August 2019 Scoping Meetings Developing Modifications to the Atlantic Large Whale Take Reduction Plan Maine, August 2019

Greater Atlantic Regional Fisheries Office

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2019 SCOPING MEETINGS, LARGE WHALE TAKE REDUCTION PLAN MODIFICATIONS

Agenda:

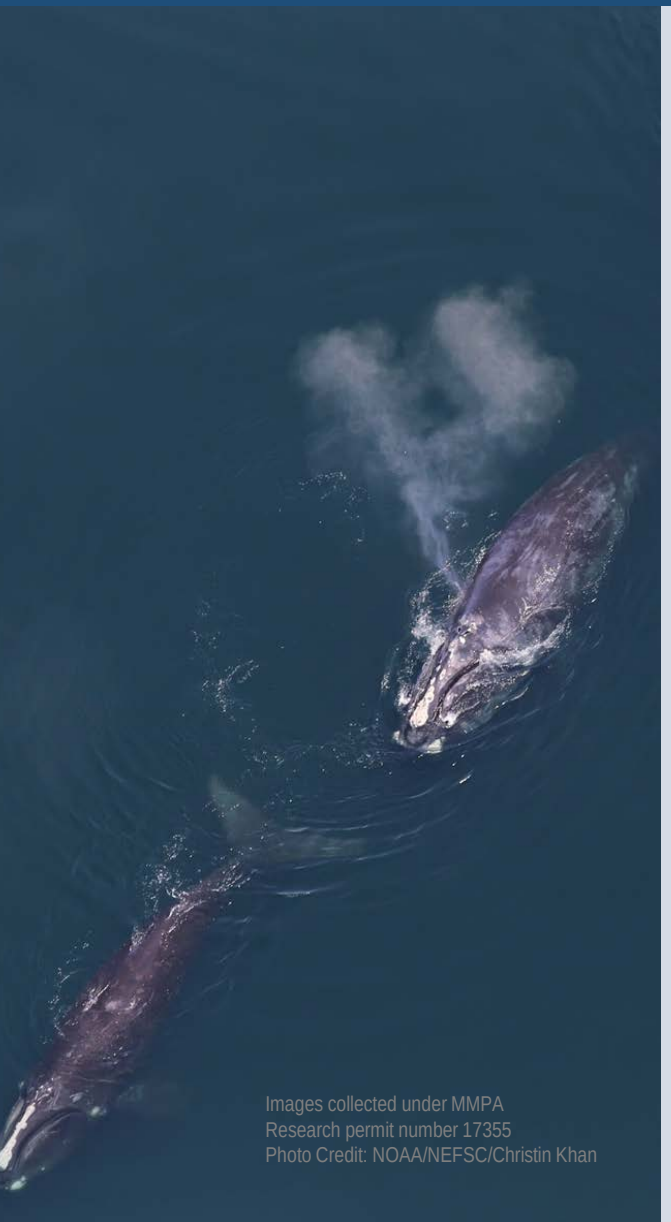
- Purpose of scoping meetings
- North Atlantic right whale status
- Marine Mammal Protection Act
  - Take Reduction Team Process
  - April 2019 Take Reduction Team recommendations
- Next Steps
- Ground rules for Public Comment

2019 SCOPING MEETINGS, PURPOSE, TOPICS

PURPOSE: Get public input on scope of analysis needed to evaluate the environmental impacts of modifications to the Atlantic Large Whale Take reduction Plan to reduce risk of serious injury and mortality to North Atlantic right whales to less than 1/year

- Scoping is different from public comments on a proposed rule – it is an opportunity to provide input on what we analyze and propose
- We are seeking input on how to reach target risk reduction, considering Take Reduction Team recommendations which include
  - Reducing the number of buoy lines
  - Requiring weak line or weaknesses along the buoy line
  - Modifying buoy line marking requirements
- In partnership with states, we are prioritizing compatible federal water measures

NORTH ATLANTIC RIGHT WHALES ARE DECLINING



Images collected under MMPA
Research permit number 17355
Photo Credit: NOAA/NEFSC/Christin Khan

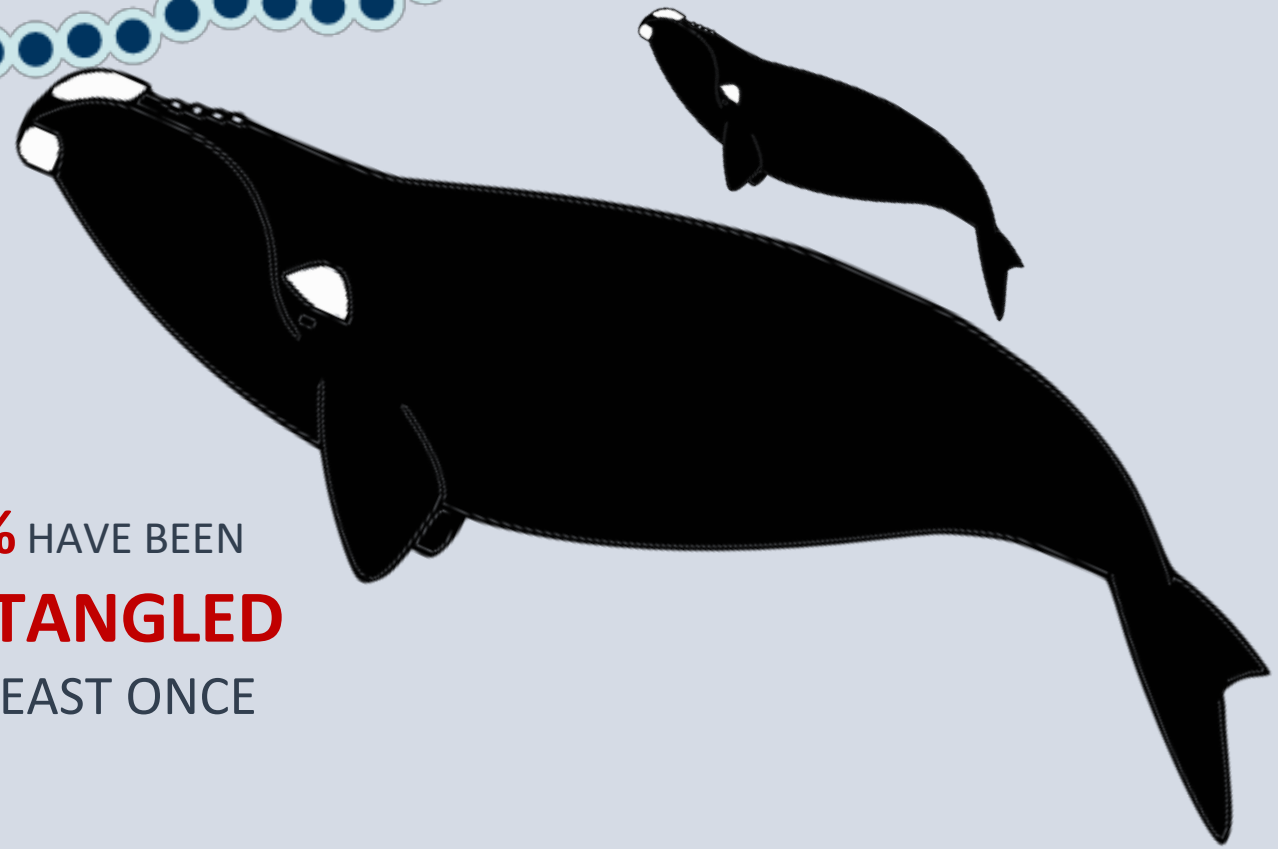
POPULATION IN DECLINE

SINCE 2010

in 1990
268

in 2010
481

in 2017
411



85% HAVE BEEN
ENTANGLED
AT LEAST ONCE

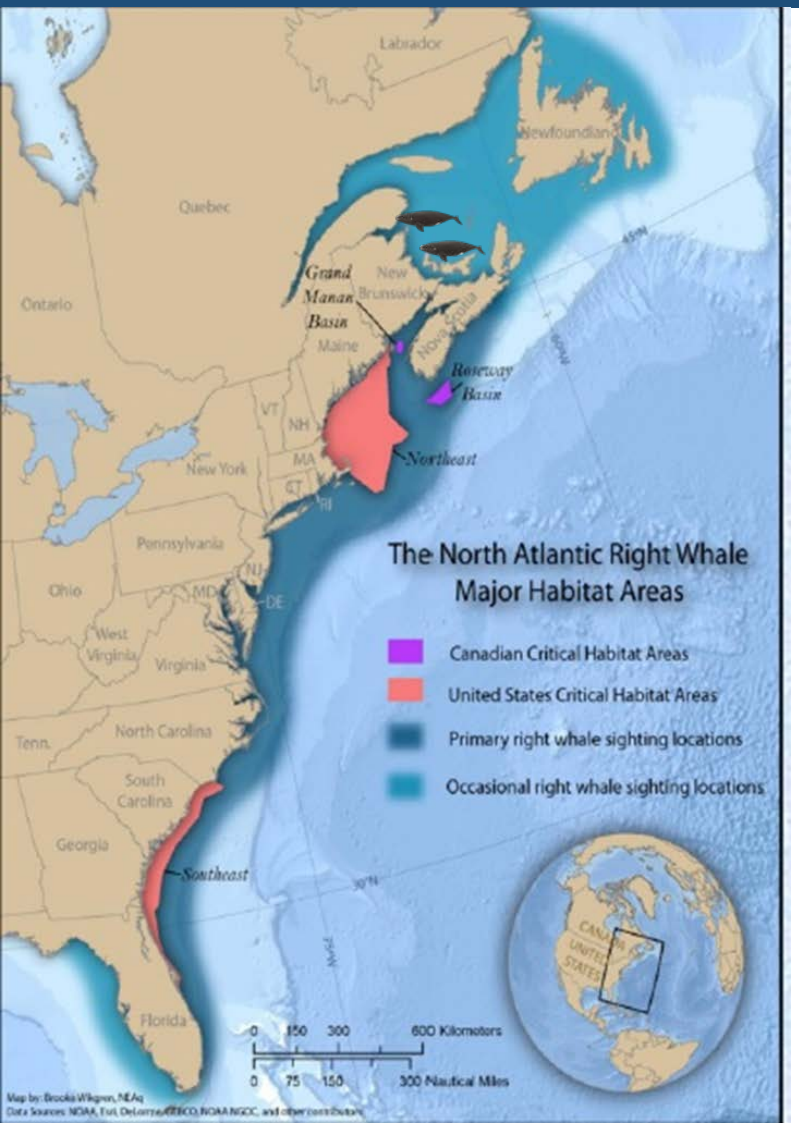
411
WHALES
ESTIMATED
August 2019,
Likely fewer than 400

