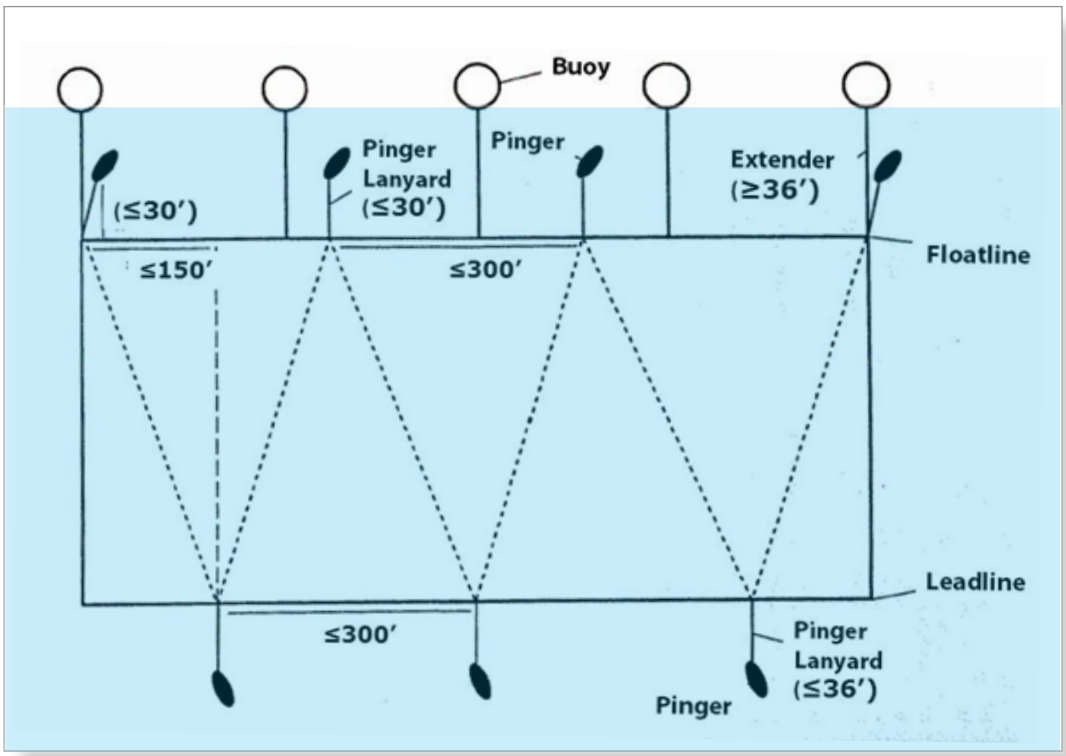
June 2017

NOAA FISHERIES

WEST COAST REGION

FAQs: West Coast drift gillnet (DGN) fishery & protected species

Current measures minimizing marine mammal and sea turtle entanglements, and NOAA Fisheries' withdrawal of a proposed rule for hard caps on interactions with protected species



How do drift gillnets work?

Drift gillnets (DGN) are mesh nets that hang down into the ocean from floats on the surface. Nets used off California are large, 14-inch mesh designed to avoid entangling smaller species than the swordfish and other large fish that the fishery targets. The top of the nets hang from underwater lines, called net extenders, at least 36 feet beneath the surface, leaving room above the nets for non-targeted species to pass over them. At one time many whales and other protected species became entangled in drift gillnets, but such entanglements are far rarer today.

What action is NOAA Fisheries taking on the Pacific Fishery Management Council's recommendation for hard caps on protected species interactions in the West Coast drift gillnet fishery?

NOAA Fisheries has decided not to adopt a recommendation from the Council to put limits called "hard caps" on the number of certain marine mammals and sea turtles that could be entangled by drift gillnets. The Council's proposed hard caps would have required the fishery to shut down for the rest of the season and even into the following season if the limits were reached. NOAA Fisheries is required under the Magnuson-Stevens Act to minimize costs and avoid unnecessary duplication when adopting fisheries conservation and management measures. The hard-cap proposal would have likely imposed significant new costs while also overlapping existing conservation measures that already protect those species. Therefore, NOAA Fisheries determined that the hard-cap proposal would not have provided significant additional conservation benefit.

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How often are protected species killed or injured in the DGN fishery?

