



MARINE MAMMAL COMMISSION

7 September 2021

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. 25786
(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 application 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 20599 authorized similar activities.

SWFSC proposes to conduct research on Antarctic fur seals (AFS), leopard seals, and Weddell seals 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, observe, photograph/videotape¹, capture, handle, restrain, sedate², mark³, sample⁴, conduct procedures on⁵, and/or attach instruments to numerous individuals of the three pinniped species per year (see the take tables for specifics). SWFSC requested up to two mortalities per year for leopard and Weddell seals⁶, which could be either unintentional or intentional⁷, as well as authorization to import, receive, possess, and/or export samples from pinnipeds. Researchers would use various measures to minimize impacts on pinnipeds and also would be required to abide by the National Marine Fisheries Service's (NMFS) standard permit conditions. SWFSC's Institutional Animal Care and Use Committee has reviewed and approved the proposed research protocols. The research would also be authorized by the National Science Foundation under Antarctic Conservation Act permit 2022-002, which is currently under review.

¹ Including using unmanned aircraft systems.

² Including via remotely deployed darts.

³ With flipper and PIT tags.

⁴ Including blood, vibrissae, hair, nails, swabs, milk, feces, skin, blubber, and/or muscle.

⁵ Including conducting ultrasound.

⁶ For AFS, nine mortalities per year were included in the take table but six mortalities per year were specified in the application text.

⁷ Via euthanasia for humaneness purposes.

Permit review process

On 5 August 2021, NMFS published SWFSC's application in the *Federal Register* (86 Fed. Reg. 42790) for public comment. Based on its informal review of the application available online, the Commission found that some of the information required in NMFS's 2016 application instructions and its implementing regulations was not consistent or clearly articulated in the application. As the Commission has stated repeatedly in previous letters⁸, it is NMFS's responsibility to ensure that applicants provide consistent information, abide by the application instructions, and provide the information necessary to establish that an application is complete prior to publishing a notice of availability in the *Federal Register*. By continuing to publish applications with missing, insufficient, or inconsistent information, NMFS perpetuates a review process that lacks transparency and makes it difficult for the Commission and the public to provide meaningful assessments⁹. Therefore, the Commission recommends that, prior to publication of any application in the *Federal Register*, NMFS staff review each application in light of the applicable instructions to ensure that all required information is included, is internally consistent, is consistent with NMFS's policies, and is in a format that facilitates review by the Commission and the public.

In accordance with NMFS's recently revised permit process, the Commission provided to NMFS a list of informal comments and questions with the understanding that the agency would provide a final, revised application to the Commission based on relevant responses from the applicant. However, NMFS did not provide the Commission with a final, revised application. Instead, the Commission received only the applicant's responses to its comments and questions. While most of the responses were sufficient to address the Commission's initial concerns and indicated that the application would be amended accordingly, some ambiguities still remain. For example, the Commission had noted informally that the requested number of mortality takes for AFS was inconsistent between the text of the application and the take tables¹⁰. Based on the applicant's response, it appears that the requested number in the take table is in fact correct, yet it was not clear whether the application text would be revised accordingly. If NMFS decides to issue a permit to SWFSC, the Commission recommends that NMFS ensure that the final permit application includes the relevant revisions based on responses to the Commission's informal comments.

Capture of AFS female-pup pairs

SWFSC proposed to capture AFS female-pup pairs to assess the survival of pups relative to the attendance and foraging behavior of the females. A pup older than 12 hours could be captured with a noose and gently pulled out of a group of seals in order to lure out the target female, which would then be captured with a hoop net. The female could undergo full sample processing and/or

⁸ e.g., its [9 December 2020 letter](#) for Marine Mammal Lab and its [4 February 2019 letter](#) for Dr. Heather Liwanag.

⁹ The Commission began conducting more detailed informal reviews of applications five years ago when it became apparent that NMFS was not ensuring that its application instructions were being followed and that accurate and consistent information was being provided by the applicant. Prior to this informal review process, final applications were inaccurate or inconsistent such that it was difficult to determine what activities and procedures were authorized by way of the permit and included take tables that were missing information or that included inaccurate and inconsistent information.

¹⁰ In the application text, three mortality takes had been requested for both pups and adults killed in the course of research activities, while in the take table, an additional three mortality takes had been denoted to account for humane euthanasia of dependent pups of females killed during research.

instrumentation under sedation for up to 45 minutes, while the pup would be measured, weighed, bleach marked, possibly sampled for a vibrissa, and then retained by the researchers until the female becomes alert again. The female and pup would then be released together and monitored until the pair reunite.

Given the very young age at which an AFS pup could be handled, the Commission feels that additional mitigation measures are necessary. Excessive distress, fatigue, or injury experienced by a pup during its capture or processing could be life-threatening. For example, a pup could be injured if a female succeeded in grabbing a noosed pup in its mouth or if a territorial male tried to interfere in any capture attempts. If the above problems occur or if the female eludes capture, the pup should be released immediately. As such, the Commission recommends that NMFS condition the final permit to require SWFSC to cease all research activities on an AFS pup and immediately release it to reunite with the female (1) if the female cannot be captured following restraint of the pup or (2) if the pup is injured during the capture process. Further, the Commission recommends that NMFS require SWFSC to (1) carefully monitor an AFS pup during capture, restraint, and processing for any signs of distress, fatigue, or injury and (2) immediately release it if any such signs are observed.

Finally, based on SWFSC's responses to the Commission's comments, the Commission understands that SWFSC has requested three annual mortalities¹¹ for AFS dependent pups. If a lactating female AFS dies as a result of research activities, SWFSC indicated that the dependent pup¹² would have no chance of survival and proposed to euthanize the pup. The Commission doesn't necessarily believe that all dependent pups in this situation would have no chance of survival and 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 would 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.

Remote sedation

The Commission has had ongoing concerns regarding remotely sedating 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 remote sedation activities under other pinniped permits. Therefore, if NMFS decides to issue a permit to SWFSC, the Commission recommends that NMFS condition the permit to require SWFSC to monitor pinnipeds

¹¹ By intentional mortality (i.e., euthanasia for humaneness purposes).

¹² Which could range in age from 12 hours to four months of age or more.

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that have been remotely sedated from the time of darting to time of recovery from sedation 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, (3) whether the dependent pups of those darted pinnipeds are abandoned, injured, or killed¹³, and (4) 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 remote sedation 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.

Please contact me if you have any questions regarding the Commission's recommendations.

Sincerely,



Peter O. Thomas, Ph.D.
Executive Director

¹³ Either by other pinnipeds or by the researchers.