left on the table, industry ultimately supported keeping single-endline fishing in the recommendation year-round to minimize the need for closures.

LMA 3 Trap Pot Regional Approach

LMA 3 Trap Pot Regional Approach					
Region	**Fishery**	**Location**	**Measure**	**Component**	**Notes**
LMA 3	NE / MATL Lobster	LMA 3	Line Cap at 45	Line Reduction	
LMA 3	NE / MATL Lobster	LMA 3 North of the Canyons	Fish with one endline (hauling line) year round	Line Reduction	
LMA 3	NE / MATL Lobster	LMA 3 South of the Canyons through the MATL in depths less than 100 fa	Fish with one endline (hauling line) year round	Line Reduction	
LMA 3	NE / MATL Lobster	LMA 3 South of the Canyons through the MATL in depths greater than 100 fa	Fish with one endline (hauling line) May-Sept	Line Reduction	
LMA 3	NE Lobster / OTP	LMA 1 RA Expanded to Cashes Ledge	Closure Oct-Feb	Closure	
LMA 3	NE Lobster / OTP	South Island Restricted Area	Closure Jan-Apr	Closure	
LMA 3	NE Lobster / OTP	GOM LMA 3 North Restricted Area	Closure May-July	Closure	
LMA 3	NE Lobster / OTP	SNE LMA 3 Restricted Area	Closure Dec-May	Closure	
LMA 3	NE Lobster / OTP	LMA 3	Endlines are 33% weak at 1700 lb max breaking strength	Weak Rope	

LMA 3 Regional Package Statistics			
Regional risk reduction:	Portion of coastwide risk reduction:	Regional co-occurrence reduction:	Regional line reduction:
89%	7.7% (out of region's 9.7%)	86%	52%

Discussion

The small group and plenary Team discussions regarding LMA 3 reflected the particular challenges of achieving the necessary risk reduction in this large offshore area, which represents the second-largest area of remaining risk along the coast.

Fishing activity in LMA3 typically involves larger vessels, deeper waters, heavier ropes, and gear that isn't brought back to shore. The effort is also spread across a large area. These conditions create challenges for implementing options such as targeted closures and weak rope.

Team members reviewed several potential options, including significant trawling up, line caps, one vertical endline fishing, and highly tailored approaches, such as setting minimum trawl lengths for each vessel. The team also discussed potential new closures in Georges Basin to provide a corridor for whales transiting to and from Canadian waters, as well as an extension into LMA3 of the LMA1 closure.

Modeling results showed that the specific combinations of these measures proposed by the regional group did not achieve risk reduction in the 88 to 93 percent range. One option that did achieve that level of risk reduction was put forward by NMFS and included large seasonal closures, combined with a line cap at 45, one vertical endline fishing year round (except for October - April, in depth greater than 100 fathoms, south of the Canyons), and weakening the top third of all endlines to 1700 lbs. Team members did not have time to speak in depth about the large seasonal closures, which NMFS proposed on the final day of the meeting to demonstrate an approach that reached the required risk reduction. However, industry members signaled such an approach may likely push some fishermen out of business, in the absence of significant advances in the implementation of ropeless fishing.

Industry representatives proposed working quickly with fishermen after the meeting to craft an alternative proposal for consideration by the Agency by January 20 that would achieve equivalent risk reduction, building on the ideas of trawling up and line reduction discussed during the meeting. Several Team members expressed concern about what might come from this post-meeting effort, and were reluctant to endorse this possible alternative without being able to review it directly. Some Team members asked that the Agency evaluate any potential alternative by taking into consideration not only equivalent risk reduction, but also comparable co-occurrence and line out metrics. Some also voiced interest in NMFS creating an opportunity for participants to review and comment on industry's proposal. The Agency said it was unlikely to have time for an additional Team discussion on this.

Several team members expressed significant concern about any remaining strong ropes in the water, given the evidence of lethal harm they can cause to whales. These members urged approaches that would accelerate a transition in LMA3 to ropeless fishing. More on this discussion is contained in Section 4 below.

Gulf of Maine and Southern New England Gillnet Regional Approach

Gulf of Maine and Southern New England Gillnet Regional Approach					
Region	**Fishery**	**Location**	**Measure**	**Component**	**Notes**
GOM / SNE	Gillnet	GOM / SNE	Line Cap at 12	Line Reduction	Endline cap applied by fishery as derived from trip reports/landings
GOM / SNE	Gillnet	West of 70° and North of 42.5°	Closure Apr-May	Closure	
GOM / SNE	Gillnet	MA state waters	Closure Jan-May	Closure	May 15th unless whales remain in the area
GOM / SNE	Gillnet	South Island Restricted Area	Closure Feb-Apr	Closure	
GOM / SNE	Gillnet	GOM less than 50 fa	75% weak at 1700 lb max breaking strength	Weak Rope	
GOM / SNE	Gillnet	GOM greater than 50 fa	50% weak at 1700 lb max breaking strength	Weak Rope	
GOM / SNE	Gillnet	SNE	100% weak at 1700 lb max breaking strength (full weak in top, links in bottom)	Weak Rope	

Gulf of Maine and Southern New England Gillnet Regional Package Statistics			
Regional risk reduction:	Portion of coastwide risk reduction:	Regional co-occurrence reduction:	Regional line reduction:
73%	2% (out of region's 2.7%)	44%	1%

In addition to the above risk reduction measures, this statement was proposed as part of the recommendations:

> *Evaluate fishery management ongoing actions toward risk reduction goals as available. Clarify what the "by-fishery" line cap is on a by-vessel basis and let caucus know.*

Discussion

The Gulf of Maine and Southern New England Gillnet group agreed to put forward a proposed regional package to the full Team for consideration for inclusion in a coastwide recommendation. This approach, shown above, employed a combination of seasonal closures, weak rope, and line reductions through an endline cap.

Key issues the small group discussed included the following.

- The group worked to reconcile different conditions and industry needs between regions and fisheries, while also aiming for reasonable consistency across the broader northeast gillnet fishery for management and enforcement purposes. For example, while industry considered 100% weak rope feasible in Southern New England, Gulf of Maine fishermen

proposed a tiered approach with weak rope proportions relative to water depth.[2] The group also grappled with how to accommodate needs and limitations of different boat sizes and fisheries, e.g. when considering how much paneling up was reasonable to require.

- How hard to push and how much risk reduction it was feasible to achieve. The group grappled with how to address diminishing returns with layering additional measures to approach the required coastwide risk reduction target. While conservation and scientist members urged aiming higher, the group struggled to generate options with support beyond the low- to mid-seventies. Industry members expressed deep frustration that costly measures such as adding an additional month of closure or further paneling up did not reduce risk more significantly, when risk was already mitigated with other combined measures. Industry members felt that the additional pain to achieve minimal additional reductions of coastwide risk was not reasonable.
- Considering management constraints and impacts on risk reduction approaches.
    - Some group members, particularly industry representatives, were frustrated at the mention of management limitations as constraints on implementing new risk reduction approaches, e.g. the idea of paneling up beyond 22. They emphasized the challenges the fishery was being faced with implementing and urged regulatory and management entities to be flexible and tenacious in identifying new management options. NMFS underscored that it shared the goal of molding management approaches to fit the need of fisheries working to reduce risk, but did not want to overpromise in case such changes turned out to be infeasible.
    - Industry members urged NMFS to include in its risk assumptions new management actions that will reduce days at sea for some gillnet fisheries.
- How much to rely on weak rope. This group faced tensions similar to those occurring in discussions coastwide over the role of weak rope:
    - Industry members supported employing weak rope for as much risk reduction as possible, though they noted this would not be easy for fishermen to implement.
    - Some conservation and scientist caucus members reiterated concerns raised in plenary discussions about the risk reduction value placed on weak rope and sublethal effects. They used the factor of co-occurrence reduction as a proxy to consider the value of different options.
- How line caps will be managed for fishermen who fish more than one fishery in a trip. Some fishermen were concerned that a linecap (e.g. of 12, as discussed) would prevent fishermen from setting buoys for more than one fishery in a single trip. NMFS responded that a management approach could be developed to address this concern. Fishermen looked for specific assurance from NMFS that this type of combined trip would not be limited by new proposed buoy caps.

[2] In Southern New England, a 100% weak rope proposal was achieved with a combination of weak links in the bottom portion and fully weak rope in the top portion of the line. In the Gulf of Maine, industry proposed 75% weak rope within 50 fathoms and 50% deeper than 50 fathoms.

LMA 4 and LMA 5 Trap Pot Regional Approach

LMA 4 and LMA 5 Trap Pot Regional Approach					
Region	**Fishery**	**Location**	**Measure**	**Component**	**Notes**
LMA 4 & LMA 5	NE / MATL Lobster	LMA 4 & LMA 5	Min 20 traps per trawl	Line Reduction	Conch was included in this measure in earlier discussion but removed at the end because it was unknown if it was feasible for the fishery.
LMA 4 & LMA 5	Black sea bass	NY, NJ, DE, MD, VA state and federal waters within LMA 4 & LMA 5	Min 20 traps per trawl	Line Reduction	
LMA 4 & LMA 5	MATL Lobster / OTP	NC state waters within LMA 5	Max 1 trap per trawl	Maintain low risk	This doesn't change effort but avoids trawling up in areas where calves may be more of a concern
LMA 4 & LMA 5	MATL Lobster / OTP	DE, MD, VA state and federal waters and NC federal waters within LMA 4 & LMA 5	Fish with one endline (hauling line) Nov-Apr	Line Reduction	NY/NJ were not included due to concerns with gear conflict with trawlers.
LMA 3 & LMA 5	MATL Lobster / OTP	LMA 3/5 overlap	Explore with ASMFC how they can fish the LMA 3 measures or what the requirements would be in that overlap area given all the changes.	Implementation Consideration	
LMA 4 & LMA 5	MATL Lobster / OTP	LMA 4 & LMA 5	100% weak rope of 1700 lb max breaking strength	Weak Rope	Conch was included in this measure in earlier discussion but removed at the end because it was unknown if it was feasible for the fishery.

LMAs 4 and 5 Regional Package Statistics			
Regional risk reduction:	Portion of coastwide risk reduction:	Regional co-occurrence reduction:	Regional line reduction:
49%	0.6% (out of region's 1.3%)	7%	7%

Discussion

The Mid-Atlantic trap/pot region, encompasses parts of New York all the way down to Cape Hatteras, North Carolina, includes multiple trap pot fisheries targeting lobster, black sea bass, and conch/welch. The region is also characterized by relatively diffuse risk that doesn't lend itself well to targeted closures. Also, the total risk created by trap pot fishing in this area is a fraction of the risk from fisheries further north.

Given these characteristics, the group focused on efforts to reduce lines by trawling up lobster and black sea bass pots, fishing with one endline in some circumstances, as well as weakening lines in almost all fisheries. New Jersey expressed concerns about implementing one endline in their state trap/pot fishery due to gear conflict. Notably, no team members represented conch/whelk, which is currently not managed in state waters in many states and has no overarching Federal management. Team members were hesitant to offer suggestions that would modify this fishery. Trawl length and weak rope measures were discussed understanding that further research may be needed to demonstrate forces needed to haul conch/whelk buoy lines.

Mid-Atlantic Gillnet Regional Approach

Mid-Atlantic Gillnet Regional Approach					
Region	**Fishery**	**Location**	**Measure**	**Component**	**Notes**
MATL	Smooth Dogfish, Spiny Dogfish, Blue Fish	NJ-VA state and federal waters	Fish with one endline (hauling line) year round	Line Reduction	
MATL	Gillnet	NJ-VA state and federal waters	100% weak at 1700 lb max breaking strength on endlines	Weak Rope	
MATL	Gillnet	NJ-VA state and federal waters	Horizontal rope 1100 lb max breaking strength (full weak or weak links every 75 ft)	Weak Rope	
MATL	Gillnet	NC state and federal waters (Nov-April)	Horizontal rope 1100 lb max breaking strength (full weak or weak links every 75 ft) Nov-Apr	Weak Rope	
MATL	Gillnet	NC federal waters (Nov-April)	100% weak rope at 1700 lb max breaking strength on both endlines	Weak Rope	Weak tag line in federal waters like state waters was discussed. Modeling efforts at the time suggested that the risk reduction from this was negligible and it was not included.
MATL	Gillnet	NC state waters (Nov-April)	One weak buoy line at 1700lb max breaking strength and the other one at 1,100lb (weak tagline) Hauling line: 100% weak rope at 1700 lb max breaking strength Tag line: 100% weak at 1,100 lb max breaking strength	Weak Rope	

Mid-Atlantic Gillnet Regional Package Statistics

Regional risk reduction:	Portion of coastwide risk reduction:	Regional co-occurrence reduction:	Regional line reduction:
60.4%	0.6% (out of region's 1%)	3.5%	9.1%

Discussion

The Mid-Atlantic gillnet region, includes parts of New York all the way down to the North Carolina/South Carolina border. Gillnet fisheries in the Mid-Atlantic face a similar dynamic as Mid-Atlantic trap pot: relatively diffuse risk, multiple fisheries with different types of gear, and comparatively small amounts of risk. Additionally, there was much conversation about the differences between how fisheries from Virginia to New York gillnet fisheries were prosecuted and NC gillnet fisheries and the measures put forth in the regional package reflect that.

The group focused on opportunities to reduce lines in the smooth dogfish, spiny dogfish, and blue fish fisheries, and further weaken vertical and horizontal lines throughout the region. It was important to the team to offer two different configuration options: one would use a manufactured weak line and the other inserts every 75 feet in the headrope. In some locations, the group proposed using a very weak tag line for one endline. Measures in North Carolina focused on the highest risk months of November through April.

