

MARINE MAMMAL COMMISSION
4340 EAST-WEST HIGHWAY, ROOM 700
BETHESDA, MD 20814-4447

25 July 2008

Mr. P. Michael Payne
Chief, Permits Division
Office of Protected Resources
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910-3226

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Service's 23 June 2008 *Federal Register* notice proposing to issue regulations under section 101(a)(5)(A) of the Marine Mammal Protection Act to govern the taking of marine mammals incidental to military readiness training operations in the Navy's Hawaii Range Complex from December 2008 through December 2013. The Commission also reviewed and provided comments on the Navy's draft environmental impact statement and draft supplemental environmental impact statement for the proposed activities (see letters of 2 October 2007 and 7 April 2008, enclosed).

The planned training operations would expose various species of marine mammals within the Hawaii Range Complex to sounds from hull-mounted mid-frequency active tactical sonar, to pressures from underwater detonations, and to taking incidental to the development, testing, and evaluation of weapons systems, vessels, and aircraft. The proposed exercises and training activities will involve mid-frequency active tactical sonar from 1 to 10 kHz, a high-frequency sonar system greater than 10 kHz but less than 100 kHz, and underwater detonations of various types of ordnance. These include Harpoon surface-to-surface and air-to-surface missiles, air-to-surface Maverick missiles, MK82, MK83, and MK84 bombs, 5-inch guns, 76-mm rounds, extended echo ranging/improved extended echo ranging (5-lb detonations), and MK48 heavyweight submarine-launched torpedoes.

The Navy is requesting authorization to take by Level B harassment up to 24 species of marine mammals (5 mysticetes, 18 odontocetes, and 1 pinniped) incidental to the proposed operations during activities to be conducted around the main Hawaiian Islands. The Navy also is requesting authorization to take up to 10 individuals of 11 species (bottlenose dolphins, *Kogia* spp., melon-headed whales, pan-tropical spotted dolphins, pygmy killer whales, short-finned pilot whales, striped dolphins, and Cuvier's, Longman's and Blainville's beaked whales) by serious injury or mortality over the five-year period.

RECOMMENDATION

The Marine Mammal Commission recommends that, if the National Marine Fisheries Service proceeds with a final rule to authorize the taking of small numbers of marine mammals incidental to the proposed military training operations, the Navy be required to—

- explain all analytical procedures and provide all data used to estimate take levels in sufficient detail that reviewers can understand, reconstruct, and verify the estimated risks;
- calibrate and verify the performance of the proposed visual and passive acoustic monitoring programs before operations begin so that all interested parties can evaluate the effectiveness of the mitigation measures;
- retain the power-down or shutdown period of 30 minutes for most marine mammals, expand it to 60 minutes for deep-diving species, and provide follow-up data on the effectiveness and costs associated with this mitigation measure;
- suspend activities if a beaked whale or other marine mammal is killed or seriously injured and the death or injury appears to be associated with that activity, and resume the activity only after a review by the Service of the circumstances of the death or injury and the Navy's plans for avoiding additional incidents; and
- provide a release date for the report of watchstander data from operations in the Hawaii Range Complex, the Southern California Range Complex, and Atlantic Fleet Active Sonar Training activities.

The Marine Mammal Commission also recommends that the Service develop a more specific implementation plan for its proposed adaptive management program and include that plan in the final rule.

RATIONALE

Take Estimation

The Service's proposed incidental take authorization suffers from the same problem identified in the Commission's letter regarding the Navy's draft supplemental environmental impact statement for the Hawaii Range Complex. That is, the analytical procedures used to estimate the number of takes cannot be reconstructed and verified based on the descriptions of the calculations used and data provided. The Service's *Federal Register* notice indicates that the information is contained in Appendix J of the final environmental impact statement and other supplemental documents, but these sources also fail to provide the necessary information. The following are examples of shortcomings in the existing descriptions.

- The methods for combining the effects of multiple sound sources are not clearly described. The existing description indicates that overlapping "footprints" are not added, but the description is not sufficient to determine how those footprints were integrated. The description also is not clear as to how non-overlapping footprints were treated. The information provided also did not describe how different frequencies were treated, as in the case of 53 and 56 sonars operated simultaneously (which could double the cumulative sound energy exposure of individuals hearing two sets of sonar signals over a given time period).
- The action area includes terrestrial habitat (i.e., islands) and it is not clear if and how estimates of animal density and ensonification levels were corrected to account for areas of land. If those areas were not removed from the calculations of both factors (density,

ensonification level), then one or both of them would be biased, causing error in the estimated numbers of animals exposed to varying sound levels.

