

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

13 November 2008

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

Dear Mr. Payne:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the National Marine Fisheries Service's proposed rule published in the 14 October 2008 *Federal Register* proposing to issue regulations under section 101(a)(5)(A) of the Marine Mammal Protection Act. The proposed regulations would be effective for five years and would authorize the U.S. Navy to take small numbers of marine mammals incidental to Atlantic Fleet Active Sonar Training (AFAST) activities conducted off the U.S. Atlantic coast and in the Gulf of Mexico. Activities covered by the authorization would include the use of mid-frequency and high frequency active sonars and an extended echo ranging system. The Navy is requesting authorization to take by Level B harassment up to 40 marine mammal species incidental to the proposed operations and up to 10 beaked whales by serious injury or mortality over the five-year period.

In a 31 March 2008 letter (enclosed), the Commission provided comments to the Navy on its Draft Environmental Impact Statement (DEIS) for the proposed activities, many of which are pertinent to the proposed incidental take regulations. In a 4 April 2008 letter (enclosed and incorporated herein by reference) the Commission also provided comments and recommendations in response to the Service's 5 March 2008 *Federal Register* notice that it was planning to develop regulations to govern the proposed activities.

RECOMMENDATIONS

Some of the Commission's recommendations set forth in its 4 April 2008 letter were not adopted. Based on its ongoing concerns about certain aspects of the proposed activities and governing regulations, the Marine Mammal Commission recommends that the Service work with the Navy—

- to provide in the final rule and EIS a side-by-side comparison of the methods each agency used to generate the sound exposure estimates so that reviewers can understand the process by which they were derived and the uncertainties associated with that process, and use that information to assess the risks to marine mammal species and the adequacy of mitigation measures;
- to validate the performance of Navy lookouts, to conduct similar testing to validate passive acoustic monitoring methods, and to complete such tests before the Navy proceeds with its AFAST training operations;

- to analyze post-operational reports thoroughly and use the results to resolve disparate views regarding the effectiveness of monitoring and mitigation measures and to improve those measures accordingly;
- to modify the Navy's mitigation measures by requiring that the Navy delay resumption of full operational sonar use following a power-down or shutdown for 30 minutes if the sighted animal can be identified to the species level and the species is not deep diving and 60 minutes if it cannot be identified or is known to be a member of a deep-diving species such as sperm and beaked whales;
- to modify the Navy's mitigation measures by allowing resumption of full operations before the end of the 30-minute period (when the species can be identified and is not a deep diver) or 60-minute period (the species cannot be determined or can be determined but is a deep diver) only when the Navy has good evidence that the marine mammal seen outside the safety zone is the same animal originally sighted within the zone; and
- to prepare a more thorough analysis of potential cumulative effects, the measures that will be taken to avoid or minimize them, and the basis for concluding that those effects will be negligible.

RATIONALE

The Commission bases its recommendations on the following rationale.

The DEIS

The Service's *Federal Register* notice (page 60823) states that "we believe that the adoption of the Navy's Final Environmental Impact Statement will allow NMFS [National Marine Fisheries Service] to meet its responsibilities under NEPA [National Environmental Policy Act] for the issuance of an LOA [letter of authorization] for AFAST." As noted in our 31 March 2008 letter to the Navy, the preferred alternative identified in the DEIS presents the highest level of environmental risk and fails to consider a number of measures or actions that would effect the least practical adverse impact to marine mammals, as required by section 101(a)(5)(A).

On page 60817, column 2, of the *Federal Register* notice, the Service states that it "has factored in the mitigation measures and avoidance to make both quantitative and qualitative adjustments to the take estimates predicted by the Navy's 'acoustic analysis.'" The Service stated that the revised take estimates and proposed take authorization "depict a more realistic scenario than those adopted directly from the Navy's acoustic analysis." The Service does not provide its calculations or otherwise explain the basis on which these adjustments and judgments were made. This lack of information represents a continuing problem. Both the Navy and the Service should be basing their analyses and conclusions on the best available science. Clearly, estimating the number of

