



MARINE MAMMAL COMMISSION

12 October 2011

Tommy P. Beaudreau
Director
Bureau of Ocean Energy Management
Department of the Interior
1849 C Street, NW
Washington, DC 20240

Dear Mr. Beaudreau:

The Marine Mammal Commission held its 2011 annual meeting on 10-12 May in New Orleans, Louisiana. A major portion of the meeting focused on the Deepwater Horizon oil spill and considered short- and long-term effects on marine mammals in the Gulf of Mexico. Presentations by staff from the Bureau of Ocean Energy Management, the National Oceanic and Atmospheric Administration, the Fish and Wildlife Service, and other federal and state agencies provided a sharp reminder of how much remains to be learned about (1) the status of the Gulf's marine mammals and (2) the effects of energy development, oil spills, and spill responses upon them and their habitat. The Bureau has the opportunity to enhance research and support monitoring programs that continue/extend better management of the Gulf's large marine ecosystem. To that end, the Commission offers the following recommendations and rationale.

RECOMMENDATIONS

After consulting with its Committee of Scientific Advisors on Marine Mammals, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management—

- work with the National Oceanic and Atmospheric Administration, the Fish and Wildlife Service, and the Marine Mammal Commission to develop comprehensive standards for baseline environmental information needed to evaluate the effects of offshore oil and gas operations on marine mammals and their habitat; and
- review the Commission's enclosed statement of research needs, consult with the National Oceanic and Atmospheric Administration, the Fish and Wildlife Service, and the Marine Mammal Commission on long-term, high priority research and monitoring needs related to the Deepwater Horizon oil spill, and incorporate those priorities into its Environmental Studies Program.

RATIONALE

Standards for environmental information

In accordance with the Outer Continental Shelf Lands Act, the Bureau is responsible for balancing orderly energy resource development with protection of human, marine, and coastal environments. The National Environmental Policy Act requires the Bureau to evaluate alternatives for resource development based, in part, on their anticipated environmental effects. In addition, the

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Marine Mammal Protection Act requires the Bureau to manage energy development to ensure that it has no more than negligible effects on marine mammals. In the Commission's view, anticipating and managing such potential effects should be science-based and should include, among other things, a thorough understanding of pre-development baseline conditions.

Information on the status of Gulf marine mammal stocks and their vulnerability to various risk factors (including energy development) falls well short of statutory mandates (National Marine Fisheries Service 2004; Waring et al. 2010). Despite decades of offshore oil and gas production in the Gulf of Mexico, the Bureau, National Marine Fisheries Service, and the oil and gas industry have yet to collect adequate information needed to determine if and how oil and gas production is affecting marine mammal species and stocks. Such information includes stock structure, distribution, abundance, movement patterns, age structure, demography (age structure, vital rates), and health (e.g., nutritional status, immune function, and exposure to contaminants, biotoxins, and pathogens).

The Bureau has funded some very useful studies of marine mammals but they are either outdated (e.g., cetacean surveys in the mid-1990s), or they address only a few individual species and how these species responded to exposure to anthropogenic noise as they forage for prey (e.g., studies of sperm whale responses to seismic surveys and follow-on but separate studies on sperm whale prey distribution). Although valuable, these studies fall far short of what is needed for environmentally sound energy development. The Bureau's Studies Development Plan for Fiscal Year 2012-2014 does not include plans to address these deficiencies.

On several occasions the Commission has recommended to the Bureau that it develop standards for baseline environmental information on marine mammals that may be affected by energy-related activities. To do so, the Bureau should collaborate with the federal agencies with management and oversight responsibilities for marine mammals—the National Oceanic and Atmospheric Administration, the Fish and Wildlife Service, and the Marine Mammal Commission. The National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling highlighted the importance of such interagency consultation in their "Deep Water" report. Consistent with that Commission's findings, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management work with the National Oceanic and Atmospheric Administration, the Fish and Wildlife Service, and the Marine Mammal Commission to develop comprehensive standards for baseline information needed to evaluate the effects of offshore oil and gas operations on marine mammals and their habitat. The Commission would be pleased to help facilitate the development of such standards, and to meet with you and/or your staff regarding next steps.

Research and monitoring of oil spill effects

In the Gulf, the lack of baseline information, and research capacity generally, is related largely to inadequate research funding, personnel, and infrastructure (e.g., research vessels, analytical laboratories). As a result, studies to assess the long-term effects of the Deepwater Horizon oil spill likely will be hampered by inadequate resources and, if the past is any indication of the future, focused on a small subset of the Gulf's marine mammals (i.e., bottlenose dolphins, sperm whales).

