

# ALWTRT entanglement update, SI/M and gear analysis



**NOAA  
FISHERIES**

GARFO and NEFSC

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# Entanglement summary 2018-2021

GARFO gear team: John Higgins, Rob Martin, David Morin. Support from Eric Matzen (NEFSC) and Nick Hopkins (SE Region)

Goal: Recover, document, analyze and store gear from large whale entanglement cases. Apply forensic quantitative approach: collect and describe factually.

Cases are considered open unless fisher is identified

# 2018 and 2019 Entanglement Summary

Analysis is ongoing and totals are preliminary as of March 23, 2021

2018

	Right	Humpback	Finback	Sei	Minke	Unknown
Disentangled / gear shed / monitor	4	20	0	0	2	0
Entangled	1	10	0	0	2	0
Deceased	1	3	0	1	4	0
<b>Total confirmed = 48</b>	<b>6</b>	<b>33</b>	<b>0</b>	<b>1</b>	<b>8</b>	<b>0</b>

2019

	Right	Humpback	Finback	Sei	Minke	Unknown
Disentangled / gear shed / monitor	2	14	0	0	2	0
Entangled	2	6	0	0	3	1
Deceased	1	2	0	0	2	0
<b>Total confirmed = 35</b>	<b>5</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>1</b>

# 2020 and 2021 Entanglement Summary

Analysis is ongoing and totals are preliminary as of March 23, 2021

2020

	Right	Humpback	Finback	Sei	Minke	Unknown
Disentangled / gear shed / monitor	0	6	0	0	1	0
Entangled	3	7	0	0	1	1
Deceased	1	2	0	0	4	0
<b>Total confirmed = 26</b>	<b>4</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>

2021

	Right	Humpback	Finback	Sei	Minke	Unknown
Disentangled / gear shed / monitor	1	1	0	0	0	0
Entangled	1	1	0	0	0	0
Deceased	0	0	0	0	0	0
<b>Total confirmed = 4</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

# 2018 entanglement gear summary

48 new confirmed entanglements (as of March 23, 2021); gear recovered in min. 12 cases

Gear Type	Right	Humpback	Minke	Sei
Trap/Pot	1 Canadian snow crab trap/pot	<ul style="list-style-type: none"> <li>• 2 U.S. lobster (1 red ALWTRP mark)</li> <li>• 2 unknown trap/pot</li> </ul>	3 U.S. lobster (one red ALWTRP mark – northern inshore/nearshore trap/pot)	
Other		<ul style="list-style-type: none"> <li>• 12 U.S. monofilament line</li> <li>• 1 U.S. tuna anchoring system</li> <li>• 1 U.S. bait gillnet</li> <li>• 1 unknown monofilament</li> </ul>	<ul style="list-style-type: none"> <li>• 1 unknown gillnet</li> </ul>	
Unknown	<ul style="list-style-type: none"> <li>• 2 Canadian unknown</li> <li>• 1 U.S. unknown</li> <li>• 2 unknown origin/type</li> </ul>	<ul style="list-style-type: none"> <li>• 2 Canadian unknown</li> <li>• 12 unknown origin/type</li> </ul>	<ul style="list-style-type: none"> <li>• 1 U.S. unknown</li> <li>• 3 unknown origin/type</li> </ul>	1 unknown origin/type
<b>TOTAL</b>	<b>6</b>	<b>33</b>	<b>8</b>	<b>1</b>

# 2019 Preliminary entanglement gear summary

35 new confirmed entanglements (as of March 21, 2021); gear recovered in 8 cases

Gear Type	Right	Humpback	Minke
Trap/Pot	1 Canadian snow crab trap/pot	<ul style="list-style-type: none"> <li>• 1 U.S. lobster</li> <li>• 1 U.S. trap/pot (red &amp; yellow ALWTRP mark)</li> <li>• 1 U.S. whelk trap/pot</li> <li>• 1 Canadian lobster</li> </ul>	1 U.S. lobster (one red ALWTRP)
Other		<ul style="list-style-type: none"> <li>• 1 U.S. striped bass gillnet</li> <li>• 1 U.S. sink gillnet</li> <li>• 1 U.S. gillnet</li> <li>• 1 U.S. tuna anchoring system</li> <li>• 1 unknown gillnet</li> </ul>	
Unknown	<ul style="list-style-type: none"> <li>• 3 unknown origin/type</li> <li>• 1 Canadian unknown</li> </ul>	• 13 unknown origin/type	• 6 unknown origin/type
<b>TOTAL</b>	<b>5</b>	<b>22</b>	<b>7</b>

# 2020 Preliminary entanglement gear summary

26 new confirmed entanglements (as of March 21, 2021); gear recovered in min. 11 cases

