UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF FLORIDA
TAMPA DIVISION

GERALD L. EUBANKS and DETERMINATION III WESTPORT 130, LLC, *Plaintiffs,* v. HOWARD LUTNICK, *in his official capacity as Secretary of the United States Department of Commerce*, and NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, *Defendants.*	Case No: 8:25-CV-614-CEH-AAS

BRIEF OF OCEANA AS *AMICUS CURIAE*

Danica Anderson Glaser (*pro hac vice*)
Senior Counsel
Oceana
1025 Connecticut Ave. NW, Suite 200
Washington, DC 20036
202-833-3900
dglaser@oceana.org

Counsel for Amicus Curiae

TABLE OF CONTENTS

INTRODUCTION

The North Atlantic right whale is one of the world's most endangered whales. Its entire population numbers only a few hundred individuals, and its only habitat is the Atlantic coast of North America. With such a small population, the death of a single whale can jeopardize the continued survival of the entire species. And injuries and deaths caused by human activities are the only major threat to right whales. As a result, our ability to avoid causing the extinction of this species depends on preventing and limiting such interactions.

The right whale is particularly susceptible to vessel strikes because of its unique biology and habitat. Vessel strikes happen regularly along the U.S. Atlantic coast, but most strikes are not detected, meaning they pose an even greater threat than hard data indicates. When strikes occur, they can cause significant trauma, leading to death or to lifelong injuries.

Limiting vessel speed reduces the risk of vessel strikes to this critically endangered species. Slowing vessels prevents vessel strikes in the first place and can decrease their lethality when they occur. Importantly, limiting vessel speed is currently the *only* generally available and effective method to prevent vessel strikes. Alternatives such as posting observers are unlikely to be effective on their own. And while high-tech detection tools are being explored, currently there are no such technologies that are proven, robust, widely available, and universally applicable.

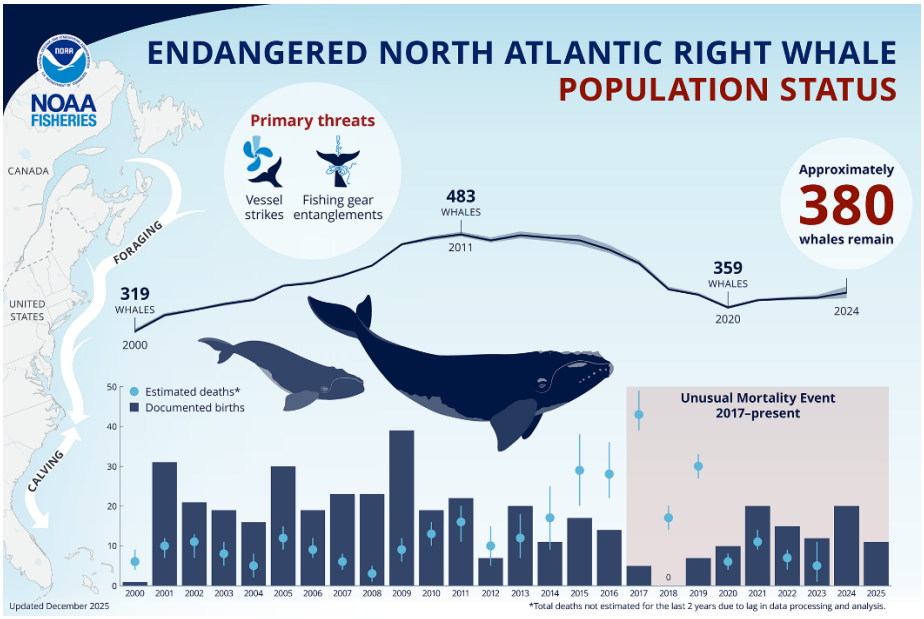
ARGUMENT

I. Population Status and Threats

The North Atlantic right whale (*Eubalaena glacialis*) was one of the species most heavily exploited by the whaling industry. Its population plummeted from a pre-whaling estimate of 21,000 whales to an estimated 100 individuals by 1935. *See* 2023 Stock Assessment Report at 20 (Ex. 2). Despite being under international protection for nearly a century, *id.*, the right whale population has not recovered.

A. The North Atlantic right whale is critically endangered.

There are only a few hundred North Atlantic right whales in the world. The most recent estimate places the 2024 population at approximately 384 individuals, only 72 are of which were reproductive females. *See* Linden 2025 at 1, 4 (Ex. 3). In the past 25 years, the population has never exceeded 500; it reached an estimated high of 483 whales in 2011, but then declined to the current estimate. *Id.* at 8 (tbl. 3).



