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2015 Elevated California Sea Lions Strandings in California: FAQs

Q: Are you seeing anything unusual in California sea lions off the Coast of California this year?

A: We are seeing an unusually large increase of California sea lion pups stranding on the beaches of southern and central California.

Q: Where are the California sea lion pups stranding?

A: Elevated strandings are being reported throughout central and southern California, especially in Santa Barbara through San Diego Counties.

Q: When did the first reports of increased strandings of California sea lions come in?

A: In December/January, the California Marine Mammal Stranding Network started to notice an increase in California sea lion pup strandings in the region. The increase has continued and intensified over the last few months.

Q. How do the stranding numbers for California sea lions you are seeing in 2015 compare to other years?

A: For the 5 month period of January – May 2015, California sea lion strandings were over 10 times the average stranding level for the same 5 month period, during 2004 - 2012.

Year	January	February	March	April	May	Total
2004	16	13	36	33	90	188
2005	35	21	27	59	138	280
2006	16	15	26	45	35	137
2007	33	35	25	61	150	304
2008	35	24	14	36	138	247
2009	77	59	49	74	323	582
2010	52	55	81	211	434	833
2011	19	6	12	17	28	82
2012	21	12	42	69	38	182
2013	113	196	619	243	91	1262
2014	21	47	163	390	241	862
2015	350	850	1050	550	540	3340

Table 1: California Sea Lion Pup and Yearling Strandings for California, Jan-May 2004-2015.

2015 Elevated California Sea Lion Strandings in California

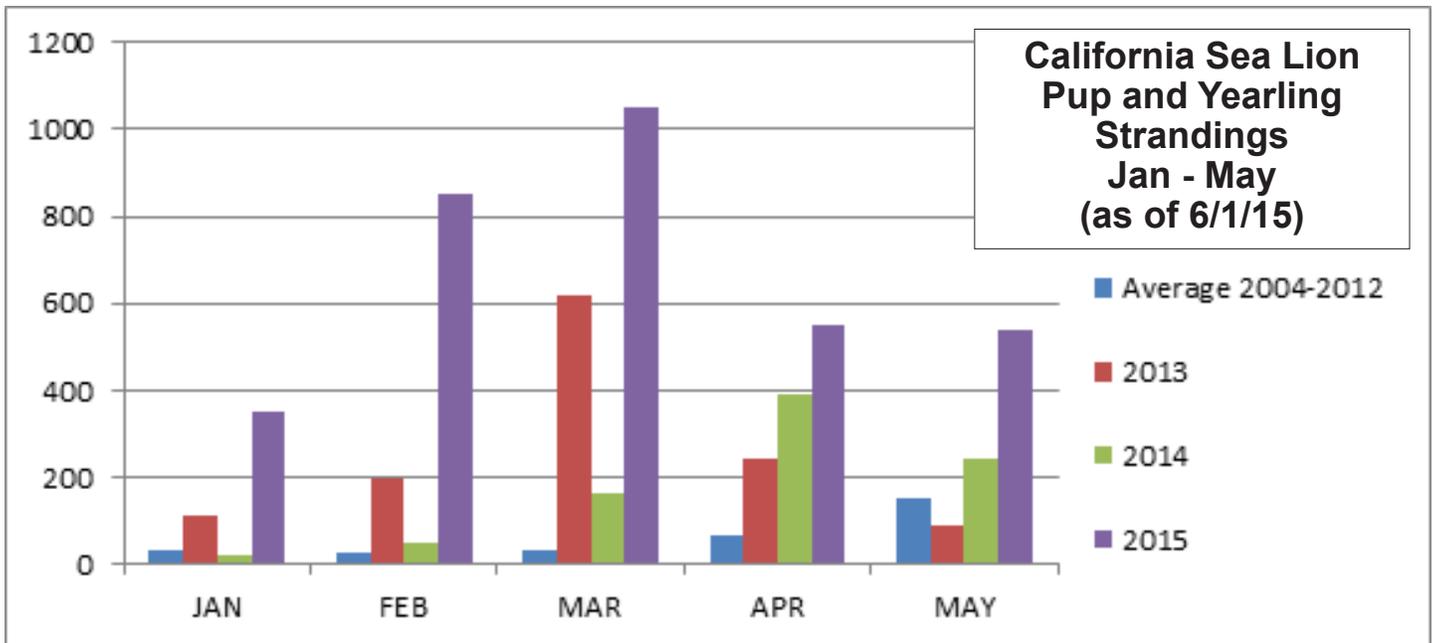


Figure 1: Comparison of monthly strandings for California sea lion pups and yearlings in 2013, 2014 and 2015 versus the average monthly stranding rate (2004-2012).

