Carbon and Water in the Earth System

Program Solicitation

NSF 06-514 Replaces Document NSF 03-597



National Science Foundation

Directorate for Geosciences
Division of Atmospheric Sciences
Division of Earth Sciences
Division of Ocean Sciences

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

March 15, 2006

REVISIONS AND UPDATES

In furtherance of the President's Management Agenda, in Fiscal Year 2006, NSF has identified programs that will offer proposers the option to utilize Grants.gov to prepare and submit proposals, or will require that proposers utilize Grants.gov to prepare and submit proposals. Grants.gov provides a single Government-wide portal for finding and applying for Federal grants online. A complete listing of these programs is available on the Policy Office website at: http://www.nsf.gov/bfa/dias/policy.

In response to this program solicitation, proposers may opt to submit proposals via Grants.gov or via the NSF FastLane system. In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

- A. Collaborative Proposals. All collaborative proposals must be submitted via the NSF FastLane system. This includes collaborative proposals submitted:
 - by one organization (and which include one or more subawards); or
 - as separate submissions from multiple organizations.

Proposers are advised that collaborative proposals submitted in response to this Program Solicitation via Grants.gov will be requested to be withdrawn and proposers will need to resubmit these proposals via FastLane. (Chapter II, Section D.3 of the Grant Proposal Guide provides additional information on collaborative proposals.)

B. All Other Types of Proposals That Contain Subawards. All other types of proposals that contain one or more subawards also must be submitted via the NSF FastLane system.

This solicitation continues some of the activities of the Coupled Biogeochemical Cycles portion of the Biocomplexity in the Environment priority area, Integrated Carbon Cycle Research, Biogeosciences, and Water Cycle Research.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Synopsis of Program:

This solicitation invites proposals aimed at closing significant gaps in our understanding of the complex relationships between and within the global water and carbon cycles. In particular, we seek proposals that cross the interfaces of land, atmosphere and oceans. Proposals should span traditional interdisciplinary boundaries and should not duplicate efforts currently supported in NSF core programs as determined by discussion with one or more of the cognizant NSF Program Officers. Studies of related biologically or geochemically reactive substances will be considered only if they pertain directly to the carbon or water cycles. Proposers are strongly encouraged to contact a Program Officer to discuss their proposals before submission.

Cognizant Program Officer(s):

- Rodey Batiza, Program Director, Directorate for Geosciences, Division of Ocean Sciences, 725 N, telephone: (703) 292-8581, fax: (703) 292-9085, email: rbatiza@nsf.gov
- Fredric Lipschultz, Associate Program Director, Directorate for Geosciences, Division of Ocean Sciences, 725 N, telephone: (703) 292-8582, fax: (703) 292-9085, email: flipschu@nsf.gov
- Enriqueta C. Barrera, Program Director, Directorate for Geosciences, Division of Earth Sciences, 785 S, telephone: (703) 292-8551, fax: (703) 292-9225, email: ebarrera@nsf.gov
- L. Douglas James, Program Director, Directorate for Geosciences, Division of Earth Sciences, 785 S, telephone: (703) 292-8549, email: Idjames@nsf.gov
- Anne-Marie Schmoltner, Program Director, Directorate for Geosciences, Division of Atmospheric Sciences, 775 S, telephone: (703) 292-8522, fax: (703) 292-9022, email: aschmolt@nsf.gov
- Johannes Verlinde, Program Director, Directorate for Geosciences, Division of Atmospheric Sciences, telephone: (703) 292-8524, fax: (703) 292-9022, email: jverlind@nsf.gov

Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.075 --- Social, Behavioral and Economic Sciences
- 47.078 --- Office of Polar Programs
- 47.049 --- Mathematical and Physical Sciences
- 47.079 --- International Science and Engineering (OISE)
- 47.050 --- Geosciences
- 47.041 --- Engineering
- 47.076 --- Education and Human Resources
- 47.070 --- Computer and Information Science and Engineering
- 47.074 --- Biological Sciences

Eligibility Information

- Organization Limit: None Specified.
- PI Eligibility Limit: None Specified.
- Limit on Number of Proposals: None Specified.

