MARINE MAMMAL COMMISSION

9 December 2020

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. 23858
(Marine Mammal Lab)

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). Marine Mammal Lab (MML) is requesting to renew its permit to conduct research on phocids in Alaska during a five-year period—permits 19309 and 15126 authorized similar activities.

MML proposes to conduct research on harbor, bearded, ringed, spotted, and ribbon seals in the North Pacific Ocean, Bering Sea, Arctic Ocean, and coastal regions of Alaska. The purpose of the research is to investigate (1) foraging ecology, (2) population abundance and trends, (3) population structure, (4) habitat requirements, (5) health and vital rates, and (6) effects of natural and anthropogenic factors on phocids. Researchers would harass, observe, photograph/videotape[1], capture, handle, restrain, sedate[2], measure/weigh, sample, mark/tag, conduct procedures on[3], attach instruments to[4], and/or implant instruments in[5] numerous individuals of various age classes and both sexes per year (see take table for specifics). MML requests up to five mortalities per year per species[6], which could be either unintentional or intentional[7], as well as authorization to import, receive, possess, and/or export samples from the five seal species. 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.

[1] Including using unmanned aircraft systems (UAS).
[2] Including remotely sedating animals.
[3] Including ultrasound and active acoustic playback activities.
[4] Including acoustic transmitters (i.e., VEMCO tags).
[5] Including surgically implanting life history transmitter (LHX) tags.
[6] Not to exceed 15 mortalities per species over the duration of the permit.
[7] Via euthanasia for humaneness purposes.

General concerns with MML's application

During its informal review of MML's original application, the Commission provided numerous comments and questions to the applicant, many of which concerned insufficient (1) qualifications of the principal investigator (PI) and co-investigators (CIs) to conduct or supervise some of the proposed activities, (2) mitigation measures for various activities, and (3) descriptions of the methods that involve instrumentation. Based on these deficiencies, it was difficult to assess whether the proposed activities met the humaneness criteria under section 104 of the MMPA. For example, the PI and several of the CIs[8] would be authorized to supervise abdominal surgeries to implant LHX tags in seals, implying that they have both an ability to conduct the procedure unsupervised and to take control in an emergency situation. However, those personnel are not veterinarians nor did they specify any surgical training or experience conducting the procedure in their QFs.

As stated in previous Commission letters[9], the Commission poses questions or seeks additional information when either (1) the applicant has not provided all of the information required under the relevant (i.e., 2016) application instructions *or* (2) the information provided is not sufficiently complete or clear to support the findings required under the MMPA and an agency's implementing regulations or to serve as the basis for recommending appropriate permit conditions for inclusion in furtherance of MMPA section 104(b)(2). The Commission's comments and questions seek to ensure that the research methodologies are adequate, clear, and consistent so that the Commission and the public are able to assess whether the humaneness and *bona fide* research criteria have been met.

Because MML did not address all of the Commission's comments and questions, concerns for the welfare of seals on the part of the Commission remain, information is still lacking, and deficiencies still exist in the descriptions of methods for the various proposed research activities. These make it difficult to evaluate whether the humaneness criteria would be met under section 104 of the MMPA. Some of the continued issues with MML's revised application include its failure to—

- accurately specify who is considered a 'veterinarian'. MML specified a list of veterinarians and veterinary technicians (vet techs), only some of whom would be formally listed as CIs under the permit, who could provide additional consultation for or conduct and supervise any of the requested procedures, including conducting LHX surgeries. Although the list of personnel included both veterinarians and vet techs, the role of each was specified as 'veterinarian'.
- consistently specify who would conduct abdominal surgeries to implant LHX tags in seals. MML specified that surgeries would be performed only by qualified veterinarians in certain portions of the application and only with the presence and direct oversight of a veterinarian in others. In another part of the application, MML specified that only qualified veterinarians *or other personnel* with sufficient experience in the technique would perform the implant

[8] For example, Dr. Boveng and Mr. Dahle did not specify any experience in their qualification forms (QFs) observing or conducting LHX surgeries. Dr. London indicated that he assisted with and observed three LHX surgeries and denoted his experience as a Level 3 in his QF, while Ms. Ziel indicated that she assisted with 10 LHX surgeries and denoted her experience as a Level 1 in her QF. Level 1 denotes having assisted or received education/training in performing the procedure, but **not having successfully performed** the procedure, and Level 3 denotes having performed the procedure **without supervision** by a PI/CI.