North Atlantic Right Whale Population Status.
Source: NOAA Fisheries, infra *n. 5*

This tiny population size – combined with relatively late sexual maturation, low annual reproductive rates, and long periods between generations – make the North Atlantic right whale more susceptible to human-induced mortality. *See generally* Frasier 2024 (Ex. 4). And those same aspects of the species' life history mean that population recovery can require a long period of time. In the United States, the species has been listed as endangered since 1970.[1] It is also classified as endangered under Canadian law.[2] North Atlantic right whales are so rare that researchers record and track every known whale, including newborn calves. Each individual has an identifying number, and many have also been given a name.

In 2020, the International Union for the Conservation of Nature (IUCN) upgraded the severity of the species' status to Critically Endangered,[3] which denotes species considered to be "facing extremely high risk of extinction in the wild" based on documented population size, population decline, geographic range, and calculated extinction probability. *See* IUCN Red List Categories & Criteria at 16-18 (Ex. 5). This dire status places the North Atlantic right whale in rare company: it is one of only five Critically Endangered mammals in the United States, and only eighteen Critically Endangered marine mammal populations in the entire world.[4]

---

[1] NOAA Fisheries, *North Atlantic Right Whale*, https://www.fisheries.noaa.gov/species/north-atlantic-right-whale, last updated Dec. 9, 2025.

[2] *See* Government of Canada, *List of Wildlife Species at Risk*, https://laws.justice.gc.ca/eng/acts/s-15.3/page-10.html, last updated Dec. 2, 2025.

[3] IUCN, *North Atlantic Right Whale*, https://www.iucnredlist.org/species/41712/178589687.

[4] IUCN, *IUCN Red List of Threatened Species*, https://www.iucnredlist.org/search.

As a further blow to their already precarious population status, since 2017 North Atlantic right whales have experienced an ongoing unusual mortality event (UME).[5] A UME is a stranding event that is unexpected, involves a significant die-off of any marine mammal population, and demands immediate response. 16 U.S.C. § 1421h(9).[6] As of December 4, 2025, 168 right whales have been impacted by the UME (i.e., dead, injured, and sick individuals), including 41 deaths. *See supra* n.5. The impacted whales "represent more than 20 percent of the population, which is a significant impact on an endangered species where deaths are outpacing births." *Id.*

B. Human activity is the only major threat to North Atlantic right whales.

Right whale mortalities and their causes have been documented for decades, and nearly all those deaths are caused by interactions with humans. Right whales have no natural predators, and the only known natural deaths occur in calves, largely due to birth complications or developmental abnormalities. In fact, since 2003, human-caused injury and trauma was the *only* source of mortality for right whale adults and juveniles in cases where a cause of death could be determined. *See* Sharp 2019 at 1 (Ex. 6); 87 Fed. Reg. 46,921, 46,922 (Aug. 1, 2022).

Two human activities are responsible for these human-caused injuries and deaths: (1) entanglements, in which fishing gear, rope or other material wraps around

[5] NOAA Fisheries, *2017–2025 North Atlantic Right Whale Unusual Mortality Event*, https://www.fisheries.noaa.gov/national/marine-life-distress/2017-2025-north-atlantic-right-whale-unusual-mortality-event, last updated Dec. 9, 2025.

[6] "Stranding" refers to a marine mammal that is dead on shore or in the water, or is alive but is unable to return to its habitat or needs medical attention. 16 U.S.C. § 1421h(6).

a whale's body, cutting through skin, blubber, muscle and sometimes bone; and (2) vessel strikes, in which a whale is hit by a boat creating blunt force injury from the hull or sharp trauma from the propellor blades. Observed right whale deaths from these two causes totaled 44 over the past 20 years, with 22 from entanglement and 22 from vessel strikes. North Atlantic Right Whale Mortality Data, 2006-2025 (Ex. 1).

Considering this data, it is hardly surprising that the scientific research community is in universal agreement: entanglements and vessel strikes are the primary factors limiting the recovery of the North Atlantic right whale, and reducing those two threats is the only way to prevent the extinction of the species.