It has become unusual for turtles, large whales and other marine mammals to be injured or killed in the DGN fishery. Concerted efforts have reduced the high interaction rates of the 1990s, and today there are far fewer entanglements. NOAA Fisheries estimates the number of protected species that are injured or killed by the DGN fishery based on partial observer coverage. Gray whales are among the most-common whales off California ,but estimates show that only two gray whales have been killed or seriously injured since 2012. The most commonly entangled species is the short-beaked common dolphin; the number of short-beaked common dolphins injured or killed has dropped from more than 200 killed in some years in the early 1990s, to fewer than 10 injured or killed in 2015.

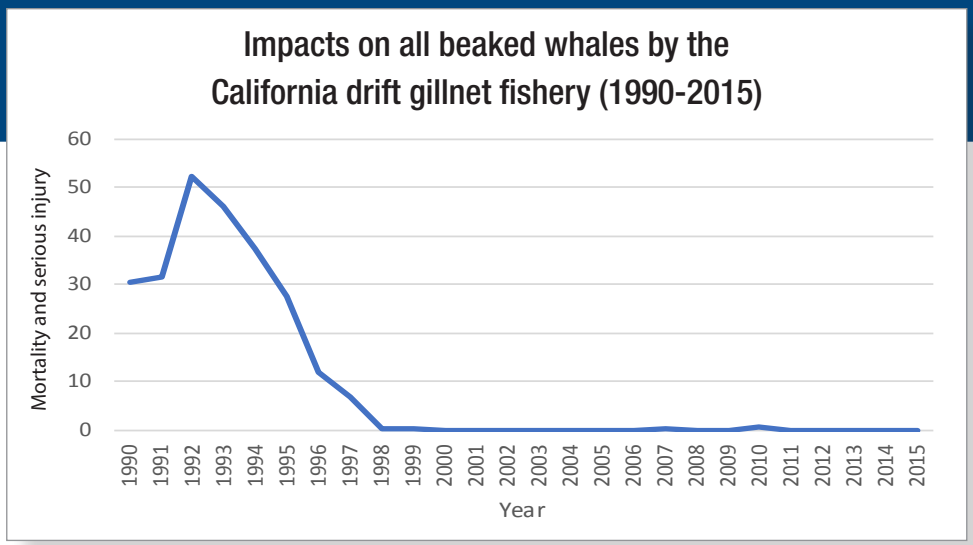
The latest estimates of mortality and serious injuries of protected species in the DGN fishery are described in a technical memorandum by NOAA Fisheries' Southwest Fisheries Science Center (SWFSC).

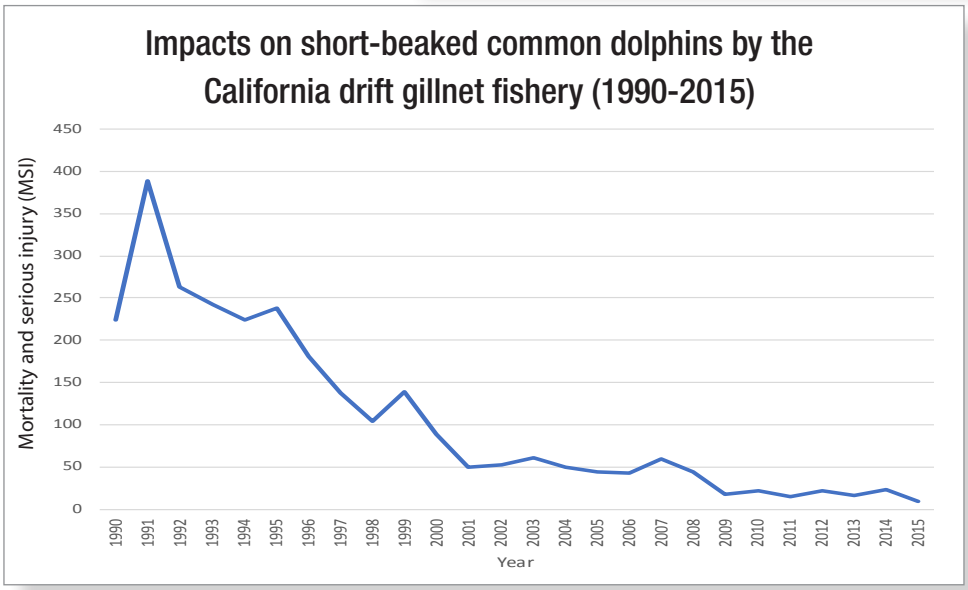
NOAA Technical Memorandum, NOAA-TM-NMFS-SWFSC-568

Regression tree and ratio estimates of marine mammal, sea turtle, and seabird bycatch in the California drift gillnet fishery: 1990-2015

Technical Memorandum available at : https://go.usa.gov/xNmJm

The number of beaked whales entangled in drift gillnets has declined sharply since the early 1990s.