takes incidental to the Navy's activities is a considerable challenge, confounded primarily by the lack of information on the density, distribution (in three dimensions), and movement patterns of the potentially affected marine mammals. The Navy has been attempting to develop a more robust estimation process, but that process is in development and has not been fully described. The Service now suggests that it is modifying the analytical procedures used by the Navy to derive more realistic estimates. However, neither the Navy's estimation processes nor the Service's have been rigorously described and reviewed, as is required under normal scientific procedure. The Commission has recommended to the Navy that it submit its analyses to scientific peer-review, which is central to scientific procedure. The Service should do the same. Absent such review, all other interested parties, including decision makers, remain ill-informed and therefore more likely to make faulty assumptions and conclusions about the risks of the proposed activities. Although Service personnel may be required to use some discretion in their consideration of the proposed activities, it is not appropriate to continue to rely on such discretion when scientific methods are available to reduce the existing level of uncertainty. Therefore, the Marine Mammal Commission recommends that the Service work with the Navy to provide in the final rule and EIS a side-by-side comparison of the methods each agency used to generate the sound exposure estimates so that reviewers can understand the process by which they were derived and the uncertainties associated with that process, and use that information to assess the risks to marine mammal species and the adequacy of mitigation measures.

Monitoring and Mitigation Performance Verification

The Service states in its *Federal Register* notice that prior to the publication of the proposed rule it worked with the Navy to identify additional practicable and effective mitigation measures to (1) minimize impacts on marine mammals, particularly the North Atlantic right whale within its southeastern critical habitat, and (2) investigate the potential relationship between the operation of mid- and high-frequency active sonars and marine mammal strandings. The notice also states that the Service and the Navy have worked on the Navy's draft monitoring plan for AFAST, are continuing to refine the plan, and anticipate that it will contain additional details before it is finalized in advance of the issuance of the final rule. In the absence of better information, reviewers, including decision makers and the public, are forced to evaluate the proposed rule on the basis of the current version of the monitoring plan. In that version, the Navy proposes to conduct aerial surveys before and after its two major training exercises each year (at least one of which includes multiple explosive detonations) to determine whether animals in the area have been injured or killed. The Navy also proposes to compare the effectiveness of professional marine mammal observers and Navy lookouts. In previous letters the Commission has made numerous recommendations to the Navy that it investigate the effectiveness of its monitoring and mitigation measures and the Commission welcomes the Navy's proposal to start doing so. It should be noted, however, that simply comparing the effectiveness of professional observers and Navy lookouts will provide only limited information. Done well, this test should assess the effectiveness of each group (i.e., what portion of the marine mammals are being sighted) and the effectiveness of Navy lookouts relative to that of professional observers. The design for this test also should take into account the possibility that Navy lookouts are significantly less effective than professional observers, i.e., the alternative hypothesis. Similar testing should be conducted to assess the effectiveness of the Navy's passive

acoustic monitoring procedures. As is clear from our past letters, the Marine Mammal Commission supports such performance testing, but it also believes that such performance testing should be conducted before training exercises are initiated. The aim of performance testing should be to determine if monitoring and mitigation measures are adequate; i.e., are sufficient to reduce risks to negligible levels with the least practicable adverse impact. Delaying performance testing could result in unnecessary risks to marine mammals. Therefore, the Marine Mammal Commission recommends that the Service work with the Navy to validate the performance of Navy lookouts, to conduct similar testing to validate passive acoustic monitoring methods, and to complete such tests before the Navy proceeds with its AFAST training operations.

Importantly, the Navy completed a series of reports after some exercises conducted under the current defense exemption. These reports provide quantitative estimates of the number of marine mammals detected versus the number predicted in the exercise area. Such information could be very useful in calibrating risk estimation procedures and in evaluating the effectiveness of mitigation measures. However, the reports are not referenced in the proposed rule and have not been analyzed thoroughly. In particular, neither the Navy nor the Service has attempted to reconcile disparate views that visual and passive acoustic monitoring offer limited detection capability versus the idea that risks can be effectively mitigated using these same methods. The Marine Mammal Commission therefore recommends that the Service work with the Navy to analyze these reports thoroughly and use the results to resolve disparate views regarding the effectiveness of monitoring and mitigation measures and to improve those measures accordingly.

