



MARINE MAMMAL COMMISSION

14 November 2019

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

Dear Ms. Harrison:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Department of Commerce's (DOC) notice (84 Fed. Reg. 50409) regarding revisions to information collection requirements under the Marine Mammal Protection Act (the MMPA), Endangered Species Act, and Fur Seal Act. Under those statutes, certain actions affecting marine mammals and endangered and threatened species are prohibited unless authorization is obtained from the responsible federal agency. Researchers, photographers, public display facilities, and members of the public seeking authorization to take or import marine mammals or listed species are required to apply for a permit or general authorization to conduct their proposed activities. The National Marine Fisheries Service (NMFS) requires certain types of information to make the necessary findings and issue permits under the applicable statutes and regulations. Permit holders then must report on their activities to track compliance with permit conditions and to ensure protection of the animals. Holders of captive marine mammals also are required to report various information regarding their animal inventories. NMFS's online application system, Authorizations and Permits for Protected Species (APPS), is used for much of the information collection.

The Commission has reviewed NMFS's revised application instructions and other related documents and forms and welcomes the attention that has gone into those revisions. It provides the following detailed comments based on its review of a multitude of permit applications over many years.

Acoustic studies

The Commission has conveyed concerns to NMFS regarding the sufficiency and accuracy of the information provided by applicants conducting acoustic studies, including both playback studies and auditory evoked potentials (AEPs) numerous times. The revised application instructions for research and enhancement permits, however, still omit some basic information necessary for determining whether the proposed activities meet the humaneness and *bona fide* criteria under section 104(c) of the MMPA. For playback studies, applicants need to specify the number of playback sessions that would be conducted in a given day, duration of each playback session, maximum total

duration of sound emission per day, and the propagation loss model used and resulting Level A and B harassment zones. Applicants also must discuss and include takes of non-target conspecifics that are in the same group as the target animal and that can approach the Level B harassment zone during the playback, as well as other non-target species that have the potential to be taken during playback studies. For captive studies, applicants must discuss whether other captive animals have the potential to be taken during the playback studies and what measures would be implemented to minimize taking (i.e., moving to a separate pool or haul-out area). Similar to playback studies, the revised application instructions need to require that applicants specify the type of sounds emitted (i.e., pips, clicks), maximum source level, distance from speaker to target animal, signal duration, duty cycle, frequency of sound emitted, and total duration of sound emission when conducting AEPs. The Commission recommends that NMFS include all aforementioned information in the revised application instructions for active acoustics and AEPs.

Consistency of counting Level B harassment takes

The Commission noted in its informal comments on the revised application instructions that NMFS did not include the manner in which Level B harassment takes of pinnipeds by manned and unmanned aircraft operating at less than 1,000 ft are to be counted. NMFS indicated that the omission was an oversight and that it does intend to account for potential disturbance by aircraft of pinnipeds both on land and in the water. For hauled-out pinnipeds, takes are to be counted based on whether an animal exhibits a Level 2 or 3 behavioral response¹, similar to ground and vessel surveys. For pinnipeds in the water, NMFS indicated that applicants are to include a predetermined percentage of takes in the application and that takes are to be counted only if a “noticeable adverse reaction” is noted during aerial overflights. Cetacean takes, on the other hand, are to be counted regardless of whether an animal reacts to an aircraft flying lower than 1,000 ft. Takes of both cetaceans and pinnipeds also are to be counted, regardless of whether a behavioral reaction has occurred, when an animal is approached by a vessel within 100 m for mysticetes and sperm whales and 50 yds for all other cetaceans and pinnipeds. The Commission is not aware of a justification that supports counting takes of cetaceans and pinnipeds at sea differently during aerial overflights. Thus, it is unclear why a behavioral reaction by a pinniped at sea must be observed before it is counted as a take during aerial overflights or why, if NMFS believes enumerating takes based on an observable response is preferred, that method was not used for cetaceans as well. Therefore, the Commission recommends that NMFS amend its application instructions to require that either (1) all pinnipeds in the water be counted and reported as takes during aerial overflights flown at less than 1,000 ft or (2) cetaceans be counted and reported as takes during aerial overflights flown at less than 1,000 ft when they exhibit a noticeable adverse reaction and provide a definition of what behaviors constitute a noticeable adverse reaction².

