

SC/69A/NH/01

Sub-committees/working group name: NH

U.S. Management Efforts to Recover North Atlantic Right Whales: 2022-2023 Updates

Lisi, N.E., Bettridge, S., Borggaard, D., Coogan, C., Daly, J., Fauquier, D., Good, C., Grewal, C., Harrison, J., Long, K.J., Et Al.



INTERNATIONAL
WHALING COMMISSION

Papers submitted to the IWC are produced to advance discussions within that meeting; they may be preliminary or exploratory.

It is important that if you wish to cite this paper outside the context of an IWC meeting, you notify the author at least six weeks before it is cited to ensure that it has not been superseded or found to contain errors.

U.S. Management Efforts to Recover North Atlantic Right Whales: 2022-2023 Updates

Niki E. Lisi¹, Shannon Bettridge¹, Diane Borggaard², Colleen Coogan², Jaclyn Daly¹, Deborah Fauquier¹, Caroline Good¹, Corie Grewal², Jolie Harrison¹, Kristy J. Long¹, Eric M. Patterson¹, Kara Shervanick³, Nicholas B. Sisson², Trevor R. Spradlin¹, Marisa L. Trego², Sarah Wilkin¹

¹Office of Protected Resources, U.S. National Marine Fisheries Service, Silver Spring, Maryland 20910 USA

²Greater Atlantic Regional Fisheries Office, U.S. National Marine Fisheries Service, Gloucester, Massachusetts 01930 USA

³Southeast Regional Office, U.S. National Marine Fisheries Service, St. Petersburg, Florida 33701 USA

Abstract

NOAA's National Marine Fisheries Service (NOAA Fisheries) continues to pursue holistic approaches to protect North Atlantic right whales, which are one of the rarest large whale species in the world. The latest preliminary estimate suggests there are fewer than 350 individuals remaining in the population, and the Unusual Mortality Event, declared in 2017, remains ongoing and includes 98 individuals as of March 2023. The two greatest threats to North Atlantic right whales are entanglement in fishing gear and vessel strikes. Though much of NOAA Fisheries' efforts focus on these two threats, we also establish various initiatives to promote North Atlantic right whales and their recovery, continue transboundary collaboration with Canada, and conduct research to assess the potential impacts offshore wind development may have on North Atlantic right whales.

Introduction

The [North Atlantic right whale](#)¹ (*Eubalaena glacialis*) is listed as endangered under the U.S. Endangered Species Act (ESA) and is a depleted stock under the U.S. Marine Mammal Protection Act (MMPA). Both statutes direct NOAA Fisheries to recover and conserve North Atlantic right whales. The two primary threats to North Atlantic right whale recovery are entanglement in fishing gear and vessel strikes. In 2022, we released our [North Atlantic Right Whale Road to Recovery](#),² which describes the holistic approach NOAA Fisheries is taking to halt the current population decline and recover the species. The *Road to Recovery* compliments the [2021-2025 Priority Action Plan](#)³ by identifying our goals and related objectives, and by tracking and communicating progress on major activities and associated milestones. Below, we describe recent efforts from 2022 to present.

¹<https://www.fisheries.noaa.gov/species/north-atlantic-right-whale>

²<https://www.fisheries.noaa.gov/species/north-atlantic-right-whale#road-recovery>

³https://www.fisheries.noaa.gov/s3/2021-04/SIS%20Action%20Plan%202021_NARightWhale-FINAL%20508.pdf

Unusual Mortality Event

The Unusual Mortality Event (UME) that was declared for North Atlantic right whales in 2017 remains ongoing in 2023. The MMPA defines a UME as "a stranding that is unexpected, involves a significant die-off of any marine mammal population, and demands immediate response." NOAA Fisheries formally declared the UME after elevated numbers of dead whales were documented along the Northwest Atlantic Ocean coast, and included serious injury cases in the scope of the UME investigation after it became clear entanglements and vessel strikes were the primary causes. This is a transboundary event given that whales strand or are found injured in both the U.S. or Canada. Therefore, there is close coordination and collaboration between U.S. and Canadian officials, Stranding and Entanglement Response Network organizations, and scientists on the UME investigation.

As of March 30, 2023, the UME has documented 98 known cases, including 36 dead, 33 seriously injured, and 29 sublethally injured/ill individuals. This means that to date, approximately 25% of the population has been impacted by the UME, which is a significant impact on such an endangered species. More information and the latest UME numbers can be found at [NOAA Fisheries UME website](#).⁴

Of the 36 confirmed dead whales, 26 whales were necropsied and 21 (81%) were confirmed probable, or suspected deaths as a direct result of human activities; 9 suffered from entanglements and 12 from vessel strikes (Figure 1).^{5,6,7} Of the 33 serious injury cases, which involve live free-swimming non-stranded whales, 30 had serious injuries from entanglements, 2 from vessel strikes, and there was 1 dependent calf (Figure 2).