95
POTENTIAL
MOTHERS
ESTIMATED
ADULT FEMALES

28
KNOWN
DEAD
JAN 2017 – AUG 2019

12
CALVES
BORN OVER
LAST 3 SEASONS

RIGHT WHALE USE OF NORTHERN RANGE HAS INCREASED



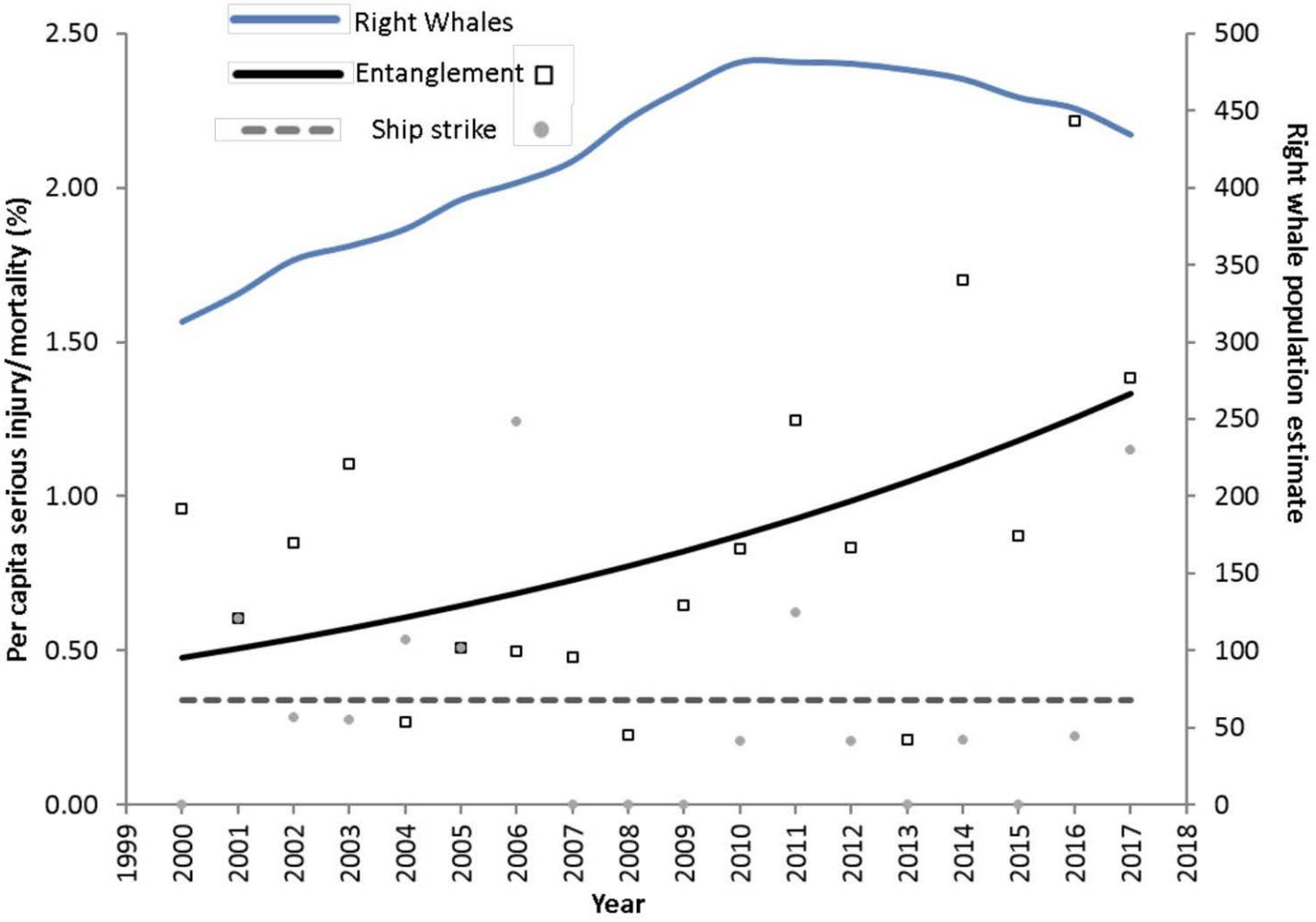
Increased energetic costs of extended migration

Continued human impacts throughout range

Increased exposure to Canadian fisheries and vessel traffic

- Evidence of snow crab entanglement from 2013 fishing year.
- Substantial increase in right whale presence in Gulf of St. Lawrence since 2015 (Canadian Science Advisory Secretariat; Science Advisory Report 2019/028)
- High mortalities in Gulf of St. Lawrence:
  2015 (3), 2017 (12), 2019 (8), including ship strikes and entanglements

TRENDS RELATED TO ENTANGLEMENT ARE INCREASING



WHAT DO WE KNOW ABOUT ENTANGLEMENTS, WHAT DO WE KNOW ABOUT ENDLINES?

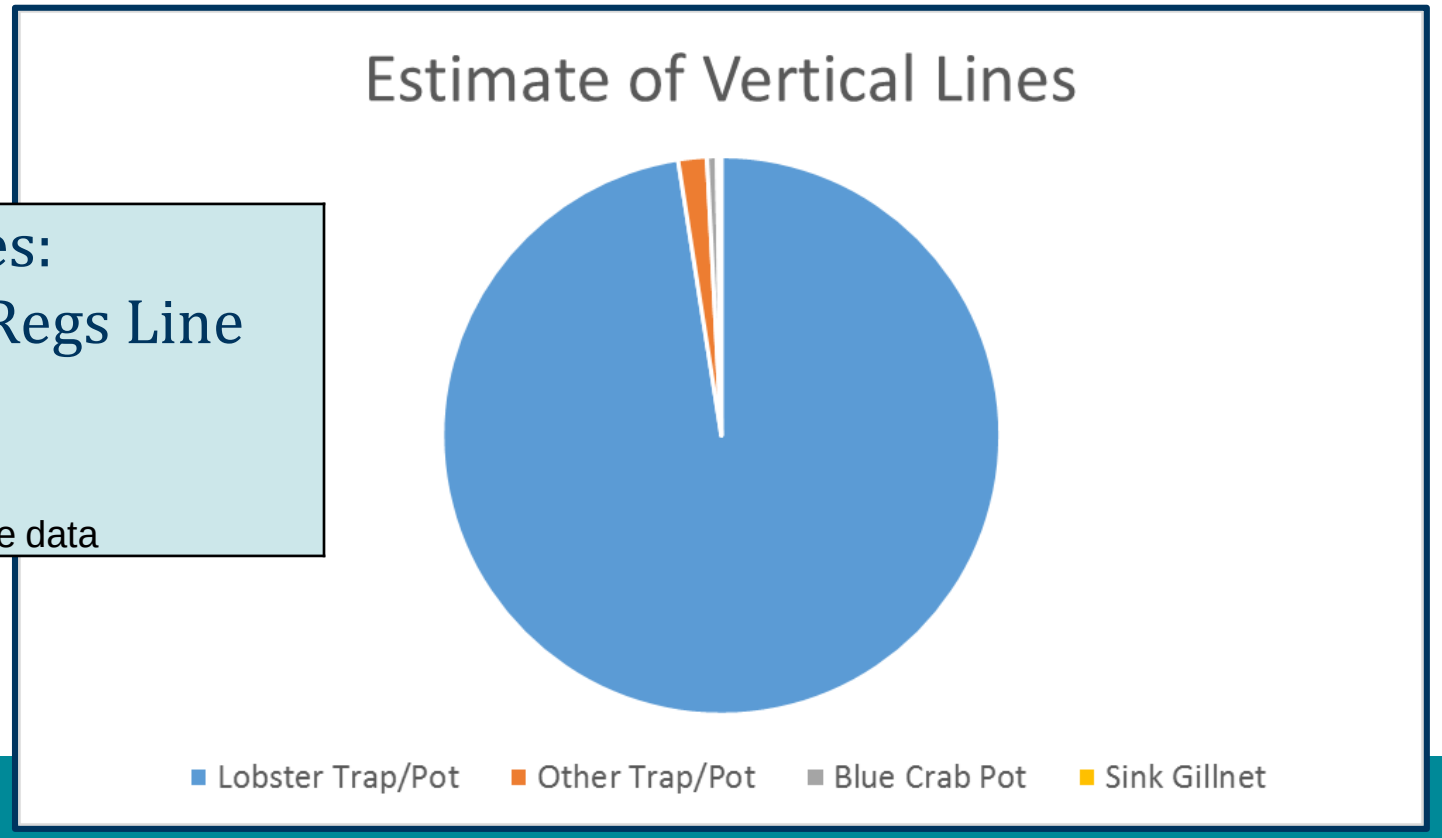
ENTANGLEMENTS: 1,462 entanglement interactions analyzed; 1980-2016

- 110 with attached gear
- 13 that could be traced to original set location

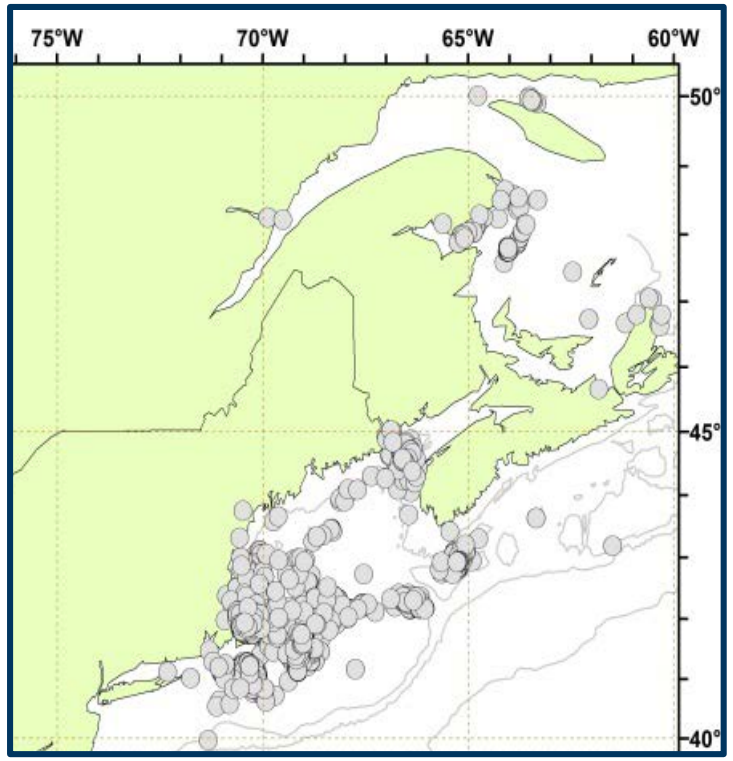
US FIXED GEAR LINE estimates:

