



# MARINE MAMMAL COMMISSION

18 December 2018

Dr. Mary Cogliano, 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 Application No. 85339C  
(Karyn Rode, Ph.D.,  
U.S. Geological Survey)

Dear Dr. Cogliano:

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). Dr. Rode proposes to conduct research on captive polar bears—permit 95406A authorized previous research activities on captive polar bears.

Dr. Rode proposes to conduct research on captive polar bears at multiple facilities on a year-round basis. Adult polar bears of either sex would be marked with dye, provided isotopically labeled food and water<sup>1</sup>, and sampled<sup>2</sup> at various intervals throughout the year (see the research proposals for specifics). The purpose of the proposed research is to investigate nutrients and hair growth in captive polar bears. The U.S. Geological Survey's Institutional Animal Care and Use Committee has reviewed and approved the research protocols.

## **Background and application completeness**

The Commission's initial review of Dr. Rode's application in October found that it lacked necessary information and included inconsistent information. However, before the Commission was able to provide FWS with its comments and raise specific questions regarding various deficiencies in the application, FWS independently determined that a research permit was unnecessary under either the MMPA or the Endangered Species Act (the ESA) and sent Dr. Rode a letter on 18 October 2018 authorizing her to obtain blood and hair samples<sup>3</sup>. The Commission responded [with a letter on 7 November 2018](#) recommending that FWS (1) retract its authorization letter, (2) continue processing Dr. Rode's request for a research permit, and (3) provide Dr. Rode with the

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<sup>1</sup> Food would be dosed with glycine and water would be dosed with deuterium oxide.

<sup>2</sup> Including blood, hair, and urine.

<sup>3</sup> The Commission did provide its informal comments and questions on the application and related documents the following day.

Commission's informal comments and questions, along with FWS's comments and questions, and request that she address all of them in a revised application prior to taking further action on the application.

On 8 November 2018, FWS informed the Commission that the activities Dr. Rode proposed to conduct did in fact require a research permit. The Commission appreciates that Dr. Rode had apparently notified FWS of its error in attempting to authorize invasive research activities via an authorization letter rather than a permit. The Commission understands that Dr. Rode also offered to address each of the Commission's comments and questions in her original application and to provide a revised application. However, FWS indicated that those steps were not necessary. Thus, Dr. Rode provided a supplementary information document, which addressed only a few of the Commission's initial concerns with the application.

As stated in previous Commission letters, the Commission poses questions or seeks additional information during its reviews when either (1) the applicant has not provided all of the information required under FWS's 2017 application instructions or (2) the information provided is not sufficiently complete or clear to support the findings required under the MMPA and FWS's implementing regulations or to recommend appropriate permit conditions for inclusion in furtherance of MMPA section 104(b)(2). As such, the Commission expects FWS to be responsive to requests for clarifications and additional information, provide applicants with the Commission's questions and comments, and seek the requested information in a timely manner. In addition, providing a supplemental document in lieu of a revised application obfuscates the information contained within the application. At this point, there are inconsistencies and inaccuracies within Dr. Rode's application, between the application and supplemental document, and within the supplemental documentation.

Since the application underpins the research permit, it is imperative that the application contain accurate, complete, and consistent information. Condition 11.A., included in each FWS research permit, requires that "all activities authorized herein must be carried out in accord [sic] with and for the purposes described in the application". When a permit is issued on the basis of an application that contains inaccurate information, the permit holder risks unintentionally violating their permit. When an application contains inconsistent information, a permit holder could be in technical violation of its permit because of the lack of clarity regarding which information the agency thought it had approved by way of the permit. Moreover, applications that contain inaccurate and inconsistent information make it difficult, and sometimes impossible, for the Commission and public to provide meaningful comments. The Commission therefore recommends that, when an applicant responds to questions sent by FWS<sup>4</sup>, FWS request that the applicant provide both (1) written responses and clarifications to address each of the questions posed and (2) a revised application that incorporates the responses and clarifications. Furthermore, many of the recent permit applications submitted to FWS have not conformed to its 2017 application instructions. As such, the Commission recommends that FWS ensure that all applicants use the 2017 application instructions and, if an applicant has not used those application instructions, require that it does so and resubmits a revised application. FWS processes 10 to 20 marine mammal permit applications

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<sup>4</sup> Including the Commission's informal comments as well.

per year so it should not be difficult for FWS to determine at the time the application is submitted<sup>5</sup> whether an applicant has used the current instructions.