Gear Type	Right	Humpback	Minke	Unknown
Trap/Pot	1 Canadian snow crab trap/pot	<ul style="list-style-type: none"> <li>• 1 U.S. lobster</li> <li>• 1 U.S. trap/pot (red ALWTRP mark)</li> <li>• 1 Canadian lobster</li> </ul>	<ul style="list-style-type: none"> <li>• 2 U.S. lobster</li> <li>• 1 U.S. trap/pot (pending fish trap ID)</li> </ul>	
Other		<ul style="list-style-type: none"> <li>• 1 U.S. gillnet – striped bass</li> <li>• 1 U.S. trawl net</li> <li>• 1 U.S. monofilament</li> </ul>	<ul style="list-style-type: none"> <li>• 1 U.S. gillnet – striped bass</li> </ul>	
Unknown	3 unknown origin/type	9 unknown origin/type	2 unknown origin/type	1 unknown origin/type
<b>TOTAL</b>	<b>4</b>	<b>15</b>	<b>6</b>	<b>1</b>

# 2021 Preliminary entanglement gear summary

4 new confirmed entanglements (as of March 21, 2021); gear recovered in 1 case

Gear Type	Right	Humpback
Trap/Pot		
Other		
Unknown	2 unknown origin/type	2 unknown origin/type
<b>TOTAL</b>	<b>2</b>	<b>2</b>



# Right whale #3920 - Cottontail

October 19, 2020

- 90 feet of 5/8" polypro float line with 19" double tucked loop and unrolled double clove hitch or rolling hitch.
- A 8" length of braided orange mending twine (gear alert marker) was 8 fathoms from tucked loop.

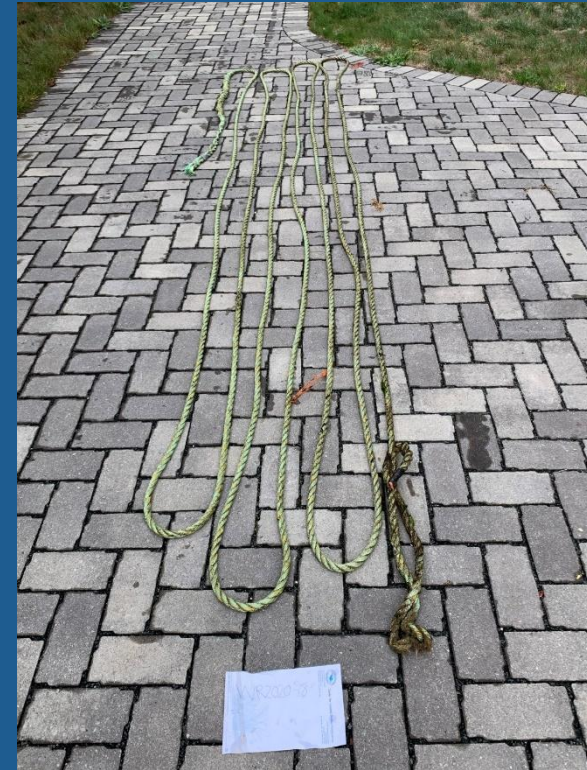
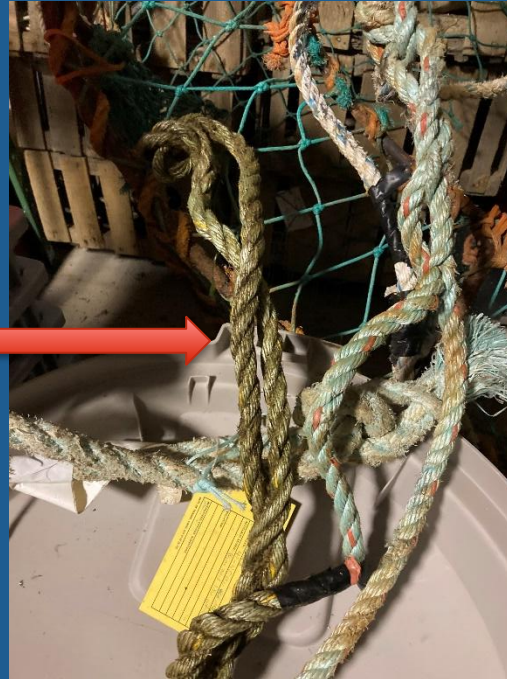
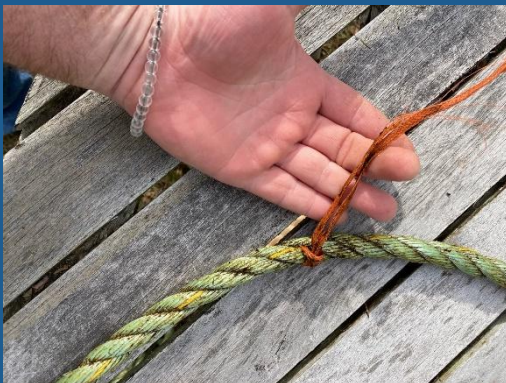


Photo courtesy of CCS



# Right whale #3920 - Cottontail

February 28, 2021

- 106' of 5/8" polypro float line
- 102' of 5/8" 3 strand leaded line
- 8" and 6" lengths of braided orange mending twine woven into the float line.

