



# MARINE MAMMAL COMMISSION

28 September 2015

Mr. Timothy J. Van Norman, Chief  
Branch of Permits, MS: IA  
Division of Management Authority  
U.S. Fish and Wildlife Service  
5275 Leesburg Pike  
Falls Church, Virginia 22041-3803

Re: Permit Amendment Application No. 186914  
(Monterey Bay Aquarium)

Dear Mr. Van Norman:

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). The Monterey Bay Aquarium (MBAQ)<sup>1</sup> is seeking to amend its permit to conduct research on sea otters that have been rescued from the wild, are undergoing rehabilitation, and could be returned to the wild—the permit expires on 13 October 2019.

MBAQ's research focuses on sea otter (1) health, disease, and basic biology, (2) stress, (3) behavior and cognition, (4) foraging ecology and movement patterns, and (5) survival. Researchers are authorized to harass, observe, capture/recapture, transport, restrain, sedate, sample,<sup>2</sup> instrument, and conduct a controlled pharmacokinetics study on sea otters. MBAQ is authorized to conduct the specified activities on individuals of various age classes and either sex. It also has been authorized up to one research-related mortality<sup>3</sup> (intentional via euthanasia or unintentional) during the permit duration.

MBAQ is requesting to test new implantable life history (LHX-2) tags<sup>4</sup> in sea otters in a controlled setting to determine whether those tags can be deployed safely in sea otters in a field setting. The tags would transmit various life history and end-of-life data. MBAQ proposes to implant<sup>5</sup> (1) a LHX-2 tag in up to three releaseable or non-releaseable sea otters<sup>6</sup> and (2) after the effects on the first three animals have been assessed, a LHX-2 tag and the standard VHF radio transmitter in up to three additional releaseable or non-releaseable sea otters<sup>7</sup>. The LHX-2 tag would

---

<sup>1</sup> MBAQ also is authorized to take southern sea otters associated with rescue, rehabilitation, and release to the wild under permit 032027

<sup>2</sup> With PIT and flipper tags.

<sup>3</sup> Including necropsy.

<sup>4</sup> The tag is positively buoyant, 95 x 33 mm in size, and 54 g in mass.

<sup>5</sup> Including administering antibiotics consistent with current implant protocols.

<sup>6</sup> Weighing at least 12 kg.

<sup>7</sup> Weighing at least 15 kg.

Mr. Timothy J. Van Norman  
28 September 2015  
Page 2

be removed 10 weeks after implantation. Biopsy sampling<sup>8</sup> would be performed (1) during the initial surgery to establish a baseline, (2) at 2 and 6 weeks post-implantation, and (3) when the LHX-2 tag is removed. Animals would be released no less than 2 weeks after the explant surgery. If VHF radio tags are not implanted initially, they would be implanted when the LHX-2 tag is removed.

All sedation, sampling, and surgical implantation would occur under the supervision and discretion of the attending veterinarian. Tags would be implanted only in clinically healthy individuals and in females not known to be pregnant. MBAQ's Institutional Animal Care and Use Committee has reviewed and approved the research protocols.

The Commission believes that the proposed activities are consistent with the purposes and policies of the MMPA and therefore recommends that the Fish and Wildlife Service issue the permit amendment, contingent on inclusion of the current permit conditions. Kindly contact me if you have any questions concerning the Commission's recommendation.

Sincerely,



Rebecca J. Lent, Ph.D.  
Executive Director

---

<sup>8</sup> Blood sampling also would occur.