

## CMG-WH Core Competency - Marine Technology

### SUMMARY:

This project provides umbrella support that allows for innovation, improvement, and some operational support for three Woods Hole facilities that support the sea-going operations of the CMG Program: (1) Ocean Bottom Seismometer Facility, (2) Sediment Transport Instrumentation Facility, (3) Sea Floor Mapping Facility. These three facilities form much of the back bone of field operations that support many cross-Team and cross-Program field activities. These core facilities provide much of the basis for the long-term scientific health and productivity of sea-going studies. Their continued excellence and leadership ensures the continued prominent role that CMGP has played and continues to play in solving complex research problems at sea. The support requested for these facilities is to provide salary to cover the routine maintenance and upgrade costs associated with sea-going equipment as well as allowing the staff to stay abreast of the latest and newest technologies. The OE costs cover expenses related to test equipment, service contracts, equipment replacement costs, and hardware/software maintenance and upgrades that are not realistic nor practical to charge against individual projects.

### INVESTIGATORS:

**Principal:** William W. Danforth (bdanforth@usgs.gov)

**Associate:** Jane F. Denny (jdenny@usgs.gov)

**Associate:** Marinna A. Martini (mmartini@usgs.gov)

**Associate:** Thomas F. O'Brien (tobrien@usgs.gov)

**Associate:** Uri Ten Brink (utenbrink@usgs.gov)

### DESCRIPTION:

The objectives common to the three marine facilities are: (1) to meet any and all needs of the science projects; (2) to develop more efficient strategies and methodologies for supporting science projects; and (3) to maintain and diversify (within budgetary constraints) state-of-the-art field and supporting analytical resources available to CMGP.

### START DATE OF PROJECT:

October 1, 2002

### END DATE OF PROJECT:

September 30, 2010

### TOPIC:

Maintain and Improve Analytical Facilities and Instrumentation

### APPROACH:

The strategy for fulfilling these project objectives is to provide partial salary support (1/3 time or less) for technical staff to stay current in their fields and do necessary maintenance and upgrades to equipment that is not funded by individual science projects. The OE costs are also justified as part of the general operations or improvements of the equipment pool and analytical tools. Each of these facilities has a senior scientist as the facility leader (OBS - Uri ten Brink; Sediment Transport Instrumentation - Brad Butman, and Sea Floor Mapping - Bill Schwab). These science leaders are expected to link the technology to the Program science needs in order to prioritize schedules for maintenance and improvement. No salary is requested for these science leaders.

### IMPACT/RESULTS:

The impacts of this project affect most aspects of Center functions: \* the quality and efficiency of science is improved by access to modern instrumentation and facilities. \* there is lower cost and higher quality of field data and supporting analytical processes. \* overall productivity and morale of staff is enhanced by access to modern technology. \* New and innovative techniques and research directions can result from knowledge of current technologies and innovations.