MARINE MAMMAL COMMISSION

27 September 2011

Mr. Eric Schwaab
Assistant Administrator for Fisheries
National Marine Fisheries Service
1315 East-West Highway
Silver Spring, MD 20910

Dear Mr. Schwaab:

In May 2011 the Marine Mammal Commission and its Committee of Scientific Advisors on Marine Mammals met in New Orleans, Louisiana, to review the conservation and management of marine mammals and ecosystems in U.S. waters of the Gulf of Mexico. During the meeting, National Marine Fisheries Service representatives provided thorough and helpful presentations on a variety of research and management topics. The Commission appreciated their contribution to the meeting and used it to identify priority issues, knowledge gaps, and research needs in the Gulf. The Service's assessments of marine mammal stocks were a central issue at the meeting, as they have a bearing on how the Service manages marine mammal interactions with fisheries, military exercises, commercial shipping, recreation, and oil and gas operations, including accidents such as the BP oil spill. Based on meeting discussions, the Commission offers the following recommendations and rationale.

RECOMMENDATIONS

The Marine Mammal Commission recommends that the National Marine Fisheries Service enhance its capacity to assess the status of marine mammal stocks in the Gulf of Mexico by—

- investing in the studies needed to determine the stock structure of the marine mammal species occurring in the northern Gulf of Mexico;
- conducting a systematic risk analysis of those stocks and using the results to (1) establish assessment priorities and (2) determine the resources needed to collect the essential baseline information and complete the stock assessments in accordance with the Marine Mammal Protection Act;
- developing or expanding partnerships with other federal, regional, and state agencies and organizations, industry, and academic and private organizations to supplement assessment efforts and resources;
- working closely with the Gulf component of the U.S. Integrated Ocean Observing System to obtain the information needed to characterize marine mammal habitat in the Gulf;
- ensuring that the assessment plan provides sufficient information to assess the effects of the multiple human-related and natural risk factors in the Gulf, including oil and gas operations, commercial shipping, commercial and recreational fishing, military exercises, tourism, coastal development, the Gulf hypoxic zone, harmful algal blooms, loss of coastal wetlands, sea level rise, ocean acidification, and other changes associated with climate disruption; and
- securing adequate and predictable funding and resources to support the above-described activities.

RATIONALE

Improving stock assessments

As a nation, we often assert that our management of living marine resources is science-based. We use the term "science-based" to mean that we apply the best available science to guide management decisions. But, frankly, that is not enough. Being science-based requires not only using the best available scientific information, but also ensuring that the best available science is adequate for its intended purpose—in this case, for managing marine resources in an informed manner. The recommendations in this letter are intended to help the Service ensure that its scientific information is adequate for the intended purpose of maintaining marine mammal stocks in the Gulf of Mexico as functioning elements of a healthy marine ecosystem.

Identifying stocks as the units of conservation and improving stock assessments

Determining the units of conservation is fundamental to stock assessment. All other assessment parameters have meaning in the context of those units. The Marine Mammal Protection Act defines the units of conservation as population stocks (or stocks), which it defines as "a group of marine mammals of the same species or smaller taxa in a common spatial arrangement, that interbreed when mature." The 2010 stock assessment reports for the Gulf of Mexico recognize 57 marine mammal stocks, but stock structure has not been investigated for the majority of the species occurring in the Gulf. For more than a decade the Commission has been urging the Service to support the studies needed to define those stocks.

The Marine Mammal Protection Act also sets forth the most basic level of scientific information needed to ensure that marine mammals remain functioning elements of the marine ecosystem. The National Marine Fisheries Service and its parent organization—the National Oceanic and Atmospheric Administration (NOAA)—are responsible for collecting that information. Management of marine resources in the Gulf of Mexico clearly illustrates the problems that arise when the Service or NOAA has not done so. The 2010 Gulf oil spill highlighted the shortcomings, but most of them had already been evident before the spill. Even a cursory review of stock assessment reports for Gulf marine mammals reveals the inadequacy of basic information for determining stock structure, distribution, abundance, and trends. Of the 57 identified marine mammal stocks in the Gulf, the basic information is adequate for only a handful of them. These shortcomings have persisted for decades, despite the fact that the Gulf is an intensely industrialized environment and that, as a result, the natural ecosystem is at high risk from a variety of human activities. The inadequacy of information means that, all too often, scientists and managers can only speculate about those risks. Such speculation is not a sound basis for management.

