

Critical Zone Observatories (CZO)

PROGRAM SOLICITATION NSF 06-588



National Science Foundation
Directorate for Geosciences
Division of Earth Sciences

Letter of Intent Due Date(s) (required) (due by 5 p.m. proposer's local time):

October 02, 2006

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

February 02, 2007

IMPORTANT INFORMATION AND REVISION NOTES

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.

In response to this program solicitation, proposers may opt to submit proposals via Grants.gov or via the NSF FastLane system.

The deadline date for this solicitation is being extended. The new due date is Friday, February 2nd, 2007.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Critical Zone Observatories (CZO)

Synopsis of Program:

This solicitation calls for proposals to develop Critical Zone Observatories that will operate at the watershed scale and that will significantly advance our understanding of the integration and coupling of Earth surface processes as mediated by the presence and flux of fresh water. Successful proposals will be motivated and implemented by both field and theoretical approaches, each providing the impetus for advances in the other, and they will include substantial and novel plans for education, outreach and broader impacts.

Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.

- Enriqueta Barrera, telephone: (703) 292-8551, email: ebarrera@nsf.gov
- H. Richard Lane, telephone: (703) 292-8551, email: hlane@nsf.gov

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

- 47.050 --- Geosciences

Award Information

Anticipated Type of Award: Cooperative Agreement

Estimated Number of Awards: 2

Anticipated Funding Amount: \$8,500,000 over 5 years, pending availability of funds

Eligibility Information

Organization Limit:

Proposals may only be submitted by the following:

- The categories of proposers identified in the Grant Proposal Guide are eligible to submit proposals under this program solicitation with the following exceptions:
 - Unaffiliated Individuals
 - Foreign Organizations. Foreign organizations may participate in the project as subawardees only.

PI Limit:

None Specified

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

None Specified

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Submission of Letters of Intent is required. Please see the full text of this solicitation for further information.
- **Preliminary Proposal Submission:** Not Applicable
- **Full Proposal Preparation Instructions:** This solicitation contains information that supplements the standard NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) proposal preparation guidelines. Please see the full text of this solicitation for further information

B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required under this solicitation.
- **Indirect Cost (F&A) Limitations:** Not Applicable
- **Other Budgetary Limitations:** Not Applicable

C. Due Dates

- **Letter of Intent Due Date(s) (required)** (due by 5 p.m. proposer's local time):
October 02, 2006
- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):
February 02, 2007

Proposal Review Information Criteria

Merit Review Criteria: National Science Board approved criteria apply.

Award Administration Information

Award Conditions: Additional award conditions apply. Please see the full text of this solicitation for further information.

Reporting Requirements: Additional reporting requirements apply. Please see the full text of this solicitation for further information.

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I. INTRODUCTION

Precipitation that falls on continents is arguably life's most critical resource and mediator of diverse natural processes on and near the surface of Earth. By its presence, fresh water sustains a diverse panoply of life; in its absence, most life cannot thrive. The routing and flux of water dictates the rates by which physical, chemical and biological processes occur within the Earth's critical zone (defined, by the National Research Council (NRC) 2001 Basic Research Opportunities in Earth Science (BROES) report as the layer bounded by the top of the forest canopy and the base of the weathering horizon). These processes have impacts ranging from flood and debris flow hazards, rock weathering and the production of soil, sustainability of agricultural and ecological systems, mediation of evapotranspiration (with consequences for the efficacy of climate modeling), flux of carbon and its impact on climate change and the long-term evolution of topography and its impact on both the evolution of biosystems and local climate.

Processes occurring at and near the Earth's surface do not operate independently, but the extent to which they are coupled, and at what temporal and spatial scales, remains largely unknown. In 2001, the NRC Water Science and Technology Board stated, "What is needed for understanding water resources is a more holistic conceptual framework that encompasses regional hydrologic systems, land-atmosphere interactions, and biogeochemical cycles that control contaminant transport." Also in 2001, the BROES Report stated "Demands are rising for EAR investments in natural laboratories, where terrestrial processes and systems can be studied through detailed field observations and in situ measurements in specially designated areas. This type of cooperative research is particularly suitable for studies of The Critical Zone, in which techniques from several disciplines must be coordinated to collect data sets that are spatially dense and temporally extended." The current solicitation calls for proposals that address the integration and coupling of earth surface processes as mediated by the presence and flux of fresh water in the context described above.

Additional documents that are useful descriptors of community planning related to this solicitation may be accessed via www.nsf.gov/geo/ear/programs/czo_moreinfo.jsp.

II. PROGRAM DESCRIPTION

We solicit proposals to develop Critical Zone Observatories (CZO's) that will operate at the watershed scale and will investigate processes occurring in the Critical Zone. Successful proposals will be motivated by science, not simply by data gathering and characterization. Successful proposals will be guided and implemented by both field and theoretical approaches, each providing the impetus for advances in the other.

