



Frequent Questions—Offshore Wind and Whales

Frequently asked questions about interactions between offshore wind energy projects and whales.

What does NOAA Fisheries do to minimize the impact of offshore wind development on whales?

NOAA Fisheries helps avoid and minimize impacts to protected species and their habitats throughout the life cycle of offshore wind energy projects. We are responsible for several regulatory processes under the [Marine Mammal Protection Act](#) and the [Endangered Species Act](#) that ensure energy projects comply with the laws protecting our marine resources.

Who has the lead authority to approve or disapprove offshore wind projects?

The Bureau of Ocean Energy Management is responsible for offshore renewable energy development in federal waters. This includes the approval, disapproval, or modification of construction and operations plans before an offshore wind project can be constructed. BOEM leads associated [National Environmental Policy Act](#) environmental reviews.

Is U.S. offshore wind development linked to any whale deaths?

We work with our partners to analyze and understand the causes of death when we are able, following the science and data. At this point, there is no scientific evidence that noise resulting from offshore wind site characterization surveys could potentially cause whale deaths. There are no known links between large whale deaths and ongoing offshore wind activities.

We will continue to gather data to help us determine the cause of these whale deaths. We will also continue to explore how sound, vessel, and other human activities in the marine environment impact whales and other marine mammals.

[Media call on East Coast whale strandings: January 18, 2023 >](#)

Does NOAA Fisheries authorize the death of whales as it relates to offshore wind development?

NOAA Fisheries does not anticipate and has not authorized—or proposed to authorize—death or serious injury of whales for any wind-related action. Offshore wind developers have not applied for, and NOAA Fisheries has not approved, authorization to kill any marine mammals incidental to offshore wind site characterization surveys or construction activities. Marine mammals may respond to exposure to these surveys, for example, by avoiding the immediate area.

Are whale strandings on the East Coast related to offshore wind development?

At this point, there is no scientific evidence that noise resulting from offshore wind site characterization surveys could potentially cause whale deaths. There are no known links between large whale deaths and ongoing offshore wind activities.

Offshore wind developers conduct high resolution geophysical surveys to image the ocean bottom. The noises these surveys produce may disturb marine mammals. This is why offshore wind operators have requested Incidental Harassment Authorizations to allow for [Level B harassment](#). This includes actions that could disturb, but not injure or kill, a marine mammal by disrupting behavioral patterns, including migration, breathing, nursing, breeding, feeding, or sheltering.

The sound from these high resolution geophysical surveys are very different from seismic airguns used in oil and gas surveys or tactical military sonar. They produce much smaller impact zones because, in general, they have lower noise, higher frequency, and narrower beam-width. The area within which these sounds might disturb a marine mammal's behavior is orders of magnitude smaller than the impact areas for seismic airguns or military sonar. Any marine mammal exposure to sound from these surveys would be at significantly lower levels and shorter duration, which is associated with less severe impacts to marine mammals.

In 2017, NOAA Fisheries declared an [Unusual Mortality Event for humpback whale](#) strandings along the Atlantic coast from Maine to Florida. The event is ongoing, and includes animals stranded since 2016. Vessel strikes and entanglement in fishing gear are the greatest human threats to large whales. The rest of the whales in this Unusual Mortality Event either had an undetermined cause of death (due to a limited examination or decomposition of the carcass), or had other causes of death, including parasite-caused organ damage and starvation.

What caused a high number of large whales in the waters off New Jersey in 2023?

As the humpback whale population has grown, they are seen more often in the Mid-Atlantic. Along the New Jersey shore, these whales may be following their prey (small fish) which were reportedly close to shore during the winter.

These prey also attract fish that are targeted by recreational and commercial fishermen, which increases the number of boats in these areas. More whales in the water in areas traveled by boats of all sizes increases the risk of vessel strikes. As such, we advise boaters to go slowly—10 knots or less in waters where they are likely present—and keep a [lookout for whales](#).

Mariners should be aware of [voluntary slow zones](#) and active [Seasonal Management Areas](#) (where all vessels 65 feet or longer must travel at 10 knots or less) for endangered North Atlantic right whales.

Is climate change a factor in the number of whales seen close to shore?

