

Atlantic Large Whale Take Reduction Team Meeting

June 28 and July 1, 2021 | Held virtually

KEY OUTCOMES MEMORANDUM

I. Welcome, introductions and meeting objectives

NOAA's National Marine Fisheries Service (NMFS) convened the Atlantic Large Whale Take Reduction Team (ALWTRT or Team) in a two-part meeting held June 28 and July 1, 2021. The primary purpose of the meeting was to brainstorm possible risk reduction measures to bring out to public scoping for Atlantic gillnet and other trap/pot fisheries (OTP), which includes Atlantic mixed species and mid-Atlantic lobster and Jonah crab trap/pot fisheries. The meeting also focused on reviewing Decision Support Tool (DST) updates and preliminary hot spot analyses to guide the types of measures that might be important to include in scoping meetings.

ALWTRT Team Coordinator Marisa Trego opened the meeting, thanking Team members for their continued participation and the DST team for its extensive efforts over the past several months. Bennett Brooks with the Consensus Building Institute (CBI) reviewed the meeting agenda, zoom participation protocols, and Team discussion ground rules. B. Brooks emphasized that the meetings this week are focused on brainstorming measures for scoping. The Team will not begin considering formal recommendations to the Agency until early 2022. In discussing the meeting purpose, Colleen Coogan, NMFS's Greater Atlantic Region's Chief of the Marine Mammal Sea Turtle Branch, reminded Team members that the Agency is seeking measures capable of achieving a 60- to 80-percent risk reduction in aggregate across coastwide gillnet, coastwide OTPs, and mid-Atlantic lobster and Jonah crab trap/pot.

The meeting was held virtually due to restrictions on meeting in-person during the COVID-19 pandemic. A recording of the meeting itself is available [here](#).

II. Participation

The meeting was attended by 50 of 60 Team members and/or their alternates. M. Trego, C. Coogan, and Burton Shank with NMFS Northeast Fisheries Science Center's (NEFSC) led the Agency's participation. The meeting was facilitated by CBI (B. Brooks, David Plumb, Cameron Hager) and attended by approximately 30 additional participants from NMFS, other state and federal agencies, and the general public. The list of participating Team members/alternates, as well as of NMFS staff providing support for or attending the meeting, is attached.

III. Presentations

Decision Support Tool model development

On the first day, B. Shank and M. Trego provided an update on the status of the development of the DST model. B. Shank emphasized that the model continues to be a work in progress and input from the Team will be instrumental to improving its utility. Key presentation points included:

- The DST model continues to be updated based on ongoing input from state partners, fishing industry, and others. Efforts are focused on updating "base case" co-occurrence model runs for

state and federal gillnet and OTP fisheries and revising fishery data summaries for the same fisheries.

- The DST has been expanded to account for the “encounter space” of ground gear, including groundlines in the trap / pot fisheries and net panels in the gillnet fishery. With this addition, results from the DST become extremely sensitive to the assumed vertical distribution of whales, potentially making net encounters more important than vertical line encounters.
- Using currently available data, B. Shank conducted an initial “hotspot” analysis for both gillnet and OTP fisheries with an eye towards defining regions in space and season with high co-occurrence. Initial results point to a handful of possible hotspots – for gillnets, between December-May in Southern New England and December-April in the Mid-Atlantic, and for OTP, May in Cape Cod Bay; December-May in Southern New England; December-April in Mid-Atlantic – but further analysis is needed. When analyzed by regional fishery, the vast majority of co-occurrence in gillnet fisheries appears to come from Southern New England (monkfish, skate, winter skate), Mid-Atlantic (monkfish and spiny dogfish) and Gulf of Maine (cod, pollock, haddock) and in OTP fisheries from whelk pot fisheries in Southern New England and the Mid-Atlantic.
- Reviewing initial regional risk totals for the federal gillnet fishery, and state and federal OTP fisheries. The DST team is still working to incorporate existing management measures and how they reduce risk to whales, particularly for gillnets.