Additionally, in Fall 2022, a Morbidity Protocol was developed for the UME investigation to identify free-swimming sub-lethally injured or ill whales that have injuries or illness consistent with entanglement, vessel strike, injury of unknown cause, or poor nutritional body condition of unknown cause. To date there are 29 morbidity cases in the UME, including 21 with entanglement injuries, 4 with poor nutritional body condition, 2 injuries of unknown cause, and 2 with vessel strike injuries (Figure 3).

Of the 98 whales (both live and dead), 78% (76/98) were impacted by entanglements (60) or vessel strikes (16). The preliminary cause of mortality, serious injury, and morbidity in most of these whales is from rope entanglements or vessel strikes.

⁴<https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2022-north-atlantic-right-whale-unusual-mortality-event>

⁵Daoust, P.-Y., Couture, E.L., Wimmer, T., and Bourque, L. 2017. Incident Report: North Atlantic right whale mortality event in the Gulf of St. Lawrence, 2017. Collaborative Report produced by: Canadian Wildlife Health Cooperative, Marine Animal Response Society, and Fisheries and Oceans Canada. 224 pp.

⁶Sharp S.M., McLellan W.A., Rotstein D.S., Costidis A.M. and others. 2019. Gross and histopathologic diagnoses from North Atlantic right whale *Eubalaena glacialis* mortalities between 2003 and 2018. *Diseases of Aquatic Organisms* 135:1-31.

⁷Bourque, L., Wimmer, T., Lair, S., Jones, M., Daoust, P.-Y. 2020. Incident Report: North Atlantic Right Whale Mortality Event in Eastern Canada, 2019. Collaborative Report Produced by: Canadian Wildlife Health Cooperative and Marine Animal Response Society. 210 pp.

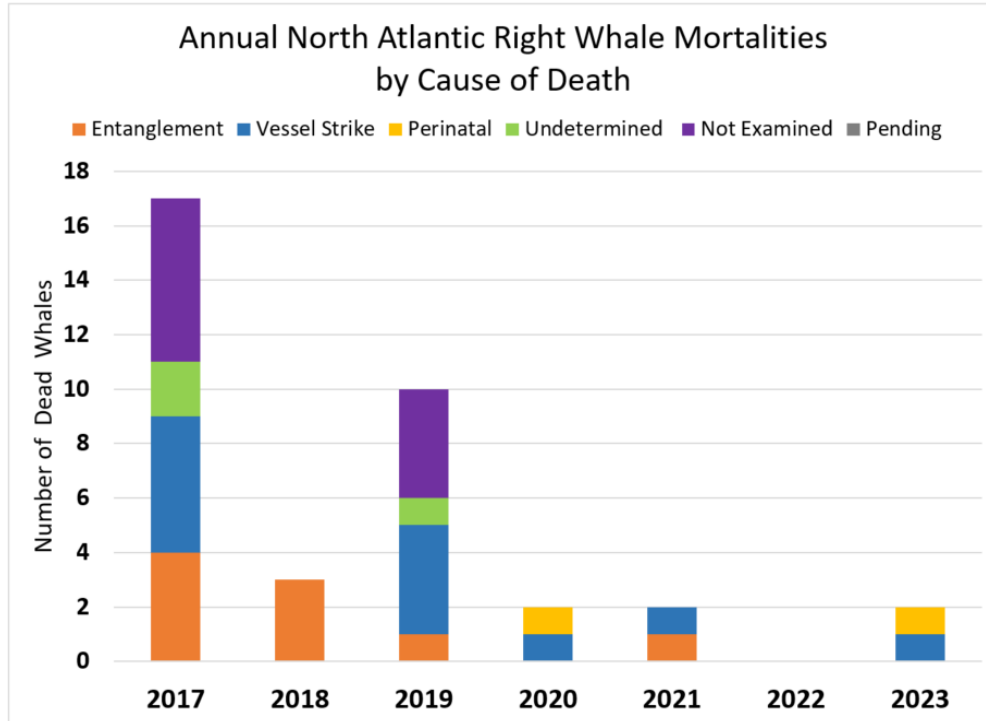


Figure 1: Observed annual North Atlantic right whale mortalities, 2017-2023, U.S. and Canada, by cause of death.