Award Information

- Anticipated Type of Award: Standard or Continuing Grant
- Estimated Number of Awards: 14 to 25
- Anticipated Funding Amount: \$32,000,000 pending availability of funds.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- Full proposals submitted via FastLane:
 - Grant Proposal Guide (GPG) Guidelines apply.

• Full proposals submitted via Grants.gov:

 NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF. Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/bfa/dias/policy/docs/grantsgovguide.pdf) To obtain copies of the Application Guide and Application Forms Package: click on the Apply tab on the Grants.gov website, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package Button.

B. Budgetary Information

- Cost Sharing Requirements: Cost Sharing is not required by NSF.
- Indirect Cost (F&A) Limitations: Not Applicable.
- Other Budgetary Limitations: Not Applicable.

C. Due Dates

Full Proposal Deadline Date(s) (due by 5 p.m. submitter's local time):
 March 15, 2006

Proposal Review Information

• Merit Review Criteria: National Science Board approved criteria apply.

Award Administration Information

- Award Conditions: Standard NSF award conditions apply.
- Reporting Requirements: Standard NSF reporting requirements apply.

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I. INTRODUCTION

This solicitation continues some activities of the Biocomplexity in the Environment (BE) initiative, and in particular aspects of the programs Coupled Biogeochemical Cycles, Integrated Carbon Cycle Research, Biogeosciences, and Water Cycle Research. These previous solicitations were aimed at increasing our fundamental understanding of links among the physical, chemical, geological, hydrologic, atmospheric, and biological processes that comprise the Earth's natural systems. This solicitation is more limited in scope, but continues the central BE theme of interrelationships by focusing on enhanced understanding of carbon and water cycle processes related to Earth's hydrosphere, atmosphere, geosphere, and biosphere, as well as exchanges among these different reservoirs.

For background, interested proposers may wish to examine examples of recent scientific reports on the Carbon Cycle (for example www.carboncyclescience.gov/planning.html), Water Cycle (for example www.usgcrp.gov/usgcrp/Library/watercycle/wcsgreport2001/default.htm), and Climate Change (for example www.climatescience.gov). However, this solicitation does not cover all the topics addressed in these reports.

II. PROGRAM DESCRIPTION

This solicitation is aimed at advancing our understanding of interdisciplinary aspects of either the carbon or the water cycles as they pertain to life, the global environment, and climate change. Specifically, proposals should address interdisciplinary gaps in our understanding of these cycles across the interfaces of atmosphere, land, and oceans and which could not be addressed by current core disciplinary programs within NSF. In particular, we are requesting proposals for multidisciplinary studies that cross traditional NSF disciplinary boundaries and those that cannot be supported by core programs because of their scope and cost. Proposals may address processes at a variety of spatial and temporal scales, however proposals that address processes at small spatial scales and short temporal scales must discuss how results can be scaled up for relevance to regional or global scales. Proposals addressing critical feedbacks, couplings, and interactions of the carbon and water cycles are particularly encouraged. Likewise, proposals to study processes in poorly understood yet globally important and challenging environmental systems, such as the oceanic mesopelagic layer, continental margins, and wetlands are also encouraged, as are those addressing poorly understood interactions. Proposals may involve observational, experimental, and/or theoretical studies.

We seek proposals that will discover, define, and quantify key mechanisms or interactions through empirical observations, theory and modeling at the level of continents, ocean basins, and air masses or critically important ecological, geological or hydrographic provinces within and between them such as continental margins and drainage basins. Studies of related biologically or geochemically reactive substances will be considered only if clearly placed within the central framework of the carbon or water cycles.