[9] e.g., its 31 July 2020 letter on Dr. Costa's permit 23188.

procedures. These inconsistencies allow for the possibility that someone other than a veterinarian may actually perform an abdominal surgery.

- authorize only qualified personnel to supervise abdominal surgeries and other invasive procedures[10], including active acoustic playbacks. The PI and some CIs, who are neither veterinarians nor vet techs and have no surgical training, would be authorized to supervise LHX surgeries[11]. For remote sedation, only a veterinarian would conduct the procedure initially, yet the PI, who is not a veterinarian and did not specify in his QF any experience remotely sedating animals, would be authorized to supervise the procedure. The PI also would be the only person authorized to supervise active acoustic playbacks, yet he did not specify any experience conducting passive acoustic monitoring or playback activities in his QF.
- authorize personnel to conduct active acoustic playbacks. MML proposed to conduct playback activities to attract harbor and bearded seals to nets for capture. However, the PI/CI table did not specify who would be authorized to conduct the playback activities to ensure that sound source levels were within the range proposed for use in the revised application. Furthermore, none of the CIs specified any experience conducting passive acoustic monitoring in his or her QF, let alone conducting active acoustic or playback activities, and MML did not specify whether research personnel would be trained how to conduct playback activities before conducting them in the field[12].
- specify how often tangle nets would be physically checked. MML stated that tangle nets would be 'checked continually' for the presence of seals[13]. The Commission understands this to mean 'observed continually' and notes that MML did not explicitly state how often the nets would be physically checked to ensure an entangled seal does not go unnoticed and accidentally drown.
- provide sufficient information for attaching external instruments. Up to three instruments could be attached to a seal at a given time, yet MML did not specify the maximum number of instruments that could be placed on the jaw or head of an animal or its flippers[14], the combination of which could have severe implications for an animal's ability to forage and swim, particularly for young pups[15]. Additionally, MML indicated that the combined mass of

[10] Similar to intrusive research as defined under section 216.3 of NMFS's implementing regulations.

[11] In its informal review of MML's original application, the Commission noted that LHX surgeries should always be conducted by a veterinarian with the assistance of a vet tech and an anesthesiologist, consistent with Horning et al. (2017). NMFS disagreed and responded that it was not its opinion that only veterinarians should be authorized to perform particular procedures on pinnipeds and that any personnel who have the proper training and are compliant with all other statutes and regulations should be able to conduct any procedure under a permit.

[12] Previous permit applications that included playback activities, e.g., Pacific Islands Fisheries Science Center (PIFSC) permit 22677, explicitly stated that personnel without prior acoustics experience would be sufficiently trained to conduct the acoustic activities before conducting them in the field.

[13] In general, tangle nets are not physically checked on a continual basis, as net tending can dissuade seals from approaching the net.

[14] NMFS indicated that its application instructions do not require that this specific information be provided. The Commission notes that NMFS's 2016 application instructions do require that applicants specify the location on the body where tags are to be attached and the maximum footprint/maximum number of tags per animal. NMFS's interpretation that those two pieces of information are to be provided only as separate, non-related items is shortsighted and undermines its ability to make a humaneness determination under the MMPA. Contrary to MML's assertion that humaneness is not the determination of the Commission but under the purview of the Institutional Animal Care and Use Committee (IACUC), humaneness is one of two issuance criteria under section 104 of the MMPA upon which the Commission is required to comment.

[15] MML would be authorized to conduct the various activities on all age classes of pups, including pups less than a week old as long as a fresh (often red or pink in color) umbilicus or visible skin folds are not present. Only implantation of

> three external instruments would not exceed two percent of an animal's body mass, but informally noted that researchers would not account for the mass of up two internal LHX tags[16] in that calculation. Thus, a young pup that had undergone surgery for LHX tag implantation and then had instruments attached externally may experience undue stress and have its ability to forage or swim be compromised. Previous permit applications that proposed to implant LHX tags in animals (e.g., Costa permit 23188) included both external and internal instrumentation in the minimum mass calculation.

Finally, MML would use UAS for photogrammetry purposes and could fly a drone at a minimum altitude of 15 m above a seal. However, MML did not describe what measures (e.g., aborting a flight, increasing altitude) would be implemented if the seal appeared disturbed by the UAS[17].

