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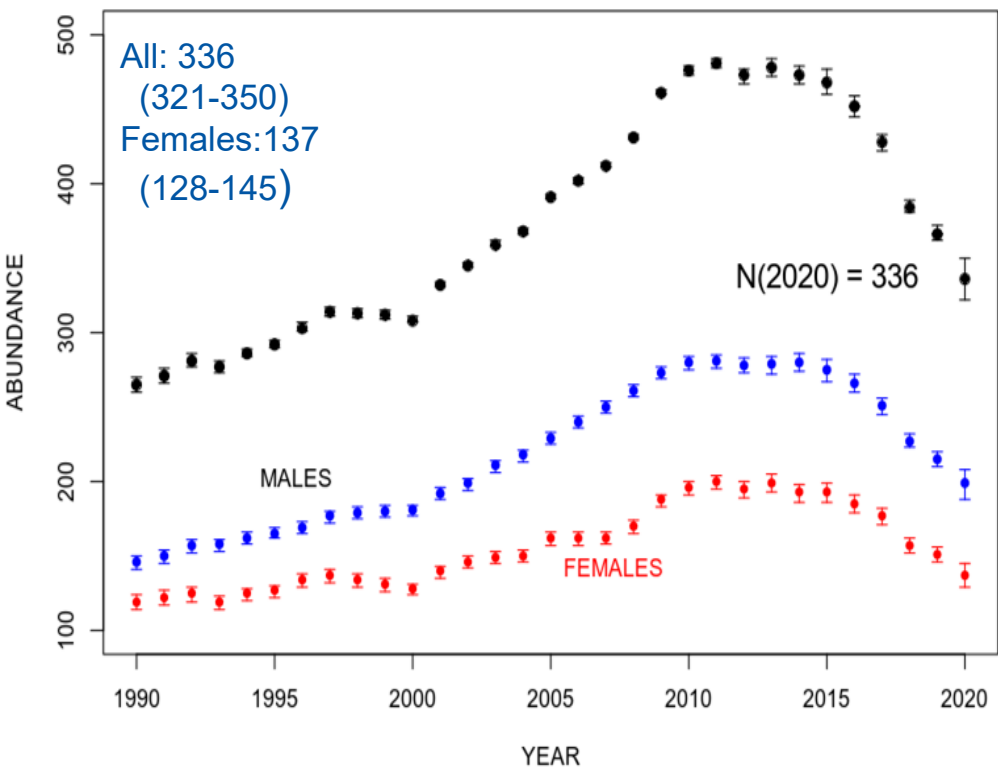
Atlantic Large Whale Take Reduction Team Update

NEFMC June 2022



Right whale population estimate (preliminary, as of early 2020)

Rangewide Estimated Annual Mortality



YEAR	EST Mort (median)	Obs Mort	Obs SI	Obs SI+M
2015	29	3	5	8
2016	30	4	9	13
2017	44	17	2	19
2018	22	3	6	9
2019	31	10	2	12



Risk reduction calculations

Use the most-recent 5 yr. observed M/SI ratio to apportion the total mortality estimate from Pace MRR model.

Across three country apportionment assumptions: 50%, 40%, or 30% US.

Country Apportionment	(a) PBR - draft 2021 SAR	(b) Annual average estimated mortality 2015-2019	(c) Assumed US proportion	(d) US mortality based on country assumption (columns b*c)	(e) US mortality - 70% EN Observed M/SI 2016-2020 (column d* 0.70)	(f) % Reduction Needed for US to achieve PBR assuming 70% EN ((e-a)/e)
50% US/ 50% CAN	0.7	31.2	0.50	15.7	11	93.6%
40% US/ 60% CAN			0.40	12.6	8.8	92.0%
30% US/ 70% CAN			0.30	9.4	6.6	89.4%



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Description of Phased Rulemaking

- **Phase 1:** risk reduction from Northeast lobster & Jonah Crab trap/pot fisheries
 - Minimum target from 2019 ALWTRT meeting
 - Completed September 17, 2021
- **Phase 2:** risk reduction from all other ALWTRT fisheries
 - Coastwide gillnet
 - Multi-species trap/pot
 - Mid-Atlantic lobster
 - New risk reduction estimate due to new population data
- **Phase 3:** remaining risk from NE lobster and Jonah crab to hit 90% estimated reduction needed to reduce mortalities and serious injuries in US commercial fisheries to PBR level

Considerations for Phase 2

- Phase 2 fisheries have lower relative effort and dispersed risk
 - Challenging to reduce risk when broadly distributed
 - Effort reduction may be key
 - Relocation outside of high risk is difficult in some areas; can just move risk
 - Reducing line strength to reduce M/SI
- Panels increase encounter risk
 - Likely varies based on behavior
 - Reducing buoy line strength could further reduce M/SI in the case of an encounter with buoy lines or panels
- Remaining risk within these fisheries is predominantly in Southern New England, mid-Atlantic, and (for gillnets) the Gulf of Maine

Similar Themes Across Sets of Measures

Achieved 37 to 64 % risk reduction

- Buoy lines or inserts with a 1,700 lb maximum breaking strength where it is feasible
- Reduce lines by requiring one buoy line or increasing traps or nets on a set (where feasible)
- A few closures, with a strong preference for dynamic management
 - Dynamic openings or closures
 - Predetermined areas that can be subset based on sightings and other criteria
 - Gillnet is likely more nimble than trap/pot gear, especially when “tended”
 - Requires investment in monitoring
 - Assume some overlapping risk between whale sightings and notice
- Apply Phase 1 measures to OTP



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Next Steps

Anticipated webinars

- Ropeless Roadmap
- DST Updates

Collaboration: Will be working with Council ALWTRT members to develop management and implementation plans for effort or gear reduction measures

DST Updates: Modelers are finalizing fishery layers and conducting higher resolution analyses.