- Excludes waters inside ColRegs Line
- Average across all months

IEC Line Model, 9/26/18 run, 2015 and 2016 state data



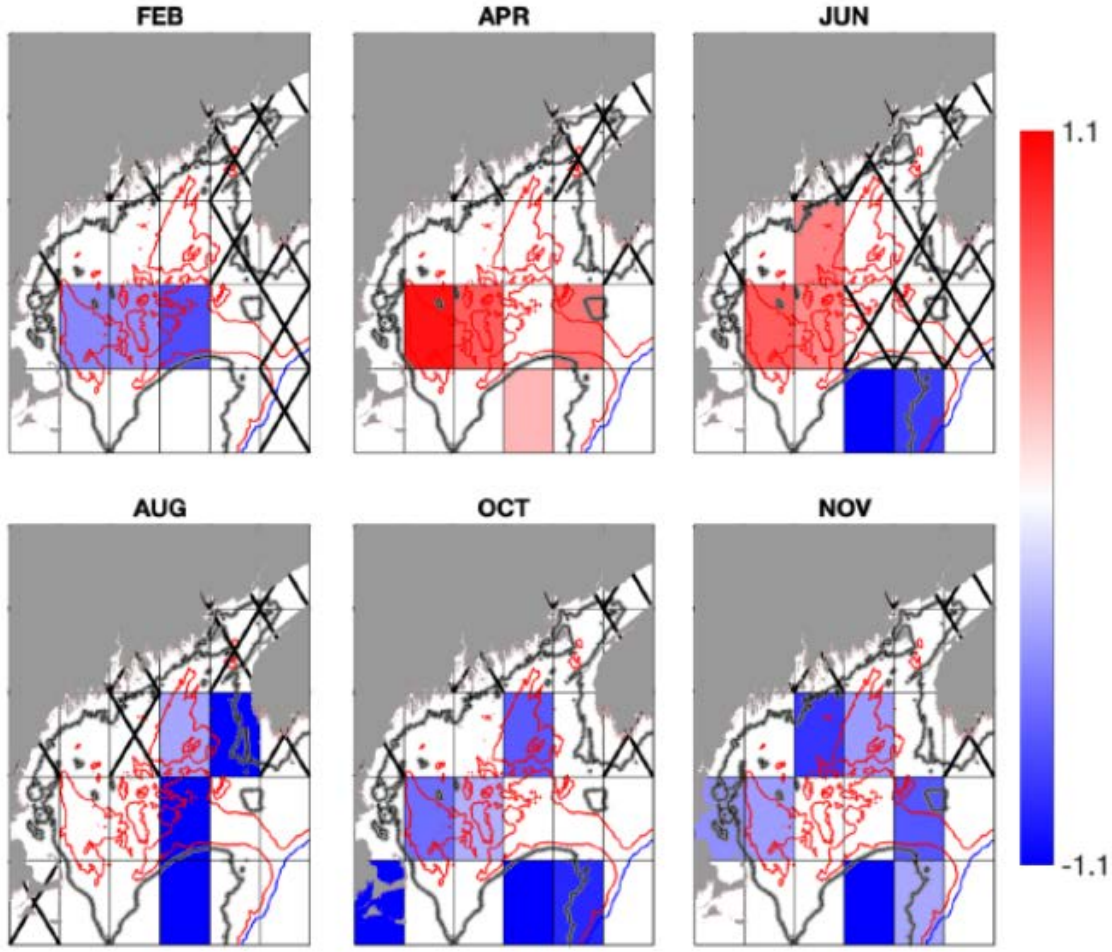
UNCERTAINTY ABOUT CURRENT AND FUTURE NORTH ATLANTIC RIGHT WHALE DISTRIBUTION



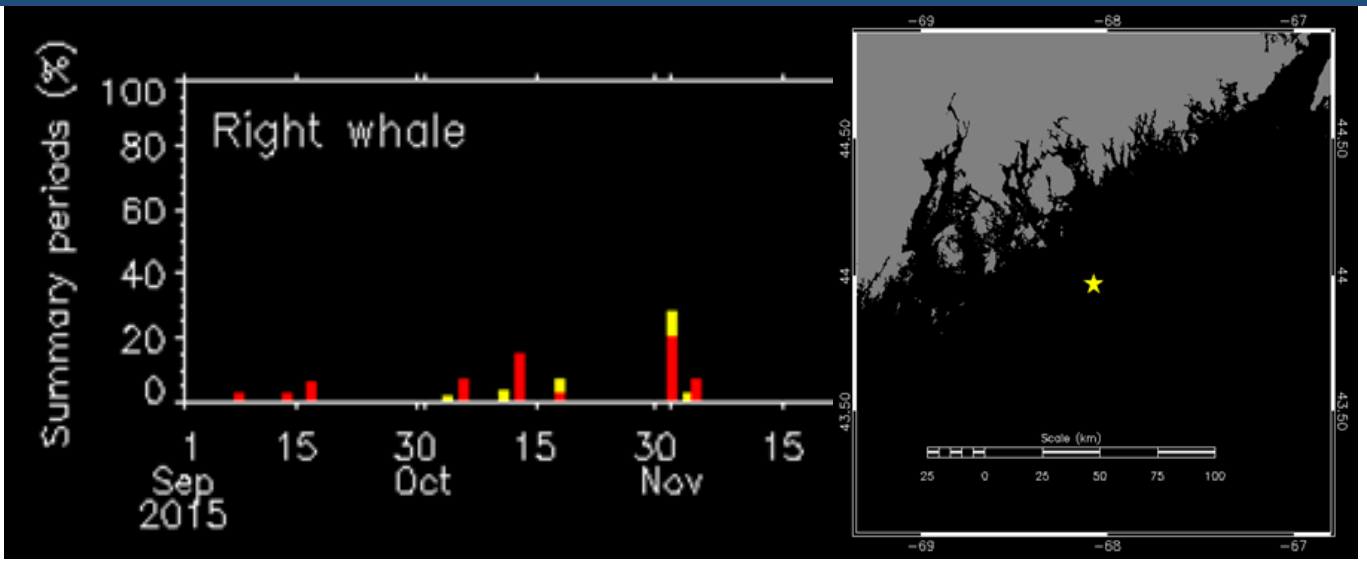
North Atlantic Right Whale Sightings, 2012 – 2016

N. Record et al 2016: Changes (increase in red, decrease in blue) in distribution of prey between 2004-2008 to 2012-2016. Before and after recent decline

Predicting right whale distribution will become more challenging with increasing environmental variability

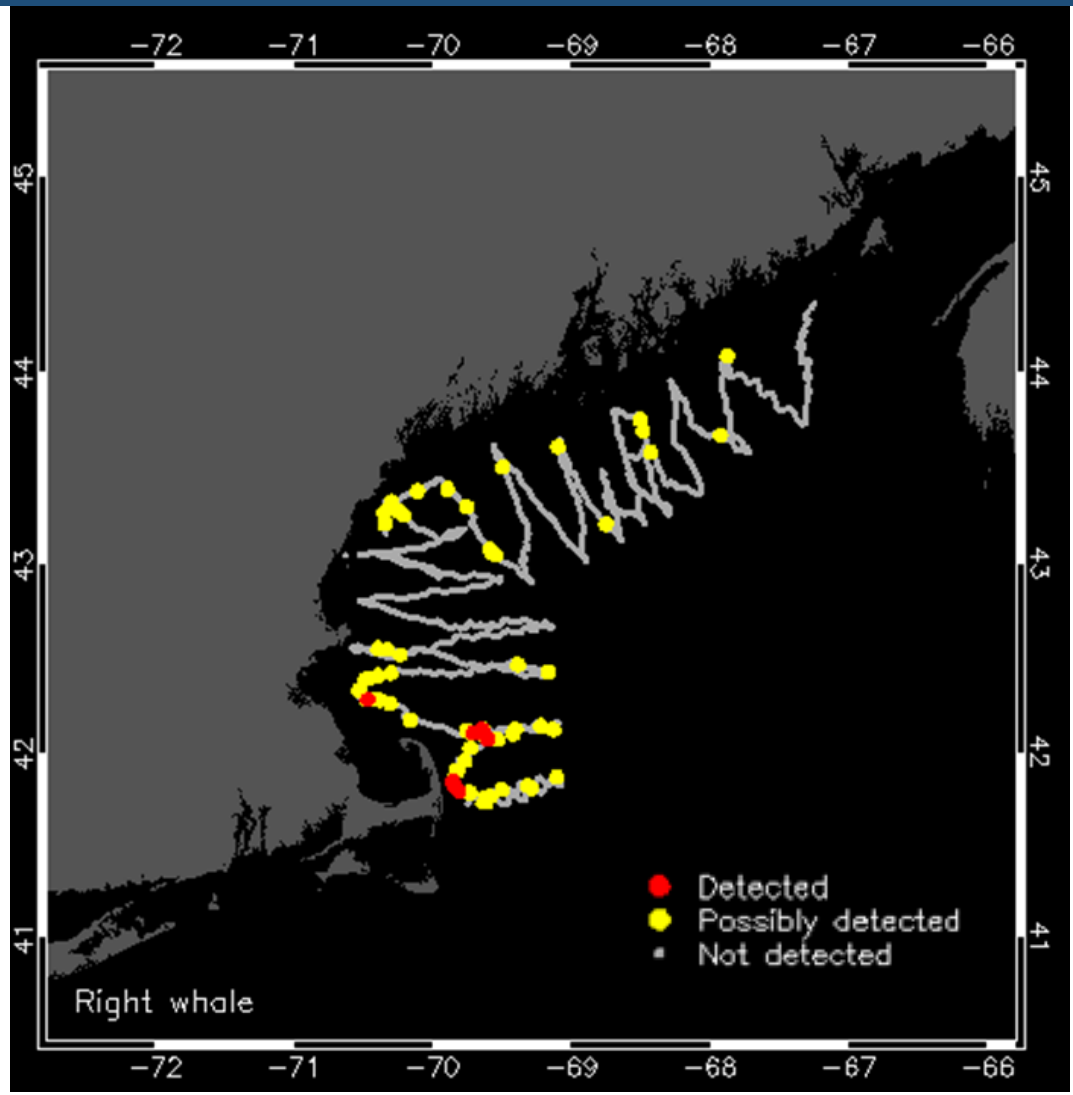


RIGHT WHALES ARE DIFFICULT TO SPOT WHEN NOT AGGREGATED; ACOUSTIC MONITORING



Above: Moored buoy, Mount Desert Rock, Fall 2015

From Baumgartner, Woods Hole Oceanographic Institution Robots4Whales



Right: Glider track, Gulf of Maine, December 2018 – April 22, 2019.