Southeast Fisheries Regional Approach

Southeast All Fisheries Regional Approach					
Region	**Fishery**	**Location**	**Measure**	**Component**	**Notes**
SE	Black sea bass	SAFMC Closures	Adopt SAFMC BSB closure under the ALWTRP and allow ropeless fishing	Maintain low risk	
SE	All OTP	SE Nearshore Trap Pot Area	Apply SERA North trap/pot requirements[3] to (newly defined) SE Nearshore Trap/Pot area*	Maintain low risk	For ropeless gear in the SE nearshore TP area, will need to think about the sinking line requirement.
SE	Blue Crab	SE Nearshore Trap Pot Area state waters	Gear cap of 200 traps	Maintain low risk	

[3] 50 CFR 229.32(f)(2)(vi) Restrictions for trap/pot gear. Fishing with trap/pot gear in the Southeast U.S. Restricted Area N during the restricted period is allowed if: (A) Trap/pot gear is not fished in a trap/pot trawl;

(B) All buoys or flotation devices are attached to the buoy line with a weak link that meets the requirements of paragraph (c)(2)(ii) of this section. The weak link has a maximum breaking strength of 600 lbs (272 kg) except in Florida State waters where the maximum breaking strength is 200 lbs (91kg);
(C) The buoy line has a maximum breaking strength of 2,200 lbs (998 kg) except in Florida State waters where the maximum breaking strength is 1,500 lbs (630 kg);
(D) The entire buoy line must be free of objects (e.g., weights, floats, etc.) except where it attaches to the buoy and trap/pot;
(E) The buoy line is made of sinking line;
(F) The gear complies with gear marking requirements as specified in paragraph (b) of this section; and
(G) Trap/pot gear that is deployed in the EEZ (as defined in § 600.10 of this title) is brought back to port at the conclusion of each fishing trip.

Southeast All Fisheries Regional Approach					
Region	**Fishery**	**Location**	**Measure**	**Component**	**Notes**
SE	Blue crab	SE Nearshore Trap Pot Area state waters	Measures to be implemented by states: **SC -** The state is undergoing blue crab regulation modifications that are in line with measures discussed as risk reduction or maintaining low risk. **GA -** Discussed modifying the seaward boundary for setting blue crab gear in state waters (i.e., restricting blue crab gear to shallow waters (0-1.5nm/18fa line)) which would reduce overlap of predicted and actual sightings of right whales and gear. The State doing this depended on the final weak rope strength requirement remaining status quo. **FL -** Implement permit non-transferability for blue crab in ocean waters. This could be done based on demonstrated landing in NE FL in winter and/or endorsement for oceanside trap fishing. -Industry would like non-transferability to include next of kin transferability similar to the dead bait shrimp fishery in Duval/Nassau county. -Industry would prefer to have both non-transferability (with next of kin) AND a specific endorsement	Maintain low risk	North Carolina was discussed but because those stakeholders were also engaged in Mid-Atl OTP and GN conversations, their ability to participate in the SE group was unfortunately limited.

Southeast All Fisheries Regional Package Statistics			
Regional risk reduction:	Portion of coastwide risk reduction:	Regional co-occurrence reduction:	Regional line reduction:
0%	0% (out of region's 0.3%)	0%	0%

Note: Most of these measures were not modeled given they largely aimed to maintain low risk levels.

The Southeast caucus focused mainly on maintaining current low levels of risk given this region only contributes 0.3 percent towards total coastwide risk.

The caucus was in favor of codifying the South Atlantic Fishery Management Council's current regulatory winter closures for the Southeastern black sea bass trap/pot fishery. The closures would be modified to allow for the use of on-demand fishing in the winter closure areas when codified in the Large Whale plan.

The caucus also favored expanding the SERA N trap/pot restrictions to all of the newly created Southeast Nearshore Trap/Pot Area. This measure would mainly serve as a safeguard to maintain the light-weight line currently used for trap/pots in the Southeast as well as not allow gear to remain offshore in federal waters after the conclusion of a trip.

The caucus also offered a 200 trap/pot cap on ocean blue crab fisheries in the Southeast. In most areas of the Southeast, this would maintain low effort to ensure effort in the blue crab fishery does not grow further and minimal lines in state coastal waters are maintained at status quo particularly during calving season. The 200 trap/pot cap would likely offer some risk reduction in Northeast Florida in winters where there are effort spikes in oceanside blue crab fishing, which is the area of greatest line and whale co-occurence in the Southeast region. States preferred to implement this cap independent of the Large whale plan given these crab fisheries are only operating in state waters and management plans for each state are different. The management mechanism in which states would implement a cap was variable. Additional discussions with states on blue crab fisheries focused on improving data collection and effort monitoring. None of the states have a specific oceanside blue crab endorsement, and often the states statistical reporting areas are broad or encompass all oceanside waters. Furthermore, trip reporting was most often done where the majority of traps were set leading to oceanside effort being attributed to inshore waters. Better effort tracking and/or a specific oceanside endorsement would be needed to monitor co-occurrence and risk over time.

For gillnet fisheries in the Southeast, the caucus also took any approach that would maintain their low risk given the lack of fine scale data from federal trip reporting to evaluate co-occurrence with large whales. The caucus suggested a focus on monitoring, enforcement, and compliance specifically in the SERA S during the restricted period (Dec 1-Mar 31). The caucus agreed that gillnet measures could be revisited every five years to determine if compliance was occuring or there was a change in co-occurrence or risk.

Non-regulatory recommendations were also discussed to improve monitoring of effort and compliance, particularly for the gillnet fishery that does not overlap with right whales during the time they are typically in the region. Ideas included: federal trip reporting for gillnet and black sea bass trips are currently reported by NMFS stat area and would benefit from finer scale reporting to account for smaller scale overlap with right whales.

4. Ropeless fishing considerations

Discussions about ropeless technology rippled through the deliberations on risk reduction in all regions. Two key developing technologies are involved in ropeless approaches: geolocation tools that use satellite technology to map the ends of trawls on an app, chart-plotter or other device, and pop-up/on-demand buoys to allow fishermen to retrieve gear from the bottom without a static vertical line.

These emerging tools were discussed as possible pathways to make "single endline" measures feasible (where the non-buoy end of a trawl would need to be identified with geolocation technology to avoid gear conflicts with other fishermen) as well as to enable fishing with no vertical lines (which would require geolocation to show where a trawl is and pop-up/on-demand buoys at the end of trawls.)

Members had different views on what the Team should recommend to NMFS regarding a transition to fishing with fewer (or no) ropes.

During discussions in smaller groups and in plenary, Team members were most (but not fully) aligned on the following elements:

- Management challenges are a significant barrier to implementation of single endline and ropeless fishing, together with the technical issues. Many Team members wanted to send a strong signal to NMFS to work more aggressively with management councils and other bodies to address these challenges, as well as deepen dialogues with mobile gear fisheries.
- One endline and ropeless fishing has a clearer path to implementation in areas with fewer gear conflicts, fewer fishermen, certain bottom types and less density of gear. Over the course of deliberations, single-endline measure proposals were put forward with generally broad support in regional packages in LMAs 2, 2/3 overlap, 3, 4, 5 and in gillnet fisheries in the Mid-Atlantic, and the Southeast. The LMA1 regional group, in contrast, proposed using a hauling line measure but with a buoy on a weak 600-pound breaking strength tagline on the other end.

During discussions in smaller groups and plenary, Team members had divergent views on:

- *Incentives and timelines*: For some Team members, the closures discussed by the Team would be sufficient incentive to shift industry toward ropeless gear, as a way to continue fishing during the closure. Other Team members, in contrast, advocated for a specific deadline for achieving milestones on ropeless implementation, through sunset clauses on weak rope or other mechanism. For instance, some members of the conservation and researcher caucuses put forward a proposal (see Appendix 1) that NMFS should commit to making on-demand fishing gear legally and commercially available by December 2024, when the new rule will take effect. Others on the Team expressed strong concerns with a date-certain provision, or any kind of future mandate

at all, citing significant outstanding concerns about the readiness of the technology and an effective management framework to address gear conflicts.

- *Implementation hurdles*: Some Team members put greater emphasis on implementation hurdles, such as the management and technology changes, as well as cost and the lack of significant testing in a variety of conditions. For example, some Team members noted that converting to new technologies and equipment to make single-endline or ropeless fishing work would require significant investments for the industry for everything from additional satellite data plans to on-demand buoy gear to costly upgrades for boats that do not currently have satellite capabilities onboard. Fishermen also expressed concern about a higher risk of lost gear, especially for more expensive equipment. Some Team members also voiced concern about using on-demand buoys in deeper waters, rockier bottoms, or rougher ocean conditions, citing a lack of demonstrated success in these contexts in research and tests.

An ad hoc cross-caucus group with a range of perspectives on ropeless fishing and its role in risk reduction measures met during the last day of the Team meeting (December 2) and developed a joint statement for Team consideration. This statement was put forward as part of a possible coastwide approach along with considerations for the Team to weigh as it sought to reach consensus on a recommendation:

> *This industry is being asked to do a lot in this action. Recognizing that big closures are on the table and that it is likely there will be increased interest in fishing without vertical buoy lines in the near future, the current EFP (experimental fishing permit) process is onerous for all. We recommend that the agency prioritize and resolve an interim geolocation system by the end of 2023, as this has application for fishing on demand, with one endline, and grappling. We also recommend that the interoperability standards be operationalized and that FMPs be amended and implementing regulations in place by Dec. 9, 2024 when the final rule is issued.*

The small group clarified that this was put forward as a non-binding recommendation to NMFS, not as a proposed mandate. Specific responses from other Team members to this statement's potential inclusion in a recommendation to NOAA Fisheries are included in the comments summarized in section 5 below.

5. Testing for agreement on recommendations

Culminating six days of meetings in November and December, and building on two years of the Team's work on coastwide trap-pot and gillnet risk reduction, Team members were asked in the afternoon of December 2 to express their level of support for a coastwide package of measures intended to meet NOAA Fisheries' stated risk reduction goal.

Decision making

During the December meeting, each of the regional groups put forward their best thinking for consideration by the full group (as described above). Some regional proposals were complete packages and others were still in development or had various alternatives still under consideration. These regional packages were reviewed by the full Team and combined into a coastwide package for consideration. CBI meeting facilitators gauged all members' perspectives using an online polling tool, Mentimeter. In response to the coastwide proposal and associated recommendations, Team members were asked to characterize their level of support in one of four ways: support, support with reservations, abstain, or not support. They were also given the opportunity to provide written comments explaining their vote.

Proposed recommendations

Prior to responding to the poll, the team reviewed a presentation that consolidated the best thinking from the regional groups (see Appendix 5.) The final slide of the presentation summarized the coastwide impacts of the suggested measures in the following table.

Package	Regional Line Reduction	Regional Co-Occurrence Reduction	Regional Risk Reduction
LMA1 Lobster (TrapPot)- includes shoulders	34.7%	80.7%	90.2%
LMA 2 Trap/Pot- includes shoulders	45.3%	73.1%	86.9%
LMA 3 Trap Pot NMFS additions	51.9%	85.7%	88.6%
OCC Trap/Pot- includes shoulder in Jan	4.6%	37.8%	62.8%
LMA 4 & 5 Trap/pot	6.6%	6.8%	49%
GOM/SNE Gillnet	1.2 %	44.2%	73.3%
Mid-Atlantic Gillnet	9.1%	3.5%	60%
Southeast	0%	0%	0%
	Total	**77%**	**88%**

Non binding statement on ropeless considerations

In addition to the coastwide measures outlined above, the non-binding ropeless statement discussed above was included in the package tested for Team consensus.

Level of support for the recommendations

Forty-four Primary Team members or their Alternates serving in their stead participated in this vote. Of the 44 members voting, 30 either supported the package moving forward, abstained or

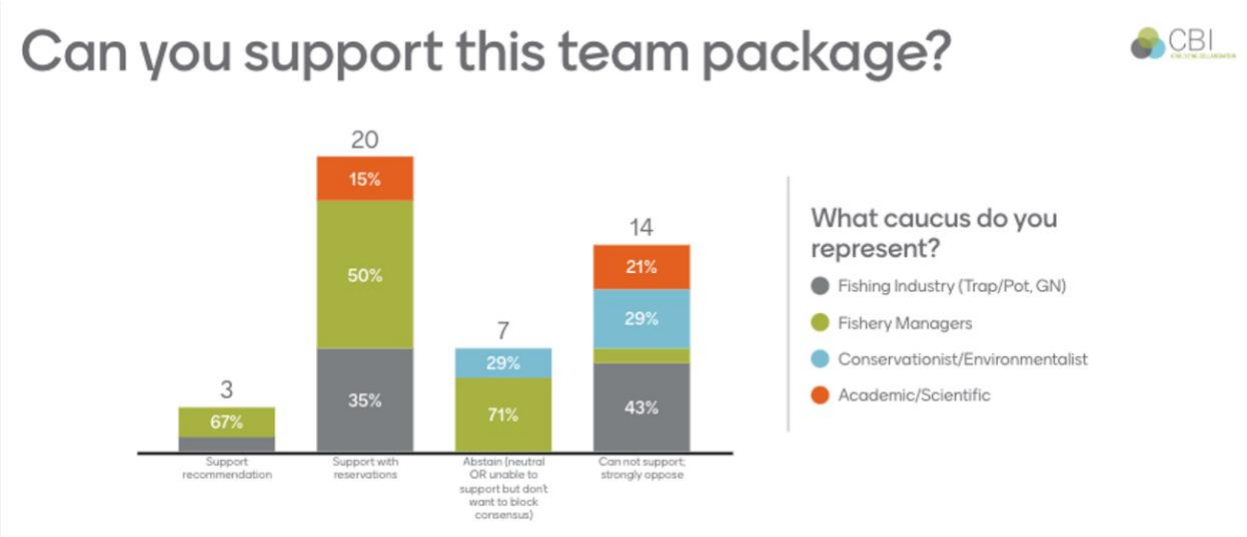
opted not to block. Fourteen members said they could not support the package. The full Team's responses were as follows:

- 3 supported the recommendation
- 20 supported the recommendation with reservations
- 8 abstained from supporting or blocking the proposal
- 14 opposed the recommendation

Due to time constraints, the Team did not have the chance to continue to work to resolve outstanding issues and undertake multiple rounds after this first round of gauging support. It is worth noting that many comments Team members made as part of their votes – particularly from those who were unable to support the package – centered on issues introduced or revised late in the deliberations, in particular, LMA3 industry's request to develop a package post-meeting; a small cross-caucus non-binding statement on ropeless; and Maine's refinement of its DMA proposal.