Next Team Meeting: TBA, goal is development of team recommendations



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Questions?



Examples of Sets of Measures Drafted by Team for Analysis



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Example of Measures being analyzed for Team Package 2B: Gillnet and OTP

OTP/ Gillnet/ Both	Measure	When	Where
Gillnet	1,700 lb buoy line (100% weak)	Year round	GOM/SNE
Gillnet	1 buoy line only per set	Year round	GOM/SNE
Gillnet - monkfish only	20 nets per string	Year round	GOM/SNE
Other gillnet fisheries	Double nets per string	Year round	GOM/SNE
Gillnet	514 Seasonal restricted area	Feb-May	Stat Area 514
Gillnet	South Island Restricted Area (close as is)	Feb-April	SIRA
OTP	1,700 lb weak rope (100% weak)	Year round	Coastwide
OTP	Pairs for singles in state waters	Jan - May	SNE/MAB
	Trawl up according to Phase 1 3-12 miles: 10 traps Beyond 12 miles: 15 traps	Year round	SNE/MAB outside of LMA 3
	45 traps per/haul	Year round	LMA 3
OTP	South Island Restricted Area	Feb-Apr	SIRA
OTP	No deep sets (e.g., with 2000 ft of line) (close and redistribute lobster > 100m)	Year round	40-50 miles offshore SNE/MAB (deeper than 50 fathoms)

* Some measures excluded from table because they were outside of model framework or current modeling capacity

Package 1

OTP/ Gillnet/ Both	Measure	When	Where
OTP	Trawl up according to Phase 1 3-12 miles: min of 10 traps 12+ miles: min of 15 traps you can apply the area 3 south of the 50 fath. line.	Year round	Everywhere, all phase 1 measures to Phase 2 OTP
	1,700 lb buoy line (75% weak)	Year round	Everywhere
OTP	Any single pots should be paired in SNE (trawl up to 2's)	Year round	SNE
Gillnet	514 Seasonal restricted area	Feb-May	Stat Area 514
Gillnet	All buoy lines weak (to 75%)	Year round	Everywhere
OTP	Hybrid trawls ONLY ONE ENDLINE and that is weak	Year round	MAB and SNE federal waters:
Gillnet	1 buoy line only per set	Year round	Federal waters, SNE, GOM
OTP/Gillnet	SIRA apply same Phase 1 restrictions closure for all fixed gear in Eastern ½ of SIRA (east half closed only)	Feb-Apr	SIRA

* Some measures excluded from table because they were outside of model framework or current modeling capacity



Package 2A: Gillnet and OTP

OTP/ Gillnet/ Both	Measure	When	Where
Gillnet	1,700 lb buoy line (100% weak)	Year round	GOM/SNE
Gillnet	1 buoy line only per set	Year round	GOM/SNE
Gillnet	514 Seasonal restricted area	Feb-May	Stat Area 514
Gillnet	South Island Restricted Area (close as is)	Feb-April	SIRA
OTP	1,700 lb weak rope (100% weak)	Year round	Coastwide
OTP	One buoy line on trawls	Year round	SNE/MAB
OTP	South Island Restricted Area	Feb-Apr	SIRA
OTP	No deep sets (e.g., with 2000 ft of line) (close and redistribute lobster > 100m)	Year round	40-50 miles offshore SNE/MAB (deeper than 50 fathoms)

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Package 3A: Gillnet and OTP

OTP/ Gillnet/ Both	Measure	When	Where
OTP/Gillnet	1,700 lb buoy line (75% weak)	Year round	Everywhere
OTP/Gillnet	514 Seasonal Restricted area	Feb-May	Stat Area 514
OTP/Gillnet	South Island Restricted Area	Feb-April	SIRA
OTP (Excluding Whelk)	Trawling up min 2 traps per trawl	Year round	Federal Waters

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Package 3B: Gillnet and OTP

OTP/ Gillnet/ Both	Measure	When	Where
OTP/Gillnet	1,700 lb buoy line (75% weak)	Year round	Coastwide
OTP/Gillnet	514 Seasonal Restricted area	Feb-May	Stat Area 514
OTP	South Island Restricted Area	Feb-April	SIRA
Gillnet	South Island Restricted Area Extended	Feb-April	SIRA Extended in eastward and south to the canyons in SNE
OTP (Excluding Whelk)	Trawling up min 2 traps per trawl	Year round	Federal Waters Coastwide

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Package 4: Gillnet and OTP

OTP/ Gillnet/ Both	Measure	When	Where
Gillnet	1,700 lb buoy line (100% weak)	Year round	Coastwide
Gillnet	15 nets per string	Year round	GOM/SNE
Gillnet	514 Seasonal Restricted area	Feb-May	Stat Area 514
Gillnet	South Island Restricted Area	Feb-April	SIRA
OTP	Trawling up min 2 traps per trawl	Year round	SNE
OTP	1,700 lb buoy line (100% weak)	Year round	SNE (Whelk only)
OTP	Trawl up according to distance from shore (similar to Phase 1) 3-12 miles: min of 10 traps 12+ miles: min of 15 traps	Year round	Mid-Atlantic Nearshore Trap/Pot waters

* Some measures excluded from table because they were outside of model framework or current modeling capacity