Major Research Instrumentation Program (MRI)

PROGRAM SOLICITATION
NSF 08-503

REPLACES DOCUMENT(S):
NSF 07-510

National Science Foundation

Office of the Director
Office of Integrative Activities

Directorate for Biological Sciences

Directorate for Computer & Information Science & Engineering

Directorate for Education & Human Resources

Directorate for Engineering

Directorate for Geosciences

Directorate for Mathematical & Physical Sciences

Directorate for Social, Behavioral & Economic Sciences

Office of Polar Programs

Office of Cyberinfrastructure

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

December 21, 2007

Required only for acquisition requests between $2 million and $4 million. See full text of this solicitation for details.

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

January 24, 2008

Fourth Thursday in January, Annually Thereafter

REVISION NOTES

A revised version of the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG), NSF 09-1, was issued on October 1, 2008 and is effective for proposals submitted on or after January 5, 2009. Please be advised that the guidelines contained in NSF 09-1 apply to proposals submitted in response to