C. The death of a single whale can jeopardize the species.

With such low population numbers, the loss of each individual whale is a significant threat to recovery, both in genetic and reproductive potential. There are many factors that impact a population's ability to reproduce at a rate high enough to overcome mortalities, and NOAA addresses this complex question by comparing human-caused mortality and injury against a reference point known as the Potential Biological Removal (PBR) level. PBR is "the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock [population] while allowing that stock to reach or maintain its optimum sustainable population." 16 U.S.C. § 1362(20). It is calculated using the population's maximum growth rate, minimum population size, and a recovery factor. *Id.* When human-caused mortality exceeds the PBR level, it indicates that human activity is preventing

the species from recovering to a healthy population size.[7] If PBR is continually exceeded, human activity is likely driving the species into continuous decline.

The PBR level for the North Atlantic right whale has hovered between 0 and 1 for decades, and the current PBR level is 0.73 individuals per year. Ex. 1. This means that *less than one* human-caused mortality can occur per year without inhibiting the species' recovery. The PBR level is so low due to the species' low reproduction rate, endangered status, and tiny population size. Ex. 2 at 24-25. Simply put: a population this small cannot afford to lose even a single individual each year.

Human activity, however, has consistently put North Atlantic right whales well beyond this scientific threshold. Human-caused mortalities have exceeded the species' PBR in 15 of the past 20 years (2006-2025); for 10 of those years, deaths from vessel strikes *alone* met or exceeded the year's PBR. And the total observed and human-caused right whale deaths in that same period (44) averages to 2.2 deaths per year – at least double the PBR for any given year, and vastly more than would allow the North Atlantic right whale to reach a sustainable population level. *See* Ex. 1.

Even this dire mortality level almost certainly significantly underestimates total deaths, because it is based only on *observed* mortalities (e.g. the carcass is seen by research teams or strands ashore). As discussed in Part III.B, recent research suggests that only 36% of right whale mortalities are observed. *See* Pace 2021 (Ex. 7).

[7] NOAA Fisheries, *Potential Biological Removal Levels: A Tool to Conserve Marine Mammals*, https://www.fisheries.noaa.gov/feature-story/potential-biological-removal-levels-tool-conserve-marine-mammals (July 30, 2024).

Extrapolation from observed numbers, using that 36% figure and assuming the ratio of human-caused mortality remains consistent, would suggest as many as 122 whales have been killed by human activity from 2006 to 2025 – an average of 6 per year.

The only way to offset these human-caused mortalities is for an equivalent, or greater, number of right whale calves to be born and reach reproductive age. But this is challenging: there are only an estimated 72 reproductive females, and they have a long gestation (about 12 months) and only one calf per pregnancy. Females are currently calving less frequently, waiting longer to have their first calf, and waiting longer between calves compared to historic averages. *See supra* n.1; Ex. 4 at 1. Decreased calving has been tied to physical and nutritional stress, environmental changes, and entanglement injuries, which limit females' ability to store enough blubber to support a healthy pregnancy and nurse a healthy calf. *See supra* n.1; Pirotta 2024 at 6 (Ex. 8); Miller 2011 at 278-280 (Ex. 9). As a result of these limiting factors, only 88 calves were born from 2017-2024, and 11 died in their first 6 months. *See* Ex. 3 at 6 (tbl. 1). These survival rates cannot offset human-caused mortality rates.[8]

II. Susceptibility to Vessel Strikes

Both entanglement and vessel strikes are significant threats to right whales. But while entanglements are a threat to many whale species,[9] vessel strikes play an

[8] NOAA Fisheries, *North Atlantic Right Whale Calving Season 2026*, https://www.fisheries.noaa.gov/national/endangered-species-conservation/north-atlantic-right-whale-calving-season-2026, last updated Dec. 22, 2025.

[9] NOAA Fisheries, *Large Whale Entanglement Response,* https://www.fisheries.noaa.gov/national/marine-life-distress/large-whale-entanglement-response, last updated Aug. 5, 2025.

outsized role in the decline of North Atlantic right whales. In fact, North Atlantic right whales have the most vessel strikes *per capita* of any large whale population in the world. Vanderlaan 2007 (Ex. 29). This is due to an unfortunate overlap between the whales' habitat and behavior, and the human uses that threaten the species today.