Caucus support

The caucus makeup of these votes is shown in the table below:



All of the conservationist and scientist caucus members present signed onto a joint statement (included below in Appendix 1) expressing concerns about the recommendation, though only a portion of each caucus opposed the recommendation (see their vote distribution in the table above.)

Regional support

No blocking concerns were raised *from* Mid-Atlantic or Southeast region members, and no blocking concerns were raised about measures *in* those regions. The areas of remaining disagreement were in those regions where the greatest risk is concentrated and the most impactful measures were put forward.

- All of the six industry members and the one fisheries manager member who opposed the package represented the Gulf of Maine or Southern New England regions. No

industry or fisheries manager members from other regions opposed the recommendations.
- Of the 14 members who opposed the package, to the extent that they raised any region-specific concerns (as opposed to broader concerns, e.g. about deploying ropeless technology or reliance on weak rope), they all pertained to the Gulf of Maine and/or Southern New England.

Qualifications of support

Team members provided the following comments to explain their level of support:

Support

- Team members applauded the extraordinary effort of all parties to reach broad agreement among the groups. The ambition of the measures considered and the breadth of agreement exceeded what they thought was possible.
- Team members appreciated the intense collaborative effort that members contributed to the process.

Support with reservations

Team members who supported the package with reservations shared the following rationales and concerns:

- Reservations about the timeline for a transition to ropeless fishing. Some wanted a stronger commitment to a date-certain transition, while others felt the statements being considered went too far.
- Concern about the package reaching only the minimum risk reduction required. Some preferred a package that aimed for the higher end of the target range given implementation uncertainties.
- Reservations about LMA 3 lobster industry developing an alternative proposal post-meeting and, therefore, unable to be presented for discussion with the Team.
- Feeling there was insufficient clarity around implementation issues, including the feasibility of measures and enforcement. Concerns noted included late-breaking changes to regional packages and ambiguity over how overlapping gillnet fisheries' line caps would be managed.
- Questions about how risk reduction was measured in the model. These included skepticism about the whale distribution model and the belief that risk reductions due to management changes and other pressures from regulations were undercounted.

Abstain (neutral or unable to support but won't block consensus)

Team members who abstained shared the following rationales:

- Lack of confidence in the data used to calculate risk.
- Unable to agree to the level of reliance on weak rope in the package.
- Absence of a specific plan to transition to ropeless and/or commitment to do so by a date certain.
- Determining they were unable to take a decision that would represent all of their constituency.

- Concern that the package may not ultimately achieve the required minimum 88% risk reduction.

Cannot support; strongly oppose
Team members who opposed the recommendation shared the following rationales:

- Unable to agree to a package that included an unknown upcoming proposal from LMA 3 industry.
- Opposed to the over-reliance on weak rope in the package.
- Needing more opportunity to vet proposals with constituents.
- Concerns with equity across regions.
- Concerned that the dynamic management area proposal for LMA 1 Zone A was not established as the preferred approach in the package (rather than default closures.)
- Large area closures seem infeasible for industry.
- Concerns about data, including:
    - lack of DST peer review
    - desire to change effort assumptions
    - questions over data inputs to the whale and fisheries models.
- Concerns about statements regarding a timeline for a transition to ropeless fishing. Some wanted a stronger commitment to a date-certain transition, while others felt the statements being considered went too far.
- Too much pressure to get lines out rather than use weak rope.
- Effort reductions proposed were too aggressive; alternative options needed further exploration.
- Scientists and conservation caucus members opposing the recommendation cited their joint statement as rationale (see statement in Appendix 1 below.)

6. Conclusion and next steps

1

Based on the Team's deliberations, CBI and NMFS outlined the following next steps:

1. NOAA Fisheries will draw on the measures in the final package and those discussed throughout the meeting to prepare a proposed rule that is expected to reduce mortality and serious injury of right whales to a level below PBR. This rule will be finalized by December of 2024.*
2. The Atlantic Offshore Lobstermen's Association identified their intention to provide for NMFS consideration an updated proposal by January 20, 2023 that would reduce risk in their fisheries by 88-93 percent.*
3. CBI will prepare a key outcomes memorandum
4. The DST Review will be conducted from January 30 to February 1, 2023.

*Following the meeting, on December 29, 2022, the Consolidated Appropriations Act, 2023 (CAA) was passed. The CAA explained that the 2021 "Atlantic Large Whale Take Reduction Plan (86 Fed. Reg. 51970) shall be deemed sufficient to ensure that the continued Federal and State

authorizations of the American lobster and Jonah crab fisheries are in full compliance" with the MMPA and ESA until December 31, 2028.

7. Appendices

The following supporting documents are appended below:

Appendix 1: Conservation/researcher statement at conclusion of the meeting

Appendix 2: TRT Position Statement submitted by Maine Lobstermen's Association on behalf of Maine Fishing Industry Members, December 22, 2022

Appendix 3: Letter from Maine Department of Marine Resources to GARFO, January 27, 2023

Appendix 4: Maine's December 1 Dynamic management proposal presentation

Appendix 5: Slides consolidating most advanced regional risk reduction proposals as of Friday, December 2

Appendix 1: Conservation/researcher statement at conclusion of the meeting

Joint statement from conservation/scientist caucus

Signatories: Regina Asmutis-Silvia, Jane Davenport, Erica Fuller, Kristen Monsell, Brian Sharp, Mason Weinrich (conservation caucus)

Alex Costidis, Robert Kenney, Amy Knowlton, Bob Lynch, Bill McLellan, Richard Merrick (scientist caucus)

The 29.7% decrease in NARW abundance between 2011 and 2020 suggests how urgent it is that significant reductions in the effects of entanglements in U.S. commercial fisheries occur. Much of this decrease is a result of SI/M and sublethal effects resulting from interactions with US commercial fishing gear. So, while developing a plan to reduce SI/M to below PBR is the clear short-term MMPA driven goal of the ALWTRT, a large proportion of risk reduction is reliant on weak rope and the results from Knowlton et al. (2016) suggest there may be up to 28% of whales that would not be helped by that modification. The biological reality is that the longer it takes to greatly reduce fishery related mortalities and sublethal effects, the greater the probability that the population will be reduced to levels below which it will not be able to recover.

We appreciate the effort put forward by the team to work toward meeting the legally mandated target of PBR and acknowledge the significant impacts to fishing communities as a result of these proposals. Preventing the extinction of critically endangered right whales should not be a choice between whales and fishing. It is with the goal of ensuring a future for both whales and fishing that we ask NMFS to transparently address the long-term implications of the mandates of both the MMPA and ESA. As the MMPA requires that, within five years, a Zero Mortality Rate Goal is achieved and the ESA requires a Negligible Impact Determination be made for the fishery to be legally permitted, the ultimate legal target that must be achieved is not PBR, but closer to 10% of PBR.

Given the sublethal population level impacts of any entanglement, we believe that the only viable risk reduction is to remove line from the water. As a result, we ask NMFS to include in this Plan amendment a commitment to make on-demand fishing gear legally and commercially available by December 2024. We do not want to see thriving fishing communities obliterated because alternatives are not available for fishermen faced with further line reduction measures within several years of the release of this rule.

Going forward, the following guiding principles must apply in NMFS's rulemaking:

- Measures that get lines out of the water are necessary and strongly preferred over measures that weaken those ropes.
- Weak rope is not a long-term solution and will not prevent sub-lethal effects or promote recovery.
- NMFS must commit to remove lines in high-risk trap/pot fisheries by prioritizing federal waters, with areas of LMA 3 being required to remove static vertical lines 3 years after the Dec. 9, 2024 rule is finalized and thereafter that federal trap/pot fisheries from 12 nm seaward in areas of LMA 1, 2, and 2/3 being required to remove static vertical lines by 5 years after the Dec. 9, 2024 rule is finalized

Appendix 2: TRT Position Statement submitted by Maine Lobstermen's Association on behalf of Maine Fishing Industry Members, December 22, 2022

To: Marisa Trego and Colleen Coogan, NMFS GARFO
Fr: Maine TRT Fishing Industry Members
Re: Opposition to Risk Reduction Package Considered by TRT on December 2, 2022

December 22, 2022

This memorandum documents the opposition of TRT members Patrice McCarron, Kristan Porter, Jeff Putnam, and Dwight Carver to the risk reduction package proposed by NMFS for the December TRT meeting and considered by the TRT on December 2, 2022. Below, we first address our overarching concerns with, and objections to, this TRT process. We then address our specific concerns with, and objections to, the risk reduction package proposed by NMFS and provide our views on some potentially viable elements of a future proposal. We raise these concerns in the context of NMFS's accelerated schedule to meet an extremely aggressive and insufficiently justified "risk reduction" target that has been arbitrarily mandated by NMFS in violation of its statutory duties. In particular, the rushed schedule and arbitrary risk reduction target compromise the core statutory obligation to use and objectively apply the best available scientific information.

Overarching Concerns and Objections

In a letter dated September 17, 2022, and in a scoping comment letter dated October 11, 2022, we transparently stated our serious procedural and substantive concerns with this TRT process. Those concerns remain and have gone largely unaddressed by NMFS. We summarize below the key points of concern and objection.

1. This TRT process is flawed because it is premised upon hypothesized, unobserved fishery impacts that are drawn from overly precautionary models utilizing worst-case scenarios and flawed assumptions, including, but not limited to, the arbitrary assignment of right whale mortality (including supposed "cryptic" mortality) to the lobster fishery. Moreover, NMFS has relied on hypothetical, arbitrary cryptic mortality figures rather than any analysis of observed trends in serious injury and mortality in recent years as whale protective measures have been implemented and whale migratory patterns have shifted away from the U.S. lobster fishery. For these and other related reasons, MLA continues to object to NMFS's erroneous conclusion that the lobster fishery has a right whale serious injury and mortality level that exceeds PBR. That conclusion is not based upon an objective assessment of the best available scientific information and is inconsistent with observed data. Notwithstanding this objection (which is being judicially pursued), we have additional, more specific concerns even if NMFS's estimated take levels are assumed to be correct, as follows.

2. This TRT process is broken. It has been improvidently and unnecessarily rushed. By placing a priority on speed at the expense of thoroughness, integrity, and quality, NMFS has undermined the possibility of conducting the meaningful outreach necessary to elicit feedback from a diverse representation of Maine lobstermen. The rushed process

has also cut short the State of Maine's evaluation of the draft DST model based on true outreach and input from a diversity of Maine lobstermen. Additionally, we note that only a portion of the draft DST model was provided to three states, including Maine, further compromising the State's evaluation, and that the draft DST model was not provided to any other TRT members. We maintain that NMFS must provide the full draft DST model to all TRT members to make this process as transparent and effective as possible.

3. Although NMFS continues to characterize the DST as a "tool," the tool has become the *de facto* management decisionmaker. In this TRT, members are not asked to propose solutions based on their knowledge, experience, or expertise. Indeed, no solutions are considered and no solutions are possible unless they are generated through the DST. Any scenarios that fall short of the arbitrary risk reduction goal are perfunctorily deemed inadequate whether or not they would result in meaningful protection for whales. Congress did not intend for TRT recommendations to be pigeonholed into a single, flawed model. Among other failings, the current draft version of the DST requires deep cuts—including closures in Maine—in areas with mere fractions of whale observations recorded. Moreover, the model does not capture the dynamic nature of interactions in a complex and changing marine environmental system. According to the DST, areas that pose *lower* risk must make *larger* changes to achieve meaningful risk reduction. And yet, TRT members are being required to accept or reject packages generated by the DST, without any critical consideration of the model's assumptions, inputs, or outputs, without any characterization of the statistical uncertainty around the results for various scenarios, and with little or no evidence or ability to meaningfully assess the reasonably expected efficacy of the measures. Thus, the TRT is asked to make recommendations that are blind to any likelihood of benefit for the species, much less any assessment of the practical and operational consequences of implementing such recommendations. The TRP is multifaceted and cannot be reduced to a simple numerical exercise using an unreliable model that has been known to produce implausible results.[1]

4. Relatedly, the draft DST still has not been peer reviewed and NMFS has pushed back the planned peer review by almost two months. NMFS staff has also stated that they do not anticipate any changes to the model despite the planned peer review and even though numerous concerns about the quality, design, and suitability of the model have been raised at TRT meetings and by independent peer reviewers on the precursor DST model. Nor has NMFS sought any input from the TRT on the terms of reference for the peer review, which were seriously deficient in the past. The staff's ongoing reluctance to make meaningful changes to the DST and its failure to prepare sufficient and effective terms of reference raise a fundamental question whether NMFS is truly giving any

[1] TRT members are unable to assess whether the flaws that led the DST to produce implausible results in the past have been corrected because NMFS has denied access to information about its updated parameters and, as noted below, it has yet to undergo peer review or to be adjusted in response to prior peer review feedback.

weight or purpose to the peer review. We steadfastly oppose a process in which TRT members vote on risk reduction packages generated by a draft DST before it has been sufficiently peer-reviewed and deficiencies are addressed.