With regard to the qualifications of personnel to be authorized to conduct activities under the permit, the Commission considers the responsibilities of a veterinarian under any research permit, either as a PI or CI or serving in a consulting capacity, to be straightforward. With formal surgical training in veterinary school, he or she is qualified to conduct all surgical procedures. While a vet tech may have some veterinary training, he or she does not have a DVM degree and should not be considered a 'veterinarian'. Instead, a vet tech should be authorized as a CI under the permit and held to the same standards as other research personnel for the procedures he or she would be authorized to conduct[18]. As discussed in the Commission's 31 July 2020 letter on Dr. Costa's permit 23188, LHX surgeries should be conducted only by a veterinarian[19] (or medical doctor), and preferably only by one with prior experience conducting the procedure. Contrary to NMFS's previously-stated position, the Commission believes that vet techs and other research personnel should not be authorized to conduct abdominal surgeries under a research permit as they have not received formal surgical training[20].

Vet techs and other research personnel also should not be authorized to supervise surgeries or any other procedure that an applicant explicitly states would only be conducted by a veterinarian, as veterinarians do not require supervision. Moreover, they should not be authorized to supervise any other invasive procedure for which they do not have adequate experience to conduct

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LHX tags would be restricted—pups must weigh at least 12 kg for single LHX tags and 24 kg for two LHX tags (Horning et al. 2017).

[16] Two LHX tags have a mass of 116 g in air.

[17] When the Commission informally asked what mitigation measures would be implemented for UAS activities, MML responded that "this does not seem necessary or required." However, stipulation of mitigation measures for each proposed procedure is required under NMFS's 2016 application instructions.

[18] This is consistent with the delineation of personnel under other permits, e.g., the delineation of a vet tech as a CI, not a veterinarian, under Pearson permit 21006.

[19] This is similar to the standard condition NMFS had included in previous permits authorizing both MML and Alaska Department of Fish and Game (ADFG) to conduct LHX surgeries and other abdominal surgical procedures, see permits 14326 and 14325, respectively.

[20] It also is worth noting that under various veterinary statutes and regulations in numerous states, one can only perform surgery on a marine mammal if he or she is a licensed veterinarian. The State of California prohibits anyone other than a veterinarian, including licensed vet techs and researchers, from conducting surgical procedures. The State of Alaska prohibits researchers from conducting surgical procedures and licensed vet techs from conducting them unless authorized by regulation of Alaska's Board of Veterinary Examiners. NMFS includes as a standard condition in all research permits, including both of MML's aforementioned phocid permits, that permittees are responsible for complying with all relevant state and federal statutes. Additionally, veterinarians certified by the American College of Veterinary Surgeons to perform surgeries on animals are required to undergo a comprehensive evaluation every three years to ensure that the required standards are being met.

unsupervised or conduct any invasive activities for which they do not have adequate experience to conduct supervised[21], as demonstrated by the levels of experience provided in their QFs[22]. As the Commission noted in its 14 November 2019 letter on NMFS's revised application instructions and in numerous other letters[23], conducting certain invasive procedures under supervision may be sufficient to allow a researcher to perform such procedures as a PI or CI. However, supervising procedures, particularly those that are invasive, such as remote sedation, requires a higher qualification standard, as it implies both an ability to conduct the procedure unsupervised and to take control in an emergency situation.

It should go without saying that an application should specify at least one person—a veterinarian, the PI, or a CI—to be authorized to conduct each proposed activity under the permit. The Commission notes, though, that NMFS's 2016 application instructions do not require an applicant to specify which research personnel would be authorized to supervise procedures, as being authorized as a CI under a permit implies that one is "qualified and authorized to conduct or directly supervise activities"[24]. In the case of this permit application, MML denoted that certain personnel would be authorized only to supervise some procedures rather than conduct *and* supervise those procedures (see Appendix 2). By implementing such an approach, it appears MML considers supervising procedures to require *fewer* qualifications than conducting them. For example, the PI had been designated to supervise blood sampling, yet he only lists in his QF his level of experience with this procedure as a 1[25]. The Commission notes that MML is the only entity which has taken the approach in its permit applications of parsing between those personnel who would conduct and supervise procedures versus those who would only supervise procedures[26] and that MML may have misunderstood how to populate its personnel table in accordance with NMFS's 2016 application instructions. As evidenced by the Commission's comments, this approach only creates confusion regarding who would be responsible for conducting which procedures under the permit and whether they are qualified to do so. This problem could have been easily rectified if NMFS had alerted MML to the issue.