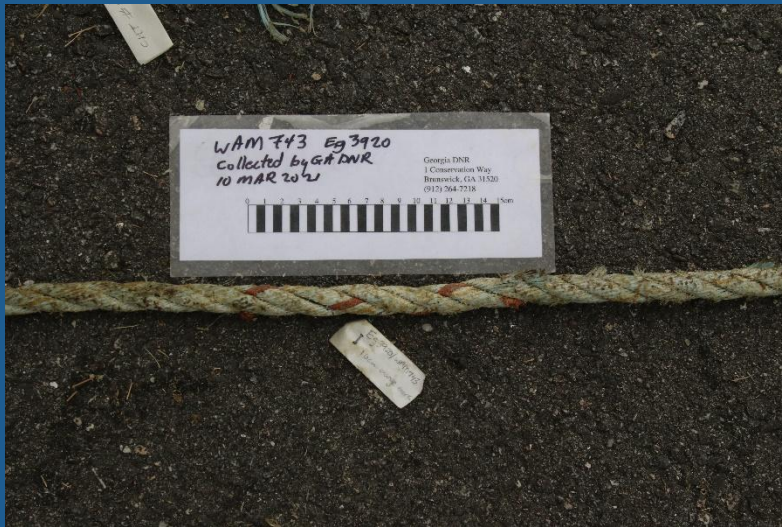


Photos courtesy of UNC Wilmington: Bill McLellan

# Right whale #3920 - Cottontail

March 10, 2021

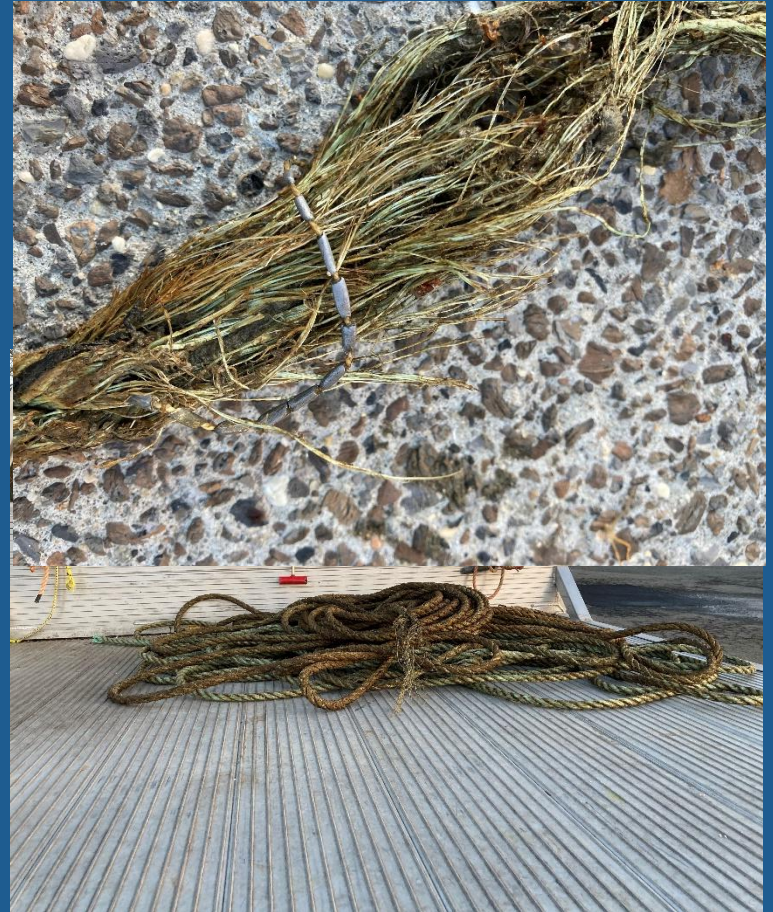
- 29' of 5/8" polypro float line
- 38' of 5/8" 3 strand leaded line
- 6" length of braided orange mending twine woven into the lead line.



Photos courtesy of GA DNR: Clay George

# Right whale #3560 – Snow Cone

- 108' of 5/8" polypro float line
- 186' of 5/8" 3 strand leaded line
- 1 fathom splice connecting the line types