### General outstanding issues

Dr. Rode's supplemental document addressed a few of the Commission's original concerns. However, some of the basic information, as required in FWS's 2017 application instructions, is still lacking and numerous inconsistencies still exist. Those include—

- failing to specify the potential effects of each procedure (i.e., marking with dye, administering deuterium water and glycine-labeled food) and consequences of those responses<sup>6</sup>;
- failing to specify the criteria that will be used to best estimate hair growth, as well as how the various isotope analyses will lead to an estimation of hair growth<sup>7</sup>;
- failing to specify how the frequencies for marking (i.e., with dye, deuterium water, glycine-labeled food) and sampling (i.e., hair, blood, urine) were determined<sup>8</sup>;
- failing to include descriptions of the constituents and/or dosages of the deuterium water and glycine-labeled food<sup>9</sup>;
- failing to include an explanation describing the equilibration assessment of glycine relative to the samples to be collected<sup>10</sup>;
- including inconsistent sampling schedules for collecting hair, blood, and urine<sup>11</sup>— justification for the variation in the intervals between blood sampling collection points also is lacking<sup>12</sup>; and
- failing to include an accurate take table<sup>13</sup>.

The take table should stipulate that the (1) collection of blood and hair should be considered Level A harassment, not Level B harassment, (2) maximum number of blood samples for each of the 45 polar bears should be 2 10-ml serum samples for the nutrient study, (3) maximum number of times each of the 10 polar bears would be marked with dye<sup>14</sup> should be five times per year, (4) maximum number of times each of the 10 polar bears would be provided either deuterium water or glycine-labeled food should be daily during up to a two-week timeframe five times per year, (5) maximum number of blood<sup>15</sup> and/or urine samples that could be collected for each of the 10 polar bears

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<sup>5</sup> Rather than many months later when an analyst reviews the information within the application.

<sup>6</sup> Items 6b and c in the 2017 application instructions.

<sup>7</sup> Items 17 and/or 18 in the 2017 application instructions.

<sup>8</sup> Item 18d in the 2017 application instructions.

<sup>9</sup> Item 20a in the 2017 application instructions.

<sup>10</sup> Item 25 in the 2017 application instructions.

<sup>11</sup> Items 19 and 20f in the 2017 application instructions.

<sup>12</sup> There is no reason to expect that deuterium oxide and glycine would be reflective in the blood at different time intervals, which is true for urine collections as well.

<sup>13</sup> Items 19, 20, and/or 29 in the 2017 application instructions.

<sup>14</sup> Using non-toxic hair dye on up to two 2-inch diameter sections of hair.

<sup>15</sup> In certain sections within the application, it states that the bears would be sedated for the blood draws rather than voluntarily allow the trainer to obtain the samples.

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should be either 12 or 15 10-ml samples<sup>16</sup> for the hair growth study, and (6) maximum number of hair samples that could be collected<sup>17</sup> for each of the 10 polar bears should be up to 62 samples from two locations each.

In addition, the Commission had informally suggested that Dr. Rode request a three-year rather than a two-year permit in case complications arise and the activities are unable to be conducted within the proposed two-year timeframe. The Commission recommends that FWS return the application to Dr. Rode to address the deficiencies and inconsistencies stipulated herein and to submit a revised application, which would form the basis of any research permit issued.

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

Sincerely,



Peter O. Thomas, Ph.D.,  
Executive Director

cc: Diane Bowen, FWS  
Karyn Rode, USGS

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<sup>16</sup> Depending on whether the samples would be collected every three months as proposed or every two months as would reconcile with the objectives of dosing the animals every two months, respectively.

<sup>17</sup> From up to two locations on the bear.