A. North Atlantic right whale habitats are heavily trafficked by vessels.

The North Atlantic right whale's geographic range extends widely across the Northwest Atlantic Ocean, but they are typically found along the East Coast of Canada and the U.S. and are present in U.S. waters year-round. *See* North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment at 1 (Ex. 10). There are two areas of critical habitat for the species in U.S. waters: (1) foraging habitat in the Northeast, and (2) the calving grounds in the Southeast (Florida, Georgia, and the Carolinas).[10] Because the whales travel seasonally as they forage and migrate, they are frequently found along the mid-Atlantic coast as well. In recent years, right whales have been detected off the entire U.S. Atlantic coast. Ex. 2 at 17-19.

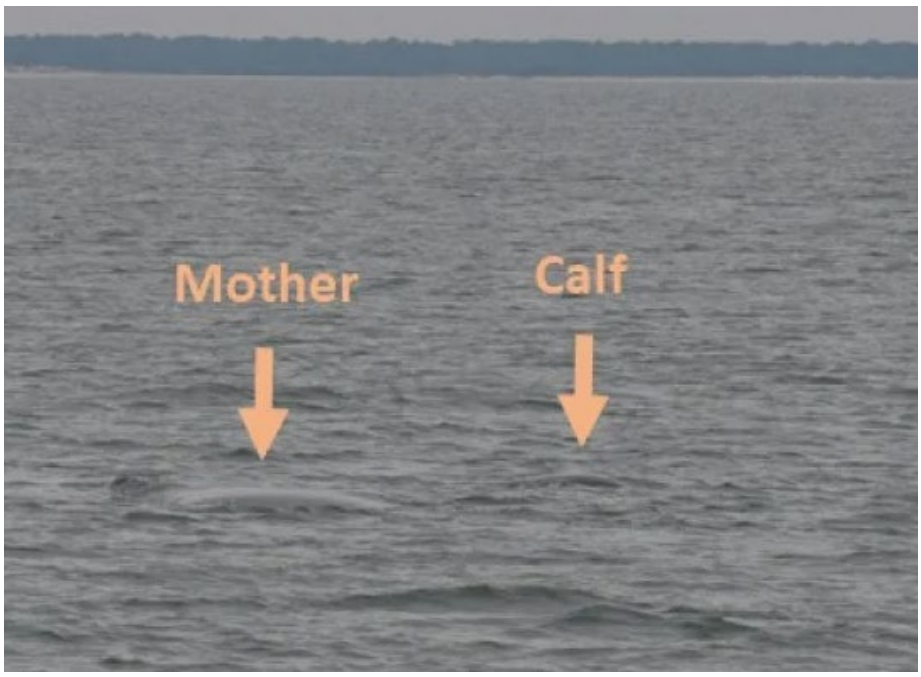
The coastal habitats where North Atlantic right whales live are characterized by "extensive vessel traffic" and include many major U.S. ports. Ex. 10 at 1, 2. A 2019 study found that the highest concentrations of vessel traffic in U.S. Atlantic waters, and 71% of all vessel traffic (both commercial and recreational), overlapped with core near-shore habitat for large whales, including right whales. Redfern 2024 at 3 (fig. 1), 5 (Ex. 11). This extensive, year-round use of the East Coast by a wide

[10] NOAA Fisheries, *Critical Habitat for North Atlantic Right Whales*, https://www.fisheries.noaa.gov/action/critical-habitat-north-atlantic-right-whales, last updated Aug. 21, 2019.

variety of vessels creates a uniquely potent threat to right whales. Their primary habitat, and their only known calving grounds, is crisscrossed by massive cargo ships and smaller vessels such as fishing boats and pleasure craft. Avoiding interactions between vessels and whales in this area is simply impossible. And given their very limited geographic range, North Atlantic right whales do not have another option.

B. North Atlantic right whales are uniquely susceptible to vessel strikes.

The threat of vessel traffic along the East Coast is further compounded by the whales' physical appearance and their natural behaviors. The North Atlantic right whale is extremely hard to see, because they have dark coloration and lack a dorsal fin on their backs. This creates a smooth profile that blends into the ocean's surface.[11]



Mother and calf at surface.
Photo credit: NOAA Permit #594-1467-02

[11] NOAA Fisheries, *How to Identify and Report North Atlantic Right Whales*, https://www.fisheries.noaa.gov/resource/outreach-materials/how-identify-and-report-north-atlantic-right-whales, last updated Dec. 19, 2025.

