

Pelagic Stock of False Killer Whales More Abundant than Previously Thought

A new study by the National Marine Fisheries Service (NMFS) indicates that the pelagic stock of false killer whales around the Hawaiian Islands may be more abundant than previously known. The new abundance estimates used data collected during the 2017 Hawaiian Islands Cetacean Ecosystem Assessment Survey conducted within the US exclusive economic zone (EEZ) around the Hawaiian Islands. The findings were presented at the 181st Council Meeting held March 10-12, 2020, in Honolulu.

The pelagic stock is a different population than the main Hawaiian Islands insular false killer whales, the latter comprising a small island-associated distinct population segment that is listed under the Endangered Species Act (ESA). In contrast, the pelagic stock ranges throughout the EEZ around Hawai'i and into the high seas and is not listed under the ESA.

The first EEZ-wide survey conducted in 2002 estimated the pelagic false killer whale population at 484 animals, based on a single group sighting during the study. For the second survey conducted in 2010, NMFS scientists revised their methodology to focus on getting better data for these elusive oceanic dolphins, which resulted in a revised abundance estimate of 1,540 animals throughout the EEZ.

With the latest 2017 survey, NMFS scientists continued to refine their survey methodology for gathering false killer whale data. They also refined their analysis approach, and used two types of methods to analyze the data, incorp-

orating all available data from past surveys. The first of these methods used a design-based approach that was similar to the past surveys, resulting in an abundance estimate of 5,106 animals throughout the EEZ. The second model-based approach used habitat features to estimate the density of the animals from all available survey data. This second approach resulted in an abundance estimate of 2,102 animals. With both methods, NMFS also reanalyzed the abundance estimates for 2002 and 2010, which showed higher numbers than their respective original estimates.

COMPARISON OF PREVIOUS AND NEW ESTIMATES OF ABUNDANCE FOR THE PELAGIC STOCK OF FALSE KILLER WHALES AROUND HAWAII.

Survey Year	Previous Estimates	New Estimates	
		Design-based	Model-based
2002	484	613	2,127
2010	1,540	2,489	2,182
2017	N/A	5,106	2,102

Source: NMFS

In light of the new population estimates, the Council asked NMFS to explore reopening the Southern Exclusion Zone (SEZ), a 132,000-square mile area spanning the entire EEZ south of the main Hawaiian Islands. The SEZ was created in 2012 under the False Killer Whale Take Reduction Plan and developed under the authority of the Marine Mammal Protection Act. It was intended to reduce impacts of the Hawai'i deep-set longline fishery on the pelagic stock of false killer whales. At the time the SEZ was implemented, the pelagic stock abundance estimate was less than 500 individuals based on the 2002 survey, which resulted in a SEZ closure trigger of two

observed mortalities or serious injuries in a year. The SEZ was closed for the second consecutive year in February 2019 after the deep-set fishery reached the closure trigger and currently remains closed.

The SEZ closure, combined with other areas that are off-limits to the Hawai'i longline fishery, leaves only 17% of the EEZ around Hawai'i available to Hawai'i longline vessels targeting bigeye tuna. With the impacts from the COVID-19 pandemic, these US EEZ waters closer to the port of Honolulu are important for longline vessels so they can take shorter trips and reduce operational costs. 🐟

Left: Map of the Southern Exclusion Zone established under the False Killer Whale Take Reduction Plan. Combined with other closures around Hawai'i, only 17% of the EEZ is currently open to the Hawai'i deep-set longline fishery. (Source: NMFS, <https://www.fisheries.noaa.gov/pacific-islands/marine-mammal-protection/frequently-asked-questions-about-2019-southern-exclusion>)

