

DRAFT

**National Science Foundation
Geosciences Directorate
Division of Ocean Sciences
Arlington, Virginia**

**DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
PURSUANT TO THE NATIONAL ENVIRONMENTAL POLICY ACT,
42 U.S.C. 4321, *et seq.***

Low-Energy Marine Seismic Survey in the Northeast Pacific Ocean, June-July 2008

This constitutes a draft environmental assessment (DEA) by the National Science Foundation (NSF) for a marine seismic survey proposed to be conducted on board the research vessel Thomas G. Thompson in the northeast Pacific Ocean in June-July 2008. This DEA is based, in part, on an Environmental Assessment prepared by LGL Ltd. (LGL) environmental research associates on behalf of NSF, entitled, "Environmental Assessment of a Planned Low-Energy Marine Seismic Survey by the Scripps Institution of Oceanography in the Northeast Pacific Ocean, September 2007" (Report #TA4470-1) (Attachment 1), which is incorporated by reference and fully adopted as if fully set forth herein. The 2008 survey is proposed to be conducted in the same geographic region as the 2007 survey, within the Exclusive Economic Zone of the United States. As opposed to the 2007 survey which used a single Generator-Injector (GI) airgun, the 2008 survey proposes to use two Generator-Injector (GI) airguns with a maximum discharge volume of 120 in³ total. A larger GI airgun pair (210 in³ total) was evaluated in a calibration study to predict possible effects in the proposed study area (as included in Attachment 2 – *IHA Application*). The conclusions from this study, which revealed that the increase in number of airguns did not result in any significant impact on the environment (see generally Attachment 2), in addition to those from the 2007 EA, were used to inform OCE management of potential environmental impacts of the 2008 cruise.

The proposed activity (seismic survey in the northeast Pacific Ocean) will include a mitigation program to minimize the impacts on marine mammals that may be present during the conduct of the research. As detailed in Attachments 1 (pages 6-11) and 2 (pages 52-54), mitigation measures that will be adopted, include: (1) vessel speed or course alteration; (2) shut down; and (3) minimizing approach to slopes when possible. Marine mammal visual observers will also participate on the cruise. Any impacts on marine mammals are expected to be short-term and/or localized changes in behavior of small numbers of marine mammals, such as, but not limited to, temporary avoidance of certain areas of seismic operations and temporary masking of natural sounds. Attachments 1 (pages 38-48 and Appendix A) and 2 (pages 29-47 and Appendix A) provide further details on these potential temporary changes. No long term or significant effects are expected on individual marine mammals or populations.

NSF has reviewed and concurs with the conclusions of the 2007 Environmental Assessment, and the additional analysis of 2 GI airgun use in the study region, that support the conclusion that the proposed activity will not have a significant impact on the environment.