5. We are also concerned because the risk reduction proposal under consideration, which was generated solely by the flawed outputs of the DST, gives rise to serious inequities among lobstermen. Specifically, Maine is the only state proposed to lose half its traps in LMA 1. Trap reductions can only be viable when all lobstermen reduce traps because there will be fewer traps overall competing for lobster. However, Maine lobstermen fish the same bottom in federal waters as lobstermen from other states who would be permitted to operate double the number of traps. Maine, like other states participating in the lobster fishery, has a multi-generational investment in the sustainability of this fishery, a strong record of compliance with all protective measures implemented for the benefit of whales, and is the home to multiple communities that rely on the fishery for economic viability. Nevertheless, the proposal before the TRT will reduce Maine's participation in LMA 1 far more than any other state's, causing its fishermen to endure closures in areas predicted to have less than a single right whale in the closure month.

6. NMFS recently changed the assumptions regarding fishing effort data for LMA 1 without meaningful input from the industry or the State of Maine (the stakeholders best positioned to review and verify such assumptions). NMFS re-ran the DST based on these new assumptions, which resulted in a downgraded risk estimate achieved from the 2021 TRP regulatory amendments from 60% to 50%. This is primarily based on an assumption that the fishery had *less* gear in the water and *less* co-occurrence than originally estimated. NMFS has tried to justify this counterintuitive conclusion by suggesting that since risk was lower than previously estimated, the fishery must do *more* now to meet the risk reduction goal because it is starting from a *lower* risk baseline than was previously assumed. This defies common sense and highlights the problem with NMFS using one flawed model (Pace) to estimate mortality and another flawed model (DST) to reduce that assumed risk. NMFS is now requiring Maine lobstermen to make even deeper cuts to meet the new risk reduction goal because the model assumes that Maine gear is less frequently deployed in co-occurrence with whales than was previously believed. This nonsensical result (requiring removal of more gear in an area where less gear is deployed than assumed when risk was calculated) should, in and of itself, be cause for all TRT members to question the quality and integrity of work being done on behalf of the species and stakeholders in our marine resources. Moreover, the fact that NMFS arbitrarily changed the underlying assumptions after a final rule was already promulgated undermines the public's trust in the process.

7. The current TRT process does not sufficiently address and incorporate the growing evidence of climate-driven changes in right whale migratory patterns or the lack of evidence documenting right whale entanglement in Maine lobster gear. Scientific literature has clearly documented a shift in the migratory pattern of right whales out of the Gulf of Maine and into Canadian waters where a disproportionately high number of

whales have been fatally entangled in Canadian snow crab gear and struck by vessels.[2] And, while all-too-many right whales perished from interactions with fishing gear and vessels in Canadian waters, there has not been a single observed entanglement with Maine lobster gear in over 18 years. NMFS must take additional time to get the science and the models right, objectively using all the best available scientific information on oceanographic variability. Consequences driven by a changing climate are already occurring, and it is incumbent on NMFS to ensure the impacts from a changing climate are fully considered in this process. At a minimum, NMFS must use existing information such as that relied on in *Meyer-Gutbrod, et al.*, to address the question whether current population survey information needs to be adjusted to take into account the probability that a portion of the population has not been properly documented as migratory patterns shifted.[3]

Specific Concerns with Proposed Risk Reduction Package

1. Despite numerous requests, we have not yet received the requested model runs of proposed LMA 1 measures under two scenarios: (1) using LMA 1 fishing effort data assumptions that were used to analyze measures in the Final Rule, and (2) using the new assumptions regarding LMA 1 fishing effort data as presented during these meetings. We strongly object to swapping out the former set of assumptions, which were peer reviewed and used to analyze the risk reduction measures in the Final Rule, for an updated method that was not peer reviewed and resulted in a different risk reduction outcome for a rulemaking that was already finalized.

2. We generally agree that the TRT is considering an appropriate suite of management options. However, we strongly object to NMFS's use of static closures in areas without confirmed presence of whales or with extremely low predicted presence. We also do not agree that any of these management options have been fully explored to determine how to most effectively reduce alleged risks, minimize adverse practical and operational consequences, minimize unintended consequences, and achieve an equitable result among fishermen.

[2] *See* Meyer-Gutbrod, et al., *Ocean Regime Shift is Driving Collapse of the North Atlantic Right Whale Population,* Oceanography 34 No. 3 (2021); Ross, et al., *Projecting regions of North Atlantic right whale,* Eubalaena glacialis*, habitat suitability in the Gulf of Maine for the year 2050*, University of California Press (2021).

[3] As just one example, a group of scientists recently published a paper in which they "redefined right whale annual distribution patterns for the post-2010 decade" and "broadly characterize[d] new seasonable habitat-use patterns across the core right whale range." *See* Meyer-Gutbrod, E.L., K.T.A Davies, C.L. Johnson, S. Plourde, K.A. Sorochan, R.D. Kenney, C. Ramp, J-F. Gosselin, J.W. Lawson, and C.H. Greene. 2022. Redefining North Atlantic right whale habitat-use patterns under climate change. Limnol. Oceanogr. 9999, 2022, 1-16. **doi.org/10.1002/lno.12242**. This information is plainly relevant to the TRT process and the TRP measures, and represents the best available scientific information. However, it is not considered at all in the current draft DST. This violates the MMPA's mandate that NMFS use the best available scientific information when developing TRP measures.

3. We oppose the proposed closure of Zone A due to the demonstrated low presence of right whales in that area. NMFS must commit to implement, *at most*, a dynamic management approach in areas with minimal whale presence that are nevertheless determined to present some risk. This is even more important in areas such as Zone A, the closure of which would result in severe social consequences to one of the poorest counties in the nation. We remain open to a discussion about dynamic management measures. We recognize that, according to the DST, Maine cannot achieve the hypothetical risk reduction goal NMFS has unilaterally set for the State without this static closure. This contributes to our serious doubt about the design and output of the model.

4. Despite our request, NMFS has not provided feedback on a potential conservation equivalency to closing Zone G in January. Furthermore, we lack clarity on how the proposed Zone G seasonal hybrid trap area will be implemented in November and December to ensure that all lobstermen fishing in the closure area are subject to the same trap limit and endline cap. We remain open to a discussion about potential conservation equivalencies.

5. A conversion to 100% weak rope is untested and raises significant safety and operational concerns, which must be considered in this TRT process but have thus far been ignored. We remain open to a discussion about weak rope options that includes meaningful consideration of these important issues.

6. We do not support inclusion of a path to ropeless fishing or a sunset date for gear modifications to trigger ropeless fishing. NMFS has publicly acknowledged, including in sworn declarations filed in federal court, that ropeless gear is not commercially viable and will not be for many years. Indeed, it is entirely unknown when, if ever, ropeless fishing will be commercially viable.

7. If ropeless fishing is to be considered in the future, NMFS must first clarify whether NMFS intends that it will be utilized primarily as a tool to gain access to closed areas (as outlined in NMFS's Roadmap to Ropeless Fishing) or, alternatively, subject to broadscale adoption across state and federal waters fisheries (as articulated in Michael Pentony's September court declaration). These options pose quite different consequences, and both are rife with uncertainty. NMFS must conduct a thorough assessment of the consequences and serious questions associated with each of these scenarios before either option can be considered.

8. We oppose the recommendations by certain Team members to mandate further reductions in co-occurrence when risk reduction goals have been already met. Those recommendations reflect a myopic view of the TRT process that has no grounding in the take reduction provisions of the MMPA, which simply call for the reduction of serious injury and mortality through a variety of possible means. A TRP can only be successful if it provides the flexibility needed to meet take reduction goals.

9. NMFS must ensure that new risk reduction measures provide the fishing industry as much flexibility as possible, given rapidly developing science on changing whale habitat and migration patterns, among other things.[4] At a minimum, NMFS should not only allow for dynamic management but should include expedited "off-ramps" to facilitate introduction of management innovations and responses as more evidence becomes available regarding the effectiveness of management measures and changes in whale migratory behavior or habitats.

10. NMFS must establish a practice of retrospective review of the Phase 1 regulations to determine the extent to which the various mitigation strategies reduced risk. The DST is a simplistic model intended to estimate risk reduction.[5] NMFS is proceeding to Phase 2 without any information on the actual efficacy of Phase 1, nor does it have any plan in place to collect such information. This inability to validate the estimated values of risk reduction in the DST severely limits the information that could be used to subsequently modify mitigation measures to make them more effective for the species and more efficient for fishermen.

[4] *See supra* note 3. As the D.C. district court stated in its remedy order in the *CBD v. Raimondo* litigation:

> [The Court] believes that this decision is the wisest course because facts on the ground are shifting rapidly, as new data emerge on right-whale migratory patterns, mortality factors, technological change, and more. *See Maine Lobstermen's Ass'n v. NMFS*, No. 21-2509, 2022 WL 4392642, at *15 (D.D.C. Sept. 8, 2022) ("As the science improves and the climate shifts, new data and new literature appear to be developing every day.").

[5] For example, the DST does not consider the role of whale behavior in entanglements, which is a factor expressly considered by a model that is the basis for a pending rule intended to reduce the impact of ship strikes on North Atlantic right whales. *See supra* note 3.

Appendix 3: Letter from Maine Department of Marine Resources to GARFO, January 27, 2023

STATE OF MAINE
DEPARTMENT OF MARINE RESOURCES
21 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0021

JANET T. MILLS
GOVERNOR

PATRICK C. KELIHER
COMMISSIONER

January 27, 2023

Colleen Coogan
Marine Mammal & Sea Turtle Branch Chief
Protected Resources Division
Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930

Dear Ms. Coogan,

The Maine Department of Marine Resources (ME DMR) submits this letter following the November and December 2022 Atlantic Large Whale Take Reduction Team (TRT) meeting and the passing of the 2023 omnibus spending package that states the lobster fisheries compliance with the Endangered Species and Marine Mammal Protection Acts for the next 6 years. The purpose of this letter is two-fold. First, to document Maine DMR's position and rationale regarding the TRT vote which took place at the end of the December meeting, and second, to identify key priorities moving forward considering recent congressional action. While the omnibus spending package provides a six-year pause in rulemaking for the lobster fishery, this is not a pause in related work. These six years provide an opportunity for critical data collection, model development, and testing of risk reduction measures. Many of the priorities identified below directly relate to concerns Maine DMR expressed at the December TRT. This is an opportunity for all parties to work together to be better informed before additional rulemaking commences.

December 2022 TRT Meeting

At the conclusion of the TRT meeting on December 2, 2022, each TRT member was asked to designate if they support, support with reservations, do not support, or abstain from voting, on a draft coastwide package aimed at reducing risk to the North Atlantic Right Whale (NARW). Since the poll was conducted anonymously, it is not clear if, or how, each team member's vote would be incorporated into the official record, and there was limited time to present rationale. ME DMR voted 'do not support', and our rationale for this vote was specific to the LMA 1 portion of the coastwide proposal and due to four concerns; 1) equity; 2) the proposed Zone A closure; 3) precision of the DST; and 4) limited opportunity for engagement with industry.

The proposed LMA 1 risk reduction package included a year-round trap cap of 400 for all ME-permitted vessels, but not for other LMA 1 permit holders. ME DMR has substantial equity concerns with ME fishermen being subject to an overall 400-trap cap while LMA1 fishermen from other states are not. Moreover, NH and MA fishermen will have additional traps they can fish directly outside that area, while ME fishermen do not. This could create an incentive for fishermen from other states, who have not previously fished within federal waters traditionally fished by Maine license holders. This approach

is a redistribution of traditional fishing bottom and will certainly create social issues that will need direct engagement by the Maine Marine Patrol. Further, an imbalanced trap cap across the LMA puts ME fishermen at a severe economic disadvantage because lobsters do not abide by management boundaries; lobsters move throughout the Gulf of Maine and to Georges Bank. As a result, a decrease in effort that is not uniformly applied in an LMA permanently disadvantages those with fewer traps.

Maine recognizes that under the current DST model, much of our risk is diffusely spread throughout the state and, in contrast to states which have seasonal and predictable feeding aggregations, some management measures such as trap caps may better align with this diffuse nature of risk. However, within the final package presented, Maine was facing three large seasonal closures. Thus, Maine, unlike the other states, was facing management measures which address both acute and diffuse risk. For this reason, ME DMR could not support a package which limits ME lobster vessels to 400 traps while other states within the same LMA are subject to different, higher trap caps.

The proposed LMA1 risk reduction package included a static closure in Maine Zone A during June and July. The majority of Zone A borders Washington County, one of Maine's most economically depressed regions which is heavily reliant on the lobster fishery; a closure during the summer months would be devastating to the economy of this rural Maine county. Maine's Zone A also has a robust student license program which enables the next generation of lobstermen to fish and fulfill their apprenticeship requirements in the summer months when they are not in school. A large spatial closure during the proposed timeframe would disproportionally impact the social and cultural fabric of the fishery by eliminating the opportunity for young Zone A fishermen to gain experience in, and access to, the commercial fishery. Further compounding the troubling outcomes that would be realized by this closure is its overlap with the disputed Grey Zone area. A static closure in this area will not reduce risk to NARW as the removal of ME gear from the grey zone will result in an increased presence of Canadian gear moving into territory vacated by ME fishermen. This would instead result in increased risk to NARW given the Canadian fleet is not subject to the same protective measures as the U.S. fleet, such as weak points, and continues to utilize floating groundlines as well as float rope at the surface of the buoy lines. Given these concerns ME DMR advocated for a dynamic management monitoring plan in Zone A out to 12 nautical miles in June and July. However, this was not considered the preferred alternative in the final package of measures at the TRT. Thus, ME DMR could not support a package which advocated for closing an area so economically vital to Downeast Maine particularly when the risk is overwhelmingly driven by the presence of gear and environmental covariates, as opposed to recent sightings of right whales. Going forward, we would encourage NOAA to consider more equitable approaches to management in the grey zone, and hope to work collaboratively with our federal and Canadian partners to develop options for such an approach.