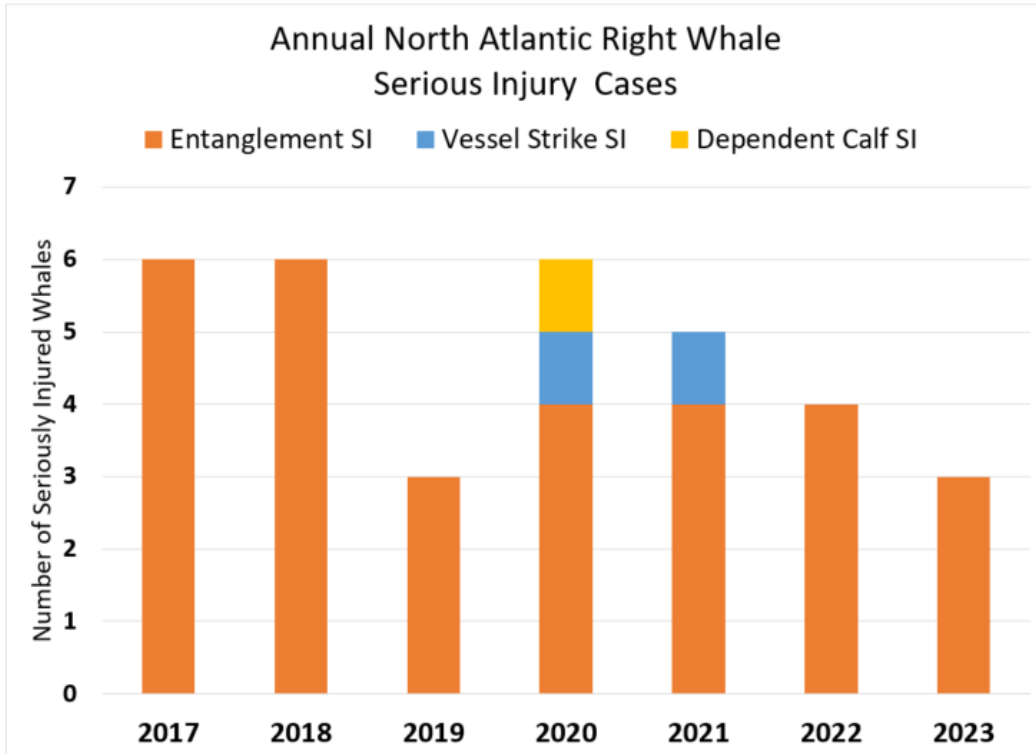


Figure 2: Observed annual North Atlantic right whale serious injury (SI) cases of whales last seen alive, 2017-2023, U.S. and Canada, by cause of serious injury.

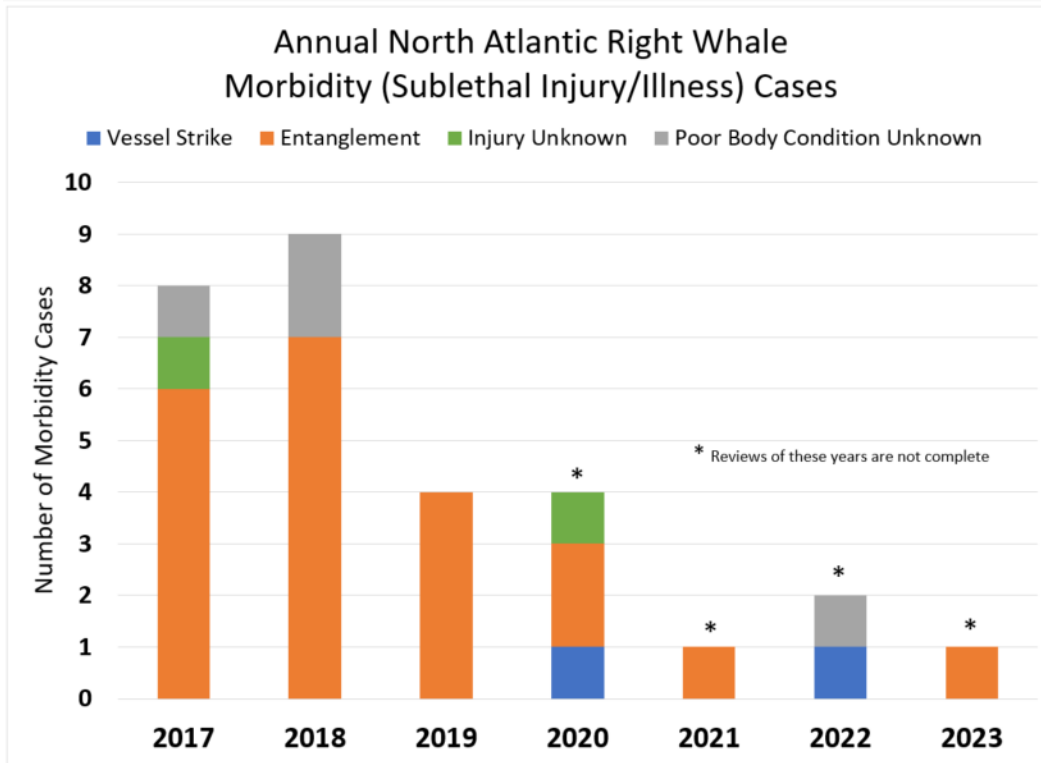


Figure 3: Observed annual North Atlantic right whale morbidity (sublethal injury/illness) cases of whales last seen alive, 2017-2023, U.S. and Canada, by cause of morbidity.

