



**NATIONAL  
WILDLIFE  
FEDERATION**

# Whales & Offshore Wind Energy

*Responsibly developed offshore wind energy is a critical renewable energy opportunity to address the challenges whales face from climate change.*

Meet the  
North Atlantic  
right whale!



Credit: NOAA Fisheries

## Impacts in Context:

Meet Cashew and her new calf! Cashew is a 23-year-old North Atlantic right whale named for the cashew-shaped callosity pattern near the front of her rostrum. Cashew has had three calves, the most recent of which was spotted off the coast of northern Florida in early 2025. Her first calf, Scorpion, was born in 2008 and is seen regularly, but her second calf was not seen past its birth year. Brought to the brink of extinction in the early 1890s due to centuries of overhunting by the whaling industry, thousands of North Atlantic right whales once called the East Coast home. **Today, they are one of the most endangered whale species in the world, with less than 390 remaining.** While the threat of commercial whaling no longer exists, the species has never recovered to its pre-whaling population numbers and still faces a significant number of threats caused by human activity. With such a small population and a low reproduction rate, a single death can have a significant negative impact on the species' ability to recover.

## The Most Imminent Threats to Whales Today

**Climate Change** impacts whale reproductive success. Oceanographic changes have caused whales to shift distribution patterns, likely to follow prey as location and availability change due to warming oceans. Changes in birthing cycles indicate that reproductive females are struggling to find sufficient food to support pregnancy.

**Vessel Strikes** from fast-moving large ships are almost always lethal to whales, but small vessels can also seriously injure or kill marine life. The faster a vessel is moving when collisions occur, the more likely the whale will experience serious injury or death.

According to the New England Aquarium, more than 86% of right whales have faced **Entanglement** at least once, and some whales having been entangled in fishing gear as many as nine times. Scientists believe that chronic entanglement is one reason female right whales are having fewer calves and taking longer to calve.

Human activity from shipping, boating, construction, and oil exploration has increased **Ocean Noise** in the Atlantic Ocean, elevating whales' stress, interrupting normal behavior, interfering with regular communication, and reducing the ability to detect hazards.

## So How Does Offshore Wind Development Interact With Whales?

Research to date indicates that offshore wind development, construction, and operations in the United States has not been shown to cause population-level declines or significant adverse impacts on whale species, including the **North Atlantic right whale**. This is due in large part to extensive collaboration among environmental organizations, scientists, government agencies, and developers to apply proven mitigation measures informed by more than three decades of offshore wind experience globally. These measures are designed to avoid, minimize, mitigate, and monitor potential risks to whales across all phases of a project's lifecycle, including exposure to underwater noise, vessel traffic, and potential entanglement hazards associated with marine activities. On the next page, we describe key mitigation strategies currently required or implemented to reduce risks to the North Atlantic right whale and other whale species.

## I. Mitigation Measures & Ocean Noise

- **Seasonal Restrictions** limit pile driving and High Resolution Geophysical (HRG) surveys to times when whales are least likely to be present in high numbers within a lease area to avoid disturbances. Additionally, most projects have committed to surveying and pile driving only during daytime hours, unless they have developed an Alternative Monitoring Plan with federal agencies to ensure equivalent protections.
- **“Acoustic and Visual Pile Driving Clearance Zones”** set a radius around the center of the pile where all monitoring methods, visual and auditory, must be implemented. If one or more North Atlantic right whale is detected, pile driving will not be initiated. If, once pile driving begins, a North Atlantic right whale is detected within the “acoustic pile driving exclusion zone”, the pile driving activity will be shut down until the whale has cleared the zone.
- **Noise Abatement Technology** like hydrosound dampers (HSDs) and ‘bubble curtains’ significantly reduce the amount of sound during the pile driving.
- **Passive Acoustic Monitoring (PAM)** is a technology that can detect the presence of North Atlantic right whale vocalizations. PAM occurs before and during pile driving on vessels and buoys to assure that both the clearance zone and exclusion zones are void of whales and other marine mammals.
- **Thermal Cameras** are deployed on vessels to detect if and when species enter the area as part of an Alternative Monitoring Plan, which must be approved by federal agencies, in order for pile driving to occur in times of low-visibility. They often used in conjunction with PAM and other technology such as **Infrared Cameras**, which can detect whales at the surface of the water in low light and night conditions.

*Note: The noise created by HRG surveys used in offshore wind development are quieter and distinct from seismic airgun arrays used by the oil and gas industry. In fact, most of the sound HRG surveys emit are higher than whales can hear and do not affect their communication or wellbeing.*

## II. Mitigation Measures & Project Vessels

- **Speed Restrictions:** NOAA speed restrictions require most vessels 65 feet or longer to travel at 10 knots or less in locations deemed ‘Seasonal Management Areas’ at specific times of year to reduce the likelihood of serious or lethal vessel strikes marine mammals. These locations are determined by continual monitoring of calving and nursing grounds, and migratory routes. NOAA utilizes ‘Dynamic Management Areas’ to notify vessel operators to slow to 10 knots in areas where North Atlantic right whales have recently been reported. Speed restrictions at offshore wind projects are often more strict than NOAA guidelines, requiring that all project-associated vessels must adhere to a speed of 10 knots, regardless of season or vessel size.
- All personnel working offshore receive **Personnel Training** on observing and identifying whales species .

## III. Continual Monitoring

- **Protected Species Observers (PSOs)** are required by NOAA and BOEM for offshore wind surveying and development. Both crew and PSOs must report all visual and acoustic detections of North Atlantic right whales to the National Marine Fisheries Service and Coast Guard within 24 hours. At least two on-duty PSOs are stationed on all offshore wind vessels and are each responsible for monitoring no more than 180 degrees of the horizon. If a PSO sees a North Atlantic right whale, in or out of the appropriate zone, pile driving activities will not initiate.

## IV. Research Initiatives & Support for Whale Population Success

Many offshore wind developers have made legal and financial commitments to engage in collaborative and transparent science research with marine experts to support ocean conservation even once the project has finished construction. This helps develop effective mitigation technologies and strategies to reduce stressors to marine species, including threats to whales unrelated to offshore wind construction, like fishing gear entanglement.

LEARN HOW THE NATIONAL WILDLIFE FEDERATION ENGAGES IN OFFSHORE WIND PLANNING & PERMITTING



READ OUR AGREEMENT WITH THE SOUTH FORK WIND FARM TO MITIGATE IMPACTS TO ATLANTIC RIGHT WHALES.



HAVE YOU HEARD CONTRARY INFORMATION ON WHALES AND OFFSHORE WIND?



You may have seen disinformation funded by fossil fuel interests and climate denial think-tanks. Learn more about what’s true, what’s not, and who is funding this disinformation campaign using the QR Code above.