7 November 2016

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. 20599
(Southwest Fisheries Science Center)

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 request with regard to the goals, policies, and requirements of the Marine Mammal Protection Act (the MMPA). Southwest Fisheries Science Center (SWFSC) proposes to conduct research on pinnipeds in Antarctica during a five-year period—permit 16472 authorized the same activities.

SWFSC proposes to conduct research on six pinniped species in the South Shetland Islands and on the Antarctic Peninsula during austral summers. The purpose of the research is to investigate (1) abundance and distribution, (2) various life-history parameters, (3) foraging ecology and energetics, and/or (4) disease and health of pinnipeds. Researchers would harass, capture[1], handle, restrain, measure/weigh, sedate[2], mark[3], sample[4], conduct procedures on[5], and/or attach instruments[6] on numerous individuals of the six pinniped species per year (see the Take Tables). Instruments would be removed by the researchers when the animals return from a foraging trip[7] or would fall off during the animals' annual molt. Only dependent Antarctic fur seal and Weddell seal pups[8] would be captured, handled, restrained, measured/weighed, sampled[9], and marked[10](see the Take Tables). Each dependent pup would be held until the female has recovered from anesthesia

[1] Animals could be recaptured to remove instruments.
[2] Including via remotely deployed darts.
[3] With flipper and PIT tags.
[4] Including blood, vibrissae, hair, nails, swabs, milk, feces, skin, blubber, muscle, and/or a tooth. A tooth would be extracted only from juvenile or adult Antarctic fur seals. All samples could be imported/exported for analysis.
[5] Including (1) conducting photogrammetry, ultrasound, enemas, and/or lavage and/or (2) administering Evan's blue dye and/or doubly-labeled water with serial blood sampling and/or amino acid glycine markers to determine vibrissae growth rates.
[6] But not to pups less than 4–6 weeks of age.
[7] Generally within a few days.
[8] Pups of the other species would be captured post-weaning.
[9] Including blood, skin, hair, vibrissae, swabs, and/or feces. Lavage and the doubly-labeled water technique would not be conducted on pups less than approximately 1 week of age. All samples could be imported/exported for analysis.
[10] With flipper tags, latex paint, and/or bleach or by clipping hair.

and the pair can be reunited. Researchers could conduct aerial[11] and ground surveys of the various pinniped rookeries. Non-target individuals of each of the six species may be harassed incidentally during the proposed activities.

The Commission has had some ongoing concerns regarding darting animals. SWFSC indicated that researchers trained in remotely sedating would be darting the various pinniped species. Animals would be darted as far away from the water as possible. Although the anesthetic agents administered should allow the animal to swim/float if it goes into the water, researchers also could administer reversals, if necessary. Since darting has inherent risks, the Commission believes that NMFS should continue to take a precautionary approach, as it has with authorizing darting activities under other pinniped permits. Therefore, the Commission recommends that NMFS condition the permit to require monitoring of the pinnipeds 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 any darted pinnipeds are abandoned, injured, or killed[12] and whether the pups' behavior in response to darting the females is notably different from their response to 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 pinnipeds are darted and suffer unanticipated adverse effects, including entering the water and either drowning or disappearing so that their fate cannot be determined.

In addition, SWFSC requests a small number of annual mortalities[13] for Antarctic fur seals, leopard seals, southern elephant seals, and Weddell seals—those animals would be necropsied. If a lactating female Antarctic fur seal dies as a result of research activities, SWFSC indicated that the dependent pup[14] would have no chance of survival and proposed to euthanize the pup. The Commission doesn't necessarily believe that all dependent pups should be euthanized, particularly older and/or healthier pups. The Commission understands that NMFS agrees and plans to condition the permit to require that, if a lactating female dies as a result of the research activities and her dependent pup can be identified, the Principal Investigator or Co-investigator (the PI/CI) would evaluate the pup's age, health, and ability to survive on its own rather than assuming that all dependent pups would not survive and thus should be euthanized. If the PI/CI determines that the dependent pup is not likely to survive, then the pup could be euthanized. The Commission understands many factors must be evaluated to determine whether to euthanize a dependent pup and supports NMFS's case-by-case approach. That approach must balance the possibility of the pup surviving against the fact, in some cases, it may be more humane to euthanize the pup than to allow it to starve—a difficult but necessary decision the PI/CI must make.

To minimize disturbance of non-target animals and to optimize safety of both the animal and the researchers, SWFSC generally would select an animal to be captured based on location and accessibility of the animal. Researchers would work as quickly as possible to minimize capture time for each animal, including a female and her pup. After a female and her pup are released, researchers would stay low to the ground and carefully watch the marked pup and female to ensure

[11] Using unmanned aerial systems.
[12] By the researchers if euthanasia was deemed necessary.
[13] By either unintentional mortality or intentional mortality (i.e., euthanasia for humaneness purposes).
[14] Which could range in age from a few days old to four months of age or more.

reunion—all research activities would be suspended until the female and pup are reunited. To minimize disturbance during ground activities, researchers would walk along the periphery and within the intertidal zone when possible. They also would stay low and move slowly. Further, SWFSC would coordinate its activities with numerous other researchers working in Antarctica. SWFSC's Institutional Animal Care and Use Committee has reviewed and approved the proposed research protocols.

The Commission believes that the proposed activities are consistent with the purposes and policies of the MMPA. Please contact me if you have any questions regarding the Commission's recommendations.

Sincerely,

Rebecca J. Lent

Rebecca J. Lent, Ph.D.
Executive Director