ME DMR is also concerned about the precision of the risk reduction estimates provided by the DST. Within materials and draft packages shared with the team at the November and December TRT meeting, risk reduction scores were presented with decimal places, yet there are no bounds around uncertainty in any of the calculations. The DST is likely not as precise as TRT members are led to believe. Further, given the changes in modeling methodologies between Phase 1 and Phase 2, Maine received a decrease in our total co-occurrence and risk scores but ended up having to take more severe action to achieve the same percentage of risk reduction. This is a counter-intuitive result of the current DST framework. The push to complete additional rulemaking where there are significant questions on the underlying model results in reliance on management actions that have not had to stand the test of time.

Maine has a strong system of co-management with our fisheries and taking the time to engage with industry, vet alternatives, and obtain feedback is a key element of considering any change. The amount of time TRT members have to review and receive feedback on has become so extraordinarily limited as to become untenable from the State's perspective. On the final day of the TRT meeting, team members were still working in small caucus groups refining potential packages, and the final coastwide and regional draft packages were formally presented less than two hours before TRT members were expected to vote. This resulted in very limited time to digest and understand the management measures included in the package, even for team members who have been actively engaged in the process throughout its development. Even more concerning, however, is the fact that there is then no opportunity to solicit industry feedback as to the feasibility of measures being considered. While some management tools were generally discussed with our industry ahead of the TRT meeting, such as trap caps and closures, the draft package contained several aspects related to weak rope for both lobster and gillnet fisheries which has not been previously discussed with industry. ME DMR feels it is untenable to vote on a package without input on operational feasibility from the fishing industry, and this will remain our position when rulemaking resumes in several years. Furthermore, asking TRT members to take a position on a final draft package they have had only a few hours to review and consider implications of is both unreasonable and inappropriate.

For the reasons highlighted above, ME DMR could not vote to support the coastwide risk reduction package as presented to the TRT in December. However, with additional time now available ME DMR is confident that many of these concerns can be addressed.

Looking Forward

The omnibus spending package provides substantial funding to improve the information on which the TRT and NOAA fisheries is making decisions regarding NARW conservation. The issues highlighted earlier in this letter identify areas where work should begin now to ensure all parties have the necessary information and resources in place to inform rulemaking ahead of 2028. Priorities for the next six years must include improving the DST, increasing monitoring in the Gulf of Maine, development and implementation of a dynamic management strategy, further development innovative gear alternatives including weak rope and on-demand gear, and extensive outreach with industry.

The omnibus also included report language directing NOAA to work with states and other stakeholders to improve the DST by merging multiple models and data sources into a single model and to utilize a 'most reasonably certain to occur' rather than a 'worst case' scenario approach. Making these changes, as well as, incorporating whale behavior, and adding data from additional time periods should result in a model that more accurately reflects the distribution of NARW in time and space. Improving the DST should be a top priority for NOAA, and additional data sources are emerging to support this effort. For example, as of January 1st Maine now requires 100% harvester reporting for all commercial lobster license holders. The added information about where harvesters are fishing, how many traps they are hauling, and how many end lines are being used is vital to understanding the footprint of the fishery and evaluating where actual risk to NARW may occur. Further, the spending package also provides substantial funding for increased acoustic monitoring and other work to help improve our understanding of NARWs. Incorporating new data from these efforts into a revised DST may address many of the issues ME DMR has highlighted about the DST as risk scores produced should more appropriately reflect actual risk to whales. This work must start now so there is sufficient time to make and vet improvements prior to producing new risk scores, risk reduction packages and draft regulations in anticipation of final rule issuance for the Northeast lobster and Jonah crab fishery by 2028.We are

hopeful that work to improve the DST will lead to a more predictable and manageable process and benefit the development of future regulatory measures.

The additional time for rulemaking also allows Maine and NOAA to carefully develop a robust dynamic management program for inclusion in the 2028 rulemaking. Additional funding for increased acoustic and plankton monitoring will allow for new data streams to support a robust monitoring plan. Maine is committed to finalizing a monitoring plan that will achieve a high level of efficiency and avoid the devastating economic impacts of broad temporal and spatial closures in areas with low right whale presence and abundance. ME DMR is committed to continuing to work with NOAA and the TRT to develop an effective and implementable dynamic management protocol.

NOAA and the TRT have an opportunity to develop a risk reduction package for lobster and Jonah crab fisheries which will reduce risk to NARW without creating serious economic hardship. While the formal rulemaking process will not begin for some time, engagement with industry on development of alternative risk reduction measures must continue. ME DMR received Congressional directed funding in FY 2022 to have an ongoing engagement process with fishing industry members throughout the original Conservation Framework process and will begin that process in earnest this year with the benefit of additional time provided in the FY2023 omnibus. There is now ample time to vet ideas and consider operational feasibility of different measures including weak rope, and on-demand gear. For example, the coastwide risk reduction package presented to the TRT included substantial weak rope measures, but it was unclear if all these measures would be operationally feasible. Further, on-demand fishing was also a prominent topic at the TRT meeting and will likely need to be a "tool in the toolbox" to continue to permit the lobster fishery under the Endangered Species Act. With additional time and funding now available efforts must focus on improving on-demand gear and its use on a commercial scale. As articulated in the omnibus' report language, this work should concentrate on subsea gear location, coordination with the mobile fleet and reducing gear conflicts, and enforcement. Maine DMR is engaged with and conducting research in many of these areas and is committed to remaining involved in efforts throughout the region to advance this technology.

Finally, because the recent spending package only delays rulemaking associated with lobster and Jonah crab under the Atlantic Large Whale Take Reduction Plan, it is our understanding that rulemaking associated with Gulf of Maine gillnet fisheries will continue. Given the separate regulatory timeline now in place, it is imperative that NOAA continue to have discussions around implementation and feasibility of risk reduction measures associated with those fisheries. While Gulf of Maine gillnet represents only a small portion of the coastwide risk, fishermen will be impacted by any management measures and opportunities for engagement with those industry members is critical and should not be overlooked. In particular, NOAA fisheries should engage state and federal partners in discussion regarding the endline caps to ensure all avenues of feasibility are evaluated.

Conclusion

As discussed in this letter, ME DMR had serious concerns with the risk reduction package presented to the TRT for a vote in December. However, recent legislative action offers a chance to thoughtfully improve upon and address these concerns prior to subsequent rulemaking. ME DMR is aware that specific reference to many of the issues identified in this letter were included in the FY23 omnibus spending package. The most efficient and comprehensive strategy for advancement of these various priorities will require close coordination between NOAA and ME DMR, as well as others, to develop a thoughtful spend plan and shared priorities that ensures these resources are maximized as

much as possible. It is imperative that we work closely together moving forward to enhance monitoring for right whales, improve the DST, continue research on subsea gear location and on demand technology, and design and implement a robust dynamic management approach. Doing so will ensure that the TRT is presented with the most accurate risk scores possible and that all parties are prepared when formal rulemaking begins closer to 2028.

Sincerely,

Patrick Keliher, Commissioner

CC Janet Coit
Samuel Rauch
Jon Hare
Michael Pentony

Dynamic Management Updated Proposal

State of Maine

Monitoring

- Adopt multiple mechanisms of detection to have a robust monitoring program with a high probability of detections if a NARW is present
- Technology is off the shelf and already being implemented in other areas of both the US and Canada
  - Canadian dynamic management
  - Aerial surveys being used to dynamically manage in Massachusetts
  - Sightings and acoustic detections triggering dynamic slow zones for vessel speed
  - Real-time acoustic arrays off of Boston and in the Mid-Atlantic
- Pair real-time monitoring during the closure time period with a year-round broad-scale monitoring program to put detections and sightings in context of broader Gulf of Maine habitat use.
  - Archival passive acoustics program
  - Pursuing funding and partnerships for expanding broadscale aerial surveys
  - Zooplankton surveys
  - Habitat modeling

Monitoring and triggers

Assuming a closure timeframe of June – July

- Start monitoring May 15
- If no detections in May – begin dynamic mgmt. in June – July
- If detections in May – close Zone A in June and dynamically manage for July
  - Environmental info can be used to help inform this decision point
- Dynamic management applies from shore to 12nm; seaward of 12nm to boundary of Zone A would be a static closure in June/July (minus section overlapping with Grey Zone)
- If final package does not contain a 400 trap cap for Maine, a seasonal 400 trap cap for this area will be implemented to be able to move gear.
- Gear is assumed to be lines out

Monitoring and triggers

- Trigger for closure: any acoustic or visual sighting triggers a closure, including a probable acoustic detection
- Closure time-period: 14 days with a 48-hour window to remove gear
- Monitoring efforts would continue throughout closure.
  - If a detection (either acoustic or visual) is made in the second week of the closure area, the closure is extended by another 7 days.
  - Closure would also be extended if a flight cannot take place and would remain closed until a flight is made resulting in no detections (and no acoustic detections)
- Allow communities to contribute to hauling in each other's gear if a closure is triggered so boats can help get gear out of the water
- Closures will be based on one of two systems presented here

Closure structure

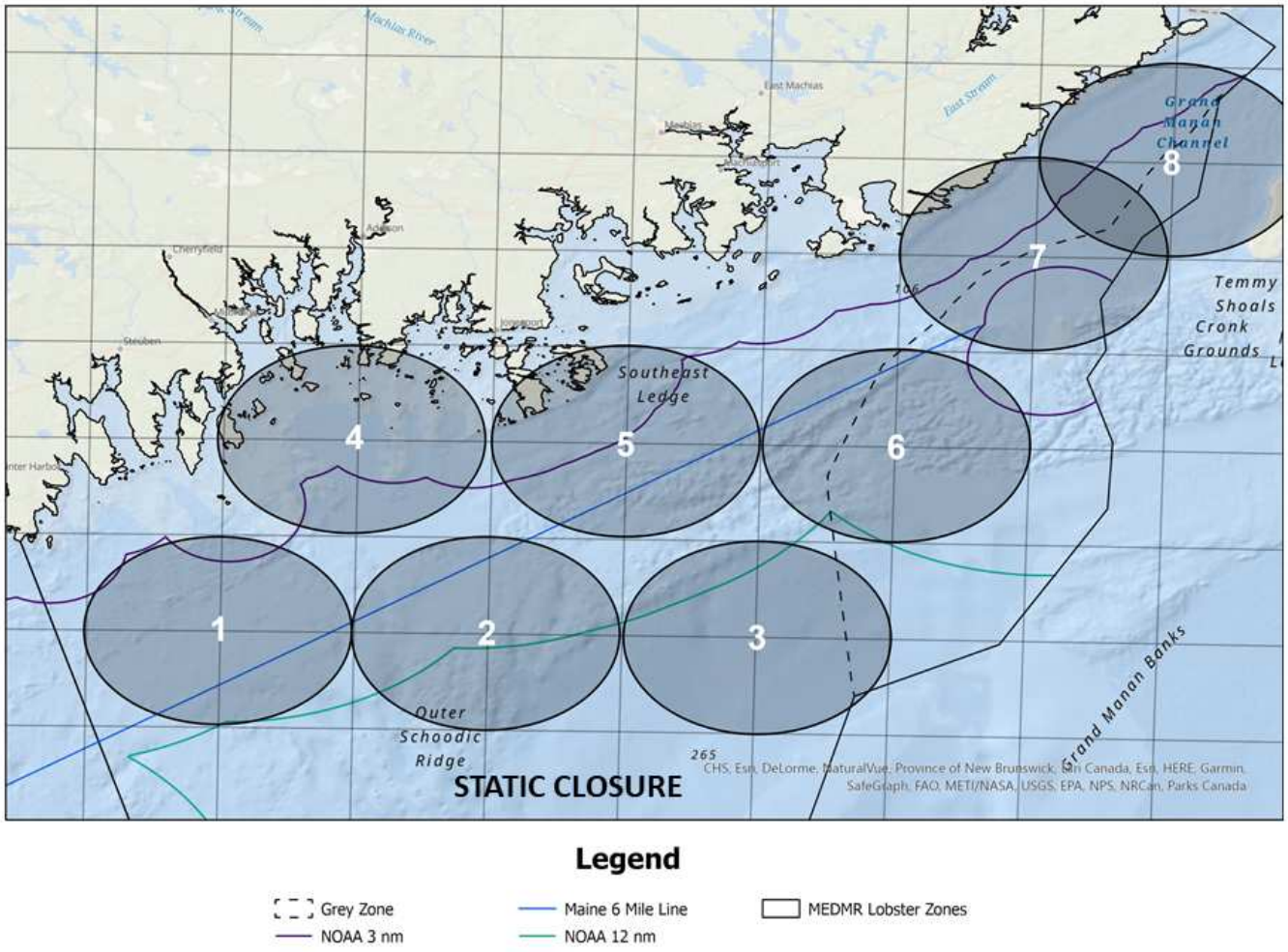
Closure System #1: Grid - based on Canadian grid system

- Real-time passive acoustic
  - Buoys moored at center point of 4 grids. Four grids closed with positive detections on a particular buoy.
  - A detection on a passive acoustic buoy will trigger an aerial flight to that area. If a visual sighting is detected the closure area would increase as indicated below.
- Aerial survey sightings
  - Grid cell containing sighting and adjacent cells close, resulting in 9 grid cell closure.