Based on the information available and if NMFS decides to issue permit 23858 to MML, the Commission recommends that NMFS (1) specify all vet techs as CIs and not 'veterinarians' in the final permit application and issued permit and remove from the final permit application any notation of veterinarian in reference to personnel that are vet techs, (2) condition the permit to require that

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[21] With the exception of some active acoustic playback activities, as described previously.
[22] Level 1 denotes having assisted or received education/training in performing the procedure, but **not having 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.
[23] Including its 31 March 2020 letter on MML's permit 23283, its 7 May 2019 letter on MML's permit 22289, and its 20 November 2019 letter on MML's permit 22678.
[24] The Commission notes that the PI and each CI *are* allowed to conduct any procedure that he or she is not specifically authorized to conduct unsupervised under the permit, as long as he or she conducts the procedure under the supervision of an experienced PI or CI. Blank cells or lack of itemized duties in the personnel table do not preclude research personnel from obtaining the necessary experience under the permit—they merely denote those procedures which require that the procedures be conducted under the supervision of other personnel.
[25] The PI specified in his QF that he supervised *a research program* that routinely includes blood sampling of various seal species but that he typically does not conduct blood sampling himself. Supervising a research program is not synonymous with supervising personnel conducting the procedures in the field.
[26] e.g., MML permit 22289 and MML permit 22678.

only veterinarians surgically implant LHX tags, (3) refrain from authorizing the PI and any CI to supervise surgical implantations of LHX tags, and (4) authorize a PI or CI to only conduct an invasive procedure that he or she has at least performed under supervision (Level 2 or greater). If neither the PI nor any of the CIs have prior experience conducting playback activities, the Commission recommends that NMFS require in the issued permit that either the PI or one of the CIs receive training in conducting active acoustic playbacks before conducting such activities in the field.

More generally, for research personnel that would be authorized to conduct procedures under a permit, the Commission recommends that NMFS (1) advise each applicant to designate them to either conduct procedures *or* conduct and supervise procedures, and (2) correspondingly, authorize them as such. If NMFS decides to issue a permit to MML and disregards these recommendations, the Commission recommends that NMFS only authorize a PI or CI to supervise procedures that he or she has at least performed without supervision (Level 3 or greater).

In general, it is apparent that applicants are not receiving clear guidance from NMFS regarding which research personnel should be authorized to conduct various procedures under a permit, particularly those that are invasive, and how experience should be indicated in a QF, curriculum vitae (CV) or biosketch to clearly demonstrate that a PI or CI is qualified to conduct a procedure. In the last two years, the Commission has written at length on this issue in eight letters on research permit applications[27], including this one, as well in its 14 November 2019 letter on NMFS's revised application instructions. However, NMFS continues to authorize research personnel to conduct and/or supervise procedures for which they are not qualified based on the information provided in the QF, CV, or biosketch. And in response to the Commission's recommendations regarding personnel qualifications in its 31 March 2020 letter on MML's permit 23283, its 17 May 2019 letter on ADFG's permit 22298, and its 7 May 2019 letter on MML's permit 22289, NMFS indicated that it would respond directly to the Commission's Executive Director. The agency is required under section 202(d) of the MMPA to respond within *120 days* after receipt of Commission recommendations and provide a detailed explanation of why any recommendation was not followed or adopted. However, NMFS has yet to provide responses to this matter. As such, in accordance with NMFS's 2016 application instructions, the Commission recommends that NMFS (1) provide adequate guidance to applicants regarding the experience necessary to qualify to conduct and supervise procedures as a PI or CI, (2) ensure that such qualifications are clearly demonstrated in a QF, CV or biosketch, (3) consistently authorize a PI or CI to supervise and conduct activities for which he or she is qualified, and (4) provide responses to all of the Commission's recommendations for the three aforementioned permits.