In addition, North Atlantic right whales spend most of their time just under the surface of the water – compounding the difficulties of spotting them visually. It is estimated they spend 67-98% of their time within 30 feet of the surface, either feeding or migrating. Garrison 2022 at 15 (Ex. 12). But while they are frequently swimming just out of sight of mariners, they are still at a depth where they can easily be struck by the propellors or hull of most large commercial vessels. And right whales are slow moving, swimming at speeds less than 4 mph. Hain 2013 at 3 (tbl. 2) (Ex. 13). This limits their ability to avoid a vessel.

These factors, unique to North Atlantic right whales, increase the risk of vessel strikes. Compounding the problem is a lack of information about how right whales behave in the presence of vessels. Only one peer-reviewed study has directly assessed the question, and that study found the whales had little to no response to vessel presence and sounds; in one instance, a whale swam *towards* the surface – a behavior that could increase the risk of a vessel strike. *See* Nowacek 2003 (Ex. 14).

C. Vessel strikes are an even greater risk in right whale calving grounds.

The threats of vessel strikes are even greater for females and dependent calves in the calving grounds off the Southeast coast. Pregnant and nursing females and their calves spend an even larger amount of time near the surface. One study found lactating mothers spent 80% of their time within 3.5m (11.5 feet) of the surface. Dombroski 2021 at 35 (Ex. 15). Calves stay close to their mothers, and since calves cannot dive as often or for as long as adults, mother-calf pairs are more frequently at the surface. Baumgartner 2003 at 128, 132 (Ex. 16). They may spend up to 9 hours

stationary at the surface while resting, nursing, and playing. Ex. 13 at 7. Whales on the calving grounds also move very slowly, averaging only 0.8 mph, with mother-calf pairs moving the slowest, *id.* at 3 (tbl. 1), further decreasing their ability to avoid or outmaneuver an oncoming vessel. And tagging data demonstrates that mother-calf pairs swim back and forth along the coastline, exposing them to a risk of vessel strike multiple times, on multiple passes through the same area. *Id.* at 8.

Vessel strikes on reproductive-age females and their calves cause outsize harm to the population as a whole. If a female with a dependent calf is killed, the calf is likely to die as well, doubling the effective mortality of a strike. This is particularly detrimental because the calf of a reproductively successful female is more likely, itself, to be reproductively successful. *See generally* Bishop 2022 (Ex. 17). The death of a mother-calf pair eliminates both the female and the genetic and reproductive contributions of her current and potential future calves. In addition, females are more prone to vessel strikes. Before the Vessel Speed Rule, females comprised 80% of vessel-related deaths for which the sex and size of the animals was known, including at least three that were killed carrying full-term fetuses. 73 Fed. Reg. 60,173, 60,174 (Oct. 10, 2008). Disproportionate strikes on females have continued in more recent years. *See* Ex. 10 at 22-23, 37.

III. Harm Caused by Vessel Strikes

A. Vessel strikes can be fatal or cause lifelong traumatic injuries.

Although North Atlantic right whales are large animals, vessels of all sizes can cause serious trauma, injury, or death. A vessel strike may cause sharp trauma, such

as lacerations from propellor blades or the hull of a vessel. Or it may cause blunt force trauma, such as broken bones and hemorrhaging. And some vessel strike injuries, while not immediately fatal, compromise the whale's immune system, inhibit feeding, or prevent reproduction, and can prove fatal years later.

One 2019 study provides a broad picture of injuries from vessel strikes. *See* Ex. 6. The study analyzed necropsies of 16 individual whales where the cause of death was identified as a vessel strike. Ten of those mortalities were caused by blunt trauma; the whales in those cases had suffered spinal fractures, skull fractures that penetrated the brain, laceration resulting in fatal hemorrhaging, and destroyed tissue at the impact point. The remaining six mortalities were due to sharp trauma from propellors; those whales had deep lacerations into their chests and abdomens, skull fractures, broken or displaced vertebrae, and even amputated tails. *Id.*

A few specific examples illustrate the severe damage vessel strikes can cause:

- Lucky (#2143), was struck by a vessel when she was a calf, leaving propellor lacerations on her back and flank. She survived, but 14 years later in 2005, her first pregnancy caused the wounds to reopen, leading to infection and sepsis that killed both Lucky and her full-term fetus. Ex. 6 at 7, 14; Ex. 10 at 24.
- In 2021, a fishing vessel struck Infinity (#3230) and her month-old calf in Florida. Infinity survived, but the calf was killed and washed ashore dead.[12]

[12] NOAA Fisheries, *North Atlantic Right Whale Calf Stranded Dead in Florida*, https://www.fisheries.noaa.gov/feature-story/north-atlantic-right-whale-calf-stranded-dead-florida, last updated Feb. 7, 2023.