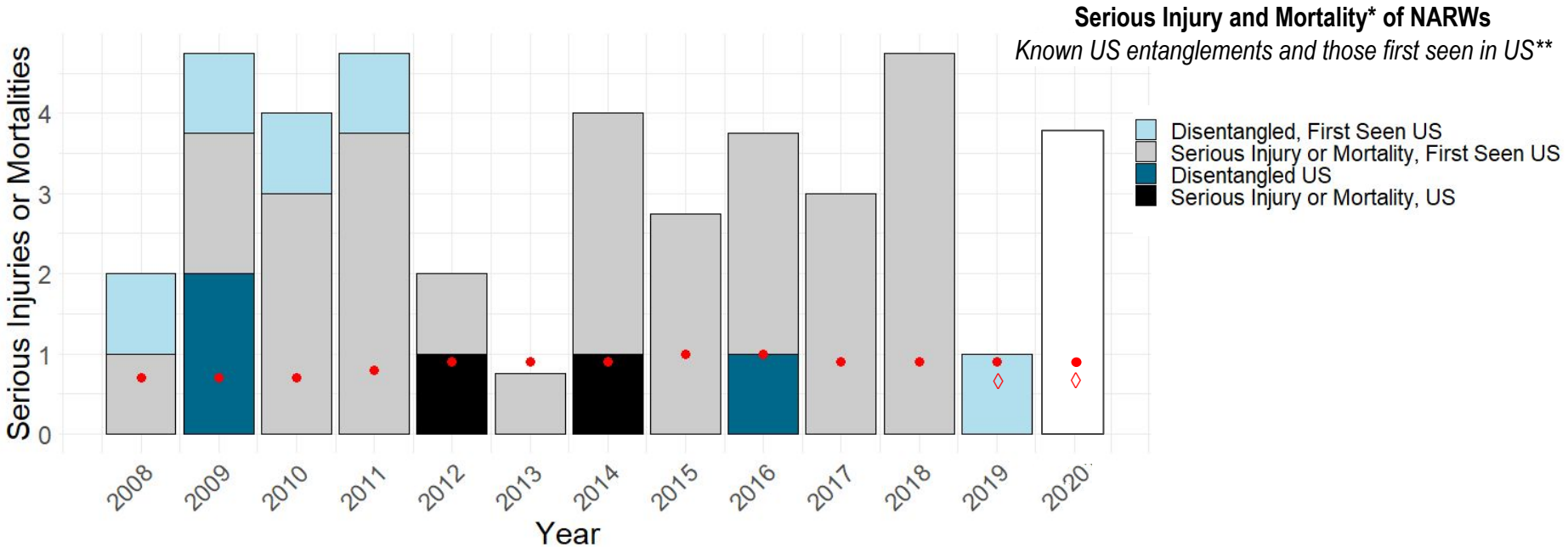


# SI/M summary 2014-2021

Allison Henry

- MMPA requires NMFS to estimate annual levels of human-caused serious injury (SI) and mortality (M)
- **Serious Injury** = “any injury that will likely result in mortality”
- **Annual evaluation** of previous years’ entanglement and stranding events using National SI criteria and regional M criteria
- Annual reports present determinations in a **rolling 5 yr period**, allowing for updates if new data becomes available
  
- This presentation will focus on the most recently published 5 year period: 2014-2018 and provide preliminary determinations for 2019-2021 events
  
- For summary slides, **SERIOUS** incidents (SI) include all prorated, serious injury and mortality incidents

# Right Whale Serious Injuries and Mortalities Continue To Exceed PBR

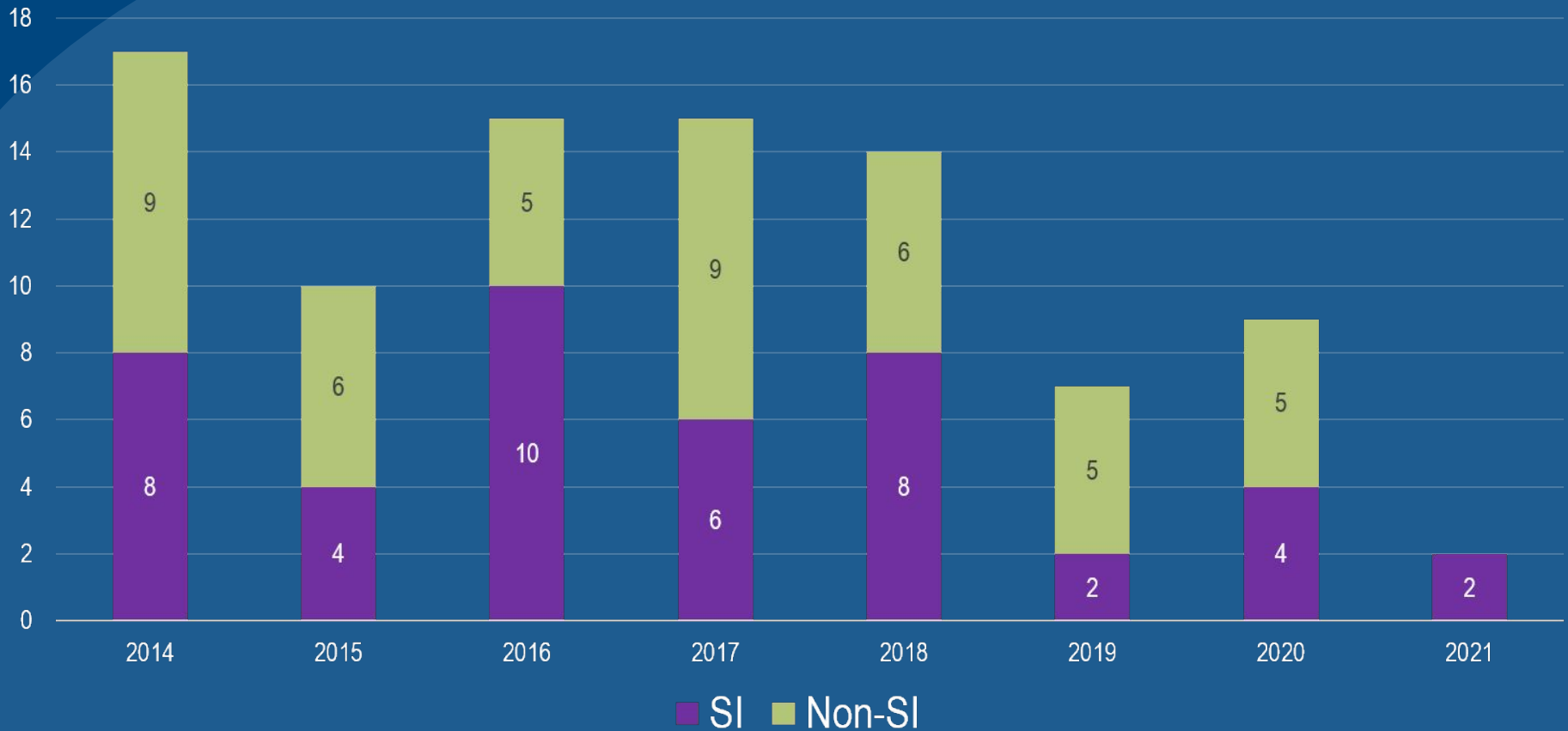


\* Five year rolling average.  
 \*\* Graph does not include known Canadian entanglements or those first seen in Canada  
 ◇ Anticipated PBR due to population decline