Resumption of Sonar Use following Shutdown or Reduction

The Commission's comments on this topic are the same as those we are sending the Service regarding the Navy's Southern California Range Complex (SOCAL) operations. The Navy's current requirements for resuming and powering up sonar use following shutdown or reduction after a marine mammal sighting are based on three criteria: (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. In its previous letters to the Service and the Navy, the Commission has recommended that these criteria be replaced to require monitoring periods of 30 minutes for most marine mammals and 60 minutes for deep-diving species (e.g., sperm and beaked whales), unless the animal is resighted at a safe distance before that time. The proposed rule neither adopts this recommendation nor provides a basis for rejecting it. Procedures to reduce or stop sonar intensity in the presence of a marine mammal are considered necessary to avoid exposing the animal to excessively high sound intensities. Such mitigation measures must take into account not only the operations being conducted, but also must account for the natural history, behavior, and movements of the potentially affected marine mammal(s). The best available scientific evidence clearly indicates that a 30-minute shut-down or reduction in source level is not sufficient for deep-diving marine mammals that may remain submerged for an hour or longer. By failing to account for this behavior, the Service and the Navy are likely reducing the effectiveness of this mitigation measure and increasing the risk that deep-diving whales will be exposed to excessively intense noise. The Marine Mammal Commission

therefore recommends that the Service work with the Navy to modify the Navy's mitigation measures by requiring that the Navy delay resumption of full operational sonar use following a power-down or shutdown for 30 minutes if the sighted animal can be identified to the species level and the species is not deep diving and 60 minutes if it cannot be identified or is known to be a member of a deep-diving species such as sperm and beaked whales. The Commission notes that in many cases it may be difficult or impossible for watchstanders to determine the species involved, in which case the Commission believes the Navy should take a precautionary approach and either power-down or shut down its operations for 60 minutes.

Under ideal circumstances, operations could resume if the animal is re-sighted at a safe distance before that time. However, in practice it will be difficult, if not impossible, to confirm that a whale sighted at a safe distance is the same animal sighted within a protection zone. Absent such confirmation, the Marine Mammal Commission also recommends that the Service work with the Navy to modify the Navy's mitigation measures by allowing resumption of full operations before the end of the 30-minute period (when the species can be identified and is not a deep diver) or 60-minute period (the species cannot be determined or can be determined but is a deep diver) only when the Navy has good evidence that the marine mammal seen outside the safety zone is the same animal originally sighted within the zone.

The Commission also continues to be concerned about the adequacy of the criterion that allows resumption of sonar use once a vessel has moved a certain distance (e.g., 2,000 yards) after sighting a marine mammal. If both the sighted marine mammal and the ship are moving, then the estimation of distance cannot be judged on the basis of the ship's speed only. This is why the Commission recommended that a safer course of action might be to adopt a simple rule of 30 minutes for identified marine mammals that are not deep divers and 60 minutes for known deep divers like sperm and beaked whales, unless the animal is resighted at a safe range before that time as recommended above. If the Navy wishes to use distance as an indicator of safety, then it must establish a safe distance criterion that fully accounts for the movements and speeds of both the ship and the marine mammal.

Cumulative Effects

In its 4 April 2008 letter, the Commission recommended that publication of a proposed rule be contingent on the development of a more thorough assessment of potential cumulative effects of Navy and other activities in the area of the proposed operations, the measures that will be taken to avoid or minimize them, and the basis for concluding that those effects on marine mammals are negligible. It appears that this recommendation also was not addressed in the Service's proposed rule. The DEIS, request for a letter of authorization, and proposed rule, do not describe how the effects of the Navy's operations and the effects of other human activities (e.g., ship traffic, commercial fishing) will be assessed and minimized to the extent necessary to avoid an excessive cumulative impact on marine mammals. The Marine Mammal Commission therefore reiterates its recommendation that the Service work with the Navy to prepare a more thorough analysis of potential cumulative effects, the measures that will be taken to avoid or minimize them, and the basis for concluding that those effects will be negligible.

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The Marine Mammal Commission provides the above recommendations to further the protection and conservation of marine mammals and ecosystems. The Commission reminds the Service that if it does not adopt these recommendations, that it is required to provide the Commission with a detailed explanation of the rationale for its decision. Please contact me if you have questions regarding any of our comments or recommendations.

Sincerely,



Timothy J. Ragen, Ph.D.
Executive Director

Enclosures