Yes. Our climate is changing, and one of those key changes is the warming of our oceans. In response, many marine species are adapting by moving into new areas where conditions are now more favorable.

Changing distributions of prey impact larger marine species that depend on them, and result in changing distribution of whales and other marine life. This can lead to increased interactions with humans as some whales move closer to near shore habitats. We are investigating the increase in humpback whale deaths beginning in 2016.

The impacts of changing species distributions reach far beyond the individual species, affecting entire ecosystems and coastal economies.

What is the current status of the humpback whale population in the North Atlantic?

The population of [humpback whales in the North Atlantic](#) is not listed as threatened or endangered under the Endangered Species Act. However, all humpback whales are protected under the Marine Mammal Protection Act. More information about the status of humpback whale stocks in U.S. waters can be found in NOAA Fisheries' [marine mammal stock assessment reports](#).

What You Can Do

What should I do if I see a dead or injured whale from Maine to Virginia?

If you see a dead or injured marine mammal or sea turtle, please call the [NOAA Greater Atlantic Marine Mammal and Sea Turtle Stranding](#) Hotline at (866) 755-6622 to be directed to a trained responder. The best way to assist these animals, and keep them and yourself safe, is by calling trained responders and maintaining a distance of at least 150 feet.

Please remember that all marine mammals are protected by the Marine Mammal Protection Act, which makes touching, feeding, or otherwise harming these animals illegal. It is also illegal to take any marine mammal part from live or dead animals, including bones and teeth.

What else can I do to help protect whales?

If you are a boater, download the [Whale Alert app](#) [↗](#) for real-time updates on management areas and whale sightings on digital nautical charts. When you are boating in these areas, slow down and keep a watchful eye on the water.

Information on Incidental Take Authorizations

What does “take” mean under the Marine Mammal Protection Act?

Under the Marine Mammal Protection Act, [take](#) is defined as: "to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect, or kill any marine mammal." This includes any of the following:

- Collection of dead animals, or parts thereof
- Restraint or detention of a marine mammal, no matter how temporary
- Tagging a marine mammal
- Negligent or intentional operation of an aircraft or vessel
- Any other negligent or intentional act which results in disturbing or molesting a marine mammal
- Feeding or attempting to feed a marine mammal in the wild

There are several forms of take; take does not necessarily equate to death.

What does “harassment” mean under the Marine Mammal and Protection Act?

Under the Marine Mammal Protection Act, harassment is statutorily defined as:

- Level A Harassment (non-serious injury): Has the potential to injure a marine mammal or marine mammal stock in the wild
- Level B Harassment (behavioral disturbance): Has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns—

including migration, breathing, nursing, breeding, feeding, or sheltering—but does not have the potential to injure a marine mammal or marine mammal stock in the wild

How do I find more information about marine mammal incidental take authorizations?

We maintain a list of [all active and in-progress incidental take authorizations](#), including those related to offshore wind. We carefully consider possible impacts to marine mammal species. Details and mitigations are included in the relevant documents for each active authorization.

[General information about the MMPA take authorization process >](#)

Additional Information on Necropsies

What are NOAA Fisheries and its partners doing to determine the cause(s) of whale deaths?

The [local stranding network partners](#) are responsible for leading examinations, but large whale responses generally involve multiple agencies from across the network working together. These stranding network partners respond to each whale that comes ashore to document and examine the carcasses. At a minimum, stranding network partners collect photo data to document each stranding event. When possible, they take or estimate measurements and conduct an external examination.

Since the cause of death is not always clear at first examination, biologists take samples from whales and work with laboratory partners to review them. Decomposition can limit our ability to determine a definitive cause of death.

[Explore frequently asked questions about necropsies >](#)

Why aren't all large whales necropsied?

Large whale necropsies are very complicated, requiring many people and typically heavy equipment (front loaders, etc.). Some whales are found dead floating offshore, and need to be towed to land for an examination. There can be limitations for access and using heavy equipment depending on the location where the whale stranded, including protected lands (parks or concerns for other endangered species) and accessibility (remote areas, tides that prevent access at times of day). Also, necropsies are the most informative when the animal died relatively recently. Some whales are not found until they are already decomposed, which limits the amount of information that can be obtained. Finally, funding is limited, and varies by location and stranding network partner.