Takes per animal

In its revised application instructions, NMFS would no longer require applicants to provide in the take table the number of times an animal may be taken in a year³. Instead, it directed

¹ Level 2 responses include movements of twice the animal’s body length or more and changes of direction greater than 90 degrees, and Level 3 responses include retreats (or flushes) to the water.

² Similar to Level 1, 2, and 3 responses.

³ Including such actions as recapturing for instrument retrieval, collecting seasonal biopsy samples, or conducting resight surveys.

applicants to provide that information in the text of the application for all animals that may be intentionally or unintentionally taken multiple times in a given year. However, the revised application instructions did not specifically require an applicant to justify why multiple takes of an animal might be needed. This is critical information for determining whether the humaneness and *bona fide* criteria are met for research and enhancement permits and whether proposed levels of disturbance necessitate additional mitigation measures for photography permits. In addition, with the removal of the takes per animal column in the take table, applicants would not be required to report the number of times an animal may have been taken during the year. This makes it impossible to know whether a permit holder exceeded its authorized takes and violated the conditions of its permit. As such, the Commission recommends that NMFS require (1) applicants to justify the number of times an animal may be taken for each applicable procedure and (2) permit holders to report the number times an animal is intentionally taken for each procedure during each year of permitted activities.

Take tables

The Commission notes that some procedures in the take tables are denoted by inconsistent terms for cetaceans and pinnipeds. For a cetacean that may be incidentally disturbed or harassed during research and enhancement activities, APPS will only let an applicant select “incidental harassment” in the “procedure” column, while an applicant must select “incidental disturbance” for pinnipeds. There is no reason for two different terms for the same activity. In addition, some procedures included in APPS intended only for cetaceans also apply to pinnipeds and vice versa. For example, “administer drug, (IM, IV, subcutaneous, topical)”, “anesthesia (injectable sedative or gas [come, mask, intubation])”, and “serial blood samples (Evans blue, hormones)” are included for pinnipeds but not cetaceans, even though those procedures can be and have been conducted on live-captured cetaceans. “Imaging, thermal” and “insert ingestible telemeter pill” are included for cetaceans but not pinnipeds, even though those procedures have been used in multiple permits involving pinnipeds. Moreover, conducting serial blood samples using deuterium oxide has routinely been included in numerous permits involving both cetaceans and pinnipeds, yet it is not included as a procedure for either one in APPS.

In addition, procedures or take actions are often denoted by different terms between applications for research on the same species. For example, in three applications regarding Steller sea lion research⁴, sampling milk from pups was denoted as “sample, stomach lavage” by two applicants and “sample, other” by a third. Two applicants denoted numerous “take actions” in their respective take tables as “incidental take” or “harass/sampling” rather than “harass” as stipulated by the third. Similar inconsistencies are found in public display⁵ and photography applications. The Commission recommends that NMFS ensure that (1) incidental harassment and disturbance is denoted by one term as a procedure in APPS for both cetaceans and pinnipeds, (2) the same terms are used to denote the same procedures or take actions in the various take tables amongst applications, and (3) “administer drug, (IM, IV, subcutaneous, topical)”, “anesthesia (injectable sedative or gas [come, mask, intubation])”, “serial blood samples (Evans blue, deuterium oxide, hormones)”, “imaging, thermal”, and “insert ingestible telemeter pill” are included as procedures in APPS for both cetaceans and pinnipeds.

⁴ Alaska Department of Fish and Game (ADFG) permit 22298, Alaska SeaLife Center (ASLC) permit 22293, Marine Mammal Lab (MML) permit 22289.

⁵ When capture for public display is requested.

The Commission has frequently commented that procedures for target species listed in the take tables of photography applications are not consistent among applications, even though the requested activities are essentially the same. The arbitrary inclusion or exclusion of certain procedures then is incorporated into the final permit, which only creates further confusion as to which activities a filmmaker is authorized to conduct. For example, two different filmmakers⁶ requested to film their target species topside and underwater from a vessel and using an unmanned aircraft system (UAS). The procedures in the take table of one applicant's permit for filming a target species were listed as "harassment", "unmanned aircraft system", "photograph/video", and "underwater photo/videography", whereas for another's permit, the procedures were listed as "observations, behavioral", "remote vehicle, aerial (VTOL)" "photograph/video," and "underwater photo/videography". The procedures listed in take tables for photography permits should convey accurately the activities that are to be conducted and ultimately that are authorized. Further, the take tables should always include certain procedures associated with photography or filming of a target species, including "observations, behavioral" and "photograph/video." The Commission recommends that NMFS ensure that the procedures in the take table rows for filming of target species (1) always include "observations, behavioral" and "photograph/video," (2) accurately reflect all proposed and authorized activities, and (3) are consistent amongst permits.