Feedback on TRT Member Requests

B. Shank and M. Trego also shared results from initial model runs related to Team member requests provided prior to and during the meeting. Specifically, on the first day, they provided results on the following: (1) better understanding the marginal decrease in fishing effort associated with truncating soak times in various fisheries (spiny dogfish; cod/pollock/haddock; menhaden); (2) assessing the performance of the Duke Whale Model Inshore Habitats (conclusion: the updated model does not seem to bias projected whale densities in inshore areas); (3) estimating potential risk reductions associated with trawling up and inserting weak lines in Rhode Island fish pot (2 pots per trawl results in a 23.9% reduction; 1,700 pound inserts in buoy lines every 60 feet in the top 75% results in a 14.8% reduction); and (4) assessing the impact on co-occurrence of several potential restricted areas (expanding Cape Cod Bay Restricted Area for gillnets; restricting gillnet from the Large South Island Restrict Area in the proposed rule; and reevaluating timing of the Great South Channel Restricted Area for gillnets). See the online presentations for discussions of preliminary results.

On Day Two, M. Trego shared preliminary model results based on several additional requests put forward by Team members during the first day of meetings. These focused on: (1) rope threat estimates and how these compare to line diameter); (2) Mid-Atlantic hot spots (highlighting areas representing the top 60% of risk within all OTP and all gillnet fisheries); (3) modeling blue crab spatial and temporal changes in co-occurrence between right whales and buoy lines (greatest occurrence occurring in January/February in Florida; March/April in Virginia and Delaware; April in Maryland; and April/May in New Jersey); (4) assessing the risk reduction effects of applying the Northeast trap/pot proposed rule on Northeast federal fish pots; and (5) assessing coastwide federal gillnet risk reduction associated with expanding eastward the current Cape Cod Bay (CCB) Restricted Area between January 1 and May 31, establishing the Large South Island Restricted Area from January 1 to May 31, using full length 1,700-pound rope, and restricting buoy lines in the mid-Atlantic from January through April. See the online presentations for discussions of preliminary results.

The Agency will continue to analyze Team member questions submitted in advance of and developed during this meeting and will share results periodically with the Team.

IV. Team Discussion

Ongoing Feedback on Decision Support Tool

Team members asked a number of clarifying questions to better understand recent updates to the model, as well as offered suggested revisions to improve its accuracy and utility and/or highlight concerns with various aspects. Specific comments included the following:

- Continued concern that baseline data needs refinement. For example:
 - Agency baseline data showing an active conch/whelk fishery in federal waters in the mid-Atlantic and New England. Two Team members said they are unaware of any significant conch/whelk fishing occurring in federal waters in those areas.
 - An apparent trap/pot hotspot in lower Cape Cod Bay in May is likely not reflecting current state closures and fishing trends, one Team member said.
- Concern that the data around monkfish, skate, and winter skate are confusing and give the impression of possible double counting. Perhaps combine them or provide some other way of showing how they are related?
 - B Shank assured no double counting has taken place, as each trip is only counted once.
- Conduct an updated analysis of Mid-Atlantic gillnets using only post-2008 data given the different gear configurations in use after 2008 (weak links, etc.).
- Suggestion that the Agency make sure it clearly distinguishes between “Day” and “Trip” gillnet categories given their very different soak times. Overall, recognize that gillnet practices vary widely.
- Recommendation that the agency ensure state fisheries analysis is fully incorporated into the model.

Brainstorming Potential Measures

Team members spent the bulk of the two days brainstorming and discussing potential measures able to collectively meet the Agency’s goal of reducing risk to right whales in coastwide gillnet and other trap-pot fisheries between 60-80%. Discussion took place both among the full Team and in breakout sessions.

Team members generated a wide range of potential measures to consider taking to scoping, with suggestions falling into the following broad categories: gear configuration, line strength, and trap limits for OTP fisheries; gear configuration, line strength, and soak time for gillnet fisheries; and seasonal restrictions for OTP, gillnets, or both. Some measures were specific in detail (for example, consider a 5 pots/trawl requirement in Rhode Island). Most, however, were more general in nature (e.g., consider shorter soak times in gillnet fisheries).

