

MARINE MAMMAL COMMISSION
4340 East-West Highway, Room 700
Bethesda, MD 20814-4447

23 May 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 application submitted by the U.S. Navy under section 101(a)(5)(A) of the Marine Mammal Protection Act seeking a Letter of Authorization to take marine mammals incidental to military readiness training operations in the Navy's Southern California Range Complex (SOCAL) from January 2009 to January 2014. The Commission also has reviewed the National Marine Fisheries Service's 17 April 2008 *Federal Register* notice announcing receipt of the application and inviting comments on its proposal to develop and implement regulations to govern the requested taking. In addition, the Commission has reviewed and provided comments on the Navy's Draft Environmental Impact Statement (DEIS) for the proposed activity (see letter of 23 May 2008, enclosed).

The planned training operations would expose various species of marine mammals within the Navy's SOCAL complex to sounds from hull-mounted mid-frequency active tactical sonar and 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, high-frequency sonar systems greater than 10 kHz but less than 100 kHz, and in-water and underwater detonations of various types of ordnance (e.g., HARPOON surface-to-surface and air-to-surface missiles, air-to-surface Maverick missiles, MK32, MK82, MK83, and MK84 bombs, Hellfire air-to-surface missiles, SLAM-ER air-to-surface missiles, 5-inch guns, and MK48 heavyweight submarine-launched torpedoes).

The Navy is requesting authorization to take by Level B harassment up to 20 species of cetaceans and 4 species of pinnipeds incidental to the proposed operations during activities to be conducted off the coast of southern California and northern Mexico over five years. The Navy also is requesting authorization to take up to 10 beaked whales by serious injury or mortality over the period.

RECOMMENDATION

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

- develop and implement a plan to calibrate and verify the performance of the visual monitoring and passive acoustic monitoring programs being proposed to enable the Navy, the Service, and other interested parties to evaluate the effectiveness of the mitigation measures;
- provide the specific date or dates for initiating the Navy's proposed Marine Species Monitoring Plan that will provide, on an on-going basis, biological data for documenting long-term trends in marine mammal abundance and distribution that will be used to inform subsequent exercise planning;
- provide a detailed explanation and all necessary data regarding the derivation of exposure numbers to reconcile the Level A and B take estimates with the complex and extensive sound patterns produced during the proposed military readiness operations and the spatial and temporal complexity in animal distribution and density;
- modify its criteria for resuming full operational sonar use following a power-down or shutdown to require monitoring periods of 30 minutes for most marine mammals and 60 minutes for deep-diving species such as sperm and beaked whales unless the animal is re-sighted at a safe range before that time, and provide follow-up data on the effectiveness and cost of such mitigation and monitoring efforts;
- suspend an activity if a beaked whale or other marine mammal is killed or seriously injured and the death or injury appears to be associated with the Navy's activities. Authorization for resumption of the activity should be contingent upon a review by the Service of the circumstances of the death or injury and the Navy's plans for avoiding additional mortalities;
- if the death or serious injury of an individual of any species other than a beaked whale occurs, the regulations be amended to provide for such taking of a certain number of individuals of such species during future operations;
- submit annual reports providing full documentation of methods, results, and interpretation pertaining to all monitoring tasks,
and the dates and locations of operations, marine mammal sightings, and estimates of the amount and nature of potential takes of marine mammals by harassment or in other ways;
and
- address in a separate, independent analysis the costs and benefits of establishing an offshore shallow water minefield on Tanner Bank. Until such an analysis is provided, the Service should withhold authorization for the taking of marine mammals as a result of such expansion.

RATIONALE

Monitoring and Mitigation

The Navy's investment in developing and refining monitoring and mitigation capabilities, including a Marine Species Monitoring Plan, is commendable. However, the performance verification procedures used by the Navy for many of its military readiness operations have yet to be

evaluated thoroughly. The Commission believes that it is incumbent upon the Navy to develop and implement a plan for obtaining performance data to justify its confidence in critical mitigation measures such as watchstander training effectiveness, watchstander probability of detecting various marine species of concern, and the effectiveness of night vision and passive acoustic information included in the monitoring protocol. Validation and verification of system performance is a well-established and standard part of research, development, testing, and evaluation processes that precede systems acquisition and fleet use. Performing similar verification and validation for measures to mitigate environmental effects would not be unduly costly and would clarify whether the Navy is, in fact, being realistic in its claims regarding the proposed mitigation efforts.

As discussed in its 23 May 2008 letter to the Navy, the Commission also continues to believe that the criteria for resuming and powering up sonar use following shutdown or reduction is not sufficiently precautionary, particularly with respect to the criterion of ship travel. The Navy's current criteria invoke any one of three options: (1) the animal is seen leaving the safety zone (which rarely occurs), (2) the animal is not seen for 30 minutes (which often happens even if the animal is not a deep diver because successive surfacings are not detected), or (3) the ship travels 2,000 yards beyond the point at which shutdown or a source level reduction was initiated. The last criterion is particularly problematic because distance travelled and time since the last sighting co-vary. Under this criterion, a ship travelling at 10 knots would be able to resume pinging or increase the source level after only six minutes. A ship travelling at 15 knots, also not an unreasonable speed during exercises, could resume operations within four minutes. It seems unlikely that a vessel travelling at those speeds could even respond to the detection of an animal and then resume normal activity within that time frame. Therefore a more realistic and more prudent course of action might be to adopt a simple rule of 30 minutes for most marine mammals and 60 minutes for deep-diving species such as sperm and beaked whales unless the animal is resighted at a safe distance before that time. The Marine Mammal Commission recommends that the regulations, if issued, require that the Navy (1) implement a plan to obtain monitoring performance validation data before beginning operations, (2) provide more detailed and substantive explanation of the risk estimation protocols, and (3) modify its criteria for resuming full operational sonar use following a power-down or shutdown and provide follow-up data on the effectiveness and cost associated with such mitigation and monitoring efforts. With respect to the third point, perhaps a six-month or one-year trial could be conducted, with re-evaluation of the burden imposed by this requirement after sufficient data have been acquired to determine whether this is a practical measure to implement permanently.