Similarly, the Commission has noted inconsistencies regarding the inclusion of direct and incidental takes of pinnipeds associated with vessel, aerial, and ground surveys in the take tables of applications⁷ and issued permits⁸. In some instances, NMFS included incidental but not direct takes of pinnipeds in take table rows associated with those surveys, denoting "incidental disturbance" as the only procedure. In other instances, NMFS included direct takes of pinnipeds for the same types of surveys, denoting procedures as "count/survey," "photo-id," "observation, monitoring," etc., but excluding "incidental disturbance" as being associated with those surveys. Finally, for other permits, NMFS accounted for both direct and incidental takes of pinnipeds resulting from such surveys. Given that in most instances⁹, animals have the potential to be harassed directly or incidental to conducting surveys, both types of takes should be included in the relevant take tables. As such, the Commission recommends that NMFS include both direct and incidental takes of pinnipeds that may result from vessel, aerial, ground, or any other type of survey in the appropriate take tables of permit applications.

Regarding permits for animal parts, currently only one term, "import/export/receive, parts" can be selected as a procedure in APPS. This can be misleading and inaccurate, as an applicant may only wish to import *or* export samples, not conduct both activities. The Commission understands that NMFS plans to make changes in APPS to allow applicants to choose "import," "export", and/or "receive" parts, as applicable and recommends that NMFS implement those changes in APPS in the near term and update the application instructions for parts permits accordingly.

⁶ Christopher Cilfone permit 20993 and Icon Films permit 22292.

⁷ e.g. MML permit 22678.

⁸ e.g. ADFG permit 22298, ASLC permit 22293, and MML permit 22289.

⁹ Except when aerial surveys are conducted to determine total population abundance, in which case surveys will only result in the direct taking of a target species.

Defining approaches and attempts

Throughout the application instructions for general authorizations, research and enhancement, and photography permits, NMFS has requested information regarding the number of attempts and approaches that may occur for the target species but did not provide definitions of either term. At times, NMFS also did not indicate for which procedures “attempts” should be enumerated and for which procedures “approaches” should be enumerated. For example, for non-intrusive research activities, NMFS would require applicants to provide the “number of approaches/attempts per animal/day” but did not indicate how each non-intrusive sampling action should be denoted. Typically, procedures that involve the movement of researchers/platforms/devices in the vicinity of an animal, such as underwater filming or vessel surveys, are conducted via approaches, which are defined as when a certain threshold distance is crossed. In contrast, procedures involving an activity directly carried out on an animal, such as tagging or biopsy sampling, are conducted via attempts and are defined as when a tag or biopsy dart is deployed but misses the animal or makes contact with an animal and either does or does not attach or does or does not result in a useable sample. In any event, the Commission recommends that NMFS (1) define what constitutes an approach versus an attempt and (2) clarify which procedures should specify each.

Mitigation measures

In the “Measures to Mitigate Effects” section for all application instructions, NMFS requested that applicants provide standard mitigation protocols for all activities to minimize the potential for adverse impacts on marine mammals. Thus, it is intended that applicants describe the measures that they would implement if an animal responds to proposed activities and what type of responses would prompt mitigation to be implemented. However, the Commission has recently provided informal comments on numerous research applications¹⁰ as well as formal comments on photography applications¹¹ regarding applicants failing to specify mitigation measures for a variety of activities, including unmanned and manned aerial surveys, underwater filming, and camera maintenance. Therefore, the Commission recommends that NMFS explicitly require applicants to specify the (1) measures that will be implemented if an animal responds to a proposed activity and (2) types of responses that would prompt the initiation of mitigation measures.

Transport requirements

For animals that would be transported for public display or research purposes, NMFS has required applicants to provide a description of how animals will be contained at the destination facility, including the enclosure system, quarantine procedures, and effluent treatment. Although some applicants include such information, NMFS has not requested that applicants provide information regarding how introductions between new and currently held animals would occur or the measures that would be implemented if adverse social behaviors are observed. Thus, the Commission recommends that NMFS explicitly require applicants requesting to transport and integrate animals into social groups to provide (1) a protocol regarding introduction of new and

¹⁰ Including Bejder permit 21476, Cartwright permit 22750, PIFSC permit 22677.