Successful proposals will include an integration of efforts in several subfields addressing near surface processes. Potential subfields include (but are not limited to) hydrology, geochemistry, geobiology, geomorphology, pedology and ecology. Connections to tectonics and climatology may be included but may not be the primary focus of a CZO. Proposals should focus on a single watershed and should address the questions to be investigated, the techniques to be employed and use of modern technology, including cyberinfrastructure, to both acquire and disseminate field data. Proposals should also include details of planned instrumental deployments considering the scientific advantages of nested observatories for exploring the spatial and temporal scales of processes. Successful proposals will involve substantial education, outreach and broader impacts and will demonstrate added value by virtue of the proposed scientific collaborations. A discussion of outcomes anticipated over the five-year period of funding is essential.

Because the data generated by these observatories will likely be of considerable significance it is crucial that they be made available to the broader community in a timely manner. Thus, successful proposals will include a discussion of data policy and mechanisms for data dissemination. Open data access is preferred. Similarly, other investigators may wish to conduct studies within an observatory using separate funds. Therefore, successful CZO proposals should address the issue of accessibility by other workers.

Examples of issues/questions that could be addressed in a CZO include, but are not limited to:

1. How do processes in the critical zone control fluxes of carbon, particulates, and atmospherically reactive trace gases between the land surface and the atmosphere?
2. To what extent do physical and chemical processes in the critical zone impact the diversity and health of ecological systems, and vice versa?
3. How do biogeochemical processes and mechanisms at critical zone interfaces govern long-term sustainability of soil and water resources?
4. How do weathering processes impact the evolution and character of the critical zone and how is this weathering engine perturbed by global environmental change, human activity and/or tectonic processes?

5. What are the mechanisms and rates of feedback between topography, hydrology, ecology and geochemistry and how do these vary as a function of local climate? Are there threshold phenomena in these feedback mechanisms and can the mechanisms be quantified?
6. What are the rates and processes of pedogenesis under current and past climates and how does pedogenesis influence the mass flux of surficial materials across a landscape.
7. How does the legacy of human impact influence processes that affect both the sustainability and transience of the critical zone at the watershed scale?
8. Can we quantify the coupling that might exist between climatic and tectonic forcing on surface processes that operate at scales that are appropriate to the evolution of individual watersheds?

III. AWARD INFORMATION

We anticipate funding two CZOs, dependent on availability of funds, for initial deployments of 5 years and with levels of funding that begin at no more than \$500K/year for each observatory in year one and no more than \$750K/year in year two. Funding for years three, four and five will be constant at no more than \$1000K/year for each observatory. Annual reviews of observatory operations and outcomes will guide decisions about continued funding. Proposals may include several institutions and PI's but will be awarded as single Cooperative Agreements.

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

- The categories of proposers identified in the Grant Proposal Guide are eligible to submit proposals under this program solicitation with the following exceptions:
 - Unaffiliated Individuals
 - Foreign Organizations. Foreign organizations may participate in the project as subawardees only.

PI Limit:

None Specified

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

None Specified

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Letters of Intent (*required*):

Letters of Intent must be submitted via email to Dr. Enriqueta Barrera (ebarrera@nsf.gov), Program Director for Geobiology and Low-Temperature Geochemistry, Division of Earth Sciences, National Science Foundation. Submission should take the form of an e-mail message sent directly to Dr. Barrera.

Only one Letter of Intent should be submitted for each project. Letters must include the following information.

- Name and affiliation of Principal Investigator
- Name(s) and affiliation(s) of Co-Principal Investigators
- Name(s) and affiliation(s) of Other Senior Personnel
- Name(s) of other participating organizations.
- Brief description of the proposed project including the site location, questions to be investigated, previous work at the site, timeline for field installations, Education and Outreach plan and plans for cyberinfrastructure.
- Letters of Intent should be no longer than 3 pages of text. Figures may be included, if appropriate.

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 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 nsfpubs@nsf.gov. Proposers are reminded to identify this program solicitation number in the program 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 nsfpubs@nsf.gov.

EAR Data Policy: Principal investigators are required to adhere to the [EAR Data Policy](#) available on the NSF website (www.nsf.gov/geo/ear/EAR_data_policy_204.doc). Proposals should include a statement describing how the data policy requirements will be met.