Examples of the types of studies that will be considered include, but are not limited to:

- Innovative ways of evaluating processes and feedbacks that affect global or regional fluxes of carbon, water, and other bioactive elements among the Earth's land, oceans, and atmosphere.
- Processes and feedbacks in the carbon or water cycles as they relate to our understanding of extreme events, climate variability, and climate change.
- Basic research that involves development of new and innovative techniques or instrumentation capabilities for important chemical species, including anthropogenic ones.
- Data synthesis and modeling to explore new linkages and to integrate field studies and remote sensing using both forward and inverse models and data assimilation techniques.
- Studies of the natural cycles of other bioactive elements, such as N, S, P, Si, Fe, and others, will be considered but
 only if the studies directly couple these to the carbon or water cycles.

In order to maximize the chances of success, and minimize misdirected efforts, interested PIs and groups of PIs are

urged to contact one of the Program Officers listed in Section VIII. "Contacts for Additional Information" to discuss their proposal ideas and the extent to which the project is suitable for this competition.

III. ELIGIBILITY INFORMATION

The categories of proposers identified in the Grant Proposal Guide are eligible to submit proposals under this program announcement/solicitation.

IV. AWARD INFORMATION

Projects may request up to \$3 million total, not including the costs of facilities, and up to 5 years of support. Approximately 14-25 standard or continuing grants are expected. Major research facilities costs will be borne by this program and will be a factor in funding decisions. Users of such facilities (ships, aircraft, etc.) should refer to section section V.B. The anticipated funding amount is \$32 million pending the availability of funds.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Instructions:

Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

• Full proposals submitted via FastLane:

Proposals submitted in response to this program announcement/solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF Website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov. Proposers are reminded to identify this program announcement/solicitation number in the program announcement/solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

• Full proposals submitted via Grants.gov:

Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants. gov website and on the NSF website at: (http://www.nsf.gov/bfa/dias/policy/docs/grantsgovguide.pdf). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

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- A. Collaborative Proposals. All collaborative proposals must be submitted via the NSF FastLane system. This includes collaborative proposals submitted:
 - by one organization (and which include one or more subawards); or
 - as separate submissions from multiple organizations.

Proposers are advised that collaborative proposals submitted in response to this Program Solicitation via Grants.gov will be requested to be withdrawn and proposers will need to resubmit these proposals via FastLane. (Chapter II, Section D.3 of the Grant Proposal Guide provides additional information on collaborative proposals.)

B. All Other Types of Proposals That Contain Subawards. All other types of proposals that contain one or more subawards also must be submitted via the NSF FastLane system.

Inclusion of a Management Plan Required

The management plan shall provide the following information: (1) a description of the management structure that will enable the team to work effectively; and (2) specification of the qualifications of each of the senior personnel as well as the contribution they are expected to make to the project. This section increases in importance as the number of senior personnel or organizations involved in the project increases. (This section is usually between 1 and 2 pages in length and is included in the 15 page limit).

Conflicts of Interest Information Required

In addition to the formal submission of the proposal, the principal investigator must send a compilation of conflicts of interest information in a spreadsheet format (**preferably in MS-Excel format**) by e-mail directly to one of the cognizant program officers listed in this solicitation no later than one week after the proposal-submission deadline.

The top of the list should include the proposal number of the proposal submitted via Grants. gov or Fastlane. Include the full names of all people for whom there would be a conflict of interest related to reviewing this proposal because of their association with one or more of the senior personnel on the project. Conflicts to be identified are: (1) Ph.D. thesis advisors or advisees, (2) postdoctoral advisors or advisees, (3) collaborators or co-authors for the past 48 months, and (4) any other individuals or organizations with which the investigator has financial ties (please specify type). For further clarification of conflicts of interests, please refer to the NSF Grant Policy Manual, Section 510. Three columns are suggested for the spreadsheet: People for whom there is a conflict, the senior personnel whose relationship makes the person in that row conflicted, and the relationship that causes the conflict of interest.

B. Budgetary Information

Cost Sharing:

Cost sharing is not required by NSF in proposals submitted under this Program Solicitation.

Budget Preparation Instructions:

Research Platform Requirements. Project requirements for research platform support must be explicitly described in the proposal, and appropriate forms, requests, and/or supplemental documents should be appended to the proposal. Contact one of the cognizant NSF Program Officers listed in this solicitation for more information.

