



# MARINE MAMMAL COMMISSION

21 March 2011

Mr. Timothy J. Van Norman  
Chief, Branch of Permits  
Division of Management Authority  
U.S. Fish and Wildlife Service  
4401 North Fairfax Drive  
Arlington, VA 22203

Re: Request for Amendment of Permit No. PRT-690038  
(U.S. Geological Survey, Alaska Science Center)

Dear Mr. Van Norman:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced permit amendment request with regard to the goals, policies, and requirements of the Marine Mammal Protection Act.

## **RECOMMENDATION**

The Marine Mammal Commission recommends that the Fish and Wildlife Service grant the amendment request provided that—

- the proposed research has been reviewed and approved by the permit holder's Institutional Animal Care and Use Committee; and
- the conditions currently contained in the permit remain in effect.

## **RATIONALE**

The permit holder currently is authorized to take up to 285 polar bears annually over five years for research purposes. Researchers are authorized to capture, measure and weigh, sample, biopsy, tag, mark, conduct bioelectrical impedance measurements on, and release bears. Up to 75 polar bears may be taken by capture, tagging with "glue-on" or ear-tag radio transmitters, instrumentation, collection of milk samples, muscle biopsies, and implantation with internal body temperature data-loggers. Up to 160 bears may be biopsy darted annually. Up to 30 female polar bears may be taken in maternal dens during surveys using forward-looking infrared-equipped aircraft. The permit holder also is authorized to import an unspecified number of blood, tissue, and tooth samples collected from polar bears taken legally in Canada, Greenland, Norway, and Russia and to export samples to researchers in those countries.

The permit holder is requesting that the permit be amended to authorize an increase in the number of animals that can be biopsy darted from 160 to 300 bears annually, and to include authorization for paint marking each bear that is biopsy darted. The permit holder has submitted the proposed amendment to the agency's Institutional Animal Care and Use Committee for review.

The permit holder is seeking the proposed amendment based on the following rationale.

- Collecting biopsy samples by darting polar bears from a helicopter reduces the need to capture (by injecting animals with immobilizing drugs) and handle them. (As a related matter, the permit holder notes that subsistence hunters have expressed concern about the possibility of consuming drug-tainted meat from harvested bears.)
- In 2010, the U.S. Geological Survey initiated a project to create a genetic database to identify polar bears in the southern Beaufort Sea. Genotyping of 20 microsatellite markers of 324 archived samples was 100 percent successful in establishing unique individual fingerprints. Genotyping of another 49 tissue samples collected through remote biopsy darting in summer and autumn 2010 was 96 percent successful in establishing the identification of individuals. In addition, the permit holder states that biopsy darting reduces potential biases in data collection because polar bears may be identified in habitats where safe capture is not possible (e.g., near open water or in areas with dense congregations of polar bears). The permit holder also notes that expanding the number of animals from which samples can be collected will augment several different lines of research including abundance, distribution, composition, and habitat use.
- The use of a marking system for identifying animals that already have been darted would ensure that they are not re-sampled within a single season. The permit holder proposes to dye-mark each bear that has been darted.

The permit holder is currently authorized to biopsy dart up to 160 polar bears annually – a number established for summer terrestrial studies. The permit holder states that this number is likely insufficient to allow additional biopsy darting during the spring when researchers conduct mark-recapture field work on the sea ice.

As noted in its 26 August 2010 letter commenting on the permit holder's previous amendment request, the Marine Mammal Commission appreciates the potential value of this research. Because the researchers will closely track the animals in this study, and because the permit holder has not requested an increase in the number of polar bears that may be captured or the number of serious injuries or deaths that are authorized, the Commission supports the requested amendment. The Marine Mammal Commission therefore recommends that the Fish and Wildlife Service approve the amendment request, provided that the proposed research has been reviewed and approved by the permit holder's Institutional Animal Care and Use Committee and the conditions currently contained in the permit remain in effect.

The Commission believes that the activities for which it has recommended approval are consistent with the purposes and policies of the Marine Mammal Protection Act and the Endangered Species Act.

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Please contact me if you have any questions concerning this recommendation.

Sincerely,

A handwritten signature in blue ink that reads "Peter O. Thomas, Sr." The signature is written in a cursive style.

Timothy J. Ragen, Ph.D.  
Executive Director