



NATIONAL SCIENCE FOUNDATION

Notice of Permit Applications Received under the Antarctic Conservation Act of 1978

AGENCY: National Science Foundation.

ACTION: Notice of Permit Applications Received under the Antarctic Conservation Act of 1978, P.L. 95-541.

SUMMARY: The National Science Foundation (NSF) is required to publish a notice of permit applications received to conduct activities regulated under the Antarctic Conservation Act of 1978. NSF has published regulations under the Antarctic Conservation Act at title 45 part 671 of the Code of Federal Regulations. This is the required notice of permit applications received.

DATES: Interested parties are invited to submit written data, comments, or views with respect to this permit application by **[INSERT DATE 30 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. This application may be inspected by interested parties at the Permit Office, address below.

ADDRESSES: Comments should be addressed to Permit Office, Room 755, Division of Polar Programs, National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230.

FOR FURTHER INFORMATION CONTACT: Nature McGinn, ACA Permit Officer, at the above address or ACAperrmits@nsf.gov.

SUPPLEMENTARY INFORMATION: The National Science Foundation, as directed by the Antarctic Conservation Act of 1978 (Public Law 95-541), as amended by the Antarctic Science, Tourism and Conservation Act of 1996, has developed regulations for the establishment of a permit system for various activities in Antarctica and designation of certain animals and certain geographic areas requiring special protection. The regulations establish such a permit system to designate Antarctic Specially Protected Areas.

APPLICATION DETAILS:

1. Applicant

Permit Application: 2016-024

Ari S. Friedlaender, Ph.D., Marine Mammal Institute, Oregon State University, Hatfield Marine Science Center, 2030 SE Marine Science Drive, Newport, OR 97365

Activity for Which Permit is Requested

Waste Permit. The applicant will conduct research around the Antarctic Peninsula to determine the ecological role of baleen whales. Recently developed sensor tags will be used to collect data on the underwater movement and behavior of the whales. Over time, the applicant will be able to determine how changes in the whales' behavior correspond to changes in sea ice, krill, and other critical aspects of the Antarctic marine ecosystem that are at risk from rapidly changing climates. The applicant will also collect skin and blubber biopsy samples to gain a better understanding of the identity, population structure, and health of the whales. The applicant will collaborate with Antarctic tour operators that will provide platforms to the applicant's research team in order to gather data during time periods that are undersampled. The applicant is seeking a waste permit to cover any accidental releases that may occur if the biopsy darts and/or tags are lost.

Multi-sensor, suction cup tags. The tags contain electronic sensors that are contained in a syntactic foam housing (400g in weight). The tags also contain a VHF radio beacon that aids in tag retrieval via standard radio tracking equipment. The tags remain on whales for up to 24 hours via silicon suction cups. When they are shed, they float and are retrieved using radio telemetry tracking tools. The applicant's research team remains in visual or radio contact with the tag continuously while it is deployed and until it is recovered. While tag failure is rare, if the VHF transmitter fails the tag would likely remain floating until it became beach-cast. In the applicant's experience, VHF failure occurs rarely, less than 1% of all deployments. A lost tag would constitute waste in the form of 300 grams of syntactic foam, 100 grams of electronics and 20 grams of silicon suction cups. The research teams are comprised of experienced researchers with many years of field time. By employing personnel such as this, the applicant minimizes the risk of generating waste and losing any equipment due to human error.

Biopsy darts. Biopsy sampling is done with a crossbow firing a floating dart, made of aluminum and carbon fiber, that bounces off the whale's body after extracting a tiny plug of tissue. The biopsy tips are a 40 mm stainless steel barrel. The bolts also contain a 5x2cm foam float that is used to aid in dart retrieval. The bolts are highly visible and remain at the surface for retrieval. The applicant will only collect samples when weather and light conditions are good and offer the best chance at retrieving the bolt. The applicant's research team generally takes samples at a range of 10-30 meters that allows them to maintain visual contact with the bolt when it is in the water. During

biopsy sampling, the team has an observer whose job is to maintain visual contact with the bolt until retrieval. The applicant's research team has collected over 500 biopsy samples in Antarctica on various projects and has only failed to retrieve two bolts to date. When bolts are lost, it is likely that they would remain floating for some time unless the foam breaks in which case the bolt would likely sink quickly.

Location

Antarctic Peninsula

Dates

February 23, 2016 to April 30, 2020

Nadene G. Kennedy
Polar Coordination Specialist
Division of Polar Programs

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