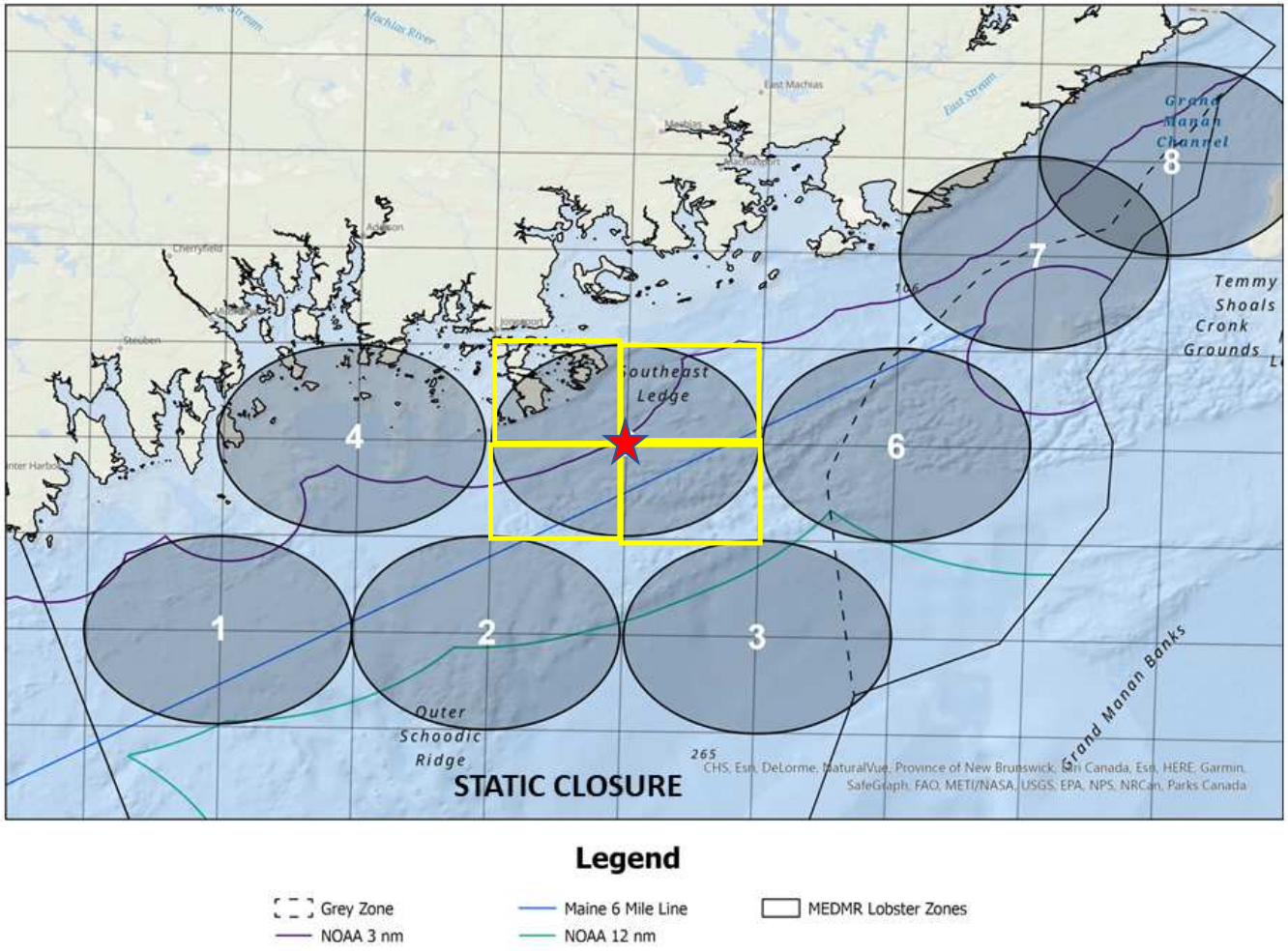
Closure System #2: Area based

- Zone A broken into 6 areas, including the grey zone.
- Any detection or sighting within an area closes that area.
- A visual sighting within *10km of an area boundary closes the adjacent area(s)
- The closure of an “inshore” area also closes the directly adjacent “offshore” area