Finally, since MML proposed to remotely sedate bearded seals, which has inherent risks, the Commission believes that NMFS should continue to take a precautionary approach, as it has with authorizing remote sedation under previous pinniped permits (e.g., MML permit 22289). If NMFS decides to issue a permit to MML, the Commission recommends that NMFS condition the permit to require monitoring of bearded seals that have been sedated remotely and report on (1) their behavioral response and any activities that place them at heightened risk of injury or death, (2)

[27] Including its 31 July 2020 letter on Dr. Costa's permit 23188, its 31 March 2020 letter on MML's permit 23283, its 15 January 2020 letter on Dr. Nowacek's permit 22156, its 20 November 2019 letter on MML's permit 22678, its 18 November 2019 letter on PIFSC's permit 22677, its 17 May 2019 letter on ADFG's permit 22298, and its 7 May 2019 letter on MML's permit 22289.

whether they entered the water and their fate could not be determined, and (3) whether the dependent pups of those remotely-sedated seals are abandoned or injured and whether the pups' behavior in response to remotely-sedating the females is notably different from their response to other capture methods. The Commission further recommends that NMFS condition any issued permit to halt the use of remote sedation and consult with NMFS and the Commission if three or more bearded seals are sedated remotely and suffer unanticipated adverse effects, including entering the water and either drowning or disappearing so that their fate cannot be determined.

Acoustic activities

The Commission provided extensive informal comments on the acoustic portions of MML's original application. Although some of comments have been addressed in the revised application, some are still outstanding and some additional clarifications are necessary. In comments on the original application, the Commission noted that there were multiple issues with the source level MML referenced and proposed to use for its playback activities[28]. MML proposed to use source levels lower—typically much lower—than 100 dB re 1 µPa at 1 m based on Cleator et al. (1989). However, Cleator et al. (1989) erroneously indicated that the *source* level was 100 dB re 1 µPa at 1 m in order for the vocalizations to be heard for up to 30 km and actually reported a *received* level[29]. Ignoring the inaccuracies of Cleator et al. (1989), the Commission informally noted that the 100-dB re 1 µPa at 1 m *source* level is less than any threshold that NMFS currently uses for Level B harassment. If that source level was a true representation of what MML intended to emit, taking would not need be authorized, as the lowest *received* level that NMFS currently uses is a 160-dB re 1 µPa threshold for intermittent sounds[30]. In addition, the Commission noted that ambient sound levels in Alaskan waters exceed 100 dB, particularly when vessels, including the researchers' vessels, are nearby. The Commission further noted that a received level must be high enough for the seal to detect it[31], while also considering transmission loss and location of the speaker[32].

Due to these issues, the Commission informally asked MML to (1) specify the maximum *source* level to be transmitted (accounting for how far away the target animals are likely to be and transmission loss), (2) specify the frequency range, duty cycle and pulse duration to estimate the Level A harassment zones, and (3) provide an estimate of the Level A and B harassment zones—all of which are consistent with NMFS's 2016 application instructions. Eventually, MML indicated that the maximum source level would be no greater than 158 dB re 1 µPa at 1 m, consistent with an amendment request from and issuance to ADFG[33]. MML never provided the frequency range and extents of any harassment zones. More importantly, the revised source level is still less than NMFS's Level B harassment threshold for intermittent sound. The Commission notes that a source level of 158 dB re 1 µPa at 1 m would result in a received level of 128 dB re 1 µPa at 100 m in shallow

[28] MML proposed to use playbacks of bearded and harbor seal vocalizations to attempt to attract seals to the capture nets.
[29] If one assumes Cleator et al. (1989) actually reported a *received* level, the source level would be 193 dB re 1 µPa at 1 m based on the reported transmission loss of 93 and the *received* level of 100 dB re 1 µPa at 30 km. 193 dB re 1 µPa at 1 m is similar to Weddell seal vocalization source levels reported in Cleator et al. (1989).
[30] MML later clarified that it could emit a 60-second vocalization every 90 seconds.
[31] The signal-to-noise ratio must be at least 5 to 10 dB greater than ambient.
[32] A vessel-placed speaker would need to emit louder playbacks than a net-placed speaker. This is particularly true for bearded seals that are deterred by vessels. The sound emitted would need to be sufficiently loud for the vessel to be located sufficiently far enough away from the net and seals so as to not deter them.
[33] That modification was processed as a minor amendment, which the Commission is not required to review. Had the Commission reviewed the amendment request, it would have denoted this issue.

water[34], which may not exceed the signal-to-noise ratio necessary for the seals to detect the sound and thus be attracted to it. As such, it is unclear if the revised source level is sufficient.