Reducing Entanglements in Fishing Gear

The MMPA mandates that NOAA Fisheries develop and implement [Take Reduction Plans](#)⁸ to prevent the depletion and assist in the recovery of certain marine mammal stocks that are killed or seriously injured in commercial fisheries. NOAA Fisheries convenes Take Reduction Teams, composed of stakeholders, that make recommendations for reducing mortalities and serious injuries to below a biological limit reference point (i.e., potential biological removal level). NOAA Fisheries uses the recommendations to develop Plans that reduce mortality and serious injury of particular marine mammals in certain fisheries within a specific timeframe through regulations.

The [Atlantic Large Whale Take Reduction Team](#)⁹ and the associated Plan addresses North Atlantic right, humpback, and fin whales incidentally killed or seriously injured in commercial trap/pot and gillnet fisheries along the U.S. East Coast. Although it has been in existence since 1997, the Atlantic Large Whale Take Reduction Plan has not been successful at consistently reducing mortalities and serious injuries below each stock’s potential biological removal level. The draft 2022 North Atlantic Right Whale Stock Assessment Report ([88 FR 4162](#))¹⁰ documents continued high scarring rates indicative of persistent interactions between right whales and

⁸<https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-take-reduction-plans-and-teams>

⁹<https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-mammal-protection/atlantic-large-whale-take-reduction-plan>

¹⁰<https://www.federalregister.gov/documents/2023/01/24/2023-01242/draft-2022-marine-mammal-stock-assessment-reports>

fishing gear range-wide. Applying observed rates of mortality caused by entanglements, NOAA Fisheries estimated that up to 22 right whale entanglement-related mortalities, of 31.2 total mortalities, occurred each year between 2016 and 2020, range wide.¹¹

Given the current decline in North Atlantic right whales, NOAA Fisheries continues to work with the Team, which is composed of approximately 60 fishermen, scientists, conservationists, and state and federal officials. NOAA Fisheries finalized regulations to amend the Plan in September 2021 ([86 FR 51970](#)).¹² The amendment includes various mitigation measures to reduce risk in Northeast lobster and Jonah crab trap/pot fisheries, which represented approximately 99% of the buoy lines in all fisheries addressed by the Plan prior to rulemaking. Specifically, the amendment:

1. Increases the minimum number of traps per trawl to reduce the number of buoy lines
2. Modifies existing restricted areas from seasonal fishing closures to seasonal closures to fishing with persistent buoy lines to accelerate ropeless fishing research
3. Expands the geographic extent of the Massachusetts Restricted Area to include Massachusetts state waters north to the New Hampshire border and establishes two new restricted areas that are seasonally closed to fishing for lobster or Jonah crab with persistent buoy lines to reduce the co occurrence of right whales and buoy lines
4. Requires modified buoy lines to incorporate rope engineered to break at no more than 1,700 pounds (771.1 kilograms) or weak insertion configurations that break at no more than 1,700 pounds (771.1 kilograms) so right whales can break free before the entanglement causes a serious injury and mortality
5. Requires a greater quantity of marks and one longer mark on buoy lines to better differentiate vertical buoy lines by principal port state, to distinguish between State and Federal waters, and to expand marking requirements into areas previously exempt from gear marking

The September 2021 Atlantic Large Whale Take Reduction Plan final rule ([86 FR 51970](#)) extended the February 1-April 30 Massachusetts Restricted Area (MRA) north to the New Hampshire border, but left an open wedge between restricted state waters and the federal portion of the Massachusetts Restricted Area. To address this risk NOAA Fisheries implemented an emergency rule in April 2022 to close the area to buoy lines ([87 FR 11590](#)).¹³ This open wedge left a critical gap where there is a high chance of entanglement when large numbers of right whales are exiting Cape Cod Bay at the same time and place where fishermen are either fishing or staging their trap/pot fishing gear in preparation for the May 1 opening. NOAA Fisheries also Implemented an emergency rule again in 2023 to address this gap ([88 FR 7362](#)).¹⁴ The 2023 emergency rule extends the boundary of the MRA for the period of February 1-April 30, 2023, consistent with the timing of federal waters encompassed in the closure to

¹¹Hayes, S. A., E. Josephson, K. Maze-Foley, P. E. Rosel, and J. Wallace. 2023. Draft US Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2022. Northeast Fisheries Science Center Woods Hole, MA.

¹²<https://www.federalregister.gov/documents/2021/09/17/2021-19040/taking-of-marine-mammals-incident-to-commercial-fishing-operations-atlantic-large-whale-take>

¹³<https://www.federalregister.gov/documents/2022/03/02/2022-04291/taking-of-marine-mammals-incident-to-commercial-fishing-operations-atlantic-large-whale-take>

¹⁴<https://www.federalregister.gov/documents/2023/02/03/2023-02185/taking-of-marine-mammals-incident-to-commercial-fishing-operations-atlantic-large-whale-take>

buoy lines. NOAA Fisheries plans to make the restricted area permanent through future rulemaking.