MARINE MAMMAL PROTECTION ACT

The MMPA prohibits take of marine mammals - but provides conditional exception for incidental take in commercial fisheries

TAKE REDUCTION TEAM PROCESS:

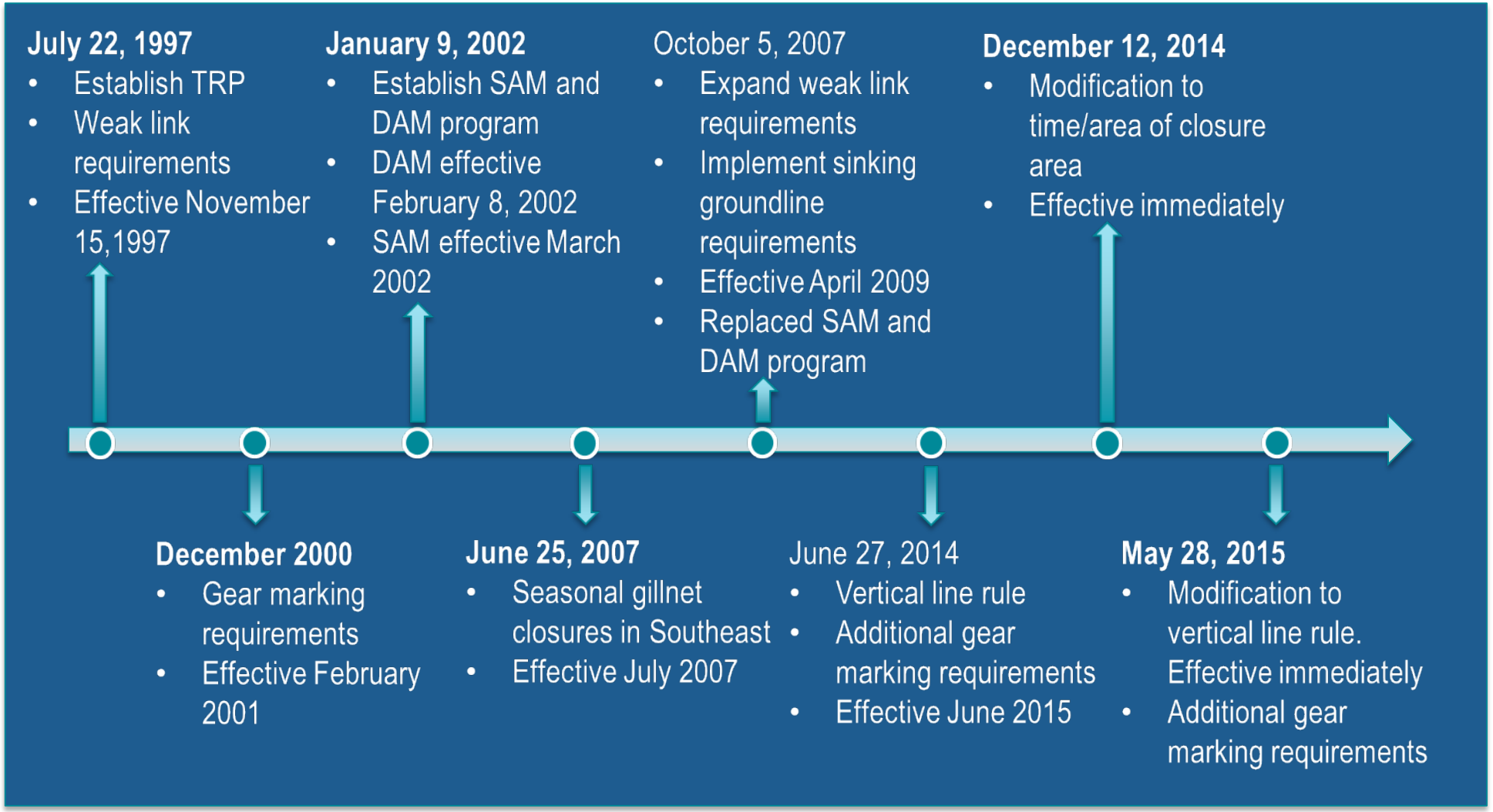
- **Required** if incidental mortality and serious injury exceeds Potential Biological Removal (less than one right whale)
- Take Reduction Planning:

  develop and recommend take reduction measures, consensus-based
- NMFS has the ultimate responsibility to take action

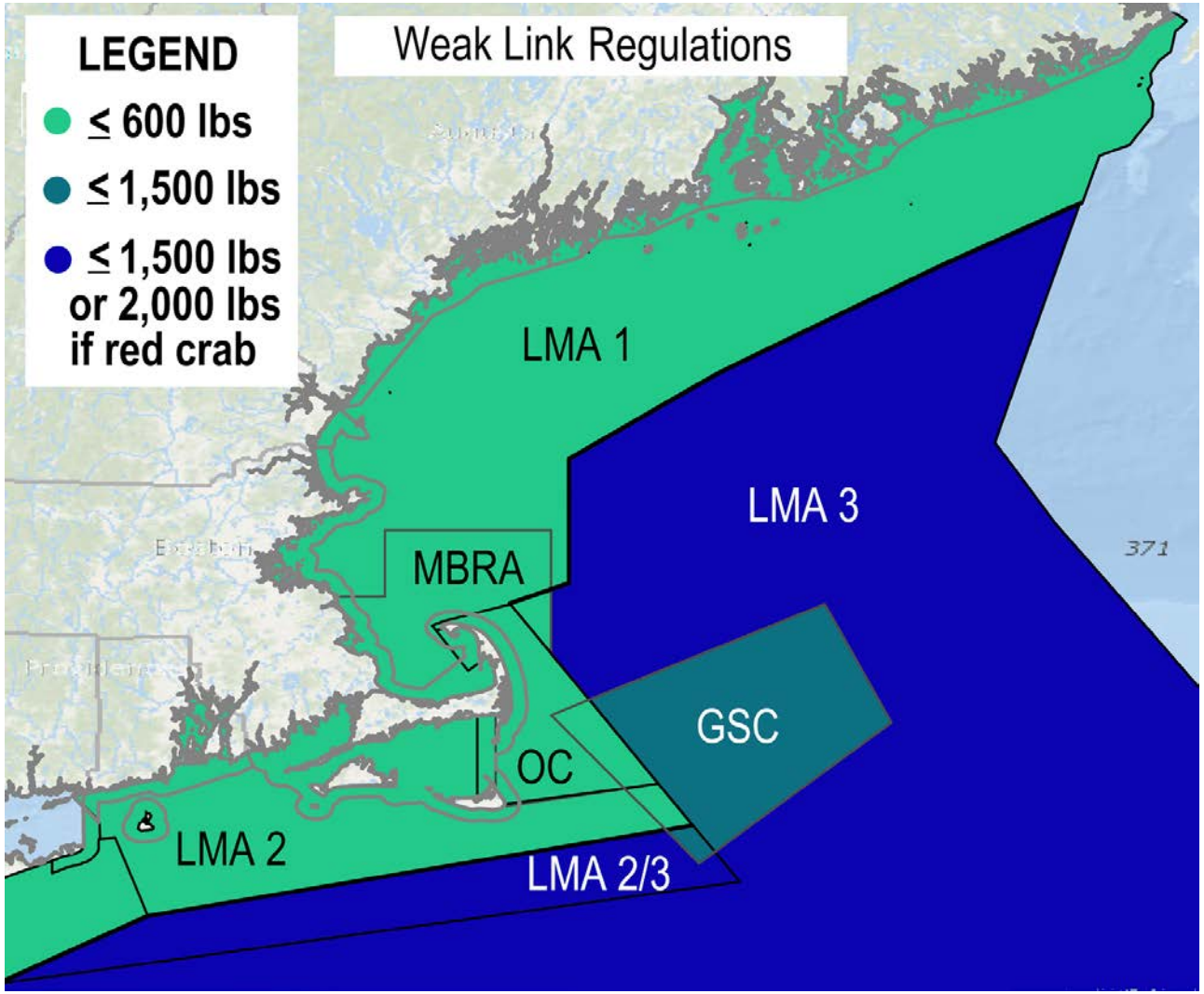
ATLANTIC LARGE WHALE TAKE REDUCTION TEAM

Group	Number of Members
Trap/Pot Fishery	18
Gillnet Fishery	5
Conservation/ Environmental	6
Academic/ Scientific	9
State Managers	14
Federal Managers	5
Fishery Management Organizations	4
Total	61

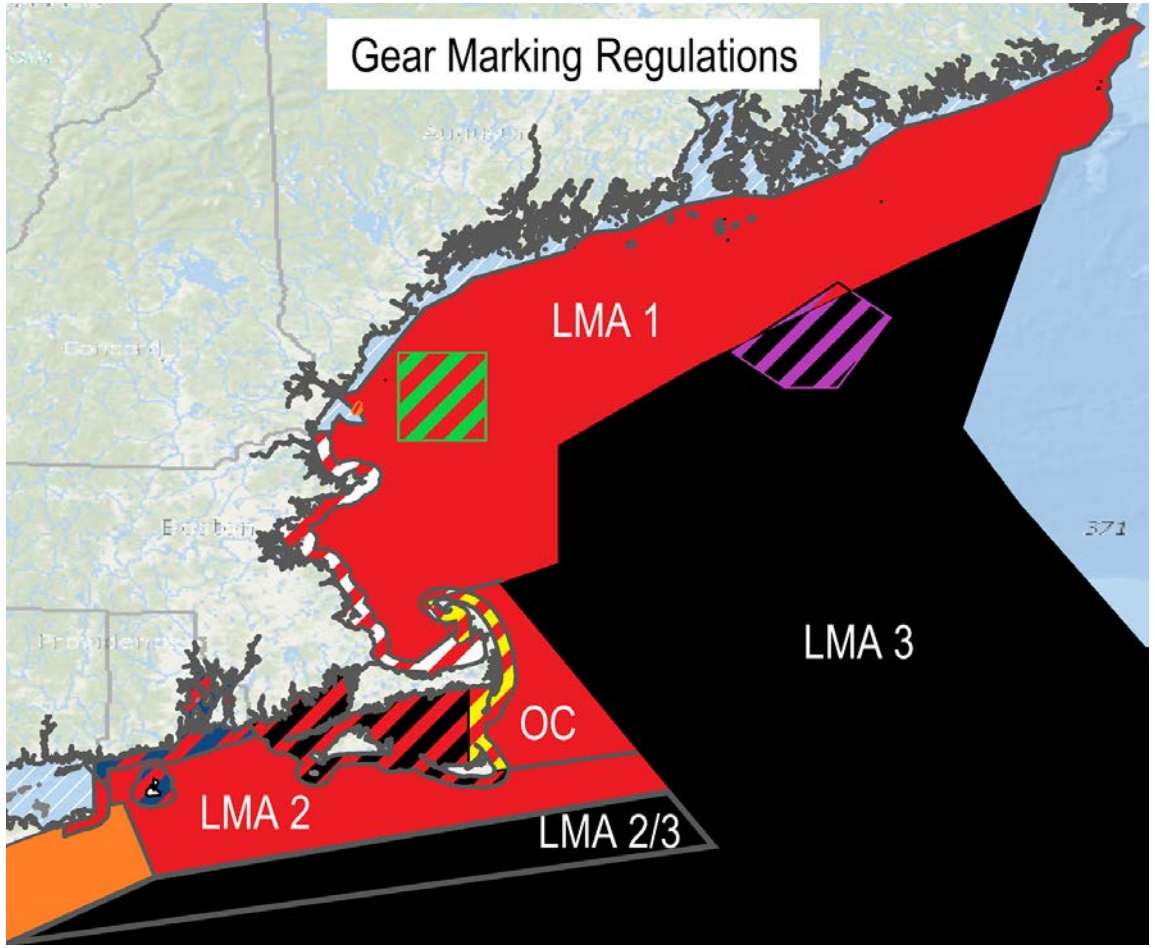
Atlantic Large Whale Take Reduction Plan