Discussions and suggestions generally centered on gillnet and OTP fisheries in the Mid-Atlantic, Southern New England, and Gulf of Maine, with participants suggesting those areas would likely generate the greatest risk reduction and most benefit from having additional potential measures to bring to scoping sessions. Team members did, however, suggest a handful of possible risk reduction measures to consider for OTP fisheries in the Southeast.

Attached is a table summarizing the ideas put forward by Team members. These ideas are not intended to suggest a consensus recommendation. Rather, they represent individual ideas for the Agency to consider taking to scoping this summer.

Discussion Themes

Beyond the specific ideas put forward by Team members, the discussion highlighted a number of important themes and concerns related to the Agency's development of potential risk reduction measures.

- **Soak time reductions.** Team members discussed the potential to reduce co-occurrence and associated risk by considering management measures focused on cutting soak times. While supportive of bringing the idea to scoping, several Team members emphasized that a single coast-wide approach is unlikely to work and any soak time-related measures will need to account for the variation among fisheries and locations. Developing better baseline data also is seen as key. Also, monitoring soak times less than a day will be challenging.
- **Dynamic / seasonal /rolling management areas.** Team members offered a wide range of perspectives on the potential to use seasonal, dynamic, and rolling management areas as a measure to reduce risk. Some Team members (from across a range of caucuses) voiced at least initial interest in looking more closely at dynamic area management (particularly for some gillnet fisheries) given (1) the increasingly unpredictable whale behavior, and (2) dynamic approaches may cause fewer negative impacts on fisheries than seasonal restricted areas. Others suggested dynamic area management is problematic to implement (e.g., not realistic for bottom-dependent fisheries like monkfish; pushes small boats out too far; inability to pull gear quickly enough; insufficient survey data to manage; unclear impact if you're not sure where the gear might go instead), and the Agency noted it does not currently have the ability to implement dynamic area management. If pursued, clear rules and frequently updated data (both survey and acoustic) will be needed to make dynamic area management viable. Seasonal area management was seen as a more viable management method in those areas where whale presence can be reasonably predicted, and rolling closures up the coast might be appropriate to match whale locations.
- **Weak rope potential.** A number of Team members from across various caucuses suggested the Agency bring weak rope measures to scoping, with some seeing this as a more viable and cost-effective measure than weak inserts between panels or vertical line reductions for some fisheries (e.g., red crab fishery). Specific suggestions included: weak inserts every 40 or 60 feet for trap/pot vertical lines; weak rope for upper portion of gillnet line; require the immediate removal of 5/8th- or 1/2-inch line; and testing weak rope with lighter anchors.
- **Broadly drawn hotspots.** Several Team members suggested some current gillnet hot spot characterizations are too broadly drawn and will need to be refined in conversation with state partners and fisheries representatives to better understand regional fishing practices (e.g., soak times) that will greatly impact the co-occurrence and associated risk characterization.
- **Accounting for gillnet panel risk.** Team members offered several perspectives on the Agency's attempt to account for the added interaction probability of gillnet panels. A key issue is how the model treats whale distribution in the water column. One Team member stressed that whales are clearly not evenly distributed, though there is better data for humpbacks than right whales. It was also noted that humpbacks are commonly in close, physical contact with the bottom when feeding on prey like sand lance. The agency committed to working with experts to incorporate a more nuanced understanding of whale distribution in the water column, probably

looking at location and time of year. A more detailed understanding of the way gillnet panels are fished in the water column will also be important to improving the model.