To further address entanglements, NOAA Fisheries reconvened the Team in November and December 2022 to discuss additional risk reduction measures for the other trap/pot and gillnet fisheries along the U.S. East Coast. The Team provided substantial input to inform future rulemaking that will further address entanglement risk.

The U.S. Congress passed the Consolidated Appropriations Act 2023 in December 2022, which included a mandate that, with limited exceptions, the 2021 Atlantic Large Whale Take Reduction Plan (Plan) amendments “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 ESA and MMPA until December 31, 2028. The Act also prescribes and provides increased appropriations that support further development and implementation of innovative gear technologies, monitoring in the Gulf of Maine, and for other purposes. Under these new provisions, NOAA Fisheries is required to “promulgate new regulations for the American lobster and Jonah crab fisheries consistent with the Marine Mammal Protection Act of 1972 (16 U.S.C. 1361 et seq.) and the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.) that take effect by December 31, 2028.” Despite the shift in timeline, NOAA Fisheries is using the input from the November and December 2022 meeting to further modify the Plan over the next several years. Plan modifications prior to 2028 would occur in fisheries other than lobster/Jonah crab trap/pot fisheries (i.e., gillnet fisheries and other trap/pot fisheries). Additionally, funds appropriated through the Consolidated Appropriation Act will support and accelerate efforts to develop and expand use of on-demand fishing and other modifications to reduce large whale entanglements while supporting continued fishing. An expansion of right whale research is also supported and will be used to improve our understanding of right whale distribution, habitat use, health, threats, and other factors and inform the models used to describe, predict, and analyze the changing risk landscape facing the North Atlantic right whale.

In addition to working with the Atlantic Large Whale Take Reduction Team, NOAA Fisheries is working to develop innovative [fishing technologies](#)¹⁵ (often called “ropeless” or “on-demand” fishing) that eliminate persistent buoy lines.¹⁶

NOAA Fisheries oversees the [Large Whale Entanglement Response Network](#)¹⁷ in the U.S. and authorizes highly trained professional responders to assist whales entangled in fishing gear or marine debris. In 2022, there was one new case of an entangled North Atlantic right whale in the U.S. The whale was alive when documented as entangled. Over the same time period, a minimum of two entanglement responses were mounted for North Atlantic right whales. However, none of these responses were for the newly documented case, but instead were responses to a whale first documented in 2021. All responses resulted in improved

¹⁵<https://www.fisheries.noaa.gov/new-england-mid-atlantic/science-data/protected-species-gear-research>

¹⁶Gahm, M., Coogan, C., Galvez, B., Khan, C., Long, K., Matzen, E., Milliken, H., Shervanick, K. U.S. Efforts to Develop Ropeless Fishing Gear Technology. Paper Submission to the 2023 IWC Annual Scientific Committee Meeting.

¹⁷<https://www.fisheries.noaa.gov/insight/entanglement-marine-life-risks-and-response>

documentation, and 1 resulted in an improvement to the animal's entanglement. NOAA Fisheries provides funds for network members to purchase equipment and maintains an ARGOS (Advanced Research and Global Observation Satellite) account for tracking telemetry tags that can be placed on entangled whales for multiple-day response efforts. Finally, NOAA Fisheries provides and supports training opportunities for network members, including enhanced safety measures following the tragic death of an experienced entanglement response team member in Canada in 2017.

Vessel Strike Mitigation

Vessel Speed Reduction

The U.S. continues to employ a suite of measures aimed at [reducing lethal vessel interactions](#)¹⁸ with North Atlantic right whales. NOAA Fisheries implements mandatory speed restrictions of 10 knots or less for most vessels greater than or equal to 65 feet in length in Seasonal Management Areas (SMAs) along the U.S. East Coast at certain times of the year when whales are likely to be present. The agency also continues to request that vessel operators voluntarily reduce their speed to 10 knots in designated Dynamic Management Areas (DMAs) and Right Whale Slow Zones. The State of Massachusetts implements [mandatory speed limits in Cape Cod Bay](#)¹⁹ (state waters) for most vessels less than 65 feet in length during March and April to protect North Atlantic right whales foraging in the Bay. The state has also extended these mandatory protections (for the past three years) into the month of May based on the continued presence of right whales in the area.

In light of findings from the 2020 [Right Whale Speed Rule Assessment](#)²⁰ (released in January 2021) and the continued decline of the species, which has been exacerbated by the ongoing UME, NOAA Fisheries published a proposed rule in August 2022 to modify the North Atlantic Right Whale Vessel Strike Reduction Rule ([50 CFR 224](#)).²¹ The measures in the rule proposed to: 1) modify the spatial and temporal boundaries of current speed restriction areas, currently referred to as Seasonal Management Areas (SMAs), 2) include most vessels greater than or equal to 35 ft (10.7 m) and less than 65 ft (19.8 m) in length in the vessel size class subject to speed restriction, 3) create a Dynamic Speed Zone framework to implement mandatory speed restrictions when whales are known to be present outside active SMAs, and 4) update the speed rule's safety deviation provision. Changes to the speed regulations are proposed to reduce vessel strike risk based on a coast wide collision mortality risk assessment and updated information on right whale distribution, vessel traffic patterns, and vessel strike mortality and serious injury events. Changes to the existing vessel speed regulation are essential to stabilize the ongoing right whale population decline and prevent the species' extinction.