Q: Why are the California sea lion pups stranding?

A: California sea Lions can strand for a number of reasons including injury, illness, and weather and/or ocean conditions. At this point in the stranding event it is very difficult to pinpoint what is causing the increased strandings in 2015; however we do have several factors to keep a close eye on. In the 2013 Unusual Mortality Event (UME), which started out very much like this year, the UME Investigation Team and NOAA Fisheries determined that a change in availability of sea lion prey was a likely contributor to the event. Availability of prey is very important for nursing sea lion mothers; for the pups as they begin to wean and start foraging on their own; and for the other age classes of sea lions as well. Therefore, prey availability (including amount, type, quality, and location) is one factor that we will continue to monitor in 2015.

Other potential causes for large numbers of increased strandings included infectious disease outbreaks and harmful algal blooms. We currently have no indication of either of these issues being involved in the current event, but we will continue to collect the necessary samples to definitively rule these other factors as causes of the event. As the year progresses we will continue to monitor the health of the stranded animals and partner with scientists in other specialties such as oceanography to help determine if environmental causes may be influencing the increased sea lion strandings.

Q: Is there an El Nino this year and is it impacting the California sea lion pups?

A: In early March 2015, NOAA declared the onset of an El Nino (<http://www.elnino.noaa.gov/>). Although it is predicted to be weak, the California current has been experiencing warmer waters than usual. These changes in sea surface temperature can have significant impacts throughout the food web. Historically, El Nino years have resulted in high numbers of marine mammal strandings, likely due to changes in prey availability and increased physiologic stress on the animals.

Q: Are you concerned about the health of California sea lion pups this year?

A: NOAA Fisheries scientists observe the breeding rookeries for a period of time each year. What they have seen this year as far as pup weight is very similar to what they observed before the 2013 Unusual Mortality Event. They have also noticed that the overall growth rate for pups is actually down a bit from 2013 so these observations do lead us to be concerned about 2015 pup survival rates and predicted increases in strandings of pups on the mainland.

2015 Elevated California Sea Lion Strandings in California

Q: Has this year's event been declared an Unusual Mortality Event?

A: Yes, the Working Group on Marine Mammal Unusual Mortality Events has examined the data from the stranding event thus far and determined that it meets three criteria to be declared a UME: 1. A marked increase in the magnitude or a marked change in the nature of morbidity, mortality, or strandings when compared with prior records; 2. A temporal change in morbidity, mortality, or strandings is occurring; 3. Affected animals exhibit similar or unusual pathological findings, behavior patterns, clinical signs, or general physical condition (e.g., blubber thickness). The Working Group also determined that due to the similarity in the pattern of strandings to 2015, and the fact that stranding rates in 2014 did not return to baseline, that this event should be considered one continuous UME for California sea lion pups from 2013-2015.

Q: What did NOAA Fisheries determine to be the cause of the California sea lion strandings when the UME was initially declared in 2013?

A: The likely cause was that the mothers were unable to provide adequate milk to nourish their pups resulting in premature weaning. The exact mechanism of why this happened remains unknown and will continue to be investigated. Sea lion pups are totally dependent on their mothers for the first six months of their life and are normally weaned at about 11 months of age. If the mothers had difficulty finding food, or had to travel further offshore to find food, then the pups may have tried to feed on their own before they were able, resulting in starvation.

Q: Why was it unusual to find stranded California sea lion pups in January, February, March, and April of 2013 during the Unusual Mortality Event?

A: Typically, the stranding network begins seeing stranded pups in May and June as the young of the year are weaned and begin foraging on their own. California sea lions are born in large rookeries on offshore islands along California and Baja Mexico, with almost all pups born in June each year. Pups typically remain with their mothers for the first 10-11 months of their life and become independent in May of the year after their birth. The 2013 stranding event was unique because most of the strandings were in the first four months of the year and were located in Southern California.