Short-beaked common dolphins are the most commonly entangled species, but the number entangled is greatly reduced since the early 1990s.

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How does the DGN fishery compare to other fisheries in terms of interactions with protected species?

In recent years, the DGN fishery has had similar or lower rates of interactions with protected sea turtles and marine mammals than other U.S. fisheries that target swordfish, including the Atlantic longline fishery that is certified by the Marine Stewardship Council. Compared to some foreign fisheries that target swordfish, it has comparable or fewer interactions with protected species.

How much swordfish does the DGN fishery catch?

In 2015, 18 drift gillnet vessels landed 66 metric tons of swordfish worth $454,000. The fishery also lands some opah and sharks. In the same year, the United States imported 8,386 metric tons of swordfish from other countries, some of which record more interactions with marine mammals and sea turtles.

Do any laws protect sea turtles and marine mammals from impacts of the DGN fishery?

Yes, the Marine Mammal Protection Act (MMPA) and Endangered Species Act (ESA) both include provisions requiring NOAA Fisheries to examine and address impacts on these protected species. The Magnuson-Stevens Act also requires that the fishery minimize bycatch to the extent practical and achieve optimum yield, which is the amount of harvest that provides "the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems."

How do existing laws make the DGN fishery safer for protected species?

NOAA Fisheries and its partners have taken many steps to greatly reduce the inadvertent catch of marine mammals and turtles in the DGN fishery. The Marine Mammal Protection Act provides for "take reduction teams" to develop strategies for reducing the catch (or "take") of marine mammals and other protected species. In 1996 NOAA Fisheries convened the Pacific Offshore Cetacean Take Reduction Team (POCTRT), which includes scientists, fishermen, representatives of environmental groups and scientific organizations, and representatives of fisheries and wildlife agencies. The POCTRT developed a Take Reduction Plan which includes strategies such as the use of sound-emitting devices called pingers to alert marine mammals to the presence of drift gillnets. and the use of net extenders that lower the nets beneath the surface where many marine mammals and turtles spend much of their time.

In addition, NOAA Fisheries has examined the fishery's impact on threatened and endangered species and has adopted additional safeguards to protect them.

Swordfish fishing vessel Sea Doxy, Moss Landing Harbor, California. Photo: NOAA Fisheries

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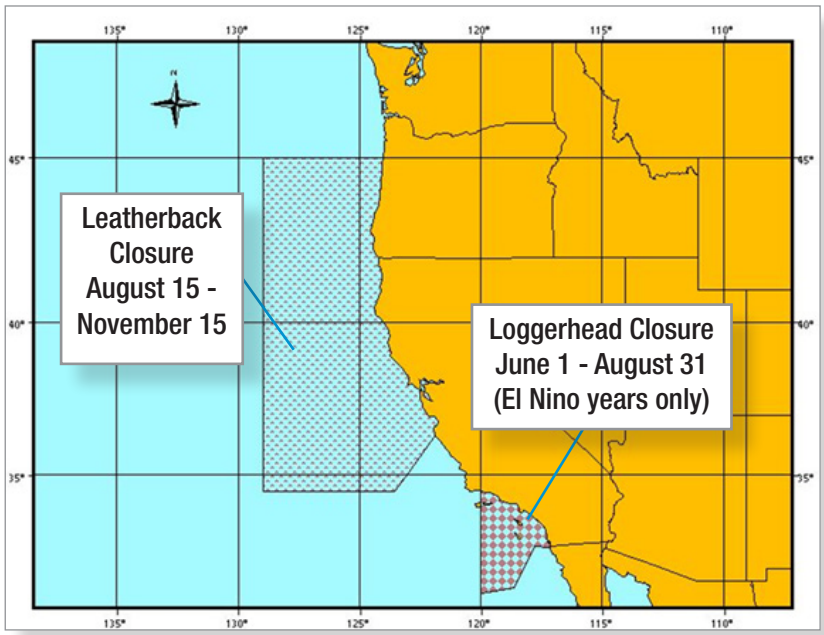
What actions have reduced impacts of the DGN fishery on protected species?