Such assessments also will be confounded by the many other human activities and natural phenomenon that affect the Gulf—seismic surveys and routine oil and gas operations, commercial and recreational fisheries, commercial shipping, coastal development, military activities, tourism, hypoxia and anoxia, harmful algal blooms, hurricanes, natural oil seeps, and climate disruption. Distinguishing the effects of those risk factors on the Gulf's marine ecosystem will be a challenge, but that does not lessen the responsibility of the regulating federal agencies for doing so.

That responsibility cannot be met without a larger commitment of resources. The natural resource damage assessment process has some funding to support research, but it is not clear that those funds will be available for studying long-term spill effects, for filling important pre-spill data gaps, or for improving the sampling and analytical methods that underlie the assessment effort. Annual appropriations for the National Oceanic and Atmospheric Administration and the Fish and Wildlife Service are likely to be limited in the coming years and, clearly, other sources of long-term funding must be identified.

The Bureau has environmental management responsibilities under the Outer Continental Shelf Lands Act and it has recently expanded its Environmental Studies Program. As noted above, the Bureau has a long history of supporting important research on potential effects of oil and gas development. Still, much more needs to be done in the Gulf and, for that matter, all areas where oil and gas development is underway or being considered. The Bureau also may be in a unique position to garner more research support from the oil and gas industry. The Commission has long believed that the industry should be shouldering much of the responsibility for supporting the research necessary to manage oil and gas production in a way that ensures adequate protection for the environment.

With regard to research on the long-term effects of the Gulf spill, the Commission has prepared the enclosed report, "Assessing the Long-term Effects of the BP Deepwater Horizon Oil Spill on Marine Mammals in the Gulf of Mexico: A Statement of Research Needs." The Commission prepared the report with input from scientists and managers from the Bureau, the National Oceanic and Atmospheric Administration, and the Fish and Wildlife Service. The report outlines the legal mandates for assessing a spill's overall effects and details the likely effects of oil spills on marine mammals. It provides an assessment of research efforts to date, outlines priorities for future efforts, and highlights the overall need to improve assessment and monitoring of the Gulf's marine mammals. Although virtually all assessment and monitoring efforts should be given high priority during or immediately after a spill, the likelihood of detecting certain impacts decreases with time and the utility and value of certain types of research declines accordingly. Therefore, the statement of research needs gives highest priority to (1) assessing the health status of stranded or live-captured animals; (2) assessing oil spill-related changes in the ecosystem leading to a potential reduction in prey availability; (3) evaluating other ecosystem changes that are harmful to marine mammals and that may have been exacerbated by the spill (e.g., harmful algal blooms, hypoxia or anoxia); and (4) determining the extent to which exposure to oil and/or response activities leads to a reduction in status involving individual fitness, population vital rates (survival and reproduction), and population abundance and trends.

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The Commission developed this statement of research needs to help guide the Bureau and other regulatory agencies as they develop plans to assess the long-term effects of the Gulf spill. To that end, the Marine Mammal Commission recommends that the Bureau of Ocean Energy Management review the Commission's enclosed statement of research needs, consult with the National Oceanic and Atmospheric Administration, the Fish and Wildlife Service, and the Marine Mammal Commission on long-term, high priority research and monitoring needs related to the Deepwater Horizon oil spill, and incorporate those priorities into its Environmental Studies Program.

The Commission hopes that you find these recommendations and comments helpful. Please contact me if you have questions or if the Commission can be of assistance as you consider these matters.

Sincerely,



Timothy J. Ragen, Ph. D.
Executive Director

Enclosure

cc: Eric Schwab, National Marine Fisheries Service
David Kennedy, National Ocean Service
Dan Ashe, Fish and Wildlife Service

Literature Cited

National Marine Fisheries Service. 2004. A requirements plan for improving the understanding of the status of U.S. protected marine species. Report of the NOAA Fisheries National Task Force for Improving Marine Mammal and Turtle Stock Assessments. NOAA Technical Memorandum NMFS-F/SPO-63, 112 pages.

Waring, G., E. Josephson, K. Maze-Foley, and P.E. Rosel (eds). 2010. U.S. Atlantic and Gulf of Mexico Marine Mammal Stock Assessments - 2010. NOAA Technical Memorandum NMFS-NE-219, 598 pages.