- The basis for limiting the number of takes expected to occur to a 24-hour period is not clear. Exposure should not be accumulated over an indefinite period or beyond the period of recovery, but some animals exposed to temporary threshold shifts or significant behavioral disturbance may require recovery periods longer than a single day. This could be a particular problem for animals in the vicinity of multiple sound sources.

The Commission has repeatedly requested that the Navy provide additional explanation of the take estimation protocol. However, we have still not received the requested information. The supporting documents cited as providing the missing details of take estimation procedures do not provide sufficient detail to enable reviewers to replicate the procedures used by the Navy and the Service. For that reason, the proposed rulemaking and referenced documents are not sufficient to support informed concurrence or disagreement with the proposed finding of negligible impact. We consider this to be a serious deficiency in the proposed rulemaking. The Marine Mammal Commission therefore recommends that the issuance of the final rule be contingent upon the Navy explaining all analytical procedures and providing all data used to estimate take levels in sufficient detail that reviewers can understand, reconstruct, and verify the estimated risks.

Monitoring and Mitigation

As discussed in its 23 May 2008 letter regarding the Navy's Southern California Range Complex (enclosed), the Commission does not believe that the criteria being used to turn sonar systems back on or return them to full power after a marine mammal sighting are sufficiently precautionary, particularly for ships that are underway. The Marine Mammal Commission recommends that the Navy delay use of full sonar power for at least 30 minutes for most marine mammals and 60 minutes for deep-diving species. The Marine Mammal Commission also recommends that the Navy document the effectiveness and costs of this approach to determine if mitigation methods require future adjustment. A six-month or one-year trial should be sufficient for that purpose.

Lethal Taking/Serious Injury

The Navy is requesting authorization to take a certain number of marine mammals by injury or mortality to allow it to continue training exercises without suspension pending a potentially lengthy investigation if a death or stranding occurs. The Commission believes that any authorization for marine mammal deaths should, at a minimum, require the temporary suspension of activities until an initial investigation of the cause of the animal's death is conducted. Such an investigation is needed to assess the full impact of the activities (e.g., assess the total number of animals involved), determine how the activities may have caused injury or death, and determine how they should be modified to avoid future injuries or deaths. It should be clear to all interested parties that we need more information to understand the potential effects of sound on marine mammals, and taking the time to investigate these incidents may provide invaluable information. Such an approach is consistent with the adaptive management program described by the Service in its *Federal Register*

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notice. For those reasons, the Marine Mammal Commission recommends that the regulations, if issued, require suspension of activities if a beaked whale or other marine mammal is killed or seriously injured and the death or injury appears to be associated with that activity, and allow resumption of the activity only after a review by the Service of the circumstances of the death or injury and the Navy's plans for avoiding additional incidents.

Reporting

The Service's proposed rule states that, at the end of the fourth year of the rule (November 2012), the Navy will submit a draft report that analyzes and summarizes all of the multi-year marine mammal information gathered during anti-submarine warfare and explosive exercises for which individual reports are required. The Commission supports this requirement. The notice also states that the Navy will submit a draft national report that analyzes, compares, and summarizes the data gathered from the watchstanders pursuant to the implementation of the monitoring plans for operations in the Hawaii Range Complex, the Southern California Range Complex, and Atlantic Fleet Active Sonar Training activities. The release date for this report is not provided, and the Marine Mammal Commission recommends that the release date be included in the final rule.

Adaptive Management Program

The *Federal Register* notice states that the Service is proposing to incorporate an adaptive management program in its authorization process. Through this program, the Service will reserve the right to modify risk criteria and take estimates as new scientific information emerges, rather than waiting to review such material at the end of the five-year authorization period. The Commission supports this idea in theory, as new scientific evidence is emerging quickly in the field of acoustics. However, the practical value of this approach will depend on the specific manner in which it is implemented, which is not described in the *Federal Register* notice. The Marine Mammal Commission concurs with the need for such a program but recommends that the Service develop a more specific implementation plan before completing the final rule. The Commission would be pleased to participate in the development of such an implementation plan.

Please contact me if you or your staff has questions about any of the above recommendations.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Enclosures