The Marine Mammal Commission recognizes that the Service and NOAA are always limited by funding and faced with competing obligations. However, these realities do not fully explain the inadequacy of information on marine mammals in the Gulf, where stock assessment reports have always lagged far behind those of most other regions. The Service and NOAA appear to have given greater priority to management efforts in other parts of the country. Tightening of the federal budget in the coming years will only exacerbate the challenge of collecting adequate scientific

information in the Gulf and elsewhere. Clearly, all interested parties will need to think and act more creatively to meet our shared scientific objectives.

Conducting risk analyses and setting priorities

To enhance its stock assessment efforts, the Service should begin by identifying those stocks that warrant the most immediate attention. In essence, the Commission believes that priority should be based on each stock's need for protection. All too frequently, that has not been the approach used for endangered and threatened marine mammal stocks in U.S. waters; more often, priorities have been based on the extent to which management demands are viewed as likely to conflict with various human activities.

From a conservation perspective, risk analysis seems the most reasonable basis for prioritizing stock assessment efforts. A number of factors should be considered for that purpose, including the extent to which each stock's population abundance, trends, and distribution are known; the extent to which the stock is exposed to risks from various human activities; and the Service's ability to manage those risks.

Resources

Once priorities are established, obtaining adequate resources will be key to the Service's efforts to improve its stock assessment efforts. The necessary resources include infrastructure and equipment (e.g., aircraft for flying surveys); trained personnel; and support for field studies, analysis, and reporting. The Service has developed a small but strong corps of stock assessment scientists at its Southeast Fisheries Science Center, but they alone cannot accomplish all the necessary tasks without more support.

In the past, the availability of resources—particularly infrastructure—appears to have been the key consideration dictating stock assessment efforts. The same was evident during the response to the Gulf oil spill. The Service may be required to shape its response to emergencies based on the availability of infrastructure. However, infrastructure should not be the driving factor in determining the Service's long-term strategy for stock assessment and management. Instead, it should be just the opposite—that is, information needs should determine what infrastructure and resources are made available.

That being said, it is clear that the Service will not have all the resources it needs in the foreseeable future and, therefore, it must find other ways to increase its assessment capabilities.

Partnerships

Establishing partnerships with other federal, regional, and state agencies and organizations, industry, academia, and conservation organizations may be the best way for the Service to increase its assessment capabilities. For example, the Navy and Air Force conduct numerous testing and training exercises in the Gulf of Mexico and have extensive infrastructure to support those exercises. The Navy, Air Force, and NOAA all could benefit from cooperative efforts to assess marine mammals in the exercise areas—the Navy and Air Force by securing information needed to plan

exercises and to mitigate and monitor their effects, and the Service by ensuring that the incidental effects of those exercises are, in fact, negligible, as is required under the Marine Mammal Protection Act. Such information would contribute to stock assessment. Although cooperation may not be possible in all cases or even the majority of them, it should be possible in some cases. This kind of cooperation is not new – the Service has worked closely with the Coast Guard, Navy, and Air Force in Hawaiian waters to study marine mammals and conduct conservation tasks. The same is true in Alaskan waters, where the Coast Guard plays a vital role in supporting Service scientists whenever it can integrate their research into its other duties. Along the same lines, the Service could increase its cooperation with the Bureau of Ocean Energy Management, Regulation, and Enforcement, as it does in Alaska to support, for example, assessment of North Pacific right whales. The Service is working with the Bureau on the new Atlantic Marine Assessment Program for Protected Species that—over time—may come to serve as a model for interagency cooperation.