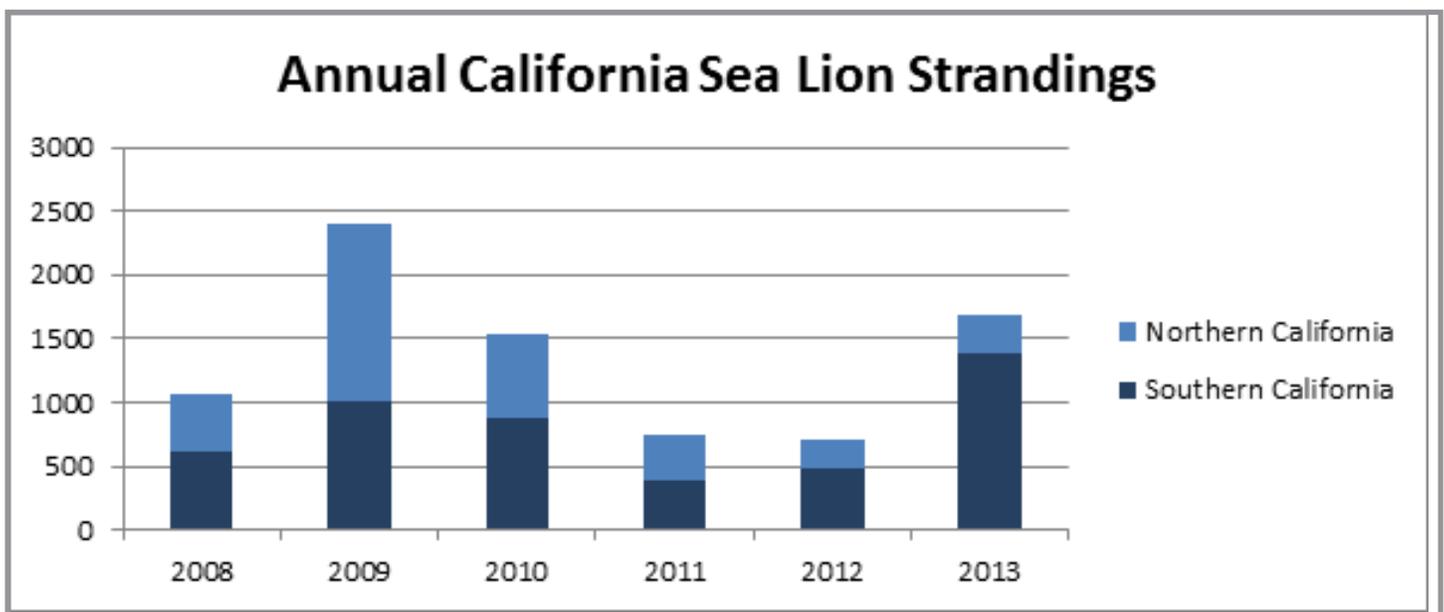


Figure 2. Annual stranding rates of live California sea lions of all age classes from 2008-2013.

Q: So are you expecting a repeat of the elevated strandings as was seen with the 2013 California sea lion UME?

A: Unfortunately, just as in 2013, we are currently experiencing an elevated number of sea lion pup strandings. However, the January-May total for 2015 (3340) is over 2.5 times the number of strandings we experienced during the same five months in 2013 (1262).

2015 Elevated California Sea Lion Strandings in California

Q: What are the findings in stranded animals in 2015?

A: At this time, the increase in strandings seems confined to California sea lion pups (born summer 2014). All live animals are currently being rescued and taken to stranding network centers. Consistent findings in the pups are emaciation and dehydration with most animals very underweight for their age. Long-term average female pup weight at San Miguel Island for 3-month-old pups is about 17.3 kg (~38 lbs). The majority of sea lion pups stranding in January 2015 at 7 months of age have been between 8-12 kg, highlighting the severe emaciation of these stranded pups.

Q: What is NOAA Fisheries doing to determine what is going on with all the stranded California sea lion pups?

A: NOAA Fisheries is working with scientists and network partners to monitor the pupping rookeries to try and forecast some of the increased strandings based on size and weights of the current pups on the Channel Islands. We are also utilizing information that we get from both the rehabilitated and sea lions that die to help determine what may be causing the increased strandings.

Q: What is the purpose of the Marine Mammal Stranding Network?

A: The Stranding Network is one part of NOAA Fisheries' Marine Mammal Health and Stranding Response Program (<http://www.nmfs.noaa.gov/pr/health/>), a statutorily mandated program under the Marine Mammal Protection Act charged with looking at the health of wild marine mammals. The stranding network is authorized by NOAA Fisheries to respond to marine mammals in distress to help provide humane treatment and care, including euthanasia, and investigate the reason why these animals strand to better understand health and health trends of marine mammals, which frequently can inform us about the health of the entire ecosystem.

Q: How are NOAA Fisheries and the Stranding Network preparing for the increased strandings?

A: The Stranding Network facilities are getting prepared by training more volunteers, getting the facilities and staff geared up and ready for high numbers of animals, evaluating possible funding sources for emergency care situations, working with National Marine Mammal Stranding Program to help provide skilled staff members and veterinarians to network facilities to cover shortages, and increasing the public's knowledge on the "do's and don'ts" for dealing with marine mammals on the beach during this very busy time.