Lethal Taking/Serious Injury

Neither the Service nor the Navy anticipates that marine mammal strandings or death will result from the operation of mid-frequency sonar during Navy exercises within the SOCAL complex. However, the applicant is requesting authorization for the lethal taking of a small number of beaked whales. The applicant states that such authorization would allow the Navy to continue training exercises without suspension pending a potentially lengthy investigation if a death or stranding occurs. The Commission believes that any authorization of beaked whale mortalities 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 help ensure that

additional deaths of beaked whales or other species of marine mammals do not occur. As a related matter, the Navy's DEIS (p. 2.9-90) provides a list of criteria that, "*in their aggregate*" [emphasis added], would require implementation of additional monitoring and mitigation measures for protecting beaked whales from the effects of mid-frequency sonar operations (i.e., steeply sloping bathymetry near shore, multiple sonars, a possible strong and deep surface duct, and bottom terrain forming a channel or embayment). As the Commission discussed in its 23 May 2008 letter to the Navy, the well-documented presence of beaked whales in many parts of the SOCAL range, the knowledge that typical antisubmarine warfare operations may lead to one or more surface vessels entering into a bay or channel or travelling toward a shoreline, and the knowledge that surface ducts are a common phenomenon in the area, with profound effects on sonar propagation, should individually be sufficient to invoke caution. The Marine Mammal Commission therefore recommends that the regulations, if issued, require that incidental take regulations, if issued, require that (1) particular activities be suspended 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, (2) authorization for resumption of the activity be contingent upon a review by the Service of the circumstances of the death or injury and the Navy's plans for avoiding additional mortalities, and (3) if the death or serious injury of an individual of any species other than a beaked whale occurs, the regulations be amended to provide for such taking of a certain number of individuals of such species during future operations.

Reporting

On page 5-10 of the Navy's DEIS, the specific information to be included in a post-event report to the Service is detailed for a SINKEX (an exercise involving the sinking of a ship). However, the discussion of most, if not all, other activities either do not mention post-event reporting or, if they do, the information provided is not described. These reports have great potential value to the Navy and the Service. The Marine Mammal Commission therefore recommends that the Service require that the applicant submit annual reports providing full documentation of methods, results, and interpretation pertaining to all monitoring tasks, and the dates and locations of operations, marine mammal sightings, and estimates of the amount and nature of potential takes of marine mammals by harassment or in other ways.

Table 3.1 of the Navy's EIS lists a translocated population of 29 sea otters on San Nicolas Island that could be affected by the proposed activities and states that the Navy is not planning to request authorization to take these animals because the animals are considered an experimental population. The Commission recognizes that the U.S. Fish and Wildlife Service's regulations at 50 C.F.R. § 17.84(d)(4)(iv)(B) under the Endangered Species Act state that "[a]ny taking of a member of the experimental population of southern sea otters that is incidental to, and not the purpose of, the carrying out of a defense-related agency action are exempted from the taking prohibitions in § 17.21 (a) through (f) of the regulations." Nevertheless, the National Marine Fisheries Service, if it has not already done so, should advise the Navy that it should contact the Fish and Wildlife Service regarding the possible need to obtain a small-take authorization under the Marine Mammal Protection Act.

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Tanner Banks

The Navy's application (p. 22) states that the Navy is proposing to establish an offshore, shallow-water minefield, approximately 2 nm by 3 nm in size, on Tanner Banks. The biological importance of Tanner Banks is well documented, and any plans to increase naval activity in that area should be carefully weighed against the options of increasing the use of existing countermeasures sites or placing the new site elsewhere where it would have the least possible impact. As we note in our letter to the Navy regarding the SOCAL DEIS, that document provides no coordinates or mapping of the proposed inert mine field within Tanner Banks, nor is there sufficient discussion of the specific likely impact of mine-countermeasures activity. The text refers to Figure 3.4-3, but the banks are not shown on that map, and a figure that does provide the location of the banks (Figure 1-3) misplaces the label for Tanner Banks by about 20 nautical miles. The expansion of the SOCAL Offshore Acoustic Range into that area provides an opportunity to better monitor the site at all times, but this aspect of the cost/benefit equation also has not been considered in the DEIS. The prudent and safe course of action is to exclude the proposed mine-countermeasures exercise area from Tanner Banks and address it separately in a subsequent independent analysis. For these reasons, the Marine Mammal Commission recommended to the Navy that it address in a separate, independent analysis the costs and benefits of establishing an offshore, shallow-water minefield on Tanner Banks. The Marine Mammal Commission recommends that, until such an analysis is provided, the National Marine Fisheries Service withhold authorization for the taking of marine mammals as a result of such expansion.

If you or your staff has questions about any of the Commission's recommendations, please let me know.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Enclosure