- **Ropeless.** There were a handful of comments regarding ropeless gear, with a few Team members encouraging the Agency to consider ways to further industry use of and comfort with ropeless. Some specific suggestions: allow ropeless fishing in existing closed areas; consider a hybrid approach, where there is a vertical line and one end and a weak rope on the other; create a cross-caucus ropeless subgroup to explore what it looks like to implement ropeless in different fisheries.
- **Baseline and risk characterizations.** A number of Team members suggested it was difficult to develop potential risk reduction measures given ongoing uncertainties associated with the model (anomalies in baseline data that have yet to be resolved, lack of complete risk characterizations, etc.). They recommended the Agency spend more time with its state partners and industry firming up the “base case” data. Some Team members also suggested these uncertainties will make it difficult for the Agency to get meaningful feedback at scoping sessions, and some recommended NMFS delay scoping until it has a more accurate and complete risk profile to share.
 - NMFS emphasized that the decision support tool is deliberately still a work-in-progress to enable greater Team input into its design. Scoping is also being held earlier in the process, the Agency said, in response to Team feedback following its 2019 meeting.
- **Latent effort concerns.** Several Team members strongly urged the Agency to manage latent effort, suggesting the Team’s efforts to develop risk reduction measures will be negated if current effort isn’t capped. One example cited: open access skate gillnetters. Agency staff expressed a willingness to work with the councils on latent effort concerns.
- **Accounting for small whale size.** One Team member urged the Agency to make sure its risk modeling (e.g., risks associated with different rope breaking strengths) accounts for a recent paper by Joshua Stewart with NMFS showing a decrease in the average right whale size since those born 30 to 40 years ago.
- **Economic impacts.** Team members briefly discussed the appropriateness of considering economic impacts when assessing the merits of different measures to reduce mortality and serious injury (M/SI) below potential biological removal (also known as PBR). The Agency clarified this issue in a July 9, 2021, email from Marisa Trego following the meeting.¹
- **Other.** Several other ideas mentioned in discussions included:
 - Target measures on the highest risk areas; best for both whales and industry
 - Increase real-time communication among fishermen (and others on the water; e.g., whale watching vessels) to make it easier for fishermen to avoid whales
 - Focus most broadly on measures that generate the least aggregate amount of rope in the water column; focus on reducing vertical lines
 - Solicit opinions from biologists on the relationship between panel size (both height and length) and the risk to whales; need to better understand the relationship between “paneling up” and conservation benefit

¹ Summarized from Marisa Trego’s July 9, 2021, email: Per the Marine Mammal Protection Act, TRTs are directed to take into account the economics of the fishery when considering the long-term goal of reducing incidental takes to insignificant levels approaching a zero mortality and serious injury rate. When pursuing the short-term goal of reducing M/SI below PBR, a Team’s charge is to develop take reduction measures likely to reduce M/SI to below PBR for the marine mammals covered by the plan. That said, the MMPA does not prohibit the Team or NMFS from considering economics when developing measures, and the Agency is required to consider a range of factors (including economic impacts) as part of the rulemaking process.

- Give credit in the plan for recent measures in the Southeast black sea bass fishery
- Ensure any measures under consideration are practical for fishermen and enforcement
- Consider lessons from other TRTs as it relates to strategies for reducing risk from gillnets
- Consider fisheries by sector (state and/or gear type and/or target species) to develop appropriate gear modifications

Additionally, several participants pushed back at CBI's plan to conduct an informal poll to "take a temperature read" on Team members' level of support for the various measures under discussion, with some participants expressing concern that any results would be skewed given the lack of numeric parity among the different caucuses and others suggesting the lack of relative risk scores would make it difficult for them to weigh in constructively. CBI emphasized that the purpose of the poll was solely to spark conversation to better understand areas of converging and divergent views – and not to be used by the Agency to assess the merits of ideas under discussion. Given the concerns, CBI opted not to conduct the poll and will consider ways to address the issues raised at future Team meetings.

There was also a suggestion from a breakout group participant that Team members be encouraged to add their affiliation after their names for all future virtual meetings. Microphone checks with Team members before the meeting were also recommended.

V. Next Steps

Below is a summary of key next steps identified during the two-day meeting.