¹⁸<https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales>

¹⁹<https://www.mass.gov/news/division-of-marine-fisheries-extends-small-vessel-speed-restriction-in-cape-cod-bay-to-protect-right-whales>

²⁰<https://www.fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales>

²¹<https://www.federalregister.gov/documents/2022/08/01/2022-16211/amendments-to-the-north-atlantic-right-whale-vessel-strike-reduction-rule>

During the public comment period for the proposed rule, NOAA Fisheries received approximately 90,000 comments. NOAA Fisheries is in the process of analyzing and reviewing all comments, and intends to take final action on the proposed rule in 2023.

Routing Measures

NOAA continues to support the Great South Channel Area To Be Avoided (ATBA), which was established by the International Maritime Organization in June 2009. All vessels greater than or equal to 300 gross tons are recommended to avoid this area between April 1 and July 31. The Great South Channel ATBA is included on NOAA navigational charts. Additionally, USCG/NOAA established recommended routes for vessels transiting across Cape Cod Bay and into/out of ports in Florida and Georgia. The routes are recommended between January and May in Cape Cod Bay and between November and April off Florida and Georgia. Mariners are asked to follow the routes to minimize transit distance through important right whale habitat areas.

Approach Regulations

It remains illegal for a vessel to approach a right whale within 500 yards (1,500 ft). If a vessel finds itself within 500 yards it “must steer a course away from the right whale and immediately leave the area at a slow safe speed” (50 CFR § 224.103(c)(1-2)). Exceptions are made if “compliance would create an imminent or serious threat to a.....vessel”. (50 CFR § 224.103(c)(3)).

Innovative Options to Reduce Vessel Strikes

NOAA Fisheries is interested in promoting the use of new technologies to reduce the risk of vessel strikes. The agency is investigating options to foster the research, development, testing and implementation of innovative tools and management practices to offer mariners additional options for reducing lethal collisions with whales. Vessel traffic is only expected to grow with increasing commercial, industrial (e.g. offshore wind) and recreational use, and NOAA seeks to expand cutting-edge options for vessel strike mitigation as soon as possible.

U.S. Recovery Planning and Implementation

The ESA authorizes NOAA Fisheries to appoint recovery teams to assist with the development and implementation of recovery plans. NOAA Fisheries has convened two implementation teams (the [Northeast Implementation Team](#)²² (NEIT), and the [Southeast Implementation Team](#)²³ (SEIT)) to assist with issues related to the status and conservation of North Atlantic right whales. The objectives include, but are not limited to, identifying and prioritizing information needs that can be best addressed through enhanced partnerships. For example, the NEIT and SEIT provided input to NOAA Fisheries on coast-wide priorities to inform the development of NOAA Fisheries’ Species in the Spotlight (SIS) Priority Action Plan for North Atlantic right whales. NOAA Fisheries also continued to support the efforts of the Implementation Teams’ Population Evaluation Tool Subgroup to develop a population viability analysis that will allow the agency to characterize the North Atlantic right whale extinction risk, taking into account current and future

²²<https://www.fisheries.noaa.gov/new-england-mid-atlantic/endangered-species-conservation/north-atlantic-right-whale-recovery-plan-northeast-us-implementation-team>

²³<https://www.fisheries.noaa.gov/southeast/endangered-species-conservation/north-atlantic-right-whale-recovery-plan-southeast-us-implementation-team>

threats. This modeling effort is underway and a final report is expected in 2023, which will help identify demographic benchmarks useful to inform management and gaps in research.

NOAA Fisheries added North Atlantic right whales to the SIS initiative in [2019](#)²⁴ and completed a 5-year Priority Action Plan for the species in 2021. The plan builds off the North Atlantic right whale recovery plan and identifies the following urgent actions NOAA Fisheries can take in the next 5 years to halt the decline of this species:

- Protect North Atlantic Right Whales from Entanglement in Fishing Gear
- Protect North Atlantic Right Whales from Vessel Strikes
- Investigate North Atlantic Right Whale Population Abundance, Status, Distribution and Health
- Collaborate with Canada on North Atlantic Right Whale Recovery
- Improve our Knowledge of Additional Factors Limiting Right Whale Recovery

A major part of the SIS initiative is to expand partnerships and motivate individuals to work with us to get species such as North Atlantic right whales on the road to recovery. In 2022, NOAA Fisheries announced the availability of the latest [Recovering Threatened and Endangered Species Report to Congress \(FY 2019-2020\)](#)²⁵ which includes highlights of recovery progress for the Species in the Spotlight. For the North Atlantic right whale, the Report to Congress focused on progress towards reducing entanglement in fishing gear and reducing vessel strikes. NOAA Fisheries is beginning the next Biennial Report to Congress which, for the first time, will summarize progress from FY 2021-2022 on the five priority actions listed in the Species in the Spotlight Action Plan.