Who are NOAA Fisheries' marine mammal stranding network partners?

Our marine mammal stranding network partners in New England and the Mid-Atlantic include:

- Allied Whale (Maine)
- Marine Mammals of Maine (Maine)
- Seacoast Science Center (New Hampshire/North Shore Massachusetts)
- Whale and Dolphin Conservation (South Shore, Massachusetts)
- International Fund for Animal Welfare (Cape Cod, Massachusetts)
- Center for Coastal Studies (Cape Cod, Massachusetts)
- Marine Mammal Alliance Nantucket (Nantucket, Massachusetts)
- Wampanoag Tribe of Gay Head Aquinnah (Martha's Vineyard, Massachusetts)
- Rhode Island Department of Environmental Management (Rhode Island)
- Mystic Aquarium (Connecticut/Rhode Island)
- New York Marine Rescue Center (New York)
- Atlantic Marine Conservation Society (New York)
- Marine Mammal Stranding Center (New Jersey)
- MERR Institute (Delaware)
- Maryland Department of Natural Resources (Maryland)
- National Aquarium (Maryland)
- Virginia Aquarium and Marine Science Center (Virginia)

How can NOAA Fisheries determine if a whale death was caused by offshore wind activity and related survey work? Are there any signs or criteria?

NOAA Fisheries uses necropsies to determine the cause of a whale death. Necropsies can help determine if there is evidence from vessel strikes, entanglement, or acoustic trauma.

Vessel strikes are determined by cuts from propellers, bruising, and broken bones from the impact with a vessel hull. However, we are generally not able to definitively determine what specific kind of vessel (i.e., the size or type of vessel or what it was doing) caused the strike without a report from a mariner or other observer such as a protected species observer.

Entanglement injuries are often evident even in external examination even when rope or other fishing gear does not remain on a carcass. Acute injuries, such as areas where line or rope has rubbed through or broken the skin, can be very evident. In some cases, tissue analysis is needed to confirm whether the injuries are old and healing or may have contributed to the whale's death.

Acoustic trauma, which could result from close exposure to loud human-produced sounds, is very challenging to assess, particularly with any amount of decomposition. Scientists look for bruising or trauma to the ear and other organs, but linking it to a particular sound source is difficult, as certain parts of the ear decompose very quickly (within hours), even more so than some of the other parts

of the animal. If the whale is already in moderate to advanced decomposition, then microscopic changes in the ears are generally no longer detectable. Baleen whales and toothed whales have different hearing ranges, which affects [how these animals respond to different levels of sound](#).

We look at samples collected from each necropsied animal to further understand other factors that may have contributed to the stranding, but we may not ever have a definitive answer for each of these cases.

Strandings and inconclusive necropsies have occurred long before offshore wind was a factor, so correlating the two now is not based in science.

What is NOAA Fisheries doing to minimize the effects of offshore wind development on endangered North Atlantic right whales?

NOAA Fisheries is heavily invested in the conservation and recovery of endangered North Atlantic right whales. NOAA Fisheries [proposed a rule to modify existing vessel speed restrictions](#) that would apply to many offshore wind-related vessels. In our Marine Mammal Protection Act authorizations and Endangered Species Act consultations, we also require mitigation measures to avoid and minimize impacts from offshore wind development.

NOAA Fisheries and the Bureau of Ocean Energy Management released a [joint strategy](#) to protect and promote the recovery of North Atlantic right whales while responsibly developing offshore wind energy. This strategy is part of NOAA Fisheries' comprehensive [Road to Recovery](#) for North Atlantic right whales.

More Information

- › [NOAA Fisheries Media Call on East Coast Whale Strandings: January 18, 2023](#)
- › [NOAA's Role in Offshore Wind Energy Development](#)
- › [Humpback Whale Unusual Mortality Event Frequent Questions](#)
- › [BOEM Renewable Energy and Environment Fact Sheets](#)
- › [Frequent Questions—Necropsies \(Animal Autopsies\) of Marine Mammals](#)

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