One month old calf of Infinity (#3230).
Photo credit: Florida Fish & Wildlife Commission, Tucker Joenz under NOAA Fisheries permit #18786

- An adult male right whale (#3343) stranded on Virginia Beach in 2023. The necropsy revealed multiple spinal fractures and separated vertebrae consistent with blunt force trauma from a vessel strike. The extent of these injuries is particularly notable as there was "no obvious external evidence" of trauma.[13]
- In January 2024, the calf of Juno (#1612) was seen with severe propellor cuts to its head, mouth, and left lip. The calf was seen in February still bleeding from the wounds, and in March its carcass washed ashore. A necropsy found the wounds had penetrated deep soft tissues and bone, leading to necrosis.[14]

[13] NOAA Fisheries, *North Atlantic Right Whale Health Updates 2023*, https://www.fisheries.noaa.gov/endangered-species-conservation/north-atlantic-right-whale-health-updates-2023#new-dead-right-whale-3343-documented-near-virginia-beach-virginia, last updated Dec. 5, 2025.

[14] NOAA Fisheries, *North Atlantic Right Whale Health Updates 2024*, https://www.fisheries.noaa.gov/endangered-species-conservation/north-atlantic-right-whale-health-updates-2024#2024-calf-of-juno-right-whale-1612, last updated Dec. 5, 2025.

B. Actual vessel strikes likely far exceed observed incidents.

Based on observed mortality, 22 right whale deaths due to vessel strikes have occurred since 2006. *See* Ex. 1. But that already high number is almost surely a significant underestimate, for two reasons. First, as noted previously, only an estimated 36% of mortalities are observed. There are many reasons for this: formal survey efforts depend on funding, agency capacity, and ocean conditions; geography and sea conditions impact if and how a carcass washes ashore or close enough to be observed; and carcasses may deteriorate or be scavenged by sharks. *See, e.g.*, Ex. 7 at 2. In addition, right whales are experiencing an overall decline in physical health and have become smaller, with lower blubber content. *See* Ex. 8 at 6; Moore 2021 (Ex. 18). Less blubber decreases buoyancy, meaning a carcass would be more likely to sink, Ex. 18 at 209, and not be observed or documented.

Second, for nearly half of observed deaths, cause of death is undetermined or unknown. This can occur where a carcass is spotted but then lost, strands in an inaccessible location, or is too decomposed to determine a cause, or if a calf disappears while still dependent on its mother. Vessel strikes are likely to have been the actual cause of death in at least some of these cases. Considering the 22 observed vessel strike mortalities, *see* Ex. 1, and a 36% chance of observing a mortality, it is likely that at least 61 vessel strike deaths have actually occurred since 2006.

IV. Methods to Prevent Vessel Strikes

Vessel speed restriction "has become a core strategy to reduce the risk of large whale vessel strikes globally." Ex. 10, at 6. Speed restrictions have been implemented

around the world, including specifically for right whales in the Gulf of St. Lawrence in Canada, and Cape Cod Bay in Massachusetts. *Id.* at 6-7; 78 Fed. Reg. 73,726, 73,728 (Dec. 9, 2013). There is a clear reason: "Numerous studies have indicated that slowing the speed of vessels reduces the risk of lethal vessel collisions, particularly in areas where right whales are abundant and vessel traffic is common and otherwise traveling at high speeds." 87 Fed. Reg. at 46,923. Ultimately, every study that has examined both vessel strike risk and vessel strike lethality has found they are reduced by lowering vessel speeds. *See, e.g.*, Exs. 11, 29; Conn 2013 (Ex. 19); Rockwood 2020 (Ex. 20); Laist 2014 (Ex. 23).

A. Limiting vessel speeds is an effective and generally available approach.

Studies have found that vessel speed is a major factor in vessel-related collisions with whales, including North Atlantic right whales, and that limiting vessel speeds reduces lethal strike risk. *See, e.g.*, Exs. 11, 19, 20, 29; Gende 2019 (Ex. 21). For example, a 2020 study from New Zealand found that a reduction in average vessel speed from 2014 to 2016 had nearly halved the probability of a lethal ship strike from 51% to 26%. Ebdon 2020 (Ex. 22).