North Atlantic Right Whale Five-Year Review

NOAA Fisheries initiated a 5-year review for North Atlantic right whales in February 2022, which is required under section 4(c)(2)(A) of the ESA to ensure that the listing classification of the species is accurate. The 5-year review must be based on the best scientific and commercial data available at the time of the review. On the basis of such reviews, NOAA Fisheries determines whether the species should be delisted, reclassified, or if no change in classification is warranted. Any change in Federal classification would require a separate rulemaking process.

The [2022 North Atlantic Right Whale Five-Year Review](#)²⁶ was released in December 2022. The review concluded that the population will remain listed as endangered under the ESA. The review also includes recommendations for NOAA Fisheries to consider when taking action to promote right whale recovery until the next review in 2027. These recommendations are based on goals and priorities in the Road to Recovery and the Species in the Spotlight Action Plan and are intended to focus recovery efforts on increasing the understanding of the threats facing North Atlantic right whales and gaining insight into the best approaches to mitigate them. Two

²⁴<https://www.fisheries.noaa.gov/feature-story/recovering-threatened-and-endangered-species-report-congress-2017-2018>

²⁵<https://www.fisheries.noaa.gov/feature-story/recovering-threatened-and-endangered-species-report-congress-2019-2020>

²⁶<https://www.fisheries.noaa.gov/resource/document/north-atlantic-right-whale-5-year-review>

previous 5-year reviews were released in [August 2012](#)²⁷ and [October 2017](#)²⁸. Both reviews concluded that no change was needed to the endangered status.

Transboundary Collaboration on North Atlantic Right Whale Recovery

NOAA Fisheries, Fisheries and Oceans Canada, and Transport Canada continue to work together as part of the United States-Canada Bilateral North Atlantic Right Whale Working Group. The Working Group shares lessons learned and explores collaborations on North Atlantic right whale research and management.

The Working Group meets regularly to review past management practices aimed at preventing entanglements and vessel strikes, and also to coordinate on the development of future measures. The Working Group has aligned scientific research across borders, including the sharing of methods and data on aerial surveys, passive acoustic monitoring, and the analysis of gear recovered from entangled North Atlantic right whales to attribute it to specific fisheries. The Working Group also cooperates on best practices for at-sea disentanglement of North Atlantic right whales. Future work will focus on coordinating aerial and passive acoustic detection of North Atlantic right whales, assessing human-caused risk to North Atlantic right whales throughout their range, and continuing to coordinate on analyzing gear recovered from entangled North Atlantic right whales. NOAA Fisheries, Fisheries and Oceans Canada, and Transport Canada continue to coordinate through the Bilateral North Atlantic Right Whale Working Group between meetings.

The Working Group is currently in early planning stages for a summer 2023 meeting. Updates are expected to include progress on topics such as the U.S. Mexico Canada Agreement (USMCA) North Atlantic Right Whale Project. The USCMA North Atlantic Right Whale Project began in 2021 and provides \$3.1 million for North Atlantic right whale recovery. Through this collaborative initiative, NOAA Fisheries and the Government of Canada are working together to improve transboundary understanding of North Atlantic right whale distribution, including data gaps, enhance transboundary efforts to monitor and assess North Atlantic right whale health, and further the development of innovative fishing gear technologies to reduce the risk of entanglement. These efforts relate to USMCA 24.8 (Multilateral Environmental Agreements), 24.12 (Marine Litter), 24.18 (Sustainable Fisheries Management), and 24.19 (Conservation of Marine Species) and provide funding to complement the extensive North Atlantic right whale protection measures and programs in place in the U.S. and Canada. This initiative complements other coordination efforts between NOAA Fisheries and the Government of Canada on science and management needs for the conservation and protection of North Atlantic right whales in both Canadian and U.S. waters.

Building off of the USCMA project, from December 4-7, 2022, a workshop was held in Montreal to initiate a transboundary collaboration between the U.S. and Canada, including but not limited to key experts from government agencies, to develop a species distribution model (or set of

²⁷<https://www.fisheries.noaa.gov/resource/document/north-atlantic-right-whale-eubalaena-glacialis-5-year-review-2012>

²⁸<https://www.fisheries.noaa.gov/resource/document/5-year-review-north-atlantic-right-whale-eubalaena-glacialis>

models) for North Atlantic right whales across their North American range. Following a few days of presentations on the available data, existing modeling efforts, covariates, and an exercise to foster collaboration and critical thinking with respect to how a transboundary model might be most useful, workshop participants turned to discussing and agreeing to a collaboration to develop models based on two different and complementary approaches. Overall the meeting was very positive; a workshop report is currently under development.