Current Plan – Weak Links



Current Plan – Gear Marking

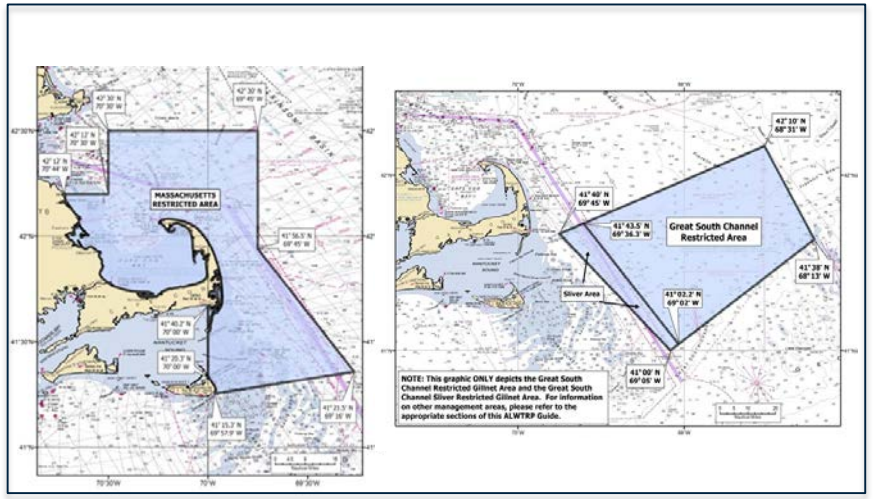


And other measures; see [webpage] for complete Plan details

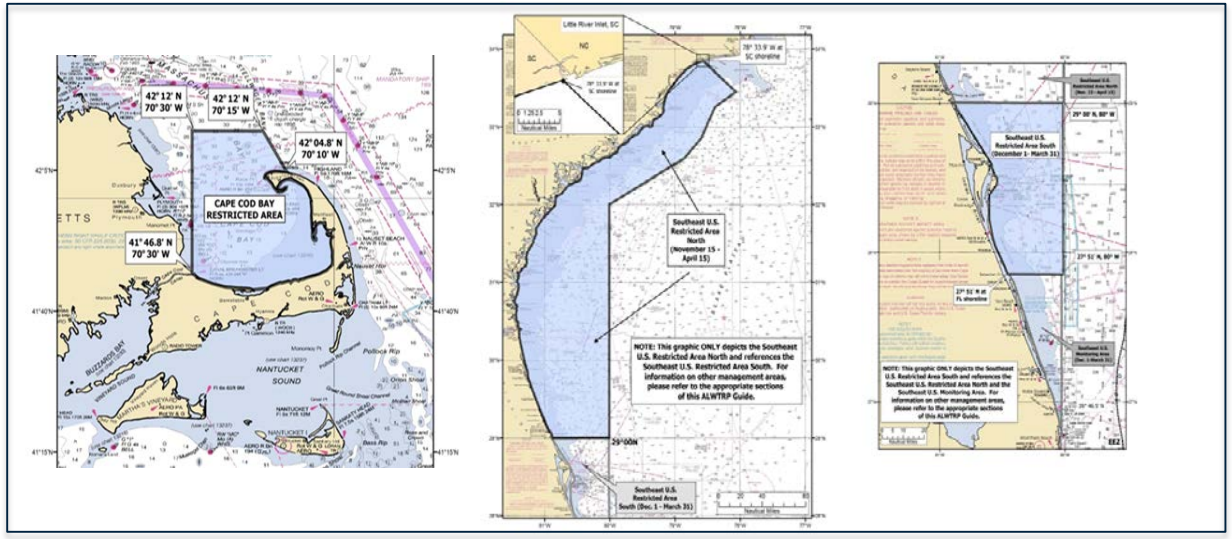
Current Plan – Closures

Area closures:

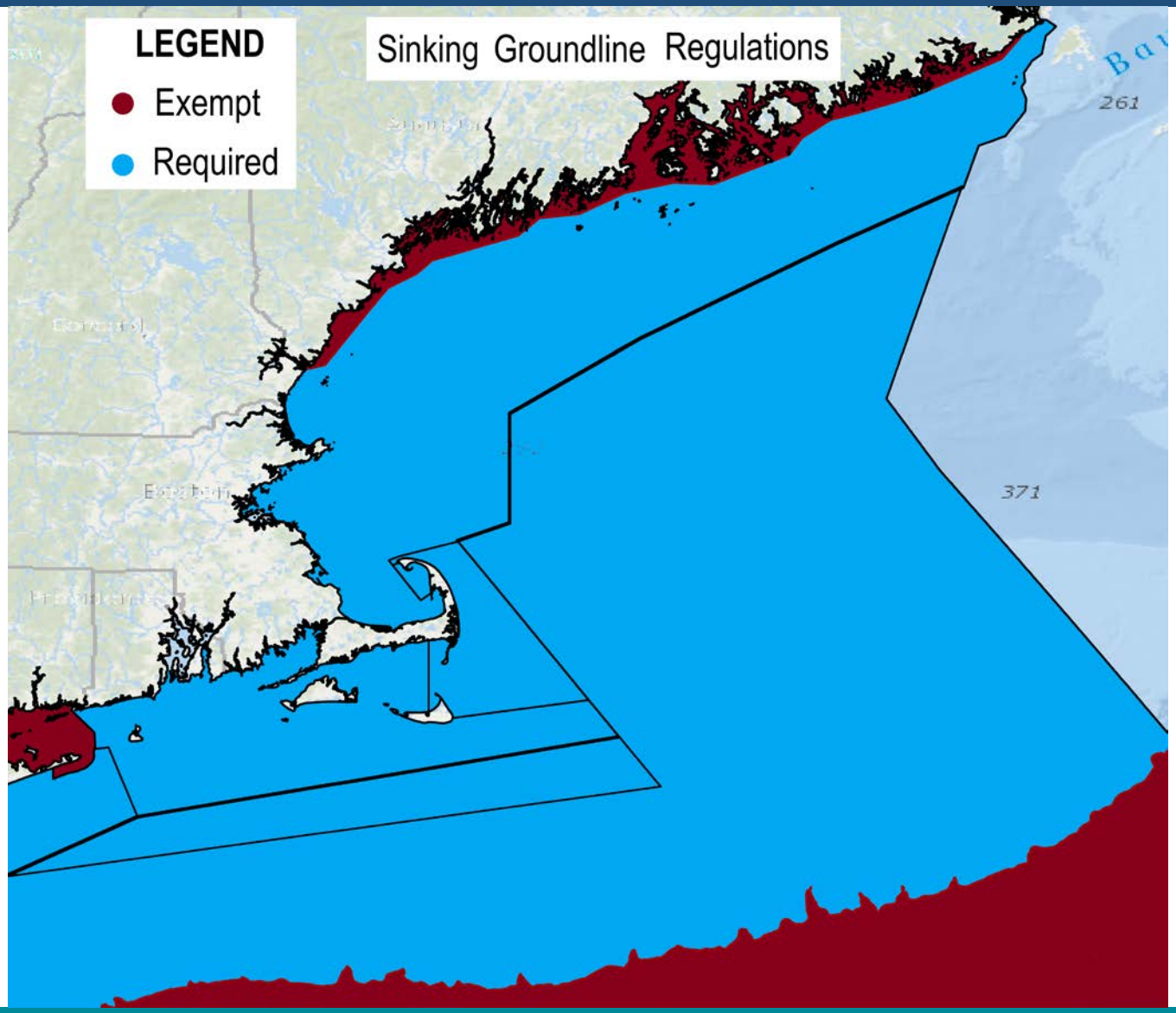
- Trap pot closures: two areas, over 6,300 mi^2 . seasonally closed to trap/pot fishing for three months each



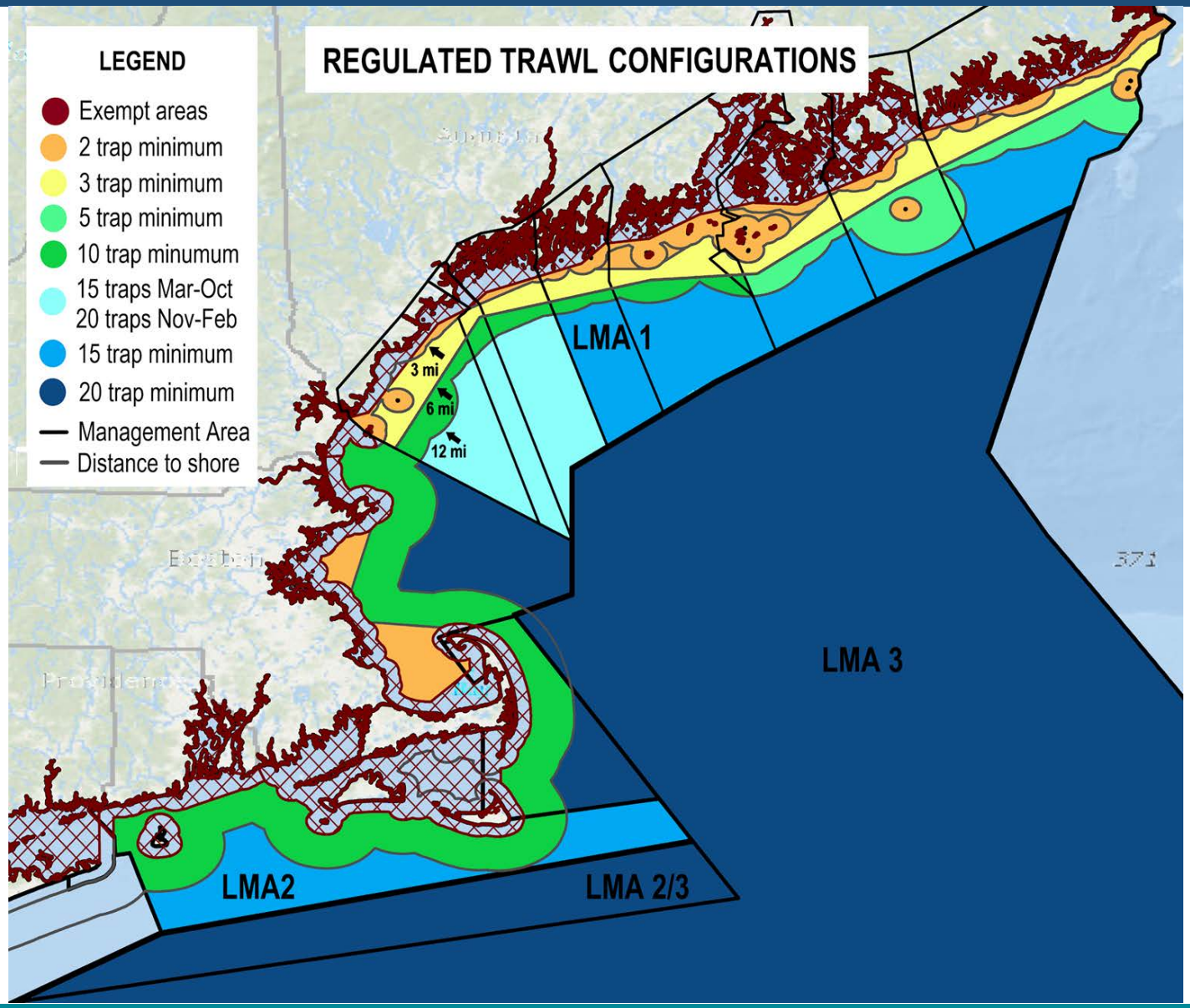
- Gillnet closures: over 28,000 mi^2 seasonally closed to gillnetting for 3 to 6 month periods