Q: What should people do if they encounter a sick California sea lion on the beach?

A: Please contact your local stranding network or local authorities to report a live or dead stranded sea lion.

- Do not touch the sea lion.
- Don't allow pets to approach the sea lion.
- Observe the animal from a safe distance (safe for you and the animal)
- Sick or dead marine mammals should be reported to the following agencies in California.

San Diego County	Sea World Rescue	800-541-SEAL
Orange County	Pacific Marine Mammal Center	949-494-3050
LA County	Marine Animal Rescue	800-399-4253
Malibu City Limits	California Wildlife Center	310-458-9453
Santa Barbara & Ventura Counties	Channel Islands Marine & Wildlife Institute	805-567-1505
San Luis Obispo, Monterey, Santa Cruz, San Mateo, San Francisco, Marin, Sonoma, & Mendocino Counties	The Marine Mammal Center	415-289-7350
Del Norte & Humboldt Counties	Northcoast Marine Mammal Center	707-951-4722

(http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/stranding_maps_and_contacts.html)

2015 Elevated California Sea Lion Strandings in California

Q: What are the names of the Stranding Network rehabilitation facilities caring for the stranded California sea lion pups in California during this event?

- A. Sea World - San Diego
- B. The Pacific Marine Mammal Center – Laguna Beach
- C. The Marine Mammal Care Center – San Pedro
- D. California Wildlife Center-Malibu
- E. Channel Islands Marine & Wildlife Institute – Ventura
- F. The Marine Mammal Center – Sausalito
- G. Northcoast Marine Mammal Center – Humboldt

Q: What is NOAA Fisheries and the Stranding Network doing to deal with all the animals coming ashore? How will they be dealing with the overload of animals at the rehabilitation facilities?

The Stranding Network rehabilitation facilities are doing their best to admit as many animals for which they can provide quality care until the facility reaches capacity. If stranding numbers exceed the size, space and/ or resource limitations of a facility, NOAA Fisheries will begin to limit new admissions of animals. Those pups that can't be brought into rehabilitation will be evaluated and either left on beach for monitoring if their condition is adequate or, for pups in poor condition, brought to a rehabilitation facility for humane euthanasia to relieve suffering. Unfortunately, now that the 2015 stranding numbers have exceeded the 2013 UME numbers, we are running out of available space in the rehabilitation facilities and will be focusing mainly on those pups currently in rehabilitation in order to provide the care needed to successfully rehabilitate these animals and return them to the wild.

Q: Why are facilities not picking up all the animals?

A: The Stranding Network is committed to providing the best achievable care for those animals that they treat. In most years, the capacity of the rehabilitation facilities is adequate to treat all rescued marine mammals. However, in years with elevated stranding rates, such as 2015, there may come a point when resource limitations prevent facilities from continuing to accept more animals in order to maintain the appropriate care for the animals that they are already treating. Additionally, depending upon the location there may be a limited number of rescue vehicles available to respond to stranded animals, so on some days animals may be left on the beach and picked up when resources are available.

Q: What are you doing with those animals not picked up?

A: Options vary by the location where the animal is found. In some cases, the animal is left on the beach where they stranded with repeated monitoring over time. In other cases, the animal may be moved to different beaches for monitoring, frequently to a more remote area where the animal can be on the beach with a reduced presence of humans thereby minimizing additional stress. If the animal is already in a poor condition with little chance of survival, then the animal would be brought to a facility and humanely euthanized by a veterinarian.

Q: Why are you trying to save all of the animals? Why don't you just leave them be and let nature take its course?

A: We do understand that we can't save them all so we try to focus our resources and efforts to rehabilitate those sea lion pups that we feel have the best chances of survival. By collecting information on the health of these stranded marine mammals, the Stranding Network helps NOAA Fisheries learn about changing ocean conditions and how these changes are affecting the environment. All stranded animals represent an opportunity for us to try and learn about what is going on in our coastal marine environments and how these changes may affect the ecosystem and its inhabitants, including us. In addition sick sea lion pups on public beaches of the mainland can also be a significant risk for the safety of the humans and pets that use the beach. Sea lions can and do bite and they also carry diseases that could potentially be passed to humans and pets. It is in the best interest of public safety to appropriately treat the animal, which includes rescue and rehabilitation as long as logistically feasible.

2015 Elevated California Sea Lion Strandings in California

Q: What is the risk to humans from stranded marine mammals?

A: Sea lions are wild animals and may bite people if approached closely. It is not clear at this time if there is any infectious disease risk to human health through contact with these animals, however marine mammals and people can share diseases. The California Department of Public Health is urging the general public to stay away from marine mammals (either live or dead marine mammals) that are stranded on the beach.