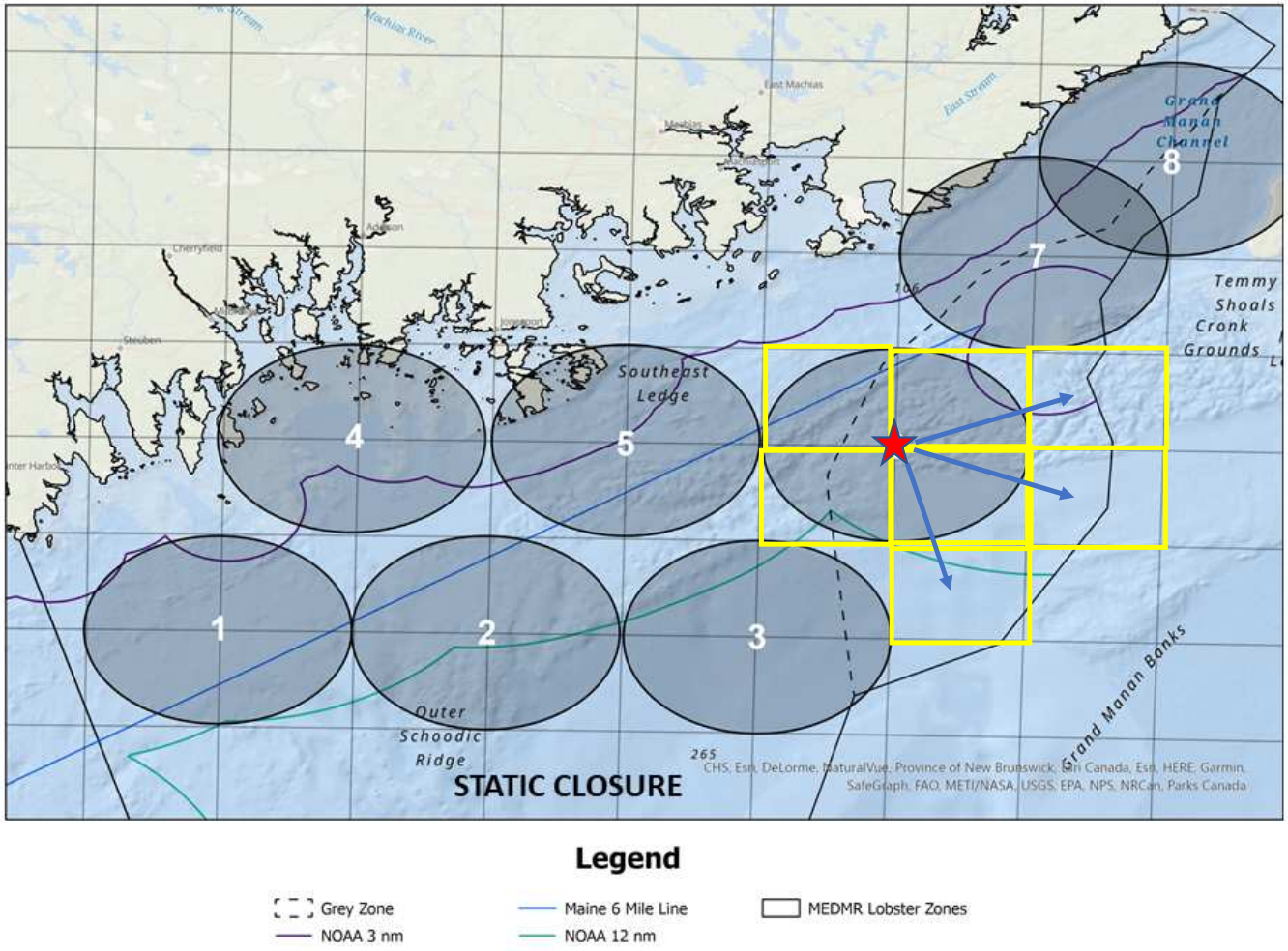
Closure System #1: Grid



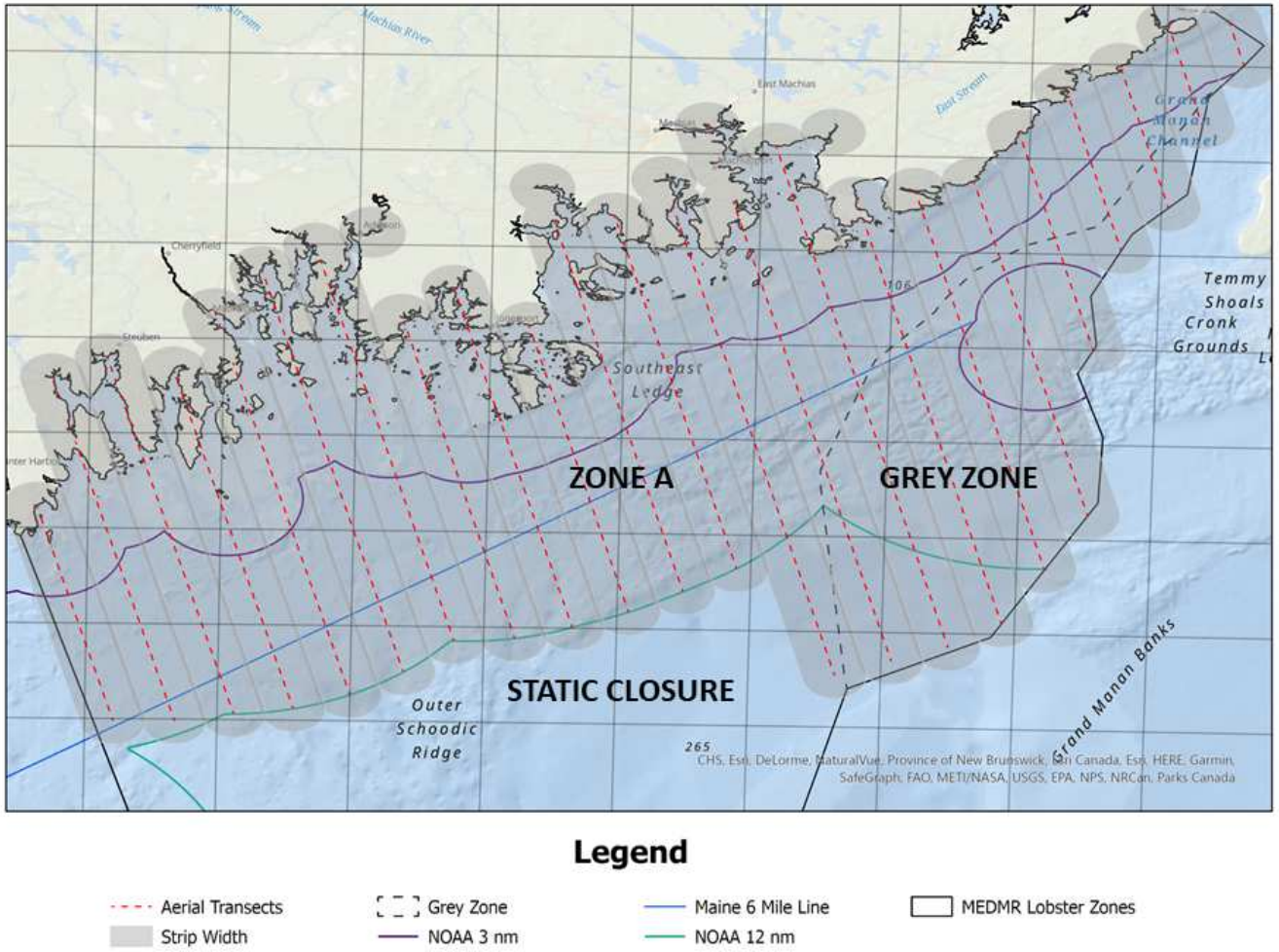
Closure System #1: Grid



Closure System #1: Grid – adjacent cells

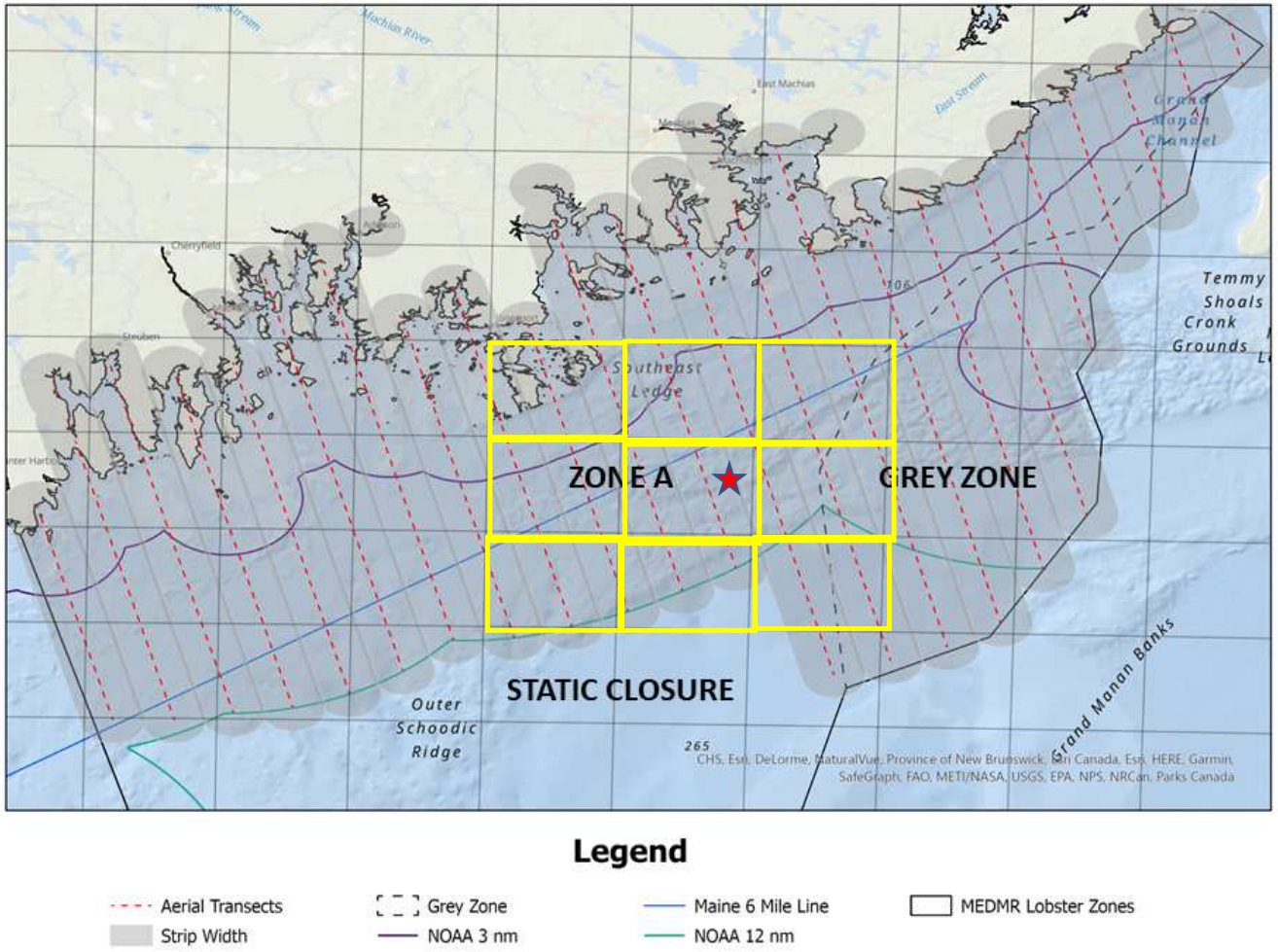


Closure System #1: Grid



- Survey tracklines running depth gradients
- Coverage out to 12-mile line + Grey Zone
- Spaced 3miles apart
- ~600 miles of tracklines with turns
- Covers ~1,390 square miles
- Could cut off tracklines at headlands/islands to shorten up into the bays
- Two flights/week to cover area if needed

Closure System #1: Grid



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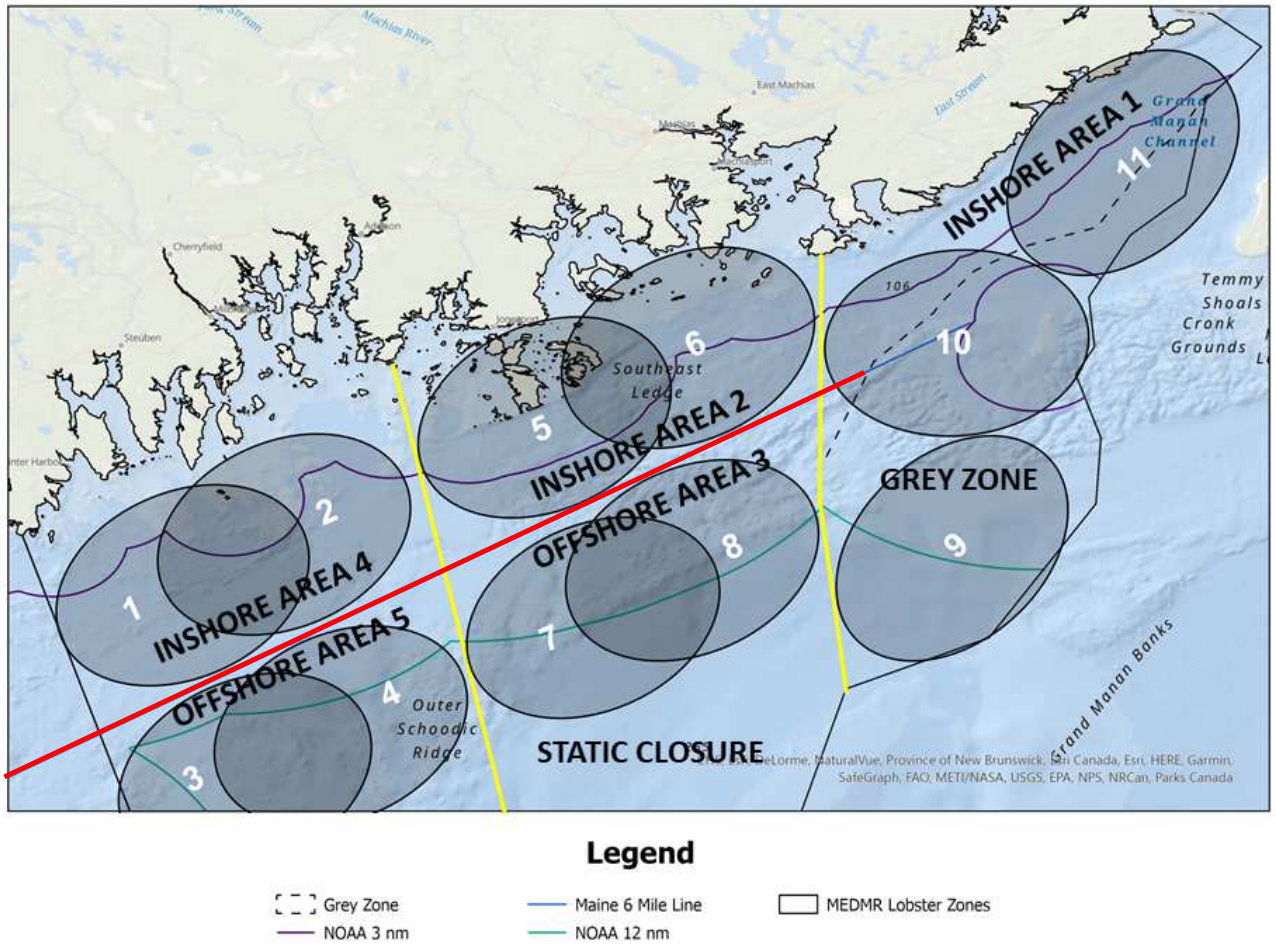
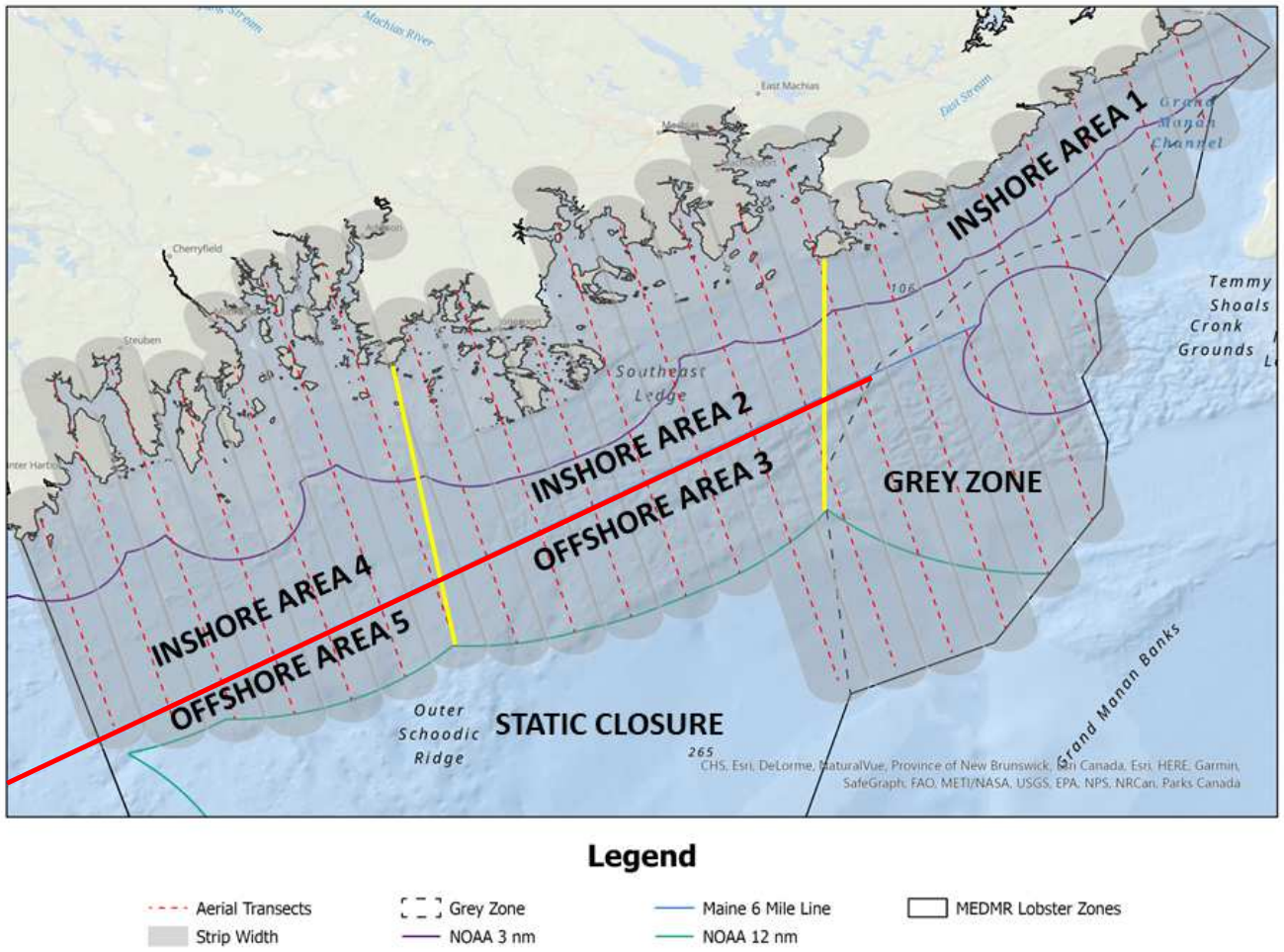
- ~600 miles of tracklines with turns
- Covers ~1,390 square miles
- Could cut off tracklines at headlands/islands to shorten up into the bays

Closure System #2: Area



- 6 areas
  - 3 inshore
  - 2 offshore
  - Grey Zone
- Detection on any acoustic buoy in an area closes the whole area
- Detection on an inshore area also closes the adjacent offshore area
- Buoys 10 and 11 close inshore area 1 + Grey Zone

Closure System #2: Area



- 6 areas
  - 3 inshore
  - 2 offshore
  - Grey Zone
- Sighting in any area closes the whole area
- Sighting in an inshore area also closes the adjacent offshore area
- Sighting within 10km of an area boundary triggers the closure of the adjacent area (*discussion point)

Outreach

- DMR would develop a web-based platform which could be updated daily with information including any visual or acoustic detections, or existing closures
- Potentially use existing platforms such as WhaleMap and whalealert.org to help with communication efforts

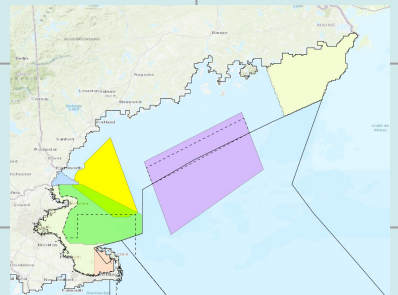
Backstop

- If infrastructure is not up and running to support dynamic management, then the backstop is a closure
- If an entanglement is detected from the area during monitoring, automatically move to a closure

Appendix 5: Slides consolidating most advanced regional risk reduction proposals as of Friday, December 2

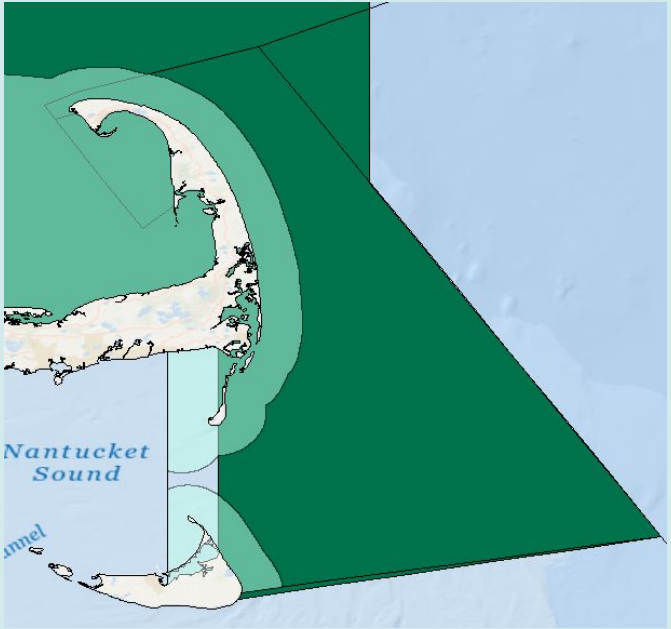
Trap Pot: LMA 1

Line Reduction	Closures to vertical buoy lines	Weak Rope	Coastwide Risk Points	Regional Risk Reduction	Total Regional Co-Occurrence Reduction
Gear Cap of 400 Traps for all vessels in Maine lobster zones; and Jeffrey's Ledge Polygon (aka LMA1A) Line Cap @ 30 Lines in Jeffreys Ledge Polygon Nov - Dec. TrawlUp to 10 in Mass LMA1 State waters Dec - Jan. TrawlUp to 15 in Mass LMA1 3-6 miles TrawlUp to 20 in Mass LMA1 6 - 12 miles	Maine Zone A; 100% Lines-Out June - July LMA1 Closure Expansion Oct - Jan* Jeffreys Ledge Polygon Jan - May Closure NH State and Adjacent Federal Waters March - April Mass 514 Federal Waters; Lines Out Feb - May 31 Cape Cod Bay East Dec - May	0 - 50 Fathoms: 100% Weak* @ 1,700 Both Ends; 50 - 100 Fathoms: Hauling Line: 100% Weak* @ 1,700 lbs; Tag Line: 100% Weak @ 600 lbs; 100+ Fathoms: Hauling Line: 33% Weak @ 1,700 lbs; Tag Line: 100% Weak @ 600 lbs; *100 percent weak (weak inserts every 60 feet or weak rope down to bottom 30 feet).	27 (out of 34)	LMA: 89.8 Maine: 88.6 NH: 90.9 Mass: 91.8	LMA: 80.0 Maine: 77.6 NH: 80.1 Mass: 84.3
		Added value for Ramp Down / Ramp Up before / after Gear-Out Closures (one week full value)		LMA: 90.2 Maine: 88.8 NH: 91.0 Mass: 92.6	LMA: 80.7 Maine: 77.9 NH: 80.2 Mass: 85.9
	Maine Zone A Jun-Jul or expanded, managed dynamically and with CE to achieve at least 80% of value of the closure (89% to LMA)			LMA: 89% +ramp up	



