

## **ENVIRONMENTAL STUDIES PROGRAM: Studies Development Plan FY 2007-2009**

**Region:** Gulf of Mexico

**Planning Area(s):** Atlantic and Gulf of Mexico

**Title:** Workshop on the Status of Passive Acoustic Monitoring (PAM)

**MMS Information Need(s) to be Addressed:** Passive Acoustic Monitoring (PAM) for marine mammals has been used for several years with varying degrees of success. Continuing development of both hardware and software for PAM has resulted in a choice of systems and a great deal of confusion and misinformation on system capabilities and requirements. The expansion of oil and gas industry seismic exploration into ocean areas of marine mammal and endangered species habitat requires protection of those species. Alternative energy projects and sand/gravel operations also use seismic profiles that require mitigation and monitoring. At the same time, MMS and other Federal agencies are increasingly relying on PAM to meet monitoring needs. PAM may be an important tool. A thorough examination of the hardware and software available, the capabilities and limitations of systems, the requirements for operation and use, the current and future applications to offshore industries and the potential impact of system reliability on industry and the animals will allow MMS as well as other regulatory agencies to determine the usefulness and appropriateness of PAM for a variety of mitigation and monitoring situations.

**Cost Range:** (in thousands) \$200-\$300

**Period of Performance:** FY 2008

### **Description:**

Background: The Atlantic Ocean and the Gulf of Mexico have a complex and diverse marine mammal community. Under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA), these species are given particular legal status. The potential impacts of seismic activities are subject to thorough review by the National Marine Fisheries Service, Fish and Wildlife Service and Marine Mammal Commission. Oil and gas exploration, sand and gravel resource assessment, future offshore wind turbine projects and other alternative energy projects may include seismic operations. Any potential impacts that MMS-regulated activities may have on these populations are significant program concerns. Given these concerns and the information needs to address them, we propose conducting a workshop to facilitate an informed understanding of the capabilities, applicability, and availability of current PAM systems, the potential developments and improvements in future PAM systems, and ways in which industry, MMS, and other regulatory agencies could use PAM as a required monitoring tool.

Objectives: The objectives of the proposed PAM workshop are to:

- 1) Review recent developments in PAM technology and equipment,
- 2) Identify available software and hardware systems,

- 3) Evaluate effectiveness of PAM for detecting marine mammals and assessing potential impacts, and
- 4) Evaluate industry cost and other liabilities of incorporating PAM
- 5) Provide MMS and industry with guidance on the applicability, feasibility and usefulness of this monitoring tool

Methods: This study will conduct a workshop with participation by PAM developers, current PAM users, acoustics operators, and interested industry personnel and representatives from federal regulatory agencies. The workshop will give the participants the opportunity to:

- 1) Learn about the capabilities and shortcomings of currently available PAM systems and their ability to detect marine mammals and assist in assessing impacts from offshore activities,
- 2) Identify industry needs and concerns regarding PAM and available data sets previously unavailable to a broad group of interested users,
- 3) Distinguish the latest techniques and equipment that may be useful in addressing mitigation needs,
- 4) Promote better communication between PAM operators, industry, PAM hardware and software developers, and Federal regulatory agencies, and

The proposed budget will cover the cost to acquire the following: workshop event planning and execution; facility and needed equipment rental; and, preparation of the workshop proceedings

Date Information Required: Workshop to be conducted no later than February 2009 (scheduling window November 2008 through February 2009).

**Revised Date:** May 6, 2008