# 2014-2021 right whale injury and mortality entanglement summary

## 89 incidents; 44 serious

2014-2021 SI determinations

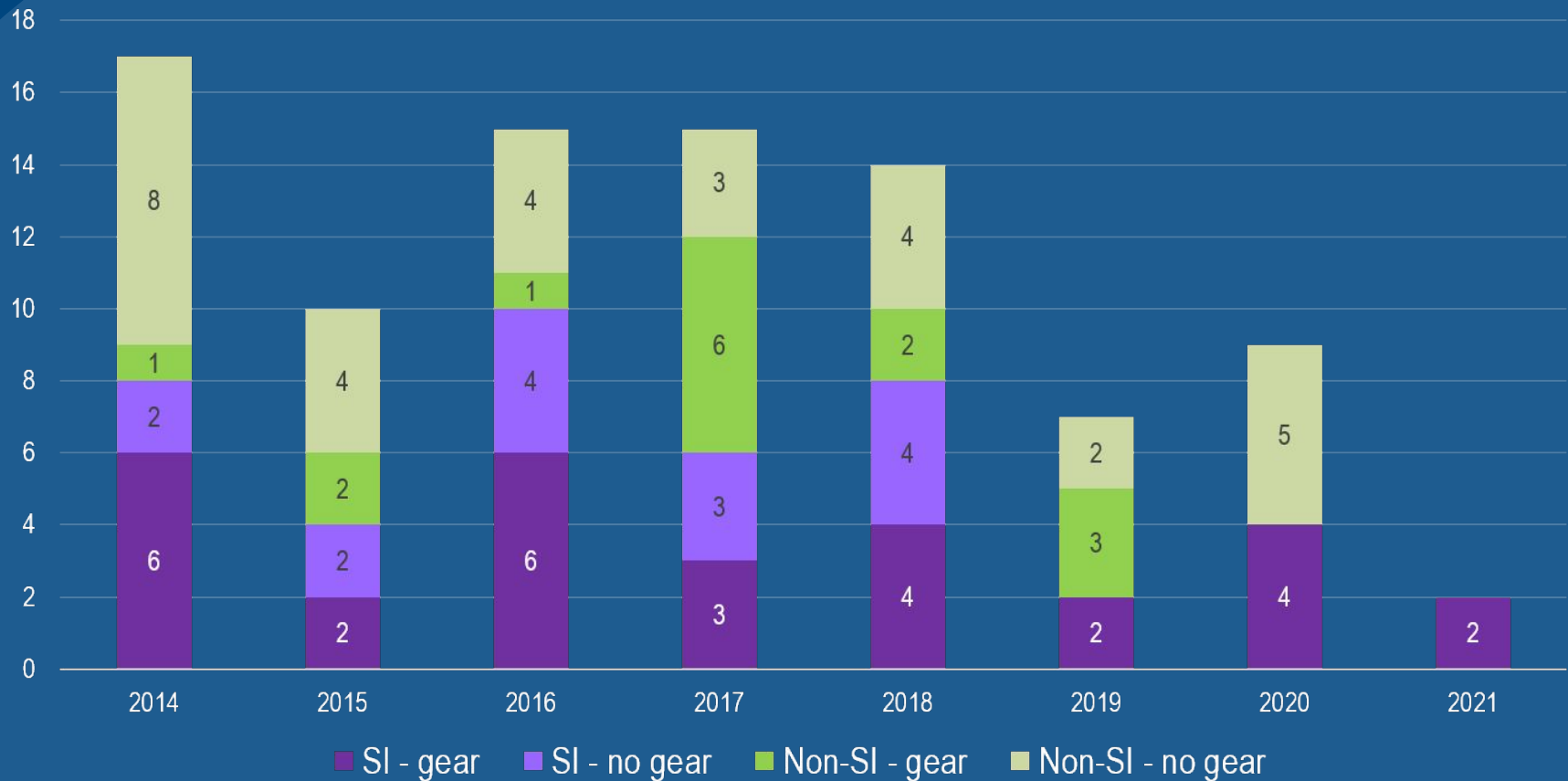


# 2014-2021 right whale injury and mortality entanglement summary

n=89, **Gear present:** 44 incidents, **No gear:** 45 incidents

**Serious:** 44 incidents, **Non-serious:** 45 incidents

2014-2021 SI determinations and gear present



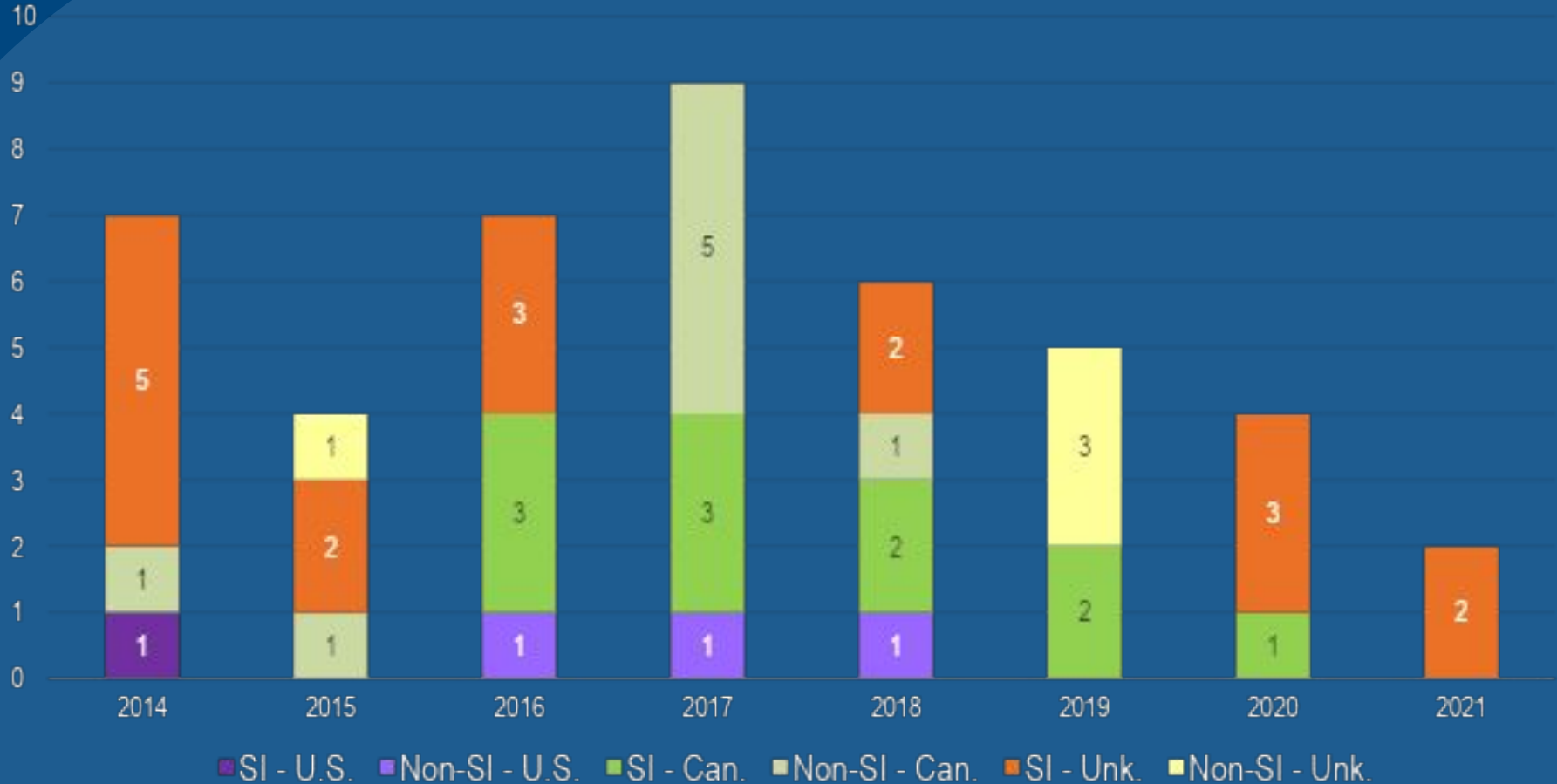


# 2014-2021 right whale injury and mortality entanglement summary

Only **Gear Present**: 44 incidents

Includes 29 serious

2014-2021 SI determinations, gear present, origin

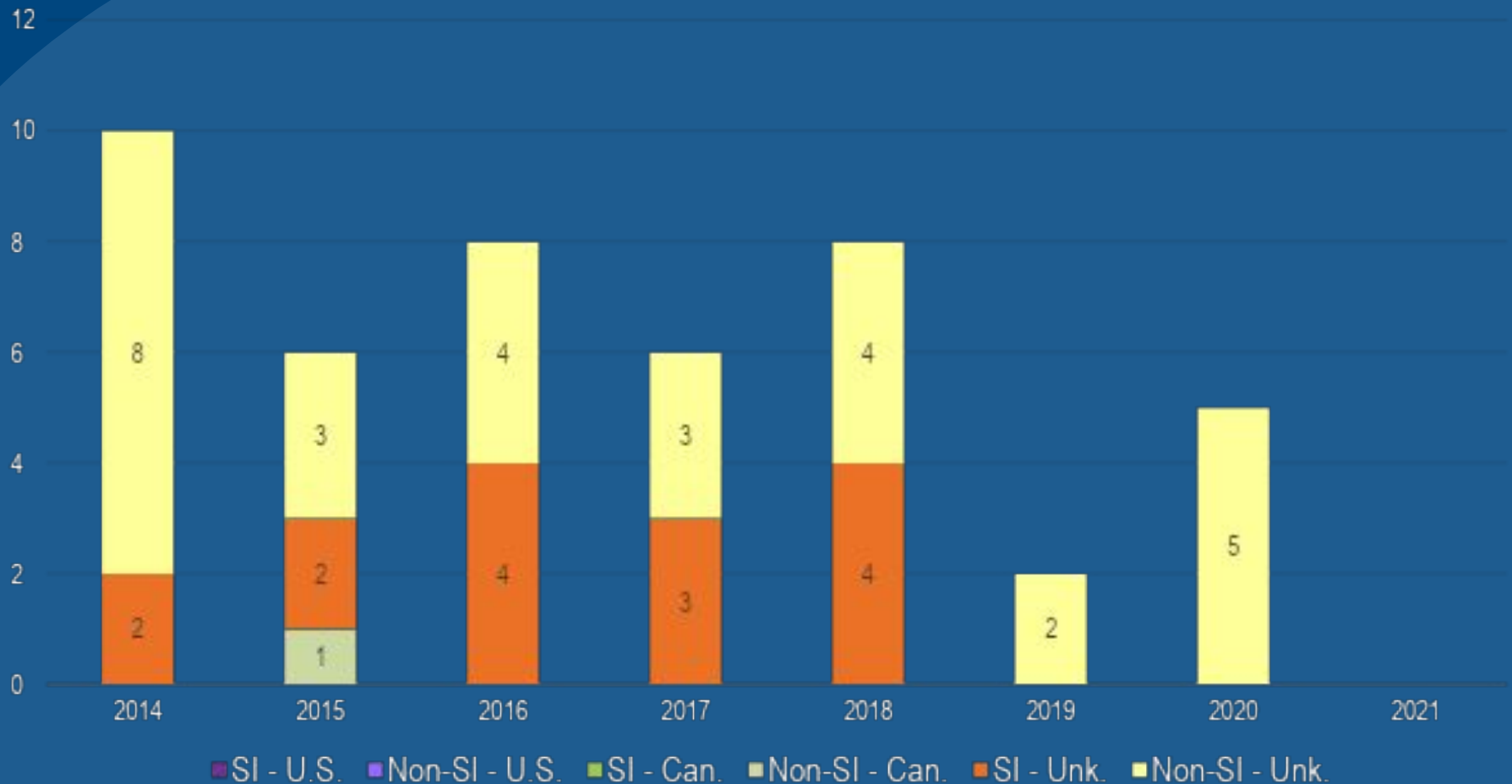


# 2014-2021 right whale injury and mortality entanglement summary

Only **No Gear Present**: 45 incidents

Includes 15 serious

2014-2021 SI determinations, gear NOT present, origin

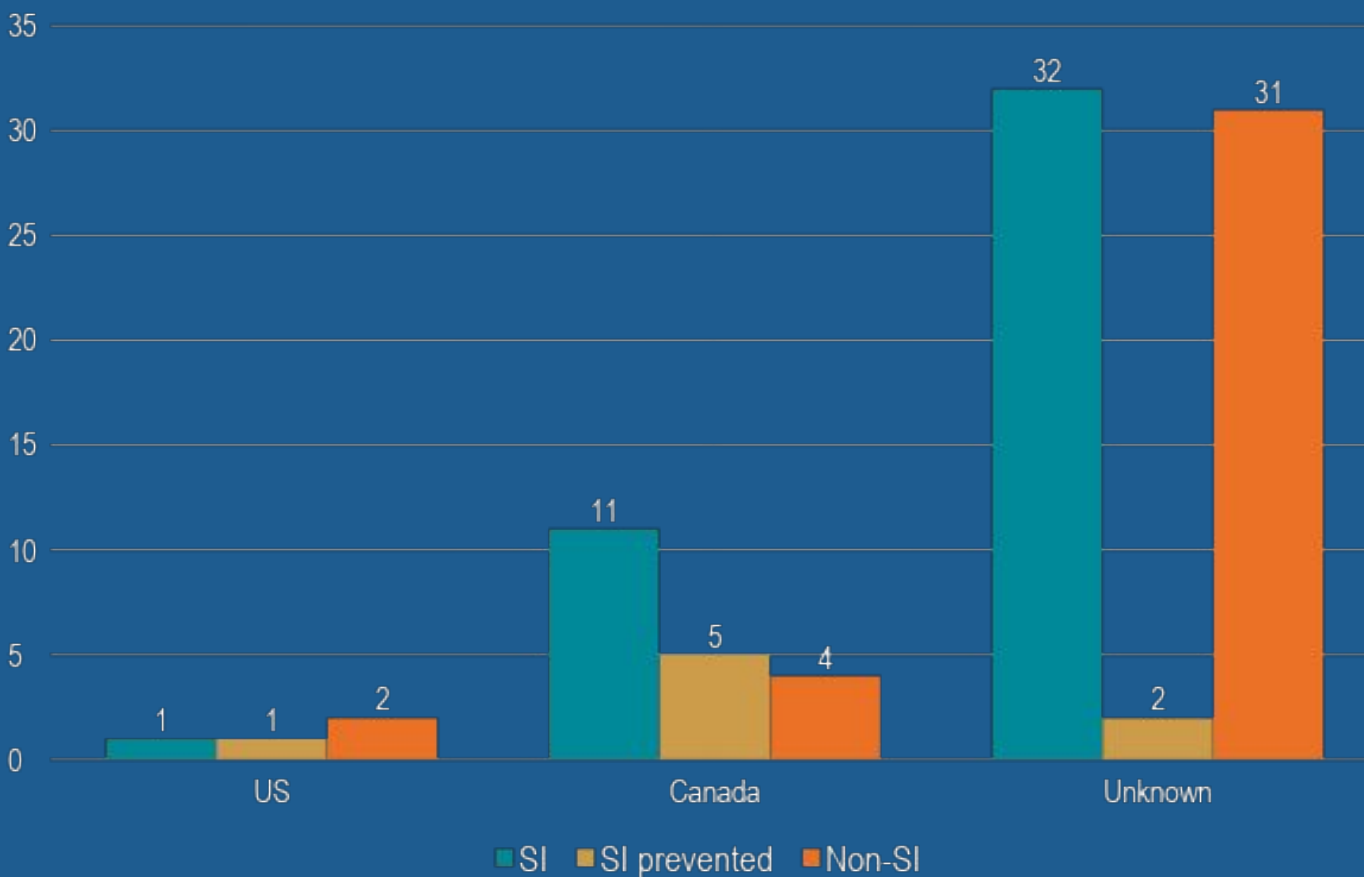


# 2014-2021 right whale injury and mortality entanglement summary

## Country of Origin

US = 4, Canada = 20, Unknown = 65