Q: Can California sea lions be dangerous?

A: Yes, California sea lions can be dangerous. California sea lions are wild animals. Sea lions are unpredictable and can become aggressive quickly. They have sharp teeth and may bite, particularly if cornered, harassed, sick, or if protecting their young. Sea lions can be playful, however they can also be territorial and dangerous especially during the mating seasons.

Q: Are there any risks to pets from the stranded animals?

A: Pets should always be kept away from marine mammals, particularly diseased or dead marine mammals. Sea lions are unpredictable and can become aggressive quickly. They have sharp teeth and may bite, particularly if cornered, harassed, sick, or if protecting their young.

Q: What should people do if they witness harassment of a California sea lion on the beach?

A: To report violations or for more information on NOAA's Office of Law Enforcement call the toll-free number: 1-800-853-1964.

Q: What can I do to help?

A: Report sightings of stranded animals to 1-866-767-6114 and let the stranding network evaluate the animal to see if rehabilitation is necessary. Please do not attempt to pick up or remove any marine mammal as this type of interaction may cause more harm than good. Also as a reminder just because a seal or sea lion is on shore it doesn't necessarily mean that the animal is in need of assistance. Additionally, the Stranding Network rehabilitation facilities are stretched very thin with the additional demand for their services. You may also consider a donation of time, supplies, or money to help.

Contact information for the impacted facilities can be found on our website at: http://www.westcoast.fisheries.noaa.gov/protected_species/marine_mammals/stranding_maps_and_contacts.html

Q: Have other marine mammals been affected by this stranding event?

A: Yes, there has been an increase in Guadalupe fur seal strandings. This species is primarily found off of Mexico, but warmer waters in Southern California may have caused a northerly shift in their habitat this year. However, the stranding rates for other seal and sea lion species have been normal for this time of year and no increase has been observed in dolphin, porpoise or whale strandings. The Stranding Network will continue to monitor strandings in all species of marine mammals in California and communicate with other wildlife rehabilitation facilities regarding changes in sea bird admissions.

Q: What is the current California sea lion population and where are the main breeding rookeries?

A: The most recent Stock Assessment Report for California sea lions was issued in 2011. The current estimated total population size is ~300,000 animals, with an annual increase of 5.4%. The main US breeding rookeries are located on the Channel Islands and California sea lion pups are born on the islands of San Miguel, San Clemente, San Nicholas and Santa Barbara.

Q: How are California Sea Lions doing as a population, are they endangered?

A: California sea lions in the U.S. are not listed as "endangered" or "threatened" under the Endangered Species Act or as "depleted" under the Marine Mammal Protection Act. In general, the population is increasing, although there have been periods when the population abundance has declined due to factors such as El Nino events, disease, prey availability, etc. The entire population cannot be counted because all age and sex classes are not ashore at the same time. In lieu of counting all sea lions, pups are counted during the breeding season (because this is the only age class that is ashore in its entirety), and the number of births is estimated from the pup count. New pup counts made in 2011 totaled ~60,000 animals, the highest recorded to date. Estimates of total population size based on these counts are currently being developed, along with new estimates of the fraction of newborn pups in the population. The most recent Stock Assessment Report for California sea lions was issued in 2011, and estimated the total population size at just under 300,000 animals.

2015 Elevated California Sea Lion Strandings in California

Q: What is the overall health of the California sea lion population?

A: The species overall is very healthy with an estimated population of 300,000. That was not always the case, in 1972 the population was very low and the implementation of the Marine Mammal Protection Act really helped to save the sea lion population.

Q: What do California sea lions eat?

A: California sea lions are opportunistic predators. They feed on hake, market squid, mackerel, sardines, anchovy, rock fish and other prey.

Q: Are the current levels of strandings a concern for the overall California sea lion population?

A: The current stranding levels are not a major concern for the overall population of California sea lions. The numbers are a concern for NOAA Fisheries because they are higher than historical stranding numbers for sea lion pups but these numbers represent only a very small portion of the overall sea lion population (~0.5% of the population stranded during the 2013 UME). We will be working with scientists, veterinarians and our partners to hopefully determine what is driving these increased strandings so that we can determine the overall population effects.

Q: Where can I find additional information on California sea lions and other Unusual Mortality Events?

A: You can visit the national NOAA Fisheries Protected Resources website at

<http://www.nmfs.noaa.gov/pr/species/mammals/pinnipeds/californiasealion.htm>

<http://www.nmfs.noaa.gov/pr/health/mmume/>