The NARW Transboundary Necropsy Workshop was held October 27-28, 2022 in Hyannis, Massachusetts. There were 37 attendees in-person and 30 attendees in virtual attendance, from both the U.S. and Canada. The purpose of the workshop was to enhance necropsy standardization between the U.S. and Canada and sharing of information between experienced NARW necropsy personnel. Workshop topics included: documentation; cause of death and significant findings; logistics; and training. Outcomes from the workshop include: a path forward to update the existing NARW necropsy protocol and forms; an outline for a peer-reviewed manuscript on large whale necropsy; and information for a road-map to improve transboundary necropsy coordination. This workshop was the first step to enhance the large whale necropsy process between and within the U.S. and Canada.

Offshore Wind Development

Offshore wind energy development continues to expand in U.S. waters in order to meet renewable energy goals. The Biden Administration has set a goal of [significantly increasing the nation's offshore wind energy capacity](#)²⁹ to 30 gigawatts by 2030. Many states have set similarly ambitious goals. On the Atlantic Outer Continental Shelf from southern New England to North Carolina, there are 27 active leases; offshore construction started for two projects in 2022. Additional areas in the Central Atlantic, Gulf of Mexico, Gulf of Maine, and West Coast are in various stages of the area identification process. In December 2022, five additional leases comprising more than 370,000 acres along the West Coast were awarded to developers.³⁰ The [Bureau of Ocean Energy Management](#)³¹ (BOEM) is the lead federal agency responsible for offshore energy exploration and development in the U.S. NOAA Fisheries is the lead federal agency charged with stewardship of marine life. Building, operating, and decommissioning offshore wind facilities affects a number of our key mission areas, including fisheries, protected species (including North Atlantic right whales), seabirds, and marine habitats.

NOAA Fisheries' primary roles in offshore wind include providing scientific information and analyses, conducting ESA section 7 consultations with other federal agencies, processing requests for incidental take authorizations pursuant to the MMPA, and acting as a cooperating and adopting agency under the National Environmental Policy Act. Potential environmental stressors from offshore wind development that NOAA Fisheries is evaluating under these statutes, with respect to North Atlantic right whales and their habitat (including prey), include noise associated with construction (e.g., installation of turbine foundations, site characterization surveys, unexploded ordnance detonation) and operation of the wind farm, vessel strike risk

²⁹<https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/>

³⁰<https://www.boem.gov/renewable-energy/state-activities/california>

³¹<https://www.boem.gov/renewable-energy>

during construction and operation, electromagnetic fields, habitat effects from turbine presence and water withdrawals and discharge from open-looped cooling systems, and entanglement risk (primarily associated with floating turbines). Through the ESA Section 7 and MMPA incidental take authorization processes, NOAA Fisheries uses the best available data to inform the development of mitigation and monitoring requirements that both minimize impacts to North Atlantic right whales and other protected species, and increase our understanding of the impacts from these stressors. In some areas, vessels associated with the operation and construction of wind facilities will represent a significant increase in vessel traffic. Given the anticipated U.S. vessel buildout associated with offshore wind, there is a unique opportunity to include vessel quieting technology early in the vessel design phase. Building quieter vessels from the start is the most effective way to comprehensively decrease chronic noise impacts from vessels to marine species. NOAA Fisheries is working with partner federal agencies to support and encourage the inclusion of quieting technologies, many of which overlap with fuel efficiency and greenhouse gas reduction technologies in the design phase.

Full build out of the Atlantic outer continental shelf, consisting of multiple wind farms, will impact North Atlantic right whales throughout the range. In order to fully and accurately understand the range-wide and population-level impacts of these activities on right whales, and to design effective mitigation, we must understand the changing spatial and temporal distribution of right whales, as well as the activities that impact them. Long-term, large-scale passive acoustic monitoring, such as is conducted through the Northeast Fisheries Science Center coordinated array, the National Park Service/NOAA Ocean Noise Reference Station Network, and the SanctSound project, is key to effectively accomplishing this. NOAA Fisheries is working closely with wind developers, BOEM, and other partners, including regional science entities, to monitor and mitigate the potential impacts of offshore wind development and other stressors on North Atlantic right whales. NOAA's website includes more information on NOAA's [Ocean Noise Strategy](#),³² our role in [offshore wind energy development](#),³³ and NOAA and BOEM's draft [North Atlantic Right Whale and Offshore Wind Strategy](#).³⁴

For information regarding NOAA Fisheries' regulatory work under the MMPA and ESA, please see our websites for offshore wind [MMPA incidental take authorizations](#)³⁵ and [ESA consultations](#).³⁶

³²<https://oceannoise.noaa.gov/>

³³<https://www.fisheries.noaa.gov/topic/offshore-wind-energy>

³⁴<https://www.noaa.gov/news-release/noaa-and-boem-announce-draft-offshore-wind-north-atlantic-right-whale-strategy>

³⁵<https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-other-energy-activities-renewable>

³⁶<https://www.fisheries.noaa.gov/topic/consultations/endangered-species-act-consultations>