Announcement of Intent to Issue Solicitation for Construction and Operation of Regional Class Research Vessels (RCRV)

The National Science Foundation intends to issue a solicitation for the construction of up to three (3) Regional Class Research Vessels using an existing, NSF-owned design and once constructed, for the management of vessel operations to support NSF and other community-wide science activities. To qualify for an award, an organization must be a US-based college, university, non-profit research institution, or association of colleges and universities having substantial in-house ocean science research and education programs that can demonstrate the ability to manage a large facility construction project and subsequently operate the facility effectively and economically. The prospective Awardee must demonstrate its ability to assemble a team to undertake successful direction, project management, technical oversight, procurement, construction, scientific outfitting, sea trials and post delivery activities of the Regional Class Research Vessel(s).

Proposals in response to the solicitation must be compelling, technically sound and must thoroughly address the four (4) project phases as described below:

Phase I – Project Refresh: Includes (1) finalizing the RCRV design to be furnished with the solicitation, and (2) refining the preliminary Project Execution Plan (PEP).

Phase II – Shipyard Selection: Includes competitive selection of the shipyard based on "best value" principles to build the RCRVs in accordance with the contract design finalized during Phase I.

Phase III – Construction: Includes Design Verification and Transfer (DVT), detail design by the shipyard, fabrication, builder's trials, and delivery from the shipyard to the Awardee for up to three (3) RCRVs.

Phase IV – Transition to Operations: Includes operator sea trials, science trials, final outfitting and delivery to the vessel home ports. This phase will also include the shipyard warranty period and designation as a University National Oceanographic Laboratory System (UNOLS) vessel.

The RCRV project will be governed by a Cooperative Agreement (CA) with NSF and a single Lead Institution as the Awardee. Funding will be through a series of phased Cooperative Support Agreements (CSA's), with award of subsequent phases contingent upon successful completion of prior phases. Phases I and II will be funded through Research and Related Activities (R&RA) funding within the Division of Ocean Sciences. Funding for Phases III and IV, is planned through NSF's Major Research Equipment and Facilities Construction (MREFC) account, subject to approval by the National Science Board (NSB) and appropriations from Congress.

The current RCRV design was developed through an interagency agreement with the US Navy's Program Executive Office (Ships), which produced two competing vessel designs for a

155' multi-purpose oceanographic research vessel capable of operating for up to twenty one days in the three distinct geographic regions; the US East, West and Gulf Coasts. That effort was closed out in early 2009. A panel of experts was convened by NSF later that year to review the designs and recommend the one considered most favorable for further development.

During Phase I, the recommended design will be re-evaluated and refreshed by the Awardee based on (1) current regulatory requirements, and (2) NSF determinations based on input from the UNOLS Fleet Improvement Committee (FIC). A Conceptual Design Review (CDR), followed by a more in-depth Preliminary Design Review (PDR) will be required to support an anticipated recommendation to the National Science Board for inclusion of the RCRV in an FY 2015 budget request to Congress under the MREFC account. It is further anticipated that Final Design Review (FDR) will be held in conjunction with NSB review and authorization to proceed with obligation of construction funds. The budget, management and oversight requirements and supporting activities for NSF projects funded by this account are described in NSF's Large Facilities Manual, dated November 2009, at:

http://www.nsf.gov/pubs/2010/nsf10012/nsf10012.pdf.

The following tentative milestones are based on RCRV project requirements and are sensitive to the NSB assessment and review process for MREFC projects:

Release of solicitation:	On or about January 24, 2011
Proposals due:	On or about May 20, 2011
CDR:	Award + 9 months (March 2012)
PDR:	Award + 15 months (September 2012)
NSB approval for inclusion in FY15 budget:	March 2013
FDR and NSB authorization to obligate funds:	Not before October 2014

Proposals must include a preliminary Project Execution Plan (PEP) that describes all relevant information necessary to demonstrate the ability of the Awardee to act in the capacity of "Lead Institution" (LI) to effectively implement and manage the RCRV project through completion of Phase IV within cost, scope and schedule. The PEP must also incorporate the activities of the entire project team, including the "Supporting Institutions" (SI's) and contractors.

Beginning in Phase I, two (2) sub-awards will be made by the LI (Awardee) to the proposed SI's in the other regions where the RCRV will operate in order to closely involve them in the design refresh. Following Phase I and confirmation of future construction funding, the LI will manage the shipyard selection process (Phase II) and the entire construction effort (Phase III) for up to three hulls. For efficiency of production, the hull and propulsion equipment of the three RCRV's will be identical and the arrangements nearly identical. Slight variations in the science outfitting may be made to suit the particular region. The LI will also manage the trials and delivery of all three hulls (Phase IV) with close cooperation by the SI's.

Following successful completion of Phase IV, the SI's and/or LI will manage the operations and maintenance of the vessels to support NSF and other federally-funded oceanographic research projects. Operational funds for the RCRVs will be reviewed and negotiated annually through five-year Cooperative Agreement(s) with the Ship Operations Program, Division of Ocean Sciences.

For the proposal, either of two (2) potential operating models may be used for when the RCRV enters into the academic research vessel fleet under the Ship Operations Program:

1. The Lead Institution (Awardee) manages only one (1) of the RCRVs with the remaining vessels managed independently by the proposed Supporting Institutions through separate Cooperative Agreements under the Ship Operations Program.

2. The Lead Institution (Awardee) manages all three (3) RCRVs with each vessel positioned at an appropriate facility in each geographic region (East, West, and Gulf coasts). The other facilities shall be academic institutions to promote synergy with oceanographic research. This model may use either a single Cooperative Agreement, or multiple Cooperative Agreements, for operation of the vessels under the Ship Operations Program depending on the proposed organizational structure. If this model is proposed, participation by Supporting Institutions is still required in order to incorporate regional design and outfitting requirements.

With regard to the operation the RCRVs following Phase IV, the proposal must (1) demonstrate the Lead and Supporting Institution's past experience in managing vessel operations in support of science and education, and (2) demonstrate their ability to accommodate the RCRV at a home port facility appropriate for the vessel size (length, beam, draft and tonnage) in order to promote and maintain high quality vessel conditions and support to science.

If an organization currently operates a UNOLS vessel, it must remove the existing vessel from the academic research vessel fleet in order to be eligible for selection as either the LI or an SI.

NSF will not provide construction or modification funds for the docking facilities or any associated costs. Additional cost-share by the proposing Institutions toward construction or outfitting of the vessels is not allowed.

Construction shall be at a single US shipyard using a sequential build strategy.

Proposals will be reviewed by a non-conflicted, external panel with strong expertise in the relevant subject matter areas. NSF Merit Review Criteria, including Intellectual Merit and Broader Impacts, will be applied in the evaluation of proposals and the selection process. Review criteria will also include the adequacy and technical soundness of the preliminary PEP and the initial, high level incorporation of the NSF determinations into the design to evaluate the team's understanding of project requirements. A Science Cruise Requirement document that includes all three geographic regions will be provided as part of the solicitation and used to uniformly evaluate the proposed vessel operating schedules and costs to the federal agencies.

The Division of Ocean Sciences, Integrative Programs Section welcomes all questions and comments on the information provided in this announcement, particularly with respect to the teaming approach and the potential operating models outlined above. This information is preliminary in nature and subject to revision prior to release of the Solicitation and as the RCRV project moves forward. Points of contact within the Integrative Programs Section are Bob Houtman (bhoutman@nsf.gov) and Matt Hawkins (mjhawkin@nsf.gov).