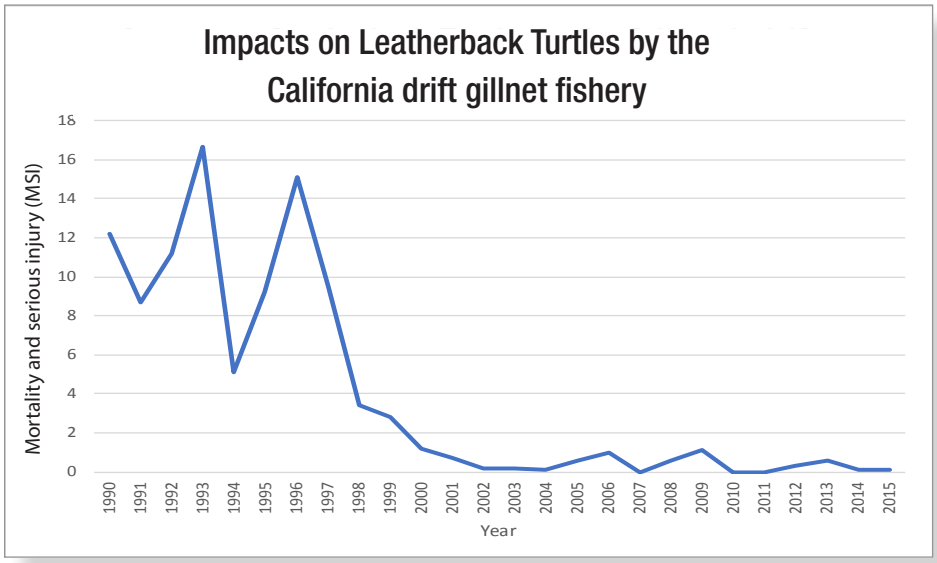
In 1997 NOAA Fisheries adopted the recommendations of the POCTRT, requiring pingers, net extenders, and mandatory workshops for skippers in the DGN fleet. In 2001 NOAA fisheries also established two large conservation areas off the coast of California and Oregon to protect endangered loggerhead and leatherback sea turtles. DGN fishing is prohibited in the conservation areas at times when sea turtles frequent the areas, thereby closing large areas to the fishery for a portion of the year. An annual closure extends from northern Oregon to Central California to protect leatherback turtles' seasonal foraging areas, while another closure in the Southern California Bight is triggered during warmer-than-normal water temperatures to protect loggerhead sea turtles that may be present.

A large area of ocean off the coast of California and Oregon is off limits to drift gillnet fishing each year to protect endangered leatherback sea turtles. Another area off southern California is closed during El Nino years (as determined by NOAA Fisheries) when water temperatures are warmer than average and loggerhead sea turtles are likely to be present.



Have existing regulations to protect marine mammals and sea turtles made a difference?

Yes, in the 1990s the bycatch of protected species was a serious problem in the DGN fishery. However, the actions recommended by the TRT process, as well as other safeguards NOAA Fisheries has adopted in the course of ESA consultations, have dramatically reduced bycatch of protected species such that it is now relatively unusual for many large whales and turtles to become entangled.



Source: Carretta, J.V., J.E. Moore, and K.A. Forney. 2017.

NOAA Technical Memorandum, NOAA-TM-NMFS-SWFSC-568. 83p.

Regression tree and ratio estimates of marine mammal, sea turtle, and seabird bycatch in the California drift gillnet fishery: 1990-2015.

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How do you know how many protected species are affected?

