MARINE MAMMAL COMMISSION

7 November 2011

Colonel Colin R. Miller
Commander, 46th Test Wing
Air Armament Center
101 West D Avenue
Eglin Air Force Base, Florida 32542

Dear Colonel Miller:

In May of this year the Marine Mammal Commission and its Committee of Scientific Advisors on Marine Mammals met in New Orleans, Louisiana, to review the management of marine mammals and marine ecosystems in the Gulf of Mexico. During the meeting Mr. Jesse O. Borthwick, Director, Range and Airspace Sustainment, 46th Test Wing, Eglin Air Force Base, Florida, provided a thorough and helpful overview of Air Force activities in the Gulf of Mexico. The Commission appreciates his contribution to the meeting. The Commission also understands that the Air Force must use parts of the Gulf of Mexico for training and testing activities and that it takes important steps to avoid or minimize effects on the Gulf marine ecosystem, including marine mammals. The following recommendations are intended to improve the Air Force's considerable efforts to manage its impacts on marine mammals.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the Air Force—

- investigate the potential use of hydrophone arrays near fixed targets for real-time detection of marine mammals to augment its current mitigation and monitoring measures;
- review its mitigation and monitoring program for the Gulf of Mexico Range Complex and incorporate into that program the steps necessary to monitor the potential long-term effects of its activities on the Gulf's marine mammals; and
- meet with the Southeast Fisheries Science Center to discuss research needs and identify opportunities where the two organizations might collaborate to meet their respective responsibilities.

RATIONALE

Detecting marine mammals at fixed targets

The Air Force regularly uses fixed targets (e.g., target barges) for testing of and training with precision strike weapons. The Air Force is required to mitigate potential impacts on marine mammals by delaying or shutting down operations when marine mammals are detected within a specified distance of the target. Monitoring to detect marine mammals close to a target is difficult because observers cannot be close to the target. Remote methods to detect the presence of and distance to marine mammals offer an alternative detection method. For example, hydrophones could be placed in the vicinity of fixed targets and used to monitor in real-time the presence of

marine mammals near those targets. The use of an array of hydrophones would make it possible to estimate the distance between a target and detected marine mammals, and therefore would provide a basis for improving mitigation measures. The use of such technology might help avoid situations in which marine mammals enter a danger zone after exercises are initiated – as occurred recently during Navy exercises on the West Coast. To better manage such situations using existing technology, the Marine Mammal Commission recommends that the Air Force investigate the potential use of hydrophone arrays near fixed targets for real-time detection of marine mammals to augment its current mitigation and monitoring measures.

The long-term effects of Air Force activities in the Gulf

The Air Force conducts a wide range of testing and training activities in its Gulf of Mexico Range Complex that may have unintended, adverse impacts on marine mammals. The Commission recognizes and appreciates that the Air Force takes a number of steps to avoid adverse impacts on marine mammals. For the most part, those measures are aimed at preventing short-term effects that result directly from a specific training or testing activity. However, it is possible, if not likely, that the Air Force's activities also may have long-term effects that accumulate as a result of multiple activities carried out in the same area over time. Although the Commission appreciates the Air Force's attention to the potential short-term effects of its activities, it also believes that the Air Force should be assessing and attempting to mitigate the long-term effects.

The best way to test for long-term effects is to characterize baseline conditions in the affected areas and monitor to see if and how conditions change from that baseline over time. Developing such a baseline is not a trivial matter because the marine ecosystem is naturally dynamic and also is affected by many other human activities. Nonetheless, assessing baseline conditions is essential if the Air Force is to provide assurance that its activities are not causing unintended, long-term, adverse effects on the Gulf's marine mammals and ecosystem. Examples of such effects might be reductions in marine mammal abundance or density in test areas, shifts in distribution, and abandonment of important habitat. To address these concerns and ensure the long-term stability of our marine ecosystems, the Marine Mammal Commission recommends that the Air Force review its mitigation and monitoring program for the Gulf of Mexico Range Complex and incorporate into that program the steps necessary to monitor the potential long-term effects of its activities on the Gulf's marine mammals. The Commission would welcome an opportunity to discuss with you how the Air Force might extend its mitigation and monitoring efforts to include long-term effects.

Developing an adequate baseline for the Gulf's marine mammals

With the exception of the Florida manatee, the National Marine Fisheries Service has primary responsibility for assessing the status of the Gulf's marine mammals. Unfortunately, those assessments fall well short of what is needed to assess the long-term effects of Air Force activities. Furthermore, the lack of stock assessment information is not likely to improve if left solely to the National Marine Fisheries Service because the Service is faced with anticipated budget restrictions. Clearly, agencies are going to have to be creative to accomplish their goals in the foreseeable future.

Perhaps more importantly, agencies are going to have to work together. The National Marine Fisheries Service has a small but excellent cadre of stock assessment scientists in its Southeast Fisheries Science Center. The Air Force, on the other hand, may have assets in the Gulf, including infrastructure and technological expertise. The Commission believes that the Service and the Air Force will have a better chance of fulfilling their respective responsibilities if they work together and couple their respective strengths. Clearly, the National Marine Fisheries Service would benefit from access to Air Force infrastructure. Just as clearly, the Air Force could benefit from being able to tap into the Service's stock assessment expertise. Undoubtedly, the opportunity to collaborate will be limited to certain types of conditions or situations. But under the right circumstances, the Air Force and the Service should take advantage of opportunities to help each other meet their needs. Potential future opportunities might include Air Force exercises that the Service could use for stock assessment purposes, or the Air Force's use of Service scientists to help design and implement better mitigation and monitoring methods. For all these reasons, the Marine Mammal Commission recommends that the Air Force meet with the Southeast Fisheries Science Center to discuss research needs and identify opportunities where the two organizations might collaborate to meet their respective responsibilities.

The Commission would be pleased to discuss any of these recommendations with you at your convenience. Please contact me if the Commission can assist in any way.

Sincerely,

Timothy J. Ragen, Ph. D.
Executive Director

cc: Bonnie Ponwith, National Marine Fisheries Service
Jesse Borthwick, Eglin Air Force Base