For purposes of preparing the proposal budget, two categories of platforms must be distinguished:

- Platform costs that MUST appear in the proposal budget: These include costs incurred for the use, rental, or lease of relatively small platforms for example, small marine craft, field vehicles, space and facilities support at remote field stations, etc. The grantee organization would be paying these costs directly to the operator.
- Platform costs that MUST NOT appear in the proposal budget: These include costs incurred for specifically
 designated types of research platform support (research cruises, polar logistics, arctic logistics, use of aircraft or
 other Earth sciences and atmospheric sciences field facilities). The PI should submit a copy of the UNOLS request,
 OPP logistics form, EAR facilities form, or request for ATM facilities with the proposal. Principal investigators are
 responsible for filing the appropriate requests with the operators of such major research platforms; a copy of the
 request must be attached as an appendix to the proposal.

C. Due Dates

Proposals must be submitted by the following date(s):

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

D. FastLane/Grants.gov Requirements

• For Proposals Submitted Via FastLane:

Detailed technical instructions for proposal preparation and submission via FastLane are available at: https://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

Submission of Electronically Signed Cover Sheets. The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Proposers are no longer required to provide a paper copy of the signed Proposal Cover Sheet to NSF. Further instructions regarding this process are available on the FastLane Website at: http://www.fastlane.nsf.gov/

• For Proposals Submitted Via Grants.gov:

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. The Grants. gov's Grant Community User Guide is a comprehensive reference document that provides technical information about Grants.gov. Proposers can download the User Guide as a Microsoft Word document or as a PDF document. The Grants.gov User Guide is available at: http://www.grants.gov/CustomerSupport. In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: support@grants.gov. The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

Submitting the Proposal: Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

VI. PROPOSAL REVIEW INFORMATION

A. NSF Proposal Review Process

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest, at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the proposal.

The National Science Board approved revised criteria for evaluating proposals at its meeting on March 28, 1997 (NSB 97-72). All NSF proposals are evaluated through use of the two merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

On July 8, 2002, the NSF Director issued Important Notice 127, Implementation of new Grant Proposal Guide Requirements Related to the Broader Impacts Criterion. This Important Notice reinforces the importance of addressing both criteria in the preparation and review of all proposals submitted to NSF. NSF continues to strengthen its internal processes to ensure that both of the merit review criteria are addressed when making funding decisions.

In an effort to increase compliance with these requirements, the January 2002 issuance of the GPG incorporated revised proposal preparation guidelines relating to the development of the Project Summary and Project Description. Chapter II of the GPG specifies that Principal Investigators (PIs) must address both merit review criteria in separate statements within the one-page Project Summary. This chapter also reiterates that broader impacts resulting from the proposed project must be addressed in the Project Description and described as an integral part of the narrative.

Effective October 1, 2002, NSF will return without review proposals that do not separately address both merit review criteria within the Project Summary. It is believed that these changes to NSF proposal preparation and processing guidelines will more clearly articulate the importance of broader impacts to NSF-funded projects.

The two National Science Board approved merit review criteria are listed below (see the Grant Proposal Guide Chapter III.A for further information). The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which he/she is qualified to make judgments.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

NSF staff will give careful consideration to the following in making funding decisions:

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

B. Review Protocol and Associated Customer Service Standard

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Proposals submitted in response to this announcement/solicitation will be reviewed by Ad Hoc and/or panel review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Director. In addition, the proposer will receive an explanation of the decision to award or decline funding.

NSF is striving to be able to tell proposers whether their proposals have been declined or recommended for funding within six months. The time interval begins on the closing date of an announcement/solicitation, or the date of proposal receipt, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be

inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program Division administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See section VI.A. for additional information on the review process.)

B. Award Conditions

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (NSF-GC-1); * or Federal Demonstration Partnership (FDP) Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreement awards are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

Consistent with the requirements of OMB Circular A-16, Coordination of Geographic Information and Related Spatial Data Activities, and the Federal Geographic Data Committee, all NSF awards that result in relevant geospatial data must be submitted to Geospatial One-Stop in accordance with the guidelines provided at: www.geodata.gov.

