

## Entanglement Response Efforts

### Background

Marine mammal entanglement, or by-catch, is a global problem that every year results in the death of hundred of thousands of whales, dolphins, porpoises, and seals. Entanglement may result in starvation or drowning due to restricted movement, physical trauma and systemic infections, and/ or contribute to other threats, like ship strikes. For Hawai'i's smaller marine mammals, like the monk seals and dolphins, death is typically immediate and due to drowning. However, large whales, like humpback whales, can typically pull gear, or parts of it, off the ocean floor and are generally not in immediate risk of drowning.



Humpback whale entangled in gear from its feeding grounds  
(NOAA MMHSRP permit # 18786-02)

*“While disentanglement efforts may free an animal from a life-threatening entanglement, it is not the long-term answer to the problem. Rather, we need to reduce the rate in which entanglements occur.”*

*Edward Lyman, Natural Resources Management Specialist for Hawaiian Islands Humpback Whale National Marine Sanctuary.*



Blough - NOAA HIHWNMS/ MMHSRP (permit # 18786)

A trained and authorized response team frees an entangled humpback whale off Maui.

### Methodology

Cutting free a 45-foot, 40-ton, typically free-swimming animal is not an easy task, and can be quite dangerous for humans and the animal alike. To do so safely, a boat-based technique called “kegging” is used to make the animal more approachable. Historically, ‘kegging’ involved attaching barrels or kegs to whales by harpooning them. The extra drag and buoyancy of the kegs would tire the whale out and keep it at the surface. For disentanglement purposes, rescuers throw grapples or use hooks on the end of poles to attach to the gear entangling the animal. Instead of barrels, rescuers use large buoys. Once approachable, rescuers safely assess the animal and entanglement, and attempt to free the animal of all entangling gear.



Humpback whale entangled in marine debris.

## Community-based Network

The Hawaiian Islands Entanglement Response Network is a community-based network, lead by Hawaiian Islands Humpback Whale National Marine Sanctuary. Network partners include NOAA's Pacific Islands Regional Office, Hawai'i's Department of Land and Natural Resources, the United States Coast Guard, whale researchers, Hawai'i's tour industry, and many private organizations and individuals. The Network's response efforts are authorized under NOAA Fisheries' Marine Mammal Health and Stranding Response Program (permit # 18786-03).

### Goals

The Network's goals are to safely free endangered humpback whales and other marine animals from life threatening entanglements, and, at the same time, help gather valuable information that will reduce entanglement threats in the future.

### Accomplishments

- The Network has grown since its inception in 2002 and now comprises over 350 participants who have received various levels of training in order to support large whale response efforts statewide.
- Over 140 whales have been reported and confirmed entangled.
- More than 180 on-water responses have been mounted (some reports could not be responded to due to time of day, weather, and/or remoteness).
- More than 30 whales have been freed of entangling gear, with over 12,000 feet of gear removed.
- Recovered gear has been identified as marine debris, mooring gear, cable, local fishing gear, and fishing gear set far from Hawai'i. In some cases gear has been traced over 2,450 nm straightline distance from Hawai'i back to the Aleutians, Southeast Alaska, and British Columbia, Canada.



Over 400 feet of line removed from a humpback whale and traced to the Aleutians.



Humpback whale entangled in fishing gear (NOAA MMHSRP permit # 932-1489).



NATIONAL MARINE  
SANCTUARIES

HAWAIIAN ISLANDS  
HUMPBACK WHALE

