

Exhibit Q



Understanding Vessel Strikes

Learn how NOAA Fisheries works to reduce the threat of vessel collisions with marine animals.

What is a vessel strike?

A vessel strike is a collision between any type of boat and a marine animal in the ocean. All sizes and types of vessels—from large ships to jet skis—have the potential to collide with nearly any marine species. Strikes that result in death or injury to the animal may go unnoticed by the vessel operator or unreported to researchers that keep track of such incidents.

The types of vessels documented in vessel strikes include large boats, such as cargo ships, whale-watching boats, ferries, and military vessels, and all manner of private watercraft used for commercial and recreational purposes.

Most reported collisions involve large whales, seals, or sea lions.

Why do vessel strikes occur?

Collisions may occur anywhere vessels cross paths with marine life. Marine animals can be difficult for a vessel operator to see because they are not always clearly visible from the surface. And even if the operator sees the animal clearly, there may be no time for either of them to avoid a collision.

Endangered [North Atlantic right whales](#) are especially vulnerable to vessel strikes because their habitat and migration routes are close to major ports and often overlap with shipping lanes. NOAA Fisheries works with mariners to [reduce ship strikes to right whales along the Atlantic seaboard](#).

All species of [sea turtles](#) are also vulnerable to vessel strikes as they surface to breathe, bask near the surface, or forage in shallow areas or on prey near the sea surface. Adult sea turtles appear to be at increased risk during breeding and nesting season.

What is being done to prevent vessels from striking marine animals?

Encouraging responsible vessel practices and understanding the distribution of marine mammals (e.g., whale, dolphins, and seals) and sea turtles are two key components to reducing the risk of

vessel strikes. To keep whales safe from ships, we work with the U.S. Coast Guard and shipping industry leaders to conduct mariner outreach, collect information on vessel strike events, and fund and coordinate aerial surveys and research programs to improve our understanding of animal distribution. For sea turtles, we work with other wildlife agencies to study the occurrence of vessel strikes to identify risk factors and strategies for reducing them.

NOAA Fisheries has taken many actions to reduce vessel strikes:

Whales

- Establishing [vessel speed restrictions](#) in parts of the U.S. eastern seaboard during certain times of the year to reduce the threat of vessel collisions to North Atlantic right whales.
- Working with the U.S. Coast Guard to establish recommended [vessel routes](#) and approaches to ports to reduce the overlap of whales and ships.
- Establishing temporary precautionary zones, called Dynamic Management Areas, around recently sighted right whale groups in which mariners are asked to reduce speed or steer clear of the area.
- Alerting vessel and watercraft operators to the dangers to whales of collisions.
- Developing and implementing “approach” regulations and guidance for operating vessels around whales in a number of regions.
- Developing and distributing written material, placards, brochures, interactive CDs, and posting signs in marinas to alert mariners to safe practices around whales.
- Developing and implementing [Mandatory Ship Reporting Systems](#) with the U.S. Coast Guard. Ships are required to report to a shore-based station when entering key right whale habitats, and in return they receive a message about whales, their vulnerability to ship strikes, precautionary measures ships can take to avoid hitting one, and locations of recent sightings. The systems were endorsed by the International Maritime Organization, a specialized organization of the United Nations.
- Working with partners to modify shipping routes at a number of heavily used ports in U.S. waters to minimize overlap and chances of ship collisions with blue, fin, humpback, and right whales and other species.
- Tracking of vessel strike occurrence through carcass examinations by the [Marine Mammal Stranding Network](#).
- Supporting apps and tools that provide information to mariners and ships about where whales are located:
 - [WhaleWatch](#)—alerts ship operators to areas where U.S. West Coast blue whales are aggregating.
 - [Whale Alert](#)—smartphone app for fishermen, recreational boaters, industry partners, and volunteer networks to share real-time whale sightings in Alaska.

Sea turtles

- Tracking of vessel strike occurrence through [the Sea Turtle Stranding and Salvage Network](#).
 - Strandings of sea turtles with injuries caused by vessel strikes are tracked in coastal areas to understand the frequency of collisions and risk factors.
- Promoting awareness.

We have also developed [guidelines for viewing marine life](#) to ensure their safety and yours.

What happens to marine life and vessels after a ship strike?

Marine mammals and sea turtles struck by vessels are often seriously injured or killed.

Collisions involving larger marine animals can damage vessels and cause serious and sometimes fatal injuries to people.

Where do vessel strikes occur?

Vessel strikes can occur anywhere in the world's oceans where ships and marine animals co-occur. Collisions involving ships and whales tend to occur around areas with the greatest commercial shipping traffic. Vessel strikes caused by small vessels tend to occur in high traffic areas such as marinas, inlets, and well-used channels.

How often do vessels strike marine animals?

Whales

From 2010 to 2014, 37 whales were reported to have been injured by vessel strikes along the Atlantic coast of the United States and Canada, as well as the Gulf of Mexico. The number of vessel strike-related injuries is estimated as comparable for a number of U.S. West Coast and Alaska species for the same period. But these minimum estimates are likely low because the number of deaths and serious injuries that go unreported is unknown.

Estimates of vessel strikes on other, smaller marine mammal species are even more likely to be underestimated, as they are less likely to be noticed by mariners and the animals are less likely to be recovered on a beach.

Sea turtles

It is estimated that hundreds of sea turtles are struck by vessels in the United States every year, and many of them are killed without being observed. Vessel strikes are one of the most common causes of sea turtles stranding in the United States. In Florida alone, injuries consistent with vessel strikes are observed in 20 to 30 percent of stranded sea turtles.

How can I help protect marine animals from vessel strikes?

Heed all [regulations and guidelines](#) regarding safe operation of vessels around marine animals. If a whale or turtle is in the vicinity of your vessel, travel at a slow, safe speed and leave the area if possible.

Here are some tips to avoid collisions:

- **Keep a sharp lookout.** Look for blows, dorsal fins, flukes, etc.
- **Watch your speed** in areas of known whale or turtle occurrence. Keeping speeds to 10 knots or less can reduce potential for injury.
- **Keep your distance.** If you see a whale or turtle, stay at least 100 yards away.
- **Slow your boat immediately and put in it neutral** if you see a whale or turtle. Resume at a slow, safe speed and distance your vessel from the animal.

Report marine life in distress

Immediately report an injured, entangled, stranded, or dead marine animal to your [local stranding network](#). These networks are located around the country in all coastal states.

Report a violation

NOAA Fisheries Enforcement Hotline, **(800) 853-1964**, provides live operator coverage 24 hours a day, 7 days a week for anyone in the United States to report a federal marine resource violation. During regular business hours, you also can contact your closest [NOAA Office of Law Enforcement field office](#) to report possible violations.