

Urgent Response to a Rise in Stranded Marine Mammals Affected by Domoic Acid Along Los Angeles County Beaches

From Malibu to Long Beach, high numbers of sea lions and other marine mammals are stranding on Los Angeles County beaches due to domoic acid toxicosis. Domoic acid is a naturally occurring neurotoxin produced by algae that accumulates in fish such as sardines and anchovies, which are then consumed by marine mammals, leading to severe neurological symptoms. This toxin can cause seizures, aggressive behavior, lethargy, dehydration, vomiting, and even death in a variety of marine mammals, dolphins, and seabirds. Recent tests from multiple locations, including near-shore areas and the Channel Islands, show rising levels of domoic acid. In 2017, research by Oregon State University and NOAA scientists linked ocean warming across the Pacific to elevated levels of DA. The study found that warmer oceans increase the likelihood of toxins exceeding safe threshold levels, which can result in mass die-offs of marine mammals and pose potential public health risks to humans.

Currently, the Marine Mammal Care Center (MMCC), a 501(c)(3) non-profit organization, is rescuing and treating sick animals at their hospital. Since its inception in 1992, the organization has been a leader in marine mammal health and conservation in Southern California and is the sole organization authorized by the National Oceanic and Atmospheric Administration (NOAA) to respond to marine mammals in distress. MMCC focuses on marine mammal rescue and rehabilitation, education, and research

and operates year-round along the entire Los Angeles County coastline, including Catalina Island.

The County operates and manages 20 beaches stretching along 25 miles of the County's pristine 75-mile mainland coast. It is estimated that California is home to 50% of all marine mammals in the United States, which includes elephant seals, California sea lions, harbor seals, fur seals (Northern and Guadalupe), multiple dolphin species, and whales. With more than 50 million visitors and locals annually, this dynamic creates public safety, public health, and animal welfare issues that are unique to Los Angeles County.

The County also has the least available shoreline habitat for marine mammals in all of California. Along most of the state's coastline, habitat is dominated by natural rock formations and beaches, where human presence and development are minimal. This provides vital resting areas for marine mammals, offering spaces where they can escape storms, give birth, nurse their pups, or recover from illness or injury. Marine mammals rely on these areas to haul out for essential activities like resting, molting, giving birth, and thermoregulating - behaviors crucial to their survival. However, in recent years, these natural haul-out spots have become increasingly scarce due to growing human development, commercial activity, and public use of coastal areas. As a result, sick or injured marine mammals often have no choice but to come ashore on the heavily populated beaches of LA County, putting them at risk and creating conflicts with the public. This is a key reason why MMCC rescues more marine mammals per mile of coastline in the County than any other stranding organization in the United States.

Each year, MMCC receives over 4,000 calls to its rescue hotline from the public, lifeguards, and local city and county officials reporting marine mammals in distress.

These calls typically lead to 600 to 900 dispatched responses and result in approximately 300 to 600 animal rescues. Calls concerning county-operated beaches make up 60% of all responses and animal admissions for rehabilitation. Venice, Will Rogers, Dockweiler, Redondo, and Malibu beaches, along with the harbor in Marina del Rey, are the primary locations where staff most frequently respond to calls for service and where the highest number of animals are transferred for rehabilitation. Although the number of animals MMCC responds to and rescues varies annually, recent trends show a rising frequency of strandings, with cyclical spikes occurring more often. The causes of these strandings include toxicity from harmful algal blooms, malnutrition, infectious diseases, and entanglements, among other threats.

MMCC is a key partner to coastal cities and Los Angeles County in the management and conservation of our marine natural resources. State, county, and local municipality law enforcement agencies, lifeguards, harbor patrols, and animal control offices work closely with MMCC to ensure a high level of communication, public and personnel safety, and effective marine mammal response. Prior to 2022, former local former local rescue organization, Marine Animal Rescue (MAR), used to save and bring ill and injured sea mammals to the MMCC for rehabilitation. MAR closed due to lack of funding and MMCC took on their role, placing a greater burden on staffing and associated costs. Currently, MMCC needs to raise between \$3 million and \$3.5 million annually to operate at current service levels. Private philanthropy makes up the bulk of the organization's annual revenue, but by adding rescue and response to their operations, it increased their budget by \$600,000. Should the Center not be able to secure funds for the revenue gap, the organization will have to cut services and reduce staffing. This would impact their ability to answer hotlines calls from members of the

public, delay the response times for rescues, reduce the number of animals they could have onsite at the hospital.

The frequency of these harmful algae blooms (HAB) has risen in recent years, driven by climate change, warming ocean temperatures, and other human activities. During the Summer of 2023, the Southern California region experienced its largest HAB event on record. The HAB resulted in the deaths of over 1,000 California sea lions and over 100 long-beaked common dolphins. The severity was heightened as the bloom extended through the July 4th holiday weekend, drawing thousands of beachgoers into close proximity to the affected animals. Inundated with calls from the public and from lifeguards about sick sea lions on beaches throughout LA County, MMCC's hospital facility reached capacity within two weeks of the start of the 12-week event. Following the 2023 Summer event, MMCC continued to be at or near maximum capacity for 8 of the past 12 months, with animals stranding due to malnourishment, disease, entanglement, gunshots, and lack of space to haul out and rest without human interaction.

The current stranding event is already shaping up to be worse than in 2023, and both MMCC and its stranding network partners, including NOAA, expect the domoic acid crisis to intensify in the coming weeks. The volume of animals being rescued and admitted to MMCC's hospital far exceeds the organization's budget and while the exact duration of this domoic acid outbreak remains uncertain, if MMCC continues to admit 3-5 animals per day, the numbers will quickly escalate in the coming weeks. Additionally, this is the time of year when young, starving elephant seal pups begin to strand along the LA County coastline. The combination of these two events is likely to create capacity challenges at MMCC's hospital in San Pedro.

With no other organization authorized by NOAA or having the skills and expertise necessary to do this work, the Center's contribution to public safety, bio-surveillance, scientific research, animal welfare, population health, and public awareness and education in the County is irreplaceable. Recently, the City of Redondo Beach entered into a three-year agreement with MMCC for their services. Moreover, with increasing reports of stranded, entangled, and distressed marine animals in our communities, in addition to the public's increased engaged and the demanding of marine mammal first responder services, MMCC's work is more critical than ever.

I, THEREFORE, MOVE that the Board of Supervisors direct the Chief Executive Office (CEO), in collaboration with the Department of Beaches and Harbors (DBH), to:

1. Report back to the Board in 5 business days with funding options up to \$700,000 to cover MMCC emergency rescue services and medical care for stranded marine mammals affected by the recent toxic algae bloom on beaches managed by the County.
2. Report back to the board in 60 days with recommendations to generate revenue, including but not limited to a round-up donation program at beach concessionaires, a new parking pass program, and other initiatives to support MMCC services and marine mammal welfare in the long-term.
3. Work with the Center for Strategic Partnerships to collaborate with philanthropic partners to seek funding to support services provided by MMCC.

I, FURTHER, MOVE to direct the Office of Emergency Management (OEM) and DBH, in consultation with MMCC, to report back in 60 days on the development of an emergency response plan for mass-stranding and harmful algal bloom events in LA

County.

I, **FURTHER, MOVE** to direct DBH to work in collaboration with MMCC to create a public education and outreach campaign, including but not limited to social media, resident communication channels, and beach signage, on reporting marine mammal issues and best practices on sharing the shore responsibly.

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