The Service and NOAA also ought to be building partnerships with the major industries of the Gulf (e.g., oil and gas, commercial shipping, commercial and recreational fishing). The Commission has long believed that the industries that pose risks to the marine environment should be responsible for a portion of the cost of assessing and mediating their impacts. Otherwise, the assessment task is left entirely to the Service's Office of Protected Resources, which does not have the funding, staff, and other resources needed to assess the effects of all the activities undertaken by marine industries. The federal government has not required those industries to share in that responsibility, despite the fact that their impacts are poorly characterized.

The Service and NOAA also should engage state and regional organizations in efforts to collect information relevant to the management of human activities in the marine environment. State and regional efforts often are underfunded, and cooperation with federal agencies is one way for state and regional organizations to expand their participation in management, ensure their perspectives are considered, contribute local and regional knowledge, and facilitate the implementation of management programs, including assessment. One clear way to expand state and regional research capacity is to engage universities and other academic/training programs in the needed research. These institutions and programs are able to tap into resources from multiple sources, and their involvement would ensure that students and professionals are better trained in matters related to the Service's and NOAA's responsibilities (e.g., stock assessment).

Collecting baseline information and ocean observing

Having baseline stock assessment information is particularly important in the Gulf of Mexico, which regularly experiences large-scale environmental perturbations. Those perturbations are both natural and human-related, although the distinction between the two is becoming blurred because of the effects of climate disruption. In recent years the Gulf environment has experienced major hurricanes, dead zones, harmful algal blooms, and the largest known accidental oil spill. As noted earlier, it also is exposed to high levels of commercial shipping and the associated noise, as well as noise from military testing and training activities, and contaminants released by industry both onshore and offshore. In addition, large-scale commercial and recreational fishing removes substantial quantities of biological production from the Gulf each year. The Gulf also is being affected by sea level rise, loss of coastal wetlands, and ocean acidification. Each of these factors is affecting the health and stability of the Gulf ecosystem and will continue to do so in the foreseeable

future. None of them can be managed effectively without adequate baseline information. Clearly, information collected now will not reflect the Gulf as it was in a pristine state—that is no longer possible. However, changes from this point forward can be measured, but only if the Service has collected adequate baseline data. Here, too, the Service will need to prioritize which types of data are needed to assess the most important threats to marine mammals and the marine ecosystem. By going through that exercise, the Service should be able to use its resources to investigate the most serious risks. The exercise also should provide a basis for determining not only how to use the infrastructure and equipment available to the Service now, but what additional infrastructure and equipment are needed to ensure adequate support for future research and management.

NOAA, in collaboration with other agencies and countries, has a program to implement ocean observing systems in the Gulf of Mexico—the U.S. Integrated Ocean Observing System. The Gulf component of that system should be able to contribute essential baseline information both for marine mammals and for their habitat. In the Gulf, the system focuses largely on physical and chemical characteristics of the environment (e.g., temperature, salinity, current, winds, dissolved oxygen). These are important and necessary indices for understanding marine mammal ecology. That being said, more biological and ecological information is needed and should be drawn from the observing system. Such information includes measures of species diversity, primary and secondary production, consumers at multiple trophic levels, ecological interactions (e.g., predation, competition, parasitism, disease), and the presence, nature, scale, and effects of dead zones and harmful algal blooms. Observing systems are still largely in the formative stages and the Service should be able to use the Gulf's developing system to help address the need for information on marine mammals.

For all the above reasons, the Marine Mammal Commission recommends that the National Marine Fisheries Service enhance its capacity to assess the status of marine mammal stocks in the Gulf of Mexico by—

- investing in the studies needed to determine the stock structure of the marine mammal species occurring in the northern Gulf of Mexico;
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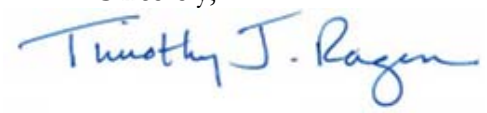
- securing adequate and predictable funding and resources to support the above-described activities.

Please contact me if you have questions regarding the Commission's recommendations and comments.

Sincerely,



Timothy J Ragen, Ph.D.
Executive Director