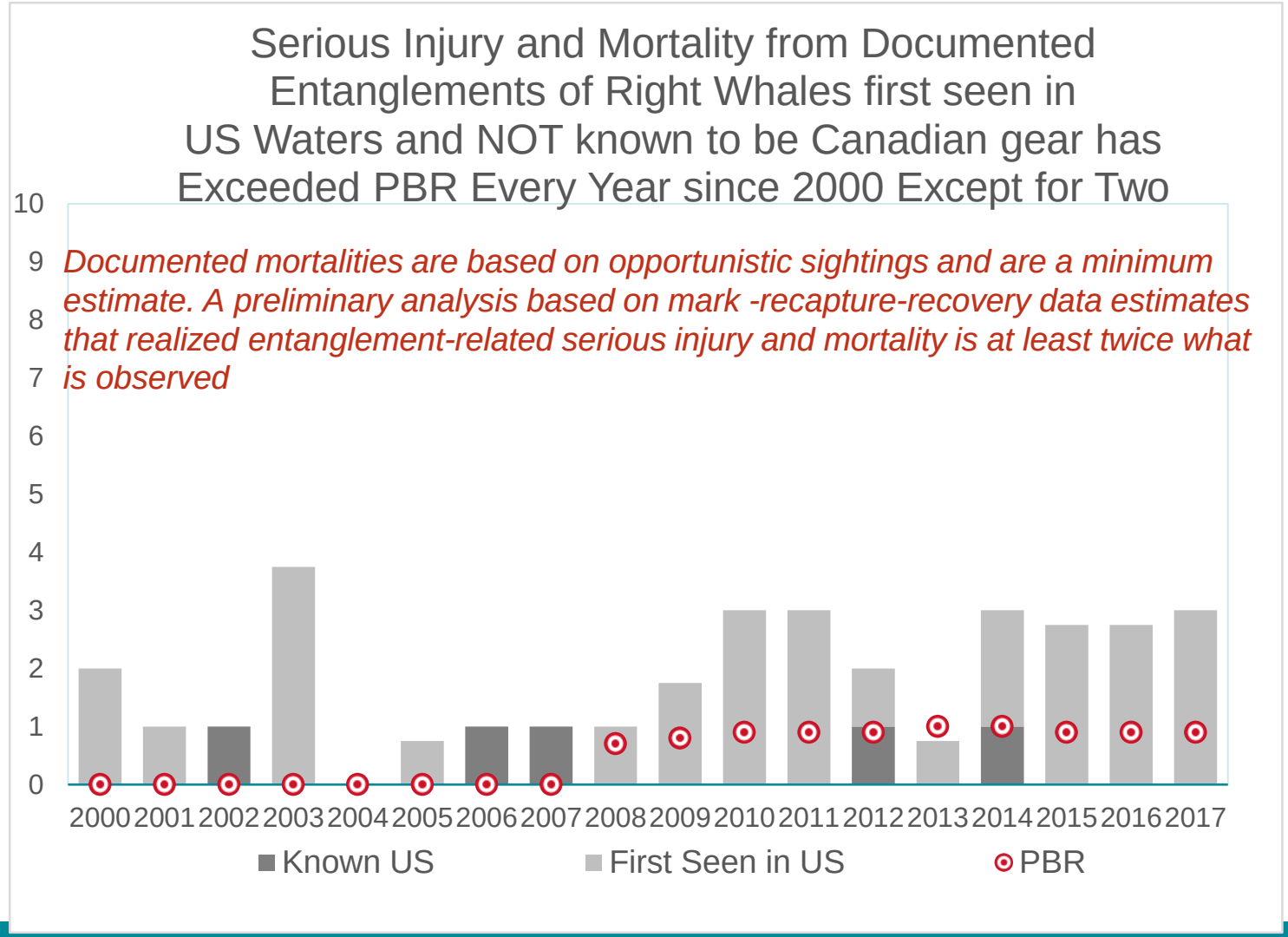
Current Plan – Sinking Groundlines



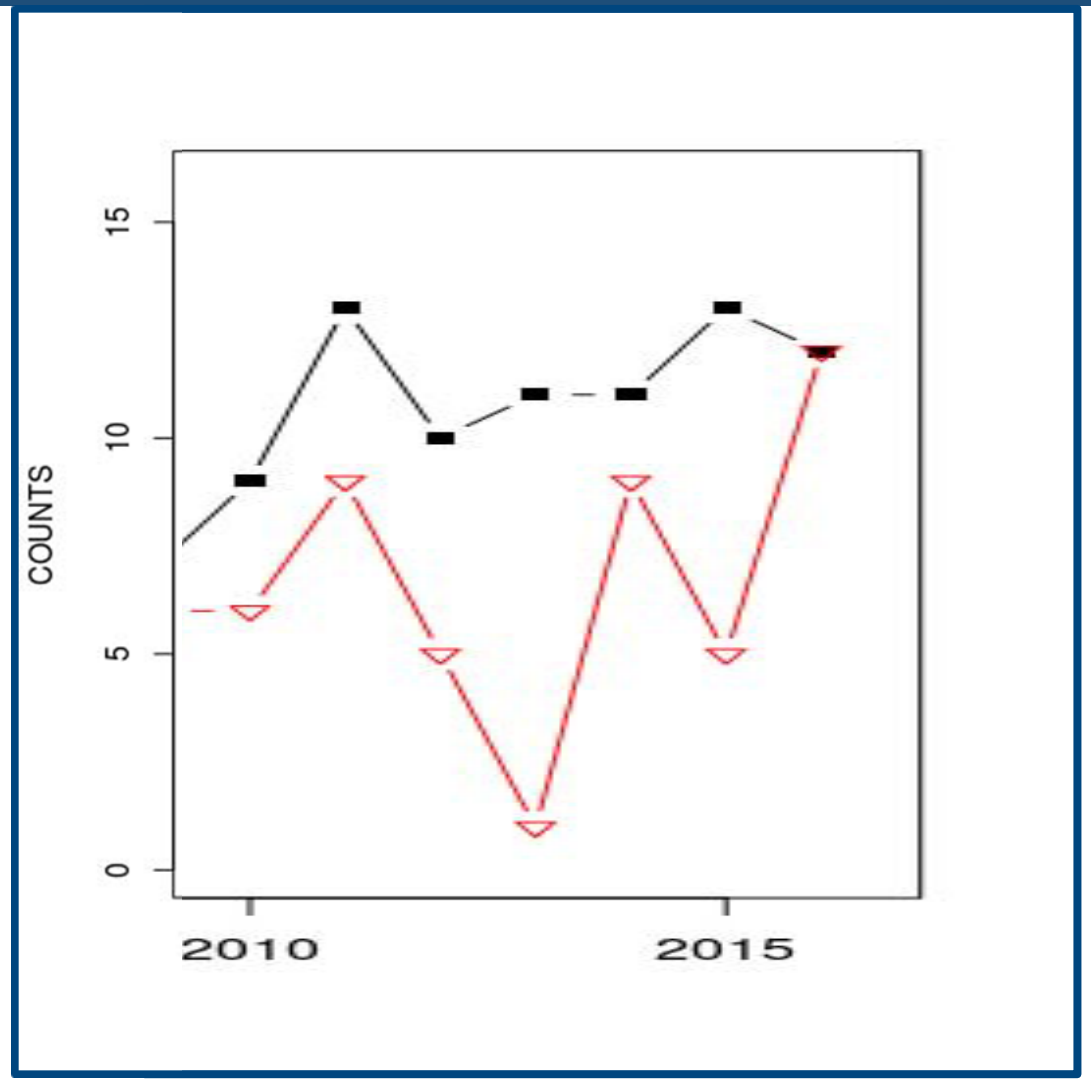
Current Plan – Trawling Up



RIGHT WHALE MORTALITIES IN US COMMERCIAL FISHERIES STILL EXCEED PBR



NOT ALL RIGHT WHALE DEATHS ARE DETECTED

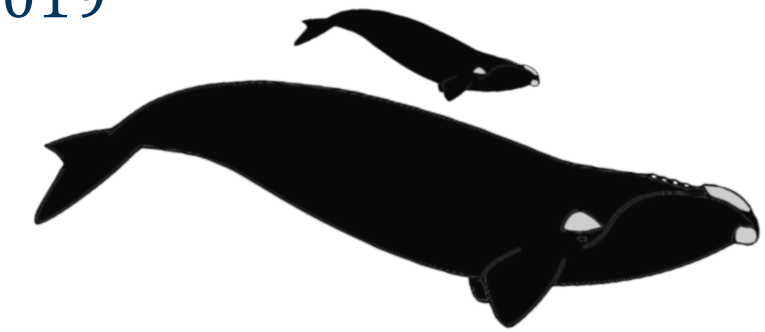


From [2018 Right Whale Stock Assessment Report], Figure 4. Observed annual total serious injuries and mortalities (SI/M) versus estimated mortalities extending the methods from Pace et al. (2017)

APRIL 2019 ALWTRT MEETING

Meeting goal: Identify and recommend modifications to the ALWTRP to further reduce impacts of U.S. fixed gear fisheries on large whales and reduce mortality and serious injury to below PBR (0.9/year) for right whales

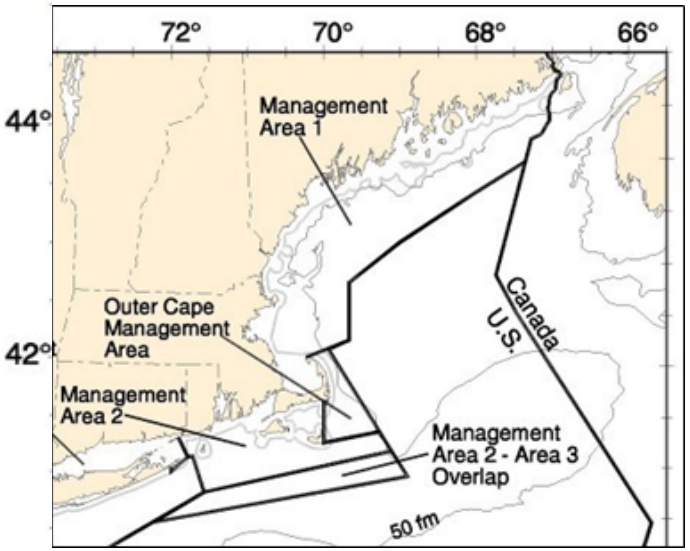
Objective: Risk Reduction Focus: Develop consensus recommendations on a suite of measures that will achieve a 60 to 80% reduction in mortalities and serious injuries of right whales in U.S. fisheries to support NMFS rulemaking that will be initiated in May 2019



Relative Risk Reduction Decision Support Tool:

RISK = Whale Density * Gear Density * Relative risk of gear configuration

NEAR-CONSENSUS AGREEMENT

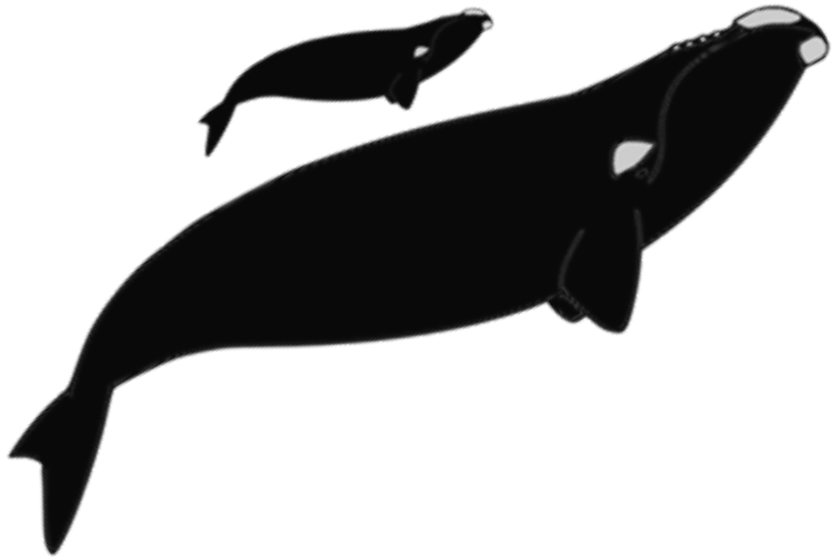


Lobster management areas (LMAs) created for fishery management purposes

State/Jurisdiction	Vertical Line Reduction	Gear Modification	Est. % Risk Reduction
Maine permitted vessels through LMA1	50% vertical line reduction through LMA1 (50% risk reduction)	LMA 1 - Weak rope outside of 3 miles on ¾ length of buoy line (toppers) (11.6% risk reduction)	**61.6%**
NH LMA1	30% vertical line reduction (30% risk reduction)	1700lb breaking strength or sleeves (28.5 % risk reduction)	**58.5%**
Massachusetts LMA1 and Outer Cape	Mass Bay Restricted Area Closure (24% risk reduction)	Sleeves or 1700lb breaking strength or equivalent (11% risk reduction)	**60%**
	30% vertical line reduction, not including MBRA fishermen (-5%) (25% risk reduction)		
LMA 2 - Massachusetts and Rhode Island	18% (2018 - 2020) vertical line reduction (18% risk reduction)	1700 lb or equivalent (42% risk reduction)	**60%**
LMA 2 / 3 Overlap – Massachusetts, Rhode Island	Trawling up to 30 traps (from 20) (30% risk reduction for that area)		
LMA 3	Accelerate planned line reduction 18% by 2020	Rapid research on alternatives to introduce weak rope or weak link elements in to offshore line	**18% + TBD Commitment to 60%**

APRIL 2019 ALWTRT RECOMMENDATION: Considerations

- "Dwight Carver safety exemption" for skiffs and students.
- Revisit need for weak links in trap/pot gear
- Decision Support Tool Improvements
- Take Reduction Plan monitoring, to include:
  - Whale surveys - numbers and distribution
  - Lines – numbers and trends
  - Evolution of implementation including
    - Accommodate gear innovations
    - Assess effects on socioeconomics post implementation



NEED INPUT ON ELEMENTS OF APRIL 2019 ALWTRT RECOMMENDATIONS

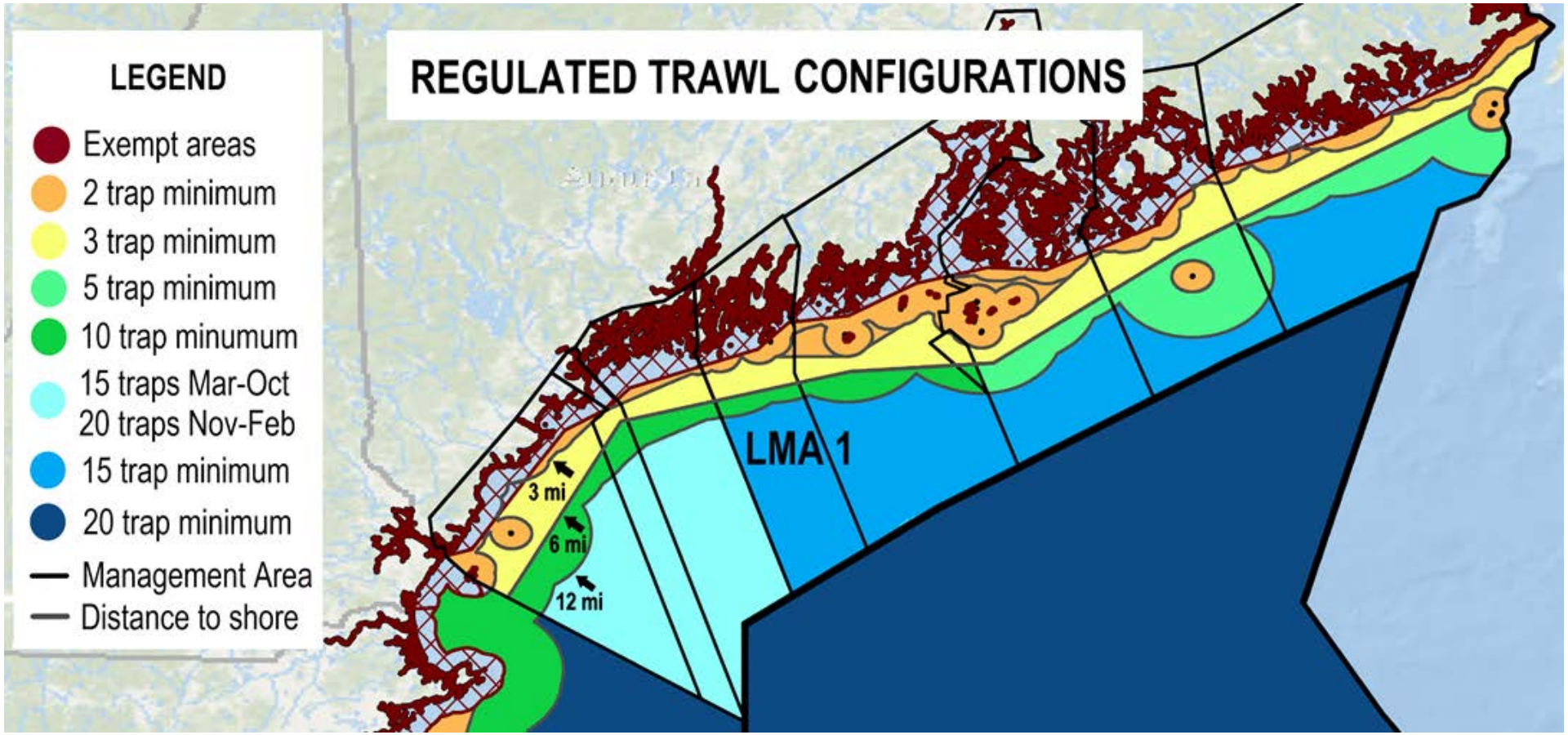
1. Line Reduction Measures
2. Weak Rope
3. Gear Marking
4. Closed Areas

1. Line reduction measures: Options for LMA1 and Outer Cape (LMAs not under an effort reduction plan)

Endline reduction	Potential considerations	Potential benefits
Trawling up	1. Equipment cost 2. Labor cost 3. Catch impacts 4. Gear loss 5. Additional crew 6. Vessel modification 7. Safety	1. Savings on endlines and buoys 2. Savings on fuel
Endline allocation	1. Similar to above list	1. Fishermen choose reduction method
Trap reduction	1. Catch impact	1. Savings on endlines and buoys 2. Savings on traps 3. Savings on other lines

Risk Reduction Estimate Example:
18% endline reduction = 18% risk reduction

1. Line reduction measures: Options and Considerations



Example:

Estimated risk Reduction of 24 traps/trawl outside of 12 nm:

~ 12 % reduction for ME permitted vessels

2. Weak rope and weaknesses in buoy line: Why?

A review of 132 rope segments recovered from 70 whale entanglements showed few whales, and no right whales carrying gear with breaking strength of less than 1700 lbs. The authors believe that right whales are capable of breaking free of rope with breaking strengths of 1700 lbs and less. (Knowlton et al., 2015)

This is consistent with an estimate of the maximum thrust and force of that right whales are capable of based on their anatomy. (Arthur et al., 2015)

Weak Rope examples

South Shore Sleeve, other weak inserts include spliced in 5/16th rope and other devices that break at 1700 lbs.

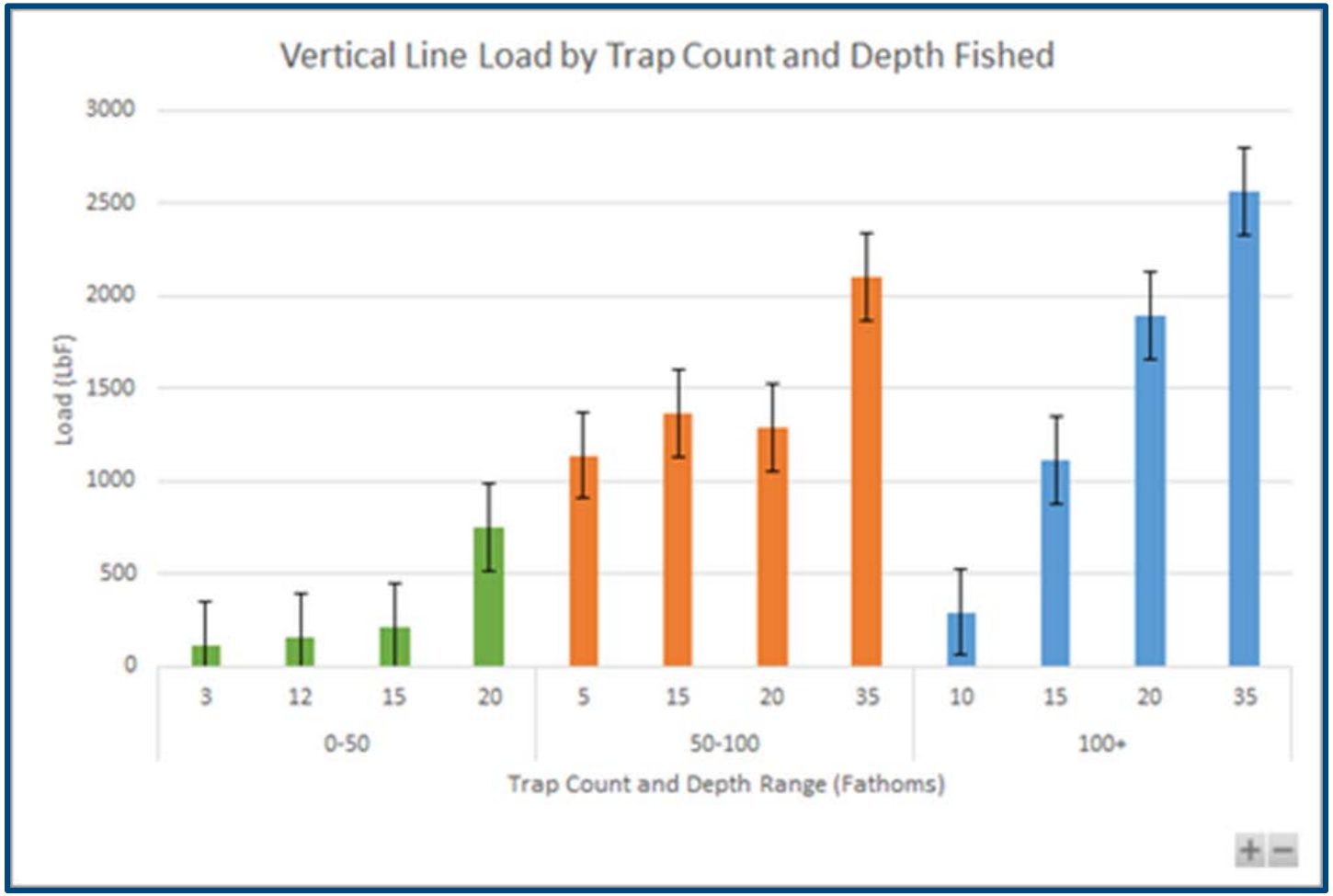
Examples of “weak” rope obtained for testing by the Massachusetts Lobstermen’s Association: Ketchum rope and Shippagan rope

