

Early Bloom of Toxic Algae off Southern California Sickens Hundreds of Sea Lions and Dolphins

March 27, 2025

Rescue teams face hard decisions over which animals to save.

Feature Story | West Coast

Harmful algae blooming off the coast of Southern California has poisoned scores of California sea lions and common dolphins that are stranding in large numbers on area beaches.

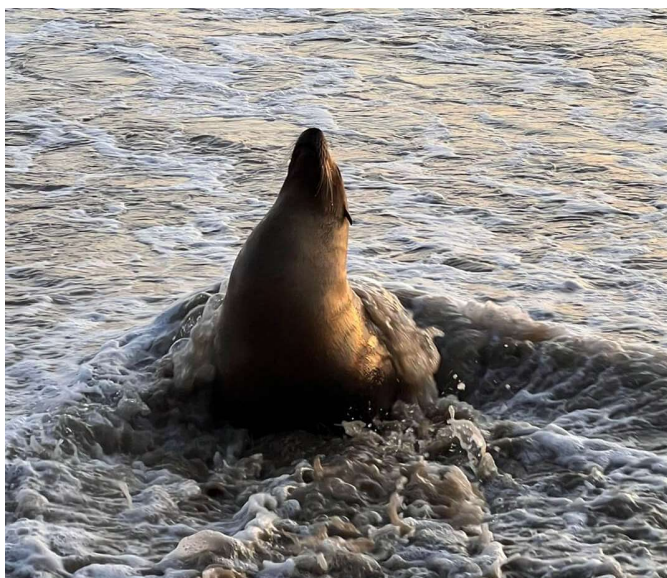
[West Coast Marine Mammal Stranding](#)

[Network](#) partners are reporting upwards of 100 calls a day reporting sea lions and dolphins affected by the algal toxin, domoic acid. Some animals experience seizures on the beach, or may appear to bob their head, while others have died. Beachgoers should remain a safe distance (a [minimum of 50 yards](#)) from affected animals—they can act erratically under the influence of the biotoxin.

In some cases, teams from marine life care centers are bypassing animals with severe domoic acid poisoning and focusing on those that have the greatest chance of recovering.



*A sea lion with domoic acid poisoning experiencing involuntary muscle spasms.
Credit: Channel Islands Marine & Wildlife Institute*



A sea lion with domoic acid poisoning unable to get out of the surf. Credit: Channel Islands Marine & Wildlife Institute

“We are having to do triage on the beach as we try to identify those animals where we have the greatest chance of making a difference,” said John Warner, chief executive officer of the [Marine Mammal Care Center in Los Angeles](#). He said teams responding to strandings have sometimes found dolphins swimming in circles in shallow water near the beach.

Upwelling Fuels Algae

The culprit in the strandings is domoic acid, a neurotoxin produced by the harmful algae *Pseudo-nitzschia* that can multiply quickly in the right conditions. Wind-driven upwelling of deep ocean water provides nutrients that fuel California’s rich marine ecosystem. That same upwelling can also feed

rapid growth of the algae and the toxin it produces.

The toxic algae emerged earlier this year than previous domoic acid outbreaks and so far has been most severe between Los Angeles and Santa Barbara counties. The Southern California Coastal Ocean Observing System shares its [3-day forecast of domoic acid](#) and rough counts of stranded animals.

Fish can accumulate domoic acid, which then poisons marine mammals that eat them, such as the dolphins and sea lions. The current outbreak has affected more than 100 dolphins, which is far more than in previous domoic acid events at this point in the year. Scientists said that the upwelling may have fueled the algae in deeper offshore waters where dolphins are more common.

A pulse of upwelling in mid-February may have contributed to the toxic algae bloom, said Andrew Leising, a research scientist at the Southwest Fisheries Science Center. Marine life was first affected around February 20 near Malibu, California, which is earlier in the year than most previous blooms. Some researchers have questioned whether the [runoff from wildfires in Los Angeles may have also contributed](#). Earlier studies have found elevated nutrients offshore after previous major wildfires.