¹¹ Including its [17 October 2019](#) and [12 June 2017](#) letters regarding Keith Ellenbogen’s and BBC’s filming activities, respectively.

currently held animals and (2) a description of the measures that would be implemented if adverse responses are observed between those animals.

Personnel qualifications

As part of all the application instructions, NMFS required that applicants provide a table that defines the roles and activities to be performed by the principal investigator (PI) and co-investigators (CI) under a permit. Per NMFS's definitions, a PI is responsible for all activities conducted under the permit and must be present during the activities unless a CI is designated to act in his/her place. CIs "are individuals who are qualified and authorized to conduct or directly supervise activities conducted under a permit without the on-site supervision of the PI." To determine whether a PI/CI should be allowed to conduct an activity, NMFS has specified a 1 to 4 scale in its Qualifications Form (QF) to denote level of experience for each activity¹². NMFS explicitly stated in the various revised application instructions that PI/CIs must have qualifications corresponding to the duties they would be authorized to conduct and that personnel would not be authorized to conduct the activities if they do not provide sufficient information.

In theory, such an approach for authorizing personnel to conduct certain activities is logical. However, the implementation of that approach has been flawed and inconsistent between applications and analysts tasked with processing the applications. First and foremost, the Commission has repeatedly noted that the qualifications provided for each PI/CI are not commensurate with the level of experience specified (i.e., Level 1 to 4). The Commission has noted in its informal comments on applications, as well as its formal comments (see its [7 May 2019 letter](#) on MML permit 22289) that applicants are proposing that PI/CIs would conduct activities for which they have only assisted or received training (Level 1) or supervise activities for which they have not conducted unsupervised (Level 2). *Conducting* certain procedures under supervision may be sufficient to allow that researcher to perform the procedure as a PI/CI. However, *supervising* a procedure, particularly those that are invasive and/or involve sedation and anesthesia, requires a higher qualification standard, as it implies both an ability to conduct the procedure unsupervised and to assume responsibility to take control in an emergency situation. Similarly, authorizing PI/CIs to conduct activities unsupervised on animals for which they have only assisted others or received training increases the risk of harm or injury to both the animal and the researcher. PI/CIs that are not formally authorized to conduct activities can instead continue gaining experience performing the procedure under supervision until they have sufficient experience to conduct it unsupervised. These standards are not impractical, nor do they limit PI/CIs from gaining additional experience, as needed. They follow a basic step-wise approach to ensure compliance with NMFS's implementing regulations that require individuals conducting activities authorized under the permit to possess qualifications commensurate with their duties and responsibilities or to be under the direct supervision of a person with such qualifications (50 C.F.R. § 216.35(g)). As such, the Commission recommends that NMFS ensure that PI/CIs are only authorized to (1) *conduct* activities for which they have at least performed under supervision (Level 2 or greater), and (2) *supervise* activities which they have at least performed without supervision (Level 3 or greater).

¹² Level 1 denotes having assisted or received education/training in performing the procedure, but have **not successfully performed** the procedure. Level 2 denotes having performed the procedure while **under supervision or training** of an expert (e.g., PI, CI, or veterinarian). Level 3 denotes having performed the procedure **without supervision** by a PI/CI. Level 4 denotes being considered an **expert** in performing this procedure, and having **supervised or trained** others in performing this procedure.

In regards to the QFs, the Commission notes that there are inconsistencies as to whether biosketches can be used in lieu of the QF table. The application instructions for all permit types indicated that CVs, resumes, *and* biosketches have not included sufficient information regarding an individual's field experience and that the QF should be used instead. However, the QF still includes the option of using a QF table or providing a biosketch. The Commission strongly reinforces the application instructions. The information provided in CVs, resumes, and biosketches has been and continues to be insufficient. As such, the QF table should be used for all PI/CIs. Use of the QF table is easy and provides the necessary information in a clear manner, minimizing the questions that routinely arise when biosketches are used and thereby maximizing efficiencies. Therefore, the Commission recommends that NMFS (1) require that the QF table be used by all PI/CIs and eliminate the option of a providing a biosketch and (2) amend the application instructions and QF accordingly.