Although MML intimated that the Commission's comments and request for additional information was excessive, the Commission's comments were intended to prompt MML to resolve these issues so that it did not inadvertently violate its permit[35] and to minimize the need to request an amendment when the playbacks were ineffective. NMFS should have recognized the lack of the required information, as well as these more general issues, *and* alerted MML to them prior to sending the application to the Commission for its review and publishing the application in the *Federal Register* for public comment. If NMFS decides to issue a permit to MML, the Commission recommends that NMFS (1) confirm with MML[36] that 158 dB re 1 μPa at 1 m is the maximum source level that would need to be used to attract seals during its playback activities and (2) if so, specify why it is authorizing taking at sound levels below its Level B harassment thresholds, when such taking is not authorized for other research permits (i.e., playback studies that involve behavioral response) that also emit sound below those thresholds.

In addition to conducting playback activities, MML proposed to use VEMCO tags to enable tracking of bearded seals that are remotely sedated. The Commission informally asked MML to specify the pulse duration and applicable Level A harassment zone for the tags and clarify whether Level A harassment could occur—all of which are consistent with NMFS's 2016 application instructions. NMFS should have recognized the lack of the required information prior to sending the application to the Commission for its review and publishing the application in the *Federal Register* for public comment. MML indicated in its revised application that, under nearly all imaginable circumstances, the VEMCO tag would be much greater than 10 centimeters from the ears of the target seal or any seals in the vicinity, and the probability of any temporary or permanent threshold shift (TTS and PTS, respectively) as a result of these tags is very small. The Commission agrees that the probability of PTS is very low, as it provided the 0.1 m reference to MML in its informal comments. However, the TTS threshold for non-impulsive sources is 20 dB less than the PTS thresholds. TTS could occur after 4 hours if the tag is attached within 0.2 m of the seal's ear and after 6 hours if within 0.3 m. As such, the information in MML's revised application is not accurate. Researchers reference their previous applications, as well as other applications—MML referenced both ADFG's amendment request for its playback activities and Northeast Science Center's application for its use of VEMCO tags. It is imperative that the information contained in a final application is correct not only because the application underpins the permit but also because errors tend to recur between an applicant's own applications and among various other applicants' applications. If NMFS decides to issue a permit to MML, the Commission recommends that NMFS revise MML's final application to state that the probability of PTS from use of VEMCO tags is very small and the probability of TTS is offset by the greater benefit of being able to track and locate seals to administer a reversal after being remotely sedated.

It is apparent that NMFS's acoustic expert was not asked to review the relevant acoustic portions of the original and revised applications and/or the expert's comments were not provided to MML. Many of the issues detailed herein could have been rectified had NMFS consulted fully with

[34] Assuming 15logR in waters 100 m in depth or less. If in deeper waters, the received level would be 118 dB re 1 μPa at 100 m assuming 20logR.
[35] Which very likely would have occurred had it retained the 100-dB re 1 μPa at 1 m source level.
[36] Who should consult with its own acoustic experts.

its acoustic expert on MML's application. The Commission indicated a similar issue in its 15 January 2020 letter on Dr. Nowacek's permit 22156 and notes that it has been an ongoing issue for other recent applications as well. In some of those instances, it is evident that when NMFS does provide the information to its acoustic expert for review, it is doing so in a piecemeal fashion. Additionally, issues concerning acoustics could more easily be addressed if NMFS allowed the Commission to consult directly with the applicant rather than passing along informal comments to him or her by way of NMFS, which only increases the likelihood that comments are misinterpreted by either NMFS or the applicant. To maximize efficiencies and ensure accuracy of applications involving acoustic activities, the Commission recommends that NMFS ensure that its acoustic expert has reviewed *all aspects* of the final version of any application, including any revised application, that involves acoustic activities before providing it to the Commission for review or publishing it in the *Federal Register* notice for public comment.

