



# MARINE MAMMAL COMMISSION

25 August 2015

Ms. Jolie Harrison, Chief  
Permits and Conservation Division  
Office of Protected Resources  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910-3225

Re: Permit Amendment Application No. 17952  
(Daniel Costa Ph.D.,  
University of California Santa Cruz)

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced permit amendment application with regard to the goals, policies, and requirements of the Marine Mammal Protection Act (the MMPA). Dr. Costa is seeking to amend permit 17952 that authorizes him to conduct research on California sea lions from California to Washington—the permit expires on 7 June 2018.

Dr. Costa is authorized to conduct research year-round on California sea lions along the U.S. West Coast, primarily on the Channel Islands and Año Nuevo Island, California. The purpose of the research is to investigate (1) foraging ecology and diving physiology, (2) movements and habitat use patterns, and (3) health and disease of California sea lions. Authorized activities include harassing, capturing, handling, restraining, holding, administering drugs to, measuring, weighing, marking/tagging, sampling, conducting procedures on (i.e., conducting ultrasound, stomach lavage, and enemas, administering Evan's blue dye and deuterium oxide and conducting serial blood sampling, using a metabolic chamber), and attaching instruments to numerous California sea lions. Dr. Costa is authorized to conduct the specified activities on individuals of various age classes and either sex (see the Take Table).

Dr. Costa is requesting multiple changes to his permit, including—

- (1) adding the use of remotely-delivered sedatives (i.e., darting) and reversals, if necessary to capture adult and juvenile California sea lions of either sex—adult females and juveniles of either sex would be darted only as a last resort when other means of recapture either are not safe or fail;
- (2) increasing the incidental harassment of California sea lions by 1,000 sea lions and adding the incidental harassment of up to 10 Steller sea lions per year based on an increase in activities at Año Nuevo Island; and

- (3) adding the disentanglement of up to 25 California sea lions of any age class or either sex each year—activities could include handling and restraining, administering drugs<sup>1</sup> or anesthesia, marking with dye or flipper tags, and disentangling.

Dr. Costa's Institutional Animal Care and Use Committee currently is reviewing the new research protocols. The Commission has had concerns regarding darting animals in the past. Dr. Costa indicated that a qualified veterinarian or researcher with experience darting otariids would be involved in the initial efforts to dart animals, and veterinary personnel would likely be present for most darting activities to handle any complication associated with the drugs and to administer additional sedation, if necessary. Dr. Costa also noted that the drugs proposed for use have been used to successfully dart California sea lions both for wild-caught and entangled/stranded animals. The proposed drug combinations have allowed for either normal respiration or effective swimming and diving behavior when animals have entered the water. However, if an animal enter the water, researchers would monitor the animal's behavior either from shore or a boat and would administer sedation reversals, if necessary. To minimize risks, the lowest dose of the sedative would be given that would allow for the lowest level of immobilization for the briefest period of time while still allowing for safe capture of the animal. Since darting does have inherent risks and has not been conducted on adult female or juvenile California sea lions, the Commission believes that the National Marine Fisheries Service (NMFS) should continue to take a precautionary approach, as it has with authorizing darting activities under the Steller sea lion and bearded seal permits. Therefore, the Commission recommends that NMFS condition the permit to require monitoring of California sea lions that have been darted and report on (1) their behavioral response and any activities that place them at heightened risk of injury or death, (2) whether they entered the water and their fate could not be determined, and (3) whether the dependent pups of those darted sea lions are abandoned, injured, or killed<sup>2</sup> and whether the pups' behavior in response to darting the females is notably different from other capture methods. The Commission further recommends that NMFS condition the permit to halt the use of the darting technique and consult with NMFS and the Commission if three or more California sea lions are darted and suffer unanticipated adverse effects, including entering the water and either drowning or disappearing so that their fate cannot be determined.

The Commission believes that the activities for which it has recommended approval are consistent with the purposes and policies of the MMPA. Kindly contact me if you have any questions concerning the Commission's recommendations.

Sincerely,



Rebecca J. Lent, Ph.D.  
Executive Director

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<sup>1</sup> Including darting adults and juveniles and administering antibiotics if necessary.

<sup>2</sup> Either by other sea lions or by the researchers, as required by permit condition III.B.5.g.