



**NATIONAL SCIENCE FOUNDATION
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NSF 17-080

Dear Colleague Letter: Management and Operation of a National Ocean Bottom Seismometer Instrument Pool

May 1, 2017

Dear Colleagues:

The Division of Ocean Sciences in the Geosciences Directorate of the National Science Foundation (NSF/OCE) intends to issue a solicitation to establish, manage and operate a National Ocean Bottom Seismometer Instrument Pool (NOBSIP) through a competitive, merit-based external peer-review process. This initiative is expected to result in the award of a five to ten-year Cooperative Agreement (CA) for this activity.

This letter provides general information regarding the upcoming competition to potential proposing organizations and other interested parties as to the material and information needed for responsive proposal preparation.

ELIGIBILITY INFORMATION

It is anticipated that the competition for management and operation of the National Ocean Bottom Seismometer Instrument Pool (NOBSIP) will be open to U.S. universities, colleges, and other non-profit, non-academic organizations. NSF will require that a single academic or non-profit U.S. organization serve as the lead organization, with any other collaborators being identified as subawardees.

NOBSIP must be managed in the public interest with objectivity and independence, and with full disclosure of the successful Awardee's technical, financial and programmatic performance, to NSF. The NSF will have overall responsibility for award oversight and anticipates that regular programmatic reviews will be conducted.

PROGRAM DESCRIPTION

Data acquired with active and passive source seismic tools are critical for addressing fundamental questions about the structure and dynamics of Earth's crust and interior. With 70% of Earth's surface covered by oceans, seismic instruments that can be deployed on the seafloor provide the ability to answer key questions that cannot be addressed with other tools. The Division of Ocean Sciences has long supported a fleet of Ocean Bottom Seismometers (OBSs) that enables research in a range of programs across Ocean and Earth Sciences.

Support was initially enabled by individual grants to multiple institutions having the capability to develop, acquire and provide OBSs for field research activities. Most recently, this has been facilitated by the Ocean Bottom Seismograph Instrument Pool (OBSIP) that includes three Institutional Instrument Contributors under the coordination of an independent OBSIP Management Office. This has ensured that necessary technical capabilities have been maintained and has provided access to OBSs for a broad user community. However, this aggregated approach has also resulted in proliferation of instrument designs, operational approaches, field support needs, and management practices that are not sustainable from a budgetary perspective. Thus, a new model is needed for OBS operations to support science research requirements.

NSF envisions that a new National Ocean Bottom Seismometer Instrument Pool (NOBSIP), established to place greater emphases on standardization of instruments and uniformity of operational procedures, will more efficiently serve the broad community by providing centralized access to specialized ocean geophysical data collection, management and analysis capabilities.

NSF'S CONCEPT OF MANAGEMENT AND OPERATIONS

In order to meet the continuing demand for ocean bottom seismometers, the Division of Ocean Sciences anticipates seeking the services of a qualified organization to manage and operate a National Ocean Bottom Seismometer Instrument Pool (NOBSIP). NOBSIP will include the instruments recently acquired with NSF support that currently reside with the three existing Institutional Instrument Contributors. These instruments, along with additional instruments in the prospective Awardee's inventory, will form the new instrument pool. NOBSIP will serve as the primary source of OBSs and associated field support for NSF-funded research programs. With the new management model, NSF seeks to encourage greater operational efficiency and service while maintaining the technical foundation necessary for future innovation.

As the selected managing organization, the prospective Awardee will work closely with NSF and the U.S. oceanographic community to ensure that NOBSIP will provide centralized support for separately funded research experiments that require OBS instrumentation. The Awardee will maintain an appropriate balance of engineering, technical and management personnel to provide the necessary interaction with potential users who may be unfamiliar with the instruments or the complexities of OBS experiment design, field operation and data reduction.

The Awardee will be required to establish and maintain a strong interface with the University National Oceanographic Laboratory System (UNOLS) to assist in cruise scheduling for the at-sea deployment and recovery of OBS instrumentation. Collaboration with the UNOLS Marine Seismic Research Oversight Committee will be required to establish an OBS Oversight Subcommittee that will serve to assess NOBSIP operations and provide advice concerning future needs.

NOBSIP will provide mechanisms for processing requests for instruments and obtaining timely feedback from the user community concerning instrument capabilities and performance. The Awardee will establish and maintain a website to inform the community about instrument services and availability, as well as scheduled instrument deployments and recovery. Also, the Awardee will ensure that OBS data acquired through NOBSIP will be entered in a timely fashion into the Incorporated Research Institutions for Seismology (IRIS) Data Management System.

The annual budget of up to \$1.8M expected to be available to support NOBSIP includes only the base

costs (including indirect costs) and not project-specific field support. No funding will be provided for development efforts as part of the eventual award, as such efforts may be considered for support through other NSF programs, or from other sources. The estimated program budget is subject to the availability of funds.

ANTICIPATED COMPETITION SCHEDULE

This notice does not constitute a solicitation. Therefore, no award of any kind will result from this notice. NSF anticipates that a program solicitation will be issued in calendar year 2017. The due date for full proposals in response to the program solicitation is expected to be approximately 3 months following its publication.

Eligible organizations are invited to review the documentation listed below and identify additional information that could inform preparation of a responsive proposal.

SOURCES FOR ADDITIONAL INFORMATION

- [OBSIP - The Ocean Bottom Seismograph Instrument Pool](#)
- ["Sea Change: 2015-2025 Decadal Survey of Ocean Sciences" | The National Academies Press](#)
- [NSF Reply to "Sea Change"](#)
- ["Investing in Science, Engineering, and Education for the Nation's Future: NSF Strategic Plan for 2014-2018"](#)

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Sincerely,

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