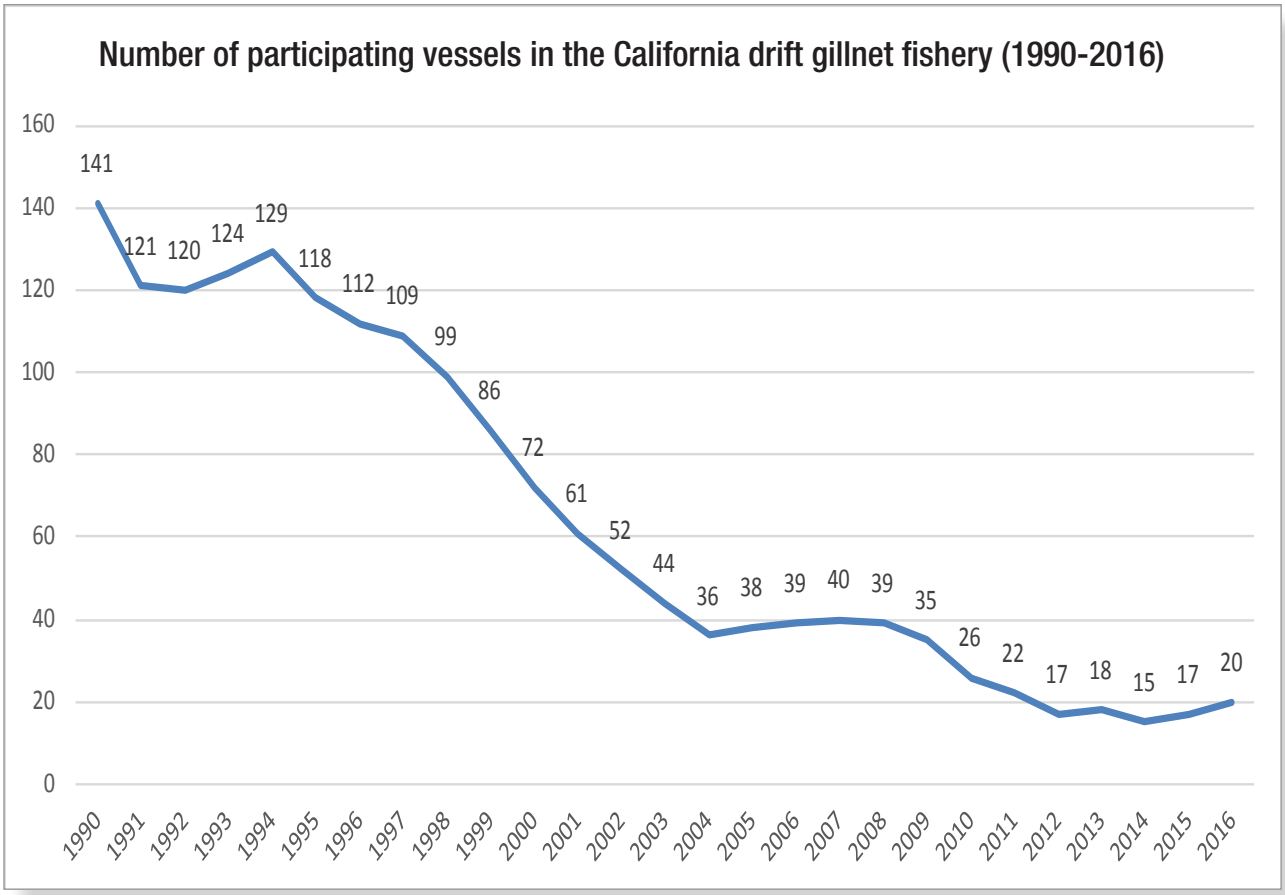
NOAA Fisheries' Observer Program deploys observers aboard some of the DGN vessels to monitor interactions with protected species. Observer coverage varies from year to year but generally observers monitor about 20 percent of the DGN fishing effort. NOAA Fisheries scientists then use the observer data and information on protected species populations to estimate the total bycatch of each species caught in the entire DGN fishery.

Can't DGN vessels just fish for something else?

An analysis by NOAA Fisheries found that most DGN fishery participants rely on the fishery for more than half their annual income. A potentially prolonged closure under the hard caps recommended by the Council could last into the next fishing year, imposing severe consequences and costs on participants. In addition, to fish in other fisheries, DGN fishery participants would have to buy permits for other fisheries and costing as much as $200,000 per permit. The Magnuson-Stevens Act calls for NOAA Fisheries to apply management and conservation measures that, where practicable, minimize costs and avoid unnecessary duplication. The hard caps recommended by the Council would increase costs significantly and overlap existing protections that have already greatly reduced interactions with protected species.

Is the DGN fishery expanding?

No, the number of vessels participating in the DGN fishery has dropped by about 90 percent since the 1990s to just 20 vessels last year. The decline is in part the result of limitations on the fishery to protect other species, such as prohibiting DGN fishing in the Pacific Leatherback Conservation Area, which was historically an area of high swordfish production.



Source: NOAA Fisheries West Coast Region Observer program records