Studies have also found the risk of vessel strikes to be correlated with speed, i.e., the slower the maximum vessel speed, the greater the risk reduction. *See, e.g.*, Exs. 11, 19, 20, 29; 78 Fed. Reg. at 73,728. A 2007 study found that every 1-knot increase in speed increased the likelihood of a strike resulting in death or serious injury by 1.5 times; the probability of a fatal strike increased from 20% lethality at 9 knots, to 80% at 15 knots, with 100% lethality at 20 knots or more. Ex. 29 at 149.

Data also shows a clear connection between vessel speed and right whale mortality. For example, from 1990 to 2022 there were nine documented lethal right whale vessel collisions in U.S. waters where the vessel speed was known; in eight of those nine incidents, the vessel was traveling more than 10 knots. 87 Fed. Reg. at 46,924. A 2014 study found a statistically significant reduction in ship-struck whales during the first 5 years that the Vessel Speed Rule was in effect. Ex. 23. And NOAA's 2020 assessment found that "[s]ince the speed rule was implemented, there has been a decline in the total number of documented right whale vessel strike mortalities." Ex. 10 at 35. That same assessment also found "an increase in serious and non-serious injuries," *id.*, that could suggest "that right whales are better able to avoid *fatal* vessel collisions due to slower vessel speeds," *id.* at 24 (emphasis added).

There is broad consensus that vessel speed reductions work, and there is no mystery about why that is the case. First, slower vessel speeds prevent strikes from happening in the first place, by expanding the time for both vessels and whales to detect and respond to an imminent collision. At higher speeds, vessels cannot maneuver to avoid a whale if they spot it, and the whales swim too slowly to move out of the way in time. *See, e.g.*, Ex. 11 at 1; Ex. 12 at 24 (fig. 2). In addition, studies have shown that higher speeds increase the "zone of influence" around the hull of a vessel, in which a whale might be pulled toward the ship and drawn into a strike. 78 Fed. Reg. at 73,728; Silber 2010 at 17-18 (Ex. 24).

Second, slower vessel speeds decrease the impact forces and trauma that a whale experiences when a strike does happen. Unsurprisingly, lower vessel speeds

correspond to lower acceleration (i.e., impact velocity) experienced by a struck whale. Ex. 24 at 18-19. A 2021 study found that strikes from any size vessel could produce compression stresses likely to cause lethal injuries to a typical adult right whale; critically, it also found that regardless of vessel size, lower-speed collisions were less likely to reach that threshold. Kelley 2020 at 12-13 (figs. 3 & 4) (Ex. 25).

B. Onboard observers are not likely to be effective.

Some vessel operators along the East Coast use visual observation to "spot" right whales in an attempt to avoid collisions. This is, apparently, the method Captain Eubanks employed during his December 2022 trip; he reports that he "trained his crew to recognize right whales, posted additional lookouts to spot any right whales, and scheduled travel during daylight hours." Dkt. No. 41, at 2.

Efforts to avoid vessel strikes in right whale habitat are commendable and well-intentioned. However, spotting is not an effective tool for avoiding strikes in most cases, for a variety of reasons. First, as noted previously, North Atlantic right whales are very difficult to spot, even at the surface. Visual observation is also limited by weather, and at night, it is only possible with night vision goggles, which reduce observer effectiveness. *See* Baille 2022 Supp. at 14 (Ex. 26).

Second, visually spotting a whale does not always mean that a collision can be avoided, because all vessels have limits on maneuverability. Turning smaller vessels can be dangerous, especially at high speeds. Large vessels may be unable to reroute; even if they can change course, they may need miles to stop, and their propellors may continue spinning while the engine is in neutral. *See* Ex. 21 at 14 (tbl. 1).

The best evidence on the effectiveness of spotting comes from professional observers, who have specialized training in detecting protected species and their behavior and interactions.[15] Even these professionals have limited success in spotting whales: one study found that observers on cruise ships in Alaska successfully spotted humpbacks on their initial surfacing between 15% and 60% of the time (depending on vessel speed), even when sighting conditions were "excellent." Ex. 21 at 10 (fig. 4). Meanwhile, in two separate incidents, research vessels traveling during daytime in Cape Cod Bay, with trained observers aboard, struck right whales. Wiley 2016 at 4, 13 (Ex. 27). These cases demonstrate that "[v]essel strikes can occur even when circumstances are seemingly optimal for avoidance." 87 Fed. Reg. at 46,928.