Injury determinations by origin



# Right whale case changes since publication

Date 1 <sup>st</sup> Observed	Animal ID #	Original publication	Updated publication
2/16/2014	4057	Country of origin published as XU	changed to CN due to positive gear ID in 2019 SAR
4/02/2014	3390	SI/M determination published as SI	changed to Non-SI due to recent sightings in 2018 SAR
9/23/2016	3694	Country of origin published as XU	changed to CN due to positive gear ID in 2019 SAR
8/20/2018	3960	Country of origin published as XC	changed to CN due to updated pre-entanglement sighting history in 2021 SAR

# Right whale cases with **confirmed origin**, gear type and determination SI/M case reminder 2014-2016

Date 1 <sup>st</sup> Observed	Animal ID #	Country of Origin	Gear	SI/M Determination
02/16/2014	4057	CN	Snow Crab trap/pot	Non-SI
09/27/2014	Unknown	US	Unknown	SI
07/05/2015	4140	CN	Fishing Weir	Non-SI*, Entrapment
07/18/2015	3160	CN	Snow crab trap/pot	Non-SI*
08/13/2016	4057	CN	Snow crab trap/pot	SI
08/31/2016	4320	CN	Snow crab trap/pot	SI
09/22/2016	3823	US	Lobster trap/pot	Non-SI*
09/23/2016	3694	CN	Snow crab trap/pot	SI

\*SI prevented by intervention

# Right whale cases with **confirmed origin**, gear type and determination SI/M case reminder 2017

Date 1 <sup>st</sup> Observed	Animal ID #	Country of Origin	Gear	SI/M Determination
01/05/2017	3530	CN	Snow crab trap/pot	Non-SI*
04/23/2017	4146	US	Unknown	Non-SI
06/21/2017	3603	CN	Snow crab trap/pot	SI
07/05/2017	4510	CN	Snow crab trap/pot	Non-SI*
07/08/2017	1317	CN	Snow crab trap/pot	Non-SI
07/09/2017	4123	CN	Snow crab trap/pot	Non-SI*
07/19/2017	4094	CN	Snow crab trap/pot	SI
08/28/2017	3245	CN	Unknown	Non-SI
09/15/2017	4504	CN	Snow crab trap/pot	SI

\*SI prevented by intervention

# Right whale cases with **confirmed origin**, gear type and determination SI/M case reminder 2018-2020

\*No confirmed US or CN in 2021 to date

Date 1 <sup>st</sup> Observed	Animal ID #	Country of Origin	Gear	SI/M Determination
01/22/2018	3893	CN	Snow crab trap/pot	SI
05/12/2018	4091	US	Unknown	Non-SI
07/13/2018	3312	CN	Unknown	SI
08/20/2018	3960	CN	Unknown	Non-SI
07/04/2019	3125	CN	Snow crab trap/pot	SI
08/06/2019	1226	CN	Unknown	SI
10/19/2020	3920	CN	Snow crab trap/pot	SI

# For more information

Entanglement reports for 2013 through 2017:

[fisheries.noaa.gov/alwtrp](https://www.fisheries.noaa.gov/alwtrp)

Serious Injury and Mortality Reports:

[fisheries.noaa.gov/resource/publication-database/marine-mammal-mortality-and-serious-injury-reports](https://www.fisheries.noaa.gov/resource/publication-database/marine-mammal-mortality-and-serious-injury-reports)

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# Upcoming Informational Webinars

April 15, 2021: 5pm-7pm ET  
NEUS Right Whale Monitoring  
Update  
Tim Cole



Photo Credit: FL FWC FWRI



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