The NOAA research ship *Reuben Lasker* was surveying ocean conditions off of Southern California when the fires occurred. [Scientists aboard collected samples](#) that will help determine whether and how the fire runoff and debris may have affected ocean waters and marine life.

Upwelling Fuels Toxic Algae Bloom

Animation of sea surface temps off S. California when harmful algae began producing domoic acid toxic to marine mammals. Blue reflects upwelling of cold water that fuels toxic algae, orange/red reflects warmer temps that can accelerate its growth.

Fourth Straight Year of Algal Blooms

This is the fourth year in a row with an algae bloom affecting Southern California marine life. There is often little that responders can do to help dolphins, but they can bring some California sea lions into [authorized rehabilitation facilities](#). Veterinarians treat them by flushing the domoic acid from their systems. During last year's outbreak, the Marine Mammal Care Center erected new pens in its parking lot to hold additional animals affected by domoic acid.

"It does take an emotional toll in the field," Warner said. "Year after year, it's getting tough. Each of our organizations is trying hard to get to as many animals as we can, but we don't have the resources to rescue every one that is out there."

NOAA Fisheries California Stranding Coordinator Justin Vierzbicke thanked the organizations and crews helping respond to the outbreak. He also stressed that only trained crews should attempt to approach stricken animals, which can be dangerous. Beachgoers should stay a safe distance from stranded wildlife, he said.

NOAA's National Centers for Coastal and Ocean Science has a Harmful Algal Bloom Event Response Program that can provide support to state, tribal, and local officials managing events. Interested resource managers or researchers can contact nccos.hab.event.response@noaa.gov for more information.

Network Partners Respond to Affected Animals

After first affecting marine life off Malibu, the toxin from the algae has spread north toward San Luis Obispo. The Marine Mammal Center has responded to several affected animals there. Last year the Center responded to more than 200 animals affected by domoic acid poisoning in San Luis Obispo County over 2 months.

"Since the Center first diagnosed domoic acid poisoning in marine mammals back in 1998, we are increasingly seeing more intense and unpredictable outbreak events," said Dr. Cara Field, Medical Director at The Marine Mammal Center. "While it's currently unclear whether this bloom and the number of responses will intensify along our authorized 600-mile response range, our response and animal care experts are prepared to rescue and treat marine mammals impacted by this neurotoxin."



*A dolphin affected by domoic acid poisoning.
Credit: Andrea Dransfield / Channel Islands
Cetacean Research Unit*

The [Channel Islands Cetacean Research Unit](#) has responded to 50 long-beaked common dolphins stranded on beaches in Santa Barbara and Ventura counties. All of the dolphins died, or were so severely affected that they were humanely [euthanized](#) to reduce the animal's suffering. The [Channel Islands Marine & Wildlife](#) Institute has meanwhile responded to more than 150 affected sea lions, mostly females and some pregnant, on beaches along the same section of coast.

“While numbers are high, we are still at approximately half of the number of dolphins that stranded in 2023,” said Michelle Berman Kowalewski, Founder and Director at the [Channel Islands Cetacean Research Unit](#). “What is unique about this event is that this bloom is very early in the season and doesn't appear to be associated with strong winds or a thick marine layer like we have seen in the past.”

The outbreak has also spread south as far as San Diego County, where SeaWorld has rescued about 16 affected sea lions this year.

Eight long-beaked common dolphins have died on San Diego beaches in the past 2 weeks. This incident is being investigated by NOAA's Southwest Fisheries Science Center. Biological samples collected from these animals will be sent to NOAA's Northwest Fisheries Science Center for biotoxin analyses.

“We're unfortunately getting used to seeing this every year, which demonstrates the importance of the Stranding Network partners that respond to sick animals,” Viezbicke said. “We really rely on these people who are often volunteers doing it because they want to help marine life. It's times like these that we need them most.”

Report stranded sea lions, dolphins, and other marine mammals to the West Coast Region Stranding Hotline: (866) 767-6114.

Last updated by [West Coast Regional Office](#) on April 22, 2025

Source: <https://www.fisheries.noaa.gov/feature-story/early-bloom-toxic-algae-southern-california-sickens-hundreds-sea-lions-and-dolphins>

Accessed July 7, 2026