



# MARINE MAMMAL COMMISSION

8 May 2017

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 Application No. 20043  
(Whitlow Au, Ph.D.,  
University of Hawaii)

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 application with regard to the goals, policies, and requirements of the Marine Mammal Protection Act (the MMPA). Dr. Au is seeking to renew his permit to conduct research on cetaceans in Hawaii during a five-year period—permit 14682 authorized similar activities.

Dr. Au proposes to conduct research on numerous species of cetaceans in Hawaii year-round. The purpose of the research is to investigate (1) abundance and distribution, (2) foraging ecology, (3) social and genetic structure, (4) movement patterns and habitat use, and (5) use of sound and behavioral response of cetaceans to various sounds. Researchers would harass, observe/track<sup>1</sup>, photograph/videotape<sup>2</sup>, record acoustically and conduct playbacks on<sup>3</sup>, sample<sup>4</sup>, and/or instrument<sup>5</sup>, numerous cetaceans of both sexes and various age classes (see the take tables). Biopsy sampling and tagging would not be conducted on calves less than 2 weeks of age for humpback whales<sup>6</sup> or calves less than 1 year of age (less than  $\frac{3}{4}$  of an adult size) for odontocetes. Females with those calves also would not be biopsy sampled or tagged. Various species of cetaceans could be harassed incidental to the proposed activities (see the take tables).

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<sup>1</sup> Including conducting focal follows.

<sup>2</sup> Including using snorkelers and conducting photogrammetry.

<sup>3</sup> Including determining what, if any, effects are observed from target or non-target species based on sound emitted from the 45-kHz pinger discussed herein.

<sup>4</sup> Including sloughed skin.

<sup>5</sup> With either suction-cup or dart tags. Up to two tags, but no more than one dart tag, could be attached to an individual humpback whale. A 45-kHz pinger could be attached to either a suction-cup or dart tag as long as responses of neither target nor non-target species are observed (see the application for specifics). The 45-kHz pinger would operate at a source level of no more than 180 dB re 1  $\mu$  Pa at 1 m. In addition, a pinger of even higher frequency (60 to 80 kHz) could be attached to some of the suction-cup tags—source levels of those pingers would not exceed 158 dB re 1  $\mu$  Pa at 1 m. Pingers only would be deployed on humpback whales.

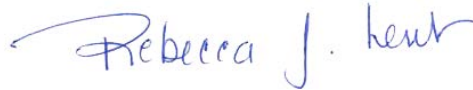
<sup>6</sup> Dart tags would be deployed only on juvenile and adult humpback whales.

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To minimize disturbance, researchers would cease activities if an animal exhibits a strong negative response (e.g., breaches not observed prior to sampling or tagging, strong avoidance behavior, or failure to return to a previous behavior that lasts longer than 5 minutes). Vessels would approach animals slowly, would remain parallel or behind the animals, and would not change speed abruptly. Females also would not be separated from their calves. During underwater activities, snorkelers would approach the whales slowly from the side or from behind and minimize splashing or bubbles created while swimming. Dr. Au would collaborate with personnel at the Hawaiian Islands Humpback Whale National Marine Sanctuary, Pacific Islands Fisheries Science Center, Marine Mammal Health and Stranding Response Program, Cascadia Research Collective, and State of Hawaii Department of Land and Natural Resources. The Institutional Animal Care and Use Committee is in the process of reviewing the research protocols. The Commission believes that the proposed activities are consistent with the purposes and policies of the MMPA and recommends that the National Marine Fisheries Service issue the permit, as requested.

Kindly contact me if you have any questions concerning the Commission's recommendation.

Sincerely,



Rebecca J. Lent, Ph.D.  
Executive Director