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpm. The GPM is also for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402. The telephone number at GPO for subscription information is (202) 512-1800. The GPM may be ordered through the GPO Website at http://www.gpo.gov/.

*These documents may be accessed electronically on NSF's Website at http://www.nsf.gov/awards/managing/. Paper copies of these documents may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from pubs@nsf.gov.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for the PI and all Co-PIs. PIs should examine the formats of the required reports in advance to assure availability of required data.

Pls are required to use NSF's electronic project reporting system, available through FastLane, for preparation and submission of annual and final project reports. This system permits electronic submission and updating of project reports, including information on project participants (individual and organizational), activities and findings, publications, and other specific products and contributions. Pls will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system.

VIII. CONTACTS FOR ADDITIONAL INFORMATION

General inquiries regarding this program should be made to:

- Rodey Batiza, Program Director, Directorate for Geosciences, Division of Ocean Sciences, 725 N, telephone: (703) 292-8581, fax: (703) 292-9085, email: rbatiza@nsf.gov
- Fredric Lipschultz, Associate Program Director, Directorate for Geosciences, Division of Ocean Sciences, 725 N, telephone: (703) 292-8582, fax: (703) 292-9085, email: flipschu@nsf.gov
- Enriqueta C. Barrera, Program Director, Directorate for Geosciences, Division of Earth Sciences, 785 S, telephone: (703) 292-8551, fax: (703) 292-9225, email: ebarrera@nsf.gov
- L. Douglas James, Program Director, Directorate for Geosciences, Division of Earth Sciences, 785 S, telephone: (703) 292-8549, email: ldjames@nsf.gov
- Anne-Marie Schmoltner, Program Director, Directorate for Geosciences, Division of Atmospheric Sciences, 775 S, telephone: (703) 292-8522, fax: (703) 292-9022, email: aschmolt@nsf.gov
- Johannes Verlinde, Program Director, Directorate for Geosciences, Division of Atmospheric Sciences, telephone: (703) 292-8524, fax: (703) 292-9022, email: jverlind@nsf.gov

For questions relating to Grants.gov contact:

 Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: support@grants.gov.

For questions related to the use of FastLane, contact:

 Brian Midson, Assistant Program Director, Directorate for Geosciences, Division of Ocean Sciences, 725 N, telephone: (703) 292-8580, fax: (703) 292-9085, email: bmidson@nsf.gov

IX. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding for research and education in science, mathematics, and engineering. The NSF *Guide to Programs* is available electronically at http://www.nsf.gov/cgi-bin/getpub?gp. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices. Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF E-Bulletin, which is updated daily on the NSF Website at http://www.nsf.gov/home/ebulletin, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's MyNSF News Service (http://www.nsf.gov/mynsf/) to be notified of new funding opportunities that become available.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Awardees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities and persons with disabilities to compete fully in its programs. In accordance with Federal statutes, regulations and NSF policies, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF, although some programs may have special requirements that limit eligibility.

Facilitation Awards for Scientists and Engineers with Disabilities (FASED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the GPG Chapter II, Section D.2 for instructions regarding preparation of these types of

The National Science Foundation promotes and advances scientific progress in the United States by competitively awarding grants and cooperative agreements for research and education in the sciences, mathematics, and engineering.

To get the latest information about program deadlines, to download copies of NSF publications, and to access abstracts of awards, visit the NSF Website at http://www.nsf.gov

> Location: 4201 Wilson Blvd. Arlington, VA 22230

 For General Information (703) 292-5111

(NSF Information Center):

• TDD (for the hearing-impaired): (703) 292-5090

To Order Publications or Forms:

Send an e-mail to: pubs@nsf.gov

or telephone: (703) 292-7827

• To Locate NSF Employees: (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to applicant institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies needing information as part of the review process or in order to coordinate programs; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

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