Incidental harassment takes of non-target marine mammal species

MML proposed that all incidental harassment takes of non-target marine mammal species, including northern fur seals and Steller sea lions, be covered under other MML permits (e.g., 20465, 22289, and 23238). The Commission informally noted that incidental harassment of non-target species that could occur during the proposed phocid research activities should be authorized under this permit, not under other MML permits. NMFS and MML responded that including incidental harassment takes under the target species-related permits allows researchers to conduct opportunistic research on those species during the proposed phocid activities. The Commission agrees that if a researcher who was a CI under both this permit and MML's Steller sea lion permit 22289 were to encounter a Steller sea lion during a harbor seal survey and wished to photograph the animal, such a take should be covered under the Steller sea lion permit. However, the Commission contends that taking of non-target species incidental to conducting research activities *on phocids*, such as approaching a mixed group of pinnipeds during a harbor seal survey and flushing Steller sea lions, should be covered under this permit. This approach is consistent with MML permits 22289 and 23283[37] issued by NMFS in the last two years. As such, if NMFS decides to issue a permit to MML, the Commission recommends that NMFS authorize and include in the take table incidental harassment takes of non-target species, including Steller sea lions and northern fur seals, that could be disturbed during the phocid research activities.

IACUC protocols

During its informal review of MML's original application, the Commission noted that surgical implantation of LHX tags had been approved by the IACUC for harbor seals only. The Commission asked whether updated protocols that included LHX tags for all of the target species were still on track to be completed and reviewed by MML's IACUC in the fall of 2020, as specified in the original application[38]. NMFS responded that this had been true at the time of submission of the application, which appears to have been many months earlier, and that the applicant was not required to constantly update the application during the course of review. The Commission disagrees. Given that the Commission conducted its informal review in the fall of 2020, its request

[37] Permit 22289 authorized the incidental taking of harbor seals and northern fur seals during Steller sea lion research activities, and permit 23283 authorized the incidental taking of harbor seals and Steller sea lions during northern fur seal research activities.

[38] In another portion of the original application, MML indicated that the protocols would be reviewed in summer or early fall.

for an update on the status of MML's IACUC protocols is relevant and reasonable, particularly since the original application was published for public comment a few weeks later. Any application provided to the public for comment should contain accurate and consistent information.

Moreover, NMFS's current policy[39] requires that the Science Centers provide the IACUC assurance statement with all applications. Based on that policy, any applications for permits or permit amendments that do not include the assurance statement are to be returned to the applicant. It has been the Office of Protected Resources' practice to not require the assurance statement at the time an application is submitted—the Science Center must provide the statement before the permit is issued. If the Office of Protected Resources believes that its IACUC policy is too restrictive in this regard, then it should consider revising the policy. However, until NMFS amends its policy, the Commission recommends that NMFS return all permit and permit amendment applications that do not include the IACUC assurance statement to the respective Science Center and refrain from publishing those applications for public comment until the IACUC assurance statement has been provided. If NMFS decides to issue a permit to MML, the Commission recommends that NMFS advise MML that, prior to conducting any procedures, *all* research protocols reviewed and approved by the relevant IACUC must match those activities authorized under the permit.

The Commission made similar recommendations regarding MML's IACUC assurance statements in its letters regarding MML permits 28283 and 22289. NMFS indicated that it would respond directly to the Commission's Executive Director regarding general IACUC recommendations. Again, the Commission has inquired and has yet to receive NMFS's response consistent with the requirements under section 202(d) of the MMPA. The Commission expects that NMFS will provide a detailed explanation of why any recommendation is not followed or adopted for MML's current permit application within the statutorily-mandated 120-day timeframe and expeditiously for MML's and ADFG's previous permit applications[40]. Please contact me if you have any questions regarding the Commission's recommendations.

Sincerely,

Peter O Thomas

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

cc: Dr. Barbara Kohn, Animal and Plant Health Inspection Service

[39] Which has been in effect since 2009.
[40] i.e., for MML permits 28283 and 22289 and ADFG permit 22298. NMFS also must provide detailed explanations for the other Commission recommendations that were not discussed herein but for which NMFS indicated it would respond directly to the Commission's Executive Director.

References

Cleator, H.J., I. Stirling, and T.G. Smith. 1989. Underwater vocalizations of the bearded seal (*Erignathus barbatus*). Canadian Journal of Zoology 67:1900–1910.

Horning, M., M. Haulena, P.A. Tuomi, J.-A.E. Mellish, C.E. Goertz, K. Woodie, R.K. Berngartt, S. Johnson, C.R. Shuert, K.A. Walker, J.P. Skinner, and P.L. Boveng. 2017. Best practice recommendations for the use of fully implanted telemetry devices in pinnipeds. Animal Biotelemetry 5(1):13.