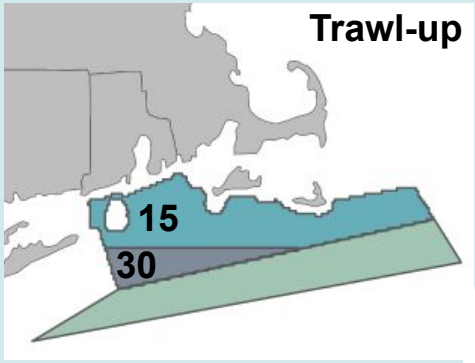
Trap/Pot: Outer Cape Cod

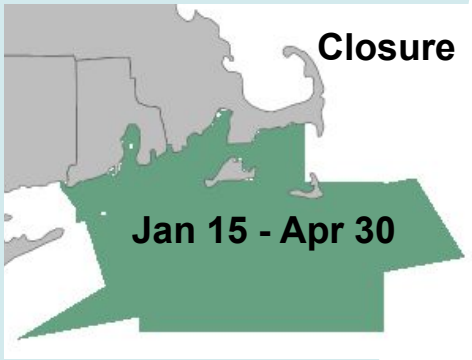
Line Reduction	Closures to vertical buoy lines	Weak Rope	Coastwide Risk Reduction Points	Regional Risk Reduction	Regional Co-Occurrence Reduction
10 pot trawl minimum for month of December	Close all Federal Waters Jan 1 to May 15	100% Weak Rope	0.3 (out of 0.5)	63%	38%



Trap Pot: LMA 2 & 2/3 Overlap

Line Reduction	Closures	Weak Rope	Coastwide Risk Reduction Points	Regional Risk Reduction	Regional Co-Occurrence Reduction	Regional Line Reduction
- 15 traps/trawl to 41° - 30 traps/trawl South of 41° - Remove one endline Year-Round	- Close A2 & 2/3 Overlap Jan 15-Apr 30 - Extend SIRA closure to Jan 15 - Added value for Ramp Down/ Ramp Up before/after Gear-Out Closures (one week full value)	100% Weak Rope	2.7 (out of 3.6)	87%	73%	45%





*Note- Exempt waters are NOT part of closure- artifact of mapping.

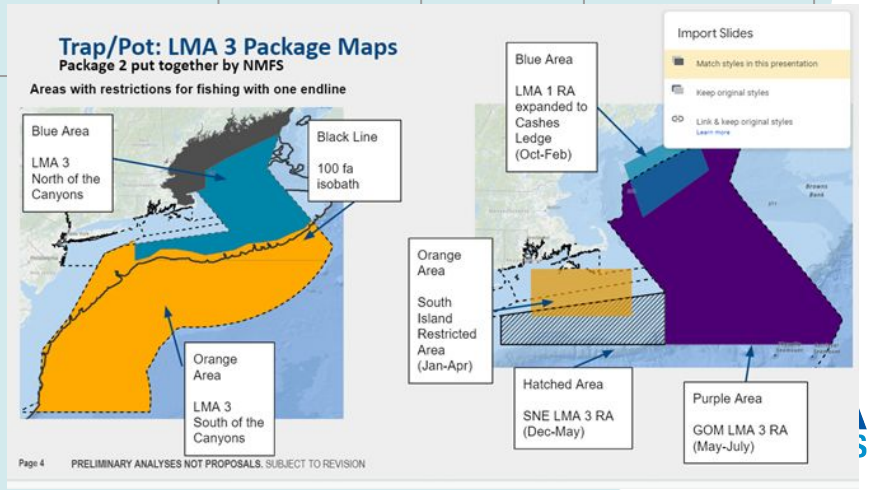
NOAA FISHERIES

Trap Pot: LMA 3

Line Reduction	Closures	Weak Rope	Coastwide Risk Reduction Points	Regional Risk Reduction	Regional Co-Occurrence Reduction

- **Line cap for LMA 3 lobster set at 45**
- Requirement to fish with one endline in LMA 3 North of Canyons year round
- Requirement to fish with one endline in LMA 3 South of Canyons thru Mid-Atlantic:
  - In depths less than 100 fa: Fishing with one endline year round
  - In depths greater than 100 fa: Fishing with one endline (May-Sept)
	- LMA 1 Restricted Area to Cashes Ledge (Oct -Feb)
	- South Island Restricted Area (Jan-Apr)
	- **GOM LMA 3 closure (May-Jul)**
	- SNE LMA 3 closure (Dec-May)
		All rope is 33% weak with max 1700 lb breaking strength	7.7 (out of 9.7)	89%	86%

Language for LMA3 package: "The Team recognizes fishery interest in LMA3 to develop alternative proposal for consideration by the Agency by Jan 20. The Team asks that the Agency evaluate the alternative taking into consideration that it deliver comparable risk reduction, co-occurrence and line out metrics expected from package above."



Gillnet: GOM & SNE

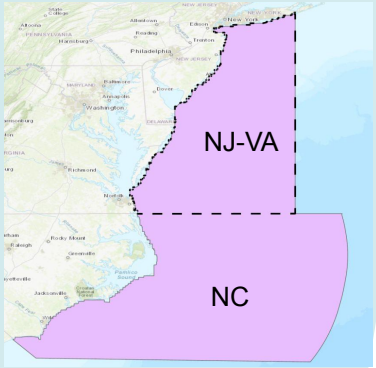
Closure	Weak Rope	Line Reduction	Coastwide Risk Reduction Points	Regional Risk Reduction	Regional Co-Occurrence Reduction
Seasonal Closure West of 70° and North of 42.5° Apr-May Closure of Mass state waters Jan - May Closure of South Islands Restricted Area Feb 1 - Apr 30	GOM: ● 75% WR <50 fa ● 50% WR outside 50 fa SNE: 100% weak (full weak in top, links in bottom)	Endline cap of 12 (apply by fishery as derived from trip reports/ landings)	2 (of 2.7)	73%	44%

Evaluate fishery management ongoing actions toward risk reduction goals as available.
Clarify what the by fishery line cap is on a by-vessel basis and let caucus know

Gillnet: Mid-Atlantic

Package Details	Area measure applies to	Coastwide Risk Reduction Points	Regional Risk Reduction	Regional Co-Occurrence Reduction	Regional Line Reduction

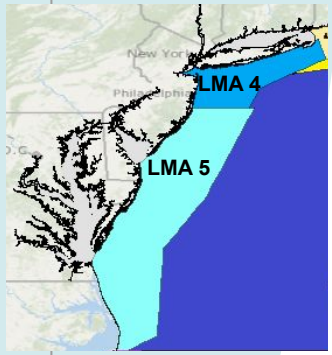
- One Endline (Dogfish & InshoreSpp)
  - Smooth Dogfish, Spiny Dogfish, Blue Fish
- 1100 lb Horizontal Rope All Gillnet (full weak line or weak links every 75ft)
- Weak Vertical Rope 1700lb All Gillnet
- Weak Vertical Rope 1700lb (one endline)
- 1100lb 100% Weak Vertical Rope (tag line)
  - TBD on how weak the tagline is, 1100 was selected at this time since it's the weak insert strength
	NJ-VA (year-round)
	
	NJ-NC
	
	NJ-VA
	NC (Nov-April)
	NC, **0-3 nmi** (Nov-April)
		0.59 (out of 1)	60.4%	3.5%	9.1%



*note that is an underestimate (not fully modelable) given the increase in frequency of the weak links

Trap Pot: LMA 4 & 5

Package Details	Area measure applies to	Coastwide Risk Reduction Points	Regional Risk Reduction	Regional Co-Occurrence Reduction	Regional Line Reduction
- Min 20 traps/trawl, Lobster	LMA 4/5	0.6 (out of 1.3)	49%	7%	7%
- Min 1 trap/trawl, Conch/whelk - *what is soak time? Can they bring pots back at end of trip?*	LMA 4/5				
- Min 20 traps/trawl, BSB *[i.e. habitat pots that are left soaking]*	NY, NJ, DE, MD, VA				
- Min 1 trap/trawl, BSB, Nov-April and pots would come back at end of trip *[i.e. when fishery is being prosecuted as a tended strike fishery]*	NC				
- Max 1 trap/trawl (singles)	NC, 0-3 nm				
- One end line, all OTP fisheries, Nov/April	DE, MD, VA, NC				
- Weak rope 1700 lbs (buoy lines full weak line or some combo of weak line/links)	LMA 4/5				
- LMA 3/5 overlap	Explore with ASMFC how they can fish the LMA 3 measures				



Trap Pot & Gillnet: Southeast

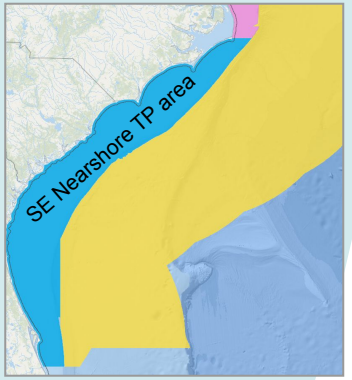
Package Details	Coastwide Risk Reduction Points	Regional Risk Reduction
- For SE BSB fishery: move current SAFMC closures (time/space) into the plan and open to ropeless fishing	0^ (out of 0.3)	0%

- Expand SERA North to all of (new) SE Nearshore Trap/Pot area*
  - Singles only*
  - Current Max Line breaking strength (2200lbs and 1500 for FL state waters)*
  - Buoy line must be made of sinking line (current lines are neutrally buoyant, not sinking line) (black sea bass line will be further considered for exemption given no change to risk)
  - In federal waters, Trap/pots deployed in the EEZ must be brought back at the conclusion of a fishing trip
  - Buoy line must be free objects (e.g. weights, floats) except where it attaches to the buoy and trap pot		

- 200 Trap Cap for Blue Crab*		

Measures implemented by states
- GA - Modify the boundary for state waters (i.e. gear restriction to shallow waters (0-1.5/18fa line)) depending on final weak rope requirements.
- SC - Currently reviewing regulations for a blue crab suite of changes which are in line with measures discussed as risk reduction or precautionary.
- FL - Non-transferability (in ocean waters) - [demonstrated landing in NE FL in winter] and/or endorsement for oceanside trap fishing
  - Industry would like transferability to include next of kin transferability similar to the dead bait shrimp fishery in Duval/Nassau county.
  - Industry would prefer non-transferability AND endorsement		

Non-regulatory recommendations: - Federal trip reporting: Federal trips (GN and BSB) are reported to NMFS stat area (which are large areas). There is no finer scale so unable to assess true overlap with right whales. - Monitoring and Compliance: SE Gillnet Compliance report on exemptions and increased NMFS enforcement or monitoring in SERA S during the restricted period (Dec 1-Mar 31). Need to revisit gillnet measures if risk has increased or compliance is low. - Assess SE reg effectiveness and need in ~5 yrs		



*Measures applicable for testing in DST

^Many SE measures are precautionary or could not me modeled given data resolution limitations

Non Binding Statement For Consideration

This industry is being asked to do a lot in this action. Recognizing that big closures are on the table and that it is likely there will be increased interest in fishing without vertical buoy lines in the near future, the current EFP process is onerous for all. We recommend that the agency prioritize and resolve an interim geolocation system by the end of 2023, as this has application for fishing on demand, with one endline, and grappling. We also recommend that the interoperability standards be operationalized and that FMPs be amended and implementing regulations in place by Dec. 9, 2024 when final rule is issued.

Emerging Upper Bound Package with NMFS LMA 3 with Additional Mods and Shoulder Gear Reductions Around Lobster Lines-Out Closures

Package	Regional Line Reduction	Regional Co-Occurrence Reduction	Regional Risk Reduction
LMA1 Lobster (TrapPot)- includes shoulders	34.7%	80.7%	90.2%
LMA 2 Trap/Pot- includes shoulders	45.3%	73.1%	86.9%
LMA 3 Trap Pot NMFS additions	51.9%	85.7%	88.6%
OCC Trap/Pot- includes shoulder on Jan	4.6%	37.8%	62.8%
LMA 4 & 5 Trap/pot	6.6%	6.8%	49%
GOM/SNE Gillnet	1.2 %	44.2%	73.3%
Mid-Atlantic Gillnet	9.1%	3.5%	60%
Southeast	0%	0.0%	0.0%
	Totals	**77%**	**88%**

PRELIMINARY ANALYSES NOT PROPOSALS. SUBJECT TO REVISION