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Research For Marine Mammal Mitigation

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LONG-TERM GOALS

The long-term goal of this effort is to assist ONR in complying with environmental regulations with respect to the potential impact of underwater acoustic signals on marine mammals.

OBJECTIVES

The objectives of this effort are to develop and maintain a unique database integrating all ONR-pertinent environmental compliance documentation and test results and to provide assistance and recommendations regarding environmental compliance process.

APPROACH

Efforts have focused on updating the database and identifying emerging environmental compliance issues.

WORK COMPLETED

New scientific studies contributing to our understanding of the potential effects of underwater acoustics on marine mammals were reviewed and added to the database. Particular efforts were made to gain an increased understanding of appropriate acoustic thresholds used to define minor changes in biologically significant behavior as well as the application of multiple criteria to define temporary threshold shifts in the case of explosive sources. New Federal, DoD or State regulations governing the preparation of environmental documentation or the conduct of at-sea tests were reviewed and added to the database as appropriate. Plans for ONR at-sea experiments such as the Proposed Florida Keys Shallow Water Acoustic Testbed were reviewed and recommendations concerning their implementation were made. Proposed regulatory changes, such as the proposed expansion of the Channel Islands National Marine Sanctuary, were reviewed to determine their possible impacts on ONR acoustic testing.

RESULTS

New scientific and regulatory data were integrated into the Environmental Compliance Reference Database. Mr. Stan Labak (MAI) developed a methodology for application of the 12-PSI temporary threshold shift criterion used during the USS *Seawolf* shock testing to smaller explosive sources such

as SUS. Analysis of the Proposed Florida Keys Shallow Water Acoustic Testbed resulted in a recommendation not to proceed with that effort.

IMPACT/APPLICATIONS

Compliance with environmental policy is required by U.S. law and by DoD, DoN, OPNAV, and ONR regulations. Research conducted under this effort assists ONR personnel in their efforts to comply with these various regulations.

TRANSITIONS

The results of research done under this task is being used in the preparation of environmental compliance documentation for several ONR programs including the Littoral Warfare Advanced Development (LWAD) program and various Ocean Acoustics projects. Additionally, the Environmental Compliance Reference Database is available on the ONR server and can be used by all ONR headquarters personnel.

RELATED PROJECTS

The Environmental Compliance Reference Database was used as a source in preparing environmental compliance documentation under the Oceanographic, Acoustic, and Marine Research program, the Littoral Warfare Advanced Development (LWAD) program, and the North Pacific Acoustic Laboratory (NPAL) program.

REFERENCES

N/A

PUBLICATIONS

ONR Environmental Compliance Reference Database (available on the ONR server).

PATENTS

N/A