Projects involving work in foreign countries: For studies in countries other than the United States, the project description should discuss, where appropriate, collaborations with scientists and students from the host country, and how these individuals will be involved in the project. Collaborations should be well justified, in that they represent true intellectual collaboration, utilize the expertise and specialized skills, facilities, and/or resources of the foreign collaborator. Letters of collaboration must be included in the Special Information and Supplementary Documents section of the proposal. These letters should include a discussion of the role of the collaborator in the project and the resources the collaborating foreign institution/organization will provide to the project. Principal investigators are encouraged to provide U.S. students and junior researchers with international research experiences. According to the [Grant Proposal Guide](#) (Sec II.C.2.j), "some governments require nonresidents to obtain official approval to carry out investigations within their borders and coastal waters under their jurisdiction. PIs are responsible for obtaining the required authorizations and for advising NSF that they have been obtained or requested." Prior to an award, PIs must provide confirmation that they have obtained necessary research agreements and all legally required collecting, import, and export permits for samples, instrumentation, and data. Where relevant, arrangements to allocate samples and data between host country organization(s) or institution(s) and U.S. organization(s) or institution(s) should be discussed in the proposal. Investigators are encouraged to include any such permits, authorizations, and agreements in the Special Information and Supplementary Documents section of the proposal.

Proposers are reminded to identify the program solicitation number, shown at the beginning of this solicitation, on the NSF Cover Sheet For Proposal to the National Science Foundation (FastLane users) or the NSF Grant Application Cover Page (Grants.gov users). Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

Proposers are reminded to identify the program solicitation number (Populated with NSF Number at Clearance) in the program 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.

B. Budgetary Information

Cost Sharing: Cost sharing is not required under this solicitation.

C. Due Dates

- **Letter of Intent Due Date(s) (required)** (due by 5 p.m. proposer's local time):
October 02, 2006
- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):
February 02, 2007

D. FastLane Requirements

Proposers are required to prepare and submit all proposals for this program solicitation through use of the NSF FastLane system. Detailed instructions regarding the technical aspects of proposal preparation and submission via FastLane are available at: <http://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 funding opportunity.

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. Further instructions regarding this process are available on the FastLane Website at: <https://www.fastlane.nsf.gov/fastlane.jsp>.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program where they will be reviewed if they meet NSF proposal preparation requirements. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF who are experts in the particular fields represented by the proposal.

These reviewers are selected by Program Officers charged with the oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal.

A. NSF Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. 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 the reviewer is qualified to make judgements.

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, original, or potentially transformative 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?

Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website at: <http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf>.

Mentoring activities provided to postdoctoral researchers supported on the project, as described in a one-page supplementary document, will be evaluated under the Broader Impacts criterion.

NSF staff also 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 and Selection Process

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review 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.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's 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 Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

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 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.B. 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 (GC-1); * or Research Terms and Conditions * and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

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

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the *NSF Award & Administration Guide (AAG)* Chapter II, available electronically on the NSF Website at http://www.nsf.gov/publications/pub_summ.jsp?ods_key=aag.

Special Award Conditions:

EAR Data Policy: Principal investigators are required to adhere to the [EAR Data Policy](#) available on the NSF website. Final reports for all awards should include a statement describing how the data policy requirements have been met.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational), publications, and other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

EAR Data Policy: Principal investigators are required to adhere to the [EAR Data Policy](#) available on the NSF website. Final reports for all awards should include a statement describing how the data policy requirements have been met.

VIII. AGENCY CONTACTS

Please note that the program contact information is current at the time of publishing. See program website for any updates to the points of contact.

General inquiries regarding this program should be made to:

- Enriqueta Barrera, telephone: (703) 292-8551, email: ebarrera@nsf.gov
- H. Richard Lane, telephone: (703) 292-8551, email: hlane@nsf.gov

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: fastlane@nsf.gov.

IX. OTHER INFORMATION

The NSF Website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this Website by potential proposers is strongly encouraged. In addition, National Science Foundation Update is a free e-mail subscription service designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Regional Grants Conferences. Subscribers are informed through e-mail when new publications are issued that match their identified interests. Users can subscribe to this service by clicking the "Get NSF Updates by Email" link on the [NSF web site](#).

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at <http://www.grants.gov>.

ABOUT THE NATIONAL SCIENCE FOUNDATION

The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

NSF receives approximately 40,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Arctic and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

Facilitation Awards for Scientists and Engineers with Disabilities provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See Grant Proposal Guide Chapter II, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

The National Science Foundation Information Center may be reached at (703) 292-5111.

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** (NSF Information Center): (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**
 - Send an e-mail to: nsfpubs@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; and 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 proposer 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 or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; 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," 69 Federal Register 26410 (May 12, 2004), and [NSF-51](#), "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to, an information collection unless it displays a valid Office of Management and Budget (OMB) control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding the burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to:

Suzanne H. Plimpton
Reports Clearance Officer
Division of Administrative Services
National Science Foundation
Arlington, VA 22230

X. APPENDIX

For more information on this solicitation, link to www.nsf.gov/geo/ear/programs/czo_moreinfo.jsp.

Policies and Important Links	Privacy	FOIA	Help	Contact NSF	Contact Web Master	SiteMap
	The National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230, USA Tel: (703) 292-5111, FIRS: (800) 877-8339 TDD: (800) 281-8749					Last Updated: 11/07/06 Text Only