Importantly, while visual observation has significant limits, those limitations are diminished when vessels are traveling more slowly. Slower vessels have better maneuverability, and studies show that visual spotting by onboard observers is more likely if the vessel is traveling at a slower speed. Ex. 21 at 11 (fig. 5); Dolman 2006 at 9 (Ex. 28). This is yet another reason why slower vessel speeds work – not only are they effective on their own, but they increase the effectiveness of other mechanisms.

C. No detection technology is proven, robust, widely available, and universally applicable.

The significance of the vessel-strike problem has prompted significant interest in technological solutions among academics, agencies, technology developers,

[15] *See, e.g.,* NOAA Fisheries, *Protected Species Observers*, https://www.fisheries.noaa.gov/national/endangered-species-conservation/protected-species-observers, last updated Feb. 20, 2025.

NGOs, and other stakeholders.[16] Several detection technologies exist, and others are being developed, including forms of acoustic monitoring, thermal infrared imaging, and satellite technology. *See supra* note 16; Ex. 26 Supp. at 14-15. Efforts to use technology to reduce vessel strike risk have been underway for many years, but they have not produced any technology that is ready for application at scale.

Currently, thermal infrared (IR) imaging systems are the most advanced and most promising technological approach. Some IR systems can be cost-effective and can outperform human observers in variable environmental conditions. *See* Ex. 26 at 59. In addition, some advanced (albeit expensive) systems are already being used on a trial basis for large container ships.[17] But even these systems, at present, are not an effective or widely available solution. One recent study concluded that current IR technology would only be effective on certain vessels, and only in conjunction with dedicated observers on board. Ex. 26 at 67. For larger vessels, "*no* currently available vessel-based detection methods would provide enough detection range for effective protection." *Id.* (emphasis added). However, the study found that IR systems *could* be highly effective "in slow-speed environments." *Id.* at 66. So again, this technology may complement, but cannot replace, vessel speed limitations.

[16] NOAA Fisheries, *Advancing Technologies for North Atlantic Right Whale Recovery*, https://www.fisheries.noaa.gov/endangered-species-conservation/advancing-technologies-north-atlantic-right-whale-recovery, last updated Dec. 4, 2025.

[17] PR Newswire, *Matson Partners with WhaleSpotter to Commercialize Breakthrough Whale Detection Technology*, https://www.prnewswire.com/news-releases/matson-partners-with-whalespotter-to-commercialize-breakthrough-whale-detection-technology-302602323.html (Nov. 3, 2025).

Other existing technologies have limited effectiveness when applied to whale detection. *Id.* Supp. at 14-15. New technologies are being specifically designed for that purpose, and their developers express confidence in their superior detection abilities. But there is little insight into the development of those systems, and no publicly available, scientifically robust assessments of their performance.

This does not mean technological options are a dead end. To the contrary, more research is needed to close existing knowledge gaps. NOAA has announced several partnerships and has held workshops to develop vessel strike reduction technology. *See supra* n.16. Yet while those efforts continue, no technological approach has been scientifically validated and shown to be robust, cost-effective, available, and broadly applicable across the many vessels and conditions that occur in North Atlantic right whale habitat. Any reliance on them as a "solution" to displace vessel speed regulations is, at best, premature.

CONCLUSION

The facts laid out in the foregoing discussion paint a clear picture: the North Atlantic right whale is so endangered that the death of a single individual may drive the species to extinction, yet such deaths occur every year as a result of human activities along the East Coast. Vessel strikes are one of the major causes of those deaths – likely well beyond what is documented. And there is only one effective and generally available tool to address those deaths: reducing vessel speeds.

Respectfully submitted this 14th day of January, 2026

/s/ Danica Anderson Glaser
Danica Anderson Glaser (*pro hac vice*)
Senior Counsel
Oceana
1025 Connecticut Ave. NW, Suite 200
Washington, DC 20036
202-833-3900
dglaser@oceana.org

Attorney for Amicus Curiae Oceana

CERTIFICATE OF SERVICE

I hereby certify that on January 14, 2026, I electronically filed the foregoing with the Clerk of Court by using the District Court CM/ECF system. A true and correct copy of this motion has been served via the Court's CM/ECF system on all counsel of record.

/s/ Danica Anderson Glaser
Danica Anderson Glaser