Measurements of force of hauled gear

353 hauls using load cells to measure force used:

- Smaller trawls in < 50 fathoms required < 1700 lbs
- Approaching 1700 lbs for trawls of 15-20 pots/trawl in 50-100 fathoms,
- Over 1700 for:
  > 25 pots/trawl in 50-100 fath
  > 20 pots/trawl in > 100 fath

> 50 fath - weak toppers



Preliminary data from Maine Dept. of Marine Resources assessment of vertical line in Gulf of Maine region under NOAA Fisheries Grant NA18 NMF4720084

Weak rope measures: Options and Considerations

Weak Rope	Potential considerations	Potential benefits
Weak Rope	1. Gear replacement costs 2. Gear modification (time) costs 3. Gear loss costs 4. More frequent replacement 5. Increasing operating risks 6. Safety	1. Avoids area closure 2. Savings when replacing new ropes
Intermittent weak rope: Sleeves, spliced in weak rope, etc, every 6 - 10 fathoms	Similar to above	1. Avoid area closure 2. Costs less than full replacement 3. Menu for flexibility
Timed Tension Line Cutter	1. Device costs (TTLC not yet commercially available) 2. Gear loss due to device failure or gear conflict 3. Can result in extensive lengths of line on whales	1. Avoid area closure 2. Fish with original gear sets

Preliminary Risk Reduction Estimate: 1700lb every 10 fathoms everywhere < 50 fath ~ 21.5%

1700lb toppers everywhere >50 fath ~ 9.6%

3. Gear marking measures: Options and Concerns

Options:

- TRT recommendation: everywhere year round, no exemptions (not just New England)
- Supported: 3 foot solid mark within two fathoms of buoy; addition to current 1 foot requirements for mark in top, middle and bottom sections
- Modify to delineate country, support for state colors, consider adding additional area marks
- Allow sleeves/weak inserts as gear mark

Potential costs	Potential benefits
1. Equipment 2. Labor	Increase the probability of identification of recovered lines from whales to reduce uncertainty of location of entanglement

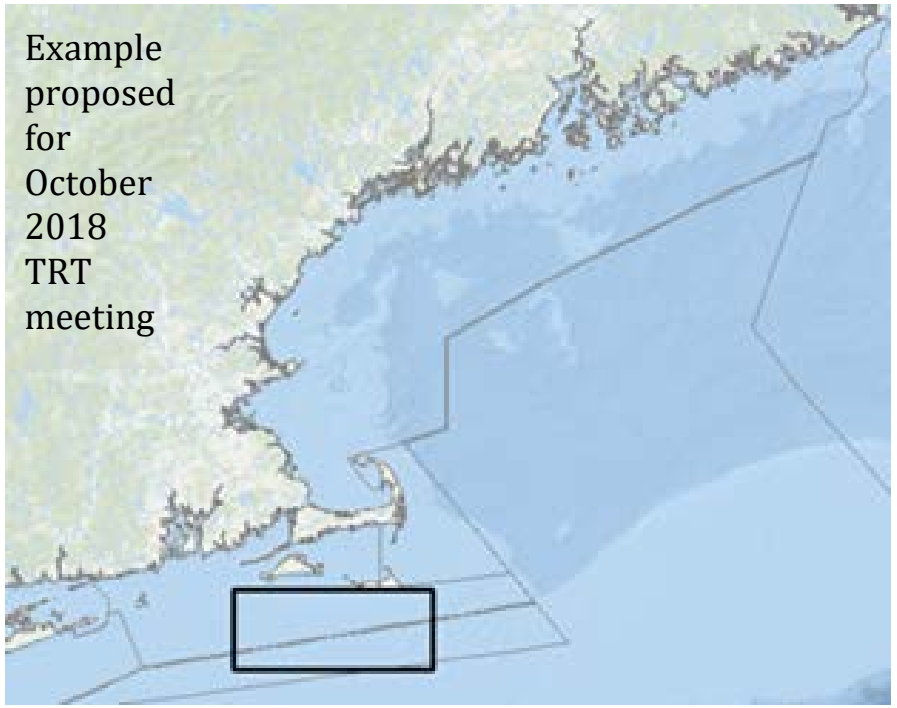
4. Area closure measures: Not in Team Recommendation

	Potential considerations	Potential benefits
Gear in (move to other areas)	1. Fuel costs 2. Less catch	1. Exploring new fishing ground 2. Maintain income stream to support year round costs
Gear out (move to dock)	1. No catch 2. Extra trips to move gears 3. Storage costs 4. Cash flow/payments costs	1. Reduce operating costs: Bait, fuel, etc. 2. Labor savings 3. Better catch in the future (more and higher quality)
Ropeless as alternative to closure	1. Device costs 2. Gear loss costs due to device failure or gear conflicts 3. Costs to mobile fisheries and enforcement for detection 4. Safety	1. Alternative to area closure 2. Fish with original gear sets

Example area closure measures:

Risk Reduction Estimates generated upon request at TRT meeting:

- Nantucket for Feb - May 15 (gear removed)
  ~ 1% risk reduction



- Half year LMA1 closure Jan - May:
  ~ 29.2% risk reduction,
  ~ 16.1% reduction of lines

*LESSON: To be effective, need to be large and for long periods of time

Examples suites of measures that reach the target

1. TRT Framework:
   Universal line reductions varying by management areas/jurisdictions
   + extensive weak rope

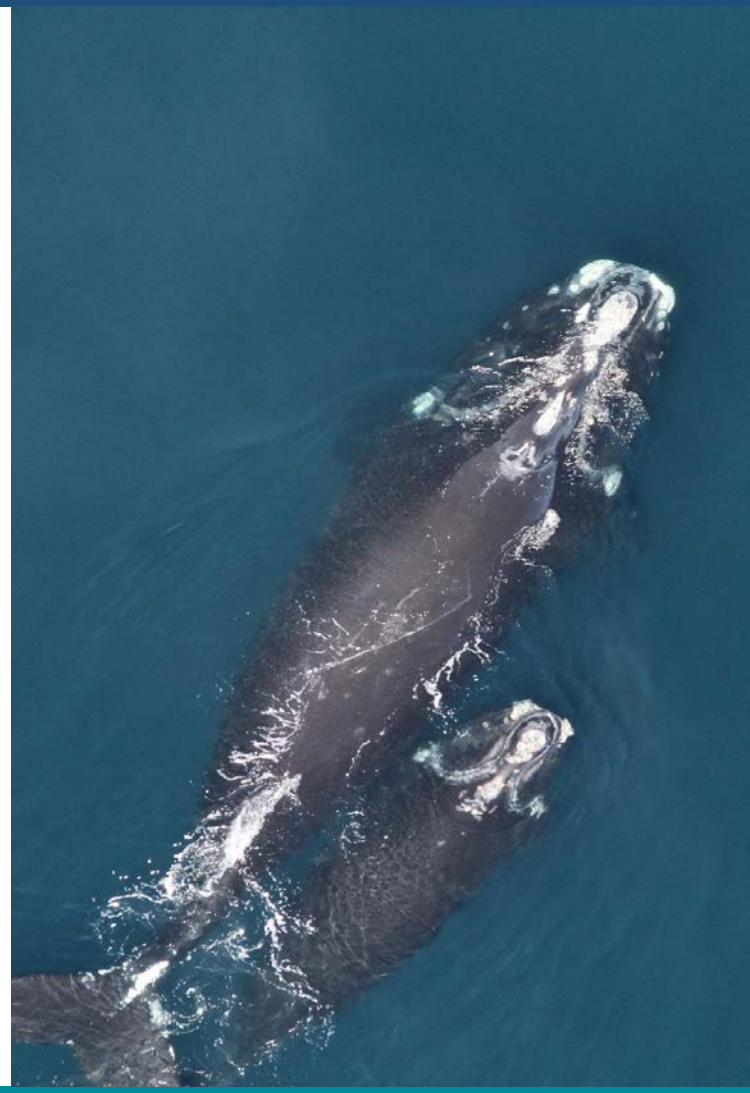
2. Universal weak rope
   + line reduction under existing fishery management effort reduction plans (LMA ⅔ 18% anticipated)
   + large area closures 2-3 months

3. Universal weak rope
   + entire fishery closure Feb-May 14

The TRT alternative appears more reasonable

NEXT STEPS

- Consider information from scoping meetings and share with states
- Draft Environmental Impact Statement (DEIS) to analyze risk reduction alternatives
- Request comments on DEIS late in 2019
- Parallel state rulemaking
- Draft proposed rule for Federal waters and to mirror state rules
- Proposed Rule will be published for comments



2019 SCOPING MEETING PROTOCOLS

We are collecting your comments to guide DEIS development and help us define the alternatives and elements we will analyze

- Active and focused participation requested
- Respectful interaction; please keep an open mind and listen to others
- Make good use of everyone's time:
  - Please limit comments to 3 minutes so other can participate and
  - Please restrict comments to the meeting goal (scope of alternatives and elements to be analyzed)
  - There is no need to repeat other comments verbatim, just indicate support
- Comments should be directed to NOAA Fisheries and Maine Department of Marine Resources

2019 SCOPING MEETING PROTOCOLS

Using the order on the sign in list, I will call you up to the microphone.

If you did not sign in but want to speak, we will try to give you that opportunity after running through our initial list

Written comments are welcome:

Under subject line (or write on outside of envelope):
"Comments on Atlantic Large Whale Take Reduction Plan Scoping."

By Email: nmfs.gar.ALWTRT2019@noaa.gov

By Mail: Address to Michael Pentony, Regional Administrator, National Marine Fisheries Service, 55 Great Republic Drive, Gloucester, MA 01930-2276.