In addition, the Commission has often noted that information provided by a PI/CI in the QF table was incomplete for some procedures that he/she proposed to conduct, with either the "experience metrics", "most recent year performed" or "level of experience" columns left blank or denoted as "N/A" or "none". Missing information and inconsistencies between QF tables make it difficult to assess whether personnel lack the experience to conduct a procedure or unknowingly omitted the information. As such, the Commission recommends that NMFS standardize how PI/CIs denote when they do not have any experience conducting that activity (i.e., Level 0) in the QF table.

For the table delineating personnel roles (the personnel table), NMFS has not required applicants to list every activity which PI/CIs are to be authorized to conduct, rather statements such as "conduct all activities under permit" have been accepted under applications and would continue to be accepted based on the revised application instructions. In instances when dozens of procedures have been proposed, particularly for live-capture activities or activities that involve numerous invasive procedures, it is difficult to discern which activity a PI/CI would be authorized to perform, especially when QFs lack any demonstrated experience for some activities. To clarify which procedure a PI/CI would be authorized to conduct or supervise the personnel table should list each PI/CI and each procedure with X's designating activities to be conducted by them and S's designating activities to be supervised (see Table 1 as an example). These types of tables have routinely been used by nearly all applicants that have proposed to conduct live-capture activities in the last three years and by other applicants that have proposed to conduct numerous invasive procedures. For clarity regarding the activities that each PI/CI would be authorized to conduct and ultimately are authorized to conduct if the permit is issued, the Commission recommends that NMFS require applicants to provide a personnel table based on the example provided herein for applications involving live-capture activities and multiple invasive procedures.

Table 1. Example personnel table.

Name	Role	Photo-id	UAS	Collect feces or sloughed skin	Biopsy	Suction-cup tag	Dart tag
Jon Doe	PI	S		X	S	X (for large whales only)	
Jim Doe	CI	X		X		X	X
James Doe	CI	X		X	X		
Jane Doe	CI	X		X	X (for large whales only)	X (for large whales only)	
Mary Doe	CI	X	X	X	X		
Dave Doe	CI	X		X			
Harry Doe	CI	X		X		X	

Finally, NMFS has required that PI/CIs who are to be authorized as UAS pilots hold a Federal Aviation Administration remote pilot certificate and provide a description of their experience flying UASs. Although most UAS pilots associated with research and enhancement permits have previous experience flying UASs around marine mammals, UAS pilots associated with photography permits frequently do not. This is problematic, as pilots without experience flying over marine mammals may be unaccustomed to natural behaviors (e.g., breaching) or unaware of the behaviors that denote an adverse reaction to a UAS, which could lead to a collision between an animal and a UAS and/or undue harassment of that animal. The Commission therefore recommends that NMFS require PI/CIs who are to be authorized as UAS pilots under a permit to provide explicit information regarding their experience flying UASs around marine mammals.

Submission of applications for public display permits

NMFS would require applicants to submit applications electronically in APPS for all permit types except for public display permits. Even though NMFS stated in its *Federal Register* notice that it plans to “improve the organizational structure of the public display instructions” (84 Fed. Reg. 50409), it did not specify whether it plans to transition the submission of such applications to an electronic system consistent with other permit types. Thus, the Commission recommends that NMFS prioritize incorporating public display applications into APPS in accordance with the submission of all other permit applications.

National Inventory of Marine Mammals (NIMM) forms

In addition to the updated application instructions, NMFS has requested public comment on revisions to its inventory form for NIMM. NMFS stated that under the proposed revisions, holders of marine mammals would be able to submit inventory information online, as well as using the current system of submission via email, fax, or mail. However, it is not clear whether information reported using email or hard-copy format would be incorporated into the new online inventory system. The Commission recommends that NMFS clarify that inventory information submitted by email, fax, or mail would be incorporated into the online NIMM database and encourage holders of marine mammals to submit information using the online system.


Ms. Jolie Harrison
14 November 2019
Page 9

Additional comments

In its review of NMFS's revised application instructions and associated forms, the Commission identified minor errors, omissions, inconsistencies, and misrepresentation of information. The Commission provided NMFS with these additional comments and recommends that NMFS incorporate them into the revised application instructions and associated forms before they are finalized.

The Commission appreciates discussions to date with NMFS staff and the opportunity for future consultation on these matters. Please contact me if you have any questions regarding the Commission's recommendations.

Sincerely,



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