- Team Members:
 - Continue reviewing fishery data summaries and provide any needed corrections or updates to B. Shank.
 - Forward additional risk reduction element concepts for potential DST evaluation and possible discussion at scoping sessions.
- NOAA Fisheries
 - GARFO to post and circulate meeting materials to Team members.
 - DST team to continue consulting with Team members to develop an accurate representation of gillnet and other trap/pot gear use and management options to develop a threat model.
 - Provide the Team with co-occurrence and risk reduction estimates for potential measures as it continues to update and run the decision support tool.
 - Distribute to the Team a table summarizing the various current gillnet fishery regulations
- CBI
 - Draft and distribute meeting summary for Team "red flag" review (significant errors or omissions)

Upcoming meetings and deadlines:

Sept/Oct: Scoping (dates tentative; include Council and Commission meetings)

Early 2022: Full Team meetings (dates TBD)

ATTACHMENT 1: Meeting Participants

The meeting was attended by 50 of 60 Team members or their alternates.

Terry Alexander	Toni Kerns	Jessica Powell (alt)
Regina Asmutis-Silva	Raymond King	Chad Power
David Borden	Amy Knowlton	Nicholas Record
Colleen Bouffard	Scott Landry	Meghan Rickard
Erin Burke (alt)	Kristy Long	Jooke Robbins (alt)
Barbie Byrd	Ben Martens (alt)	Brian Sharp
Lori Caron (alt)	Greg Mataronas	Erin Summers
Colleen Coogan	Patrice McCarron	Caitlin Starks (alt)
Karson Coutre	Kim McKown (alt)	Sarah Uhlemann (alt)
Jane Davenport	William McLellan	Megan Ware (alt)
Greg DiDomenico	Richard Merrick	Kevin Wark (alt)
Cindy Driscoll	Grant Moore (alt)	Mason Weinrich
Erica Fuller	Bob Nudd, Jr.	David Wiley
Clay George	Scott Olszewski	John Williams
Bob Glenn	Cheri Patterson	Barb Zoodsma
Dennis Heinemann	Charlie Phillips	Renee Zobel (alt)
Bob Kenney	Tom Pitchford	

NMFS staff and contractors providing support for or attending the meeting included:

Michael Asaro	Alessandra Huamani	Kara Shervanick
Dianne Borgaard	Ellen Keane	Ainsley Smith
Karyl Brewster-Geisz	Lauren Latchford	
Mark Capone	Alicia Miller	Jaclyn Taylor
Danielle Cholewiak	Meredith Moise	Marisa Trego
Jennifer Goebel	David Morin	Julie Williams
Sean Hayes	Allison Murphy	Katherine Zamboni
John Higgins	Danielle Palmer	Chao Zou
David Hilton	Burton Shank	

Additionally, the meeting was attended by representatives from other state and federal agencies, including Katie Moore with the U.S. Coast Guard, and interested members of the public.

ATTACHMENT 2: June/July Scoping Ideas

These ideas are not intended to suggest a consensus recommendation. Rather, they represent individual ideas for the Agency to consider taking to scoping this summer.

OTHER TRAP/POT		
#.	Other Trap/Pot Measure Category	Ideas (from Jam board)
1	Trawling up	<ul style="list-style-type: none"> RI/MA: 1 line per 5 pots (increase max) Minimum traps/ trawl (currently no min) MA: 2 pot minimum traps/trawl in fish and whelk Trawl up similar to what Lobster does
2	Trap cap/reduction in max # traps	<ul style="list-style-type: none"> RI- Reduce fish pot limits (total traps) Cap effort for fisheries not already capped SE- trap limits for oceanside blue crab (reduce GA to 100 and FL to 200) Reduce trap limit in whelk fishery, from 200 to 150 or 100
3	No trawls (Singles only with a low breaking strength line)	<ul style="list-style-type: none"> Instead of trawling up to reduce lines, how low a breaking strength could a single pot line go
4	Weak rope/inserts	<ul style="list-style-type: none"> Weak inserts every ~40-60 feet OR fully formed 1700lb line throughout the whole end line. MA specific weak rope regulations for state waters (fully formed or a weak insertion every 60 ft)
5	Cap line diameter	<ul style="list-style-type: none"> Limit all endlines to 1/2 inch to distinguish from other countries gear Immediate removal of lines larger than some size (~1/2 to 5/8)
6	Assess changes current restricted areas and closures	<ul style="list-style-type: none"> Assess timing and area of SERA N/S, including exemptions Extend CCB closure similar to MA State Re-evaluate area/time of GSCRA, possibly expand GSC closure to shoulder months
7	Apply current seasonal restricted areas for lobster trap/pots to other TPs	<ul style="list-style-type: none"> Large South Island RA from proposed rule 11/1 - May 30
8	New Seasonal Restricted areas (hotspots)	<ul style="list-style-type: none"> e.g. NY bight to Mid-atlantic (large, or rolling areas)
9	Apply final rule to other TP fisheries	<ul style="list-style-type: none"> Consider the lobster trap proposed rule as one alternative for other pot fisheries (subject to some modifications for the specific fisheries)
10	Exempted Areas	<ul style="list-style-type: none"> Evaluate current exempted areas
11	Ropeless fishing	<ul style="list-style-type: none"> Allow ropeless fishing in existing closures Include BSB closure in ALWTRT in order to do so.

GILLNET		
#.	Gillnet Measure Category	Ideas (from Jam board)
1	Weak rope/inserts	<ul style="list-style-type: none"> ● Weak inserts every ~40-60 feet OR fully formed 1700lb line throughout the whole end line. ● Hybrid gear (ie one end ropeless, other end weak rope)
2	Cap line diameter	<ul style="list-style-type: none"> ● Limit all endlines to 1/2 inch to distinguish from other countries gear ● Immediate removal of lines larger than some size (~1/2 to 3/8)
3	Minimum length of net string ("trawling up")	<ul style="list-style-type: none"> ● RI: Increase nets per string in large mesh (fed monks and winter skate) by distance from shore (out 20 30 10/string, beyond 15/string for eg.) ● Do minimum nets per string by distance from shore similar to TPs
4	Maximum length of net string	<ul style="list-style-type: none"> ● Groundfish gillnet has a total length restriction; check other fisheries; may affect trawling up ● Cap effort for fisheries not already capped
5	Reduce soak time	<ul style="list-style-type: none"> ● RI, ME: Shorter soak time ● NJ: prohibition of overnight gillnet soaks State waters
6	Weaker weak inserts	<ul style="list-style-type: none"> ● MidATL: Might be able to go to a smaller weak insert (less than 1100lb), if allowed to use a smaller (8lb) anchor rather than a 17 or 22 lb one.
7	Assess changes to current restricted areas and closures	<ul style="list-style-type: none"> ● Re-evaluate timing and area of SERA N/S, including exemptions ● Extend CCB closure similar to MA State ● Re-evaluate area/time of GSCRA, possibly expand GSC closure to shoulder months
8	Apply current seasonal restricted areas for lobster trap/pots to gillnets	<ul style="list-style-type: none"> ● Extend MA state waters closure to gillnets. New closure area up to NH border. ● Large South Island RA from proposed rule 11/1 - May 30 ● GSCRA
9	New Seasonal Restricted areas (hotspots)	<ul style="list-style-type: none"> ● e.g. south of NY bight to Mid-atlantic (large, or rolling areas)
10	Spatial management	<ul style="list-style-type: none"> ● Seasonal or real time predictions and real time management as we explore a flexible regulatory scheme. Possibly just gillnets if they are more flexible in relocating gear
11	Exempted Areas	<ul style="list-style-type: none"> ● Evaluate current exempted areas, eg. <ul style="list-style-type: none"> ○ Maintain exempt area in Long Island Sound ○ Chesapeake Bay - for humpbacks
12	Ropeless	<ul style="list-style-type: none"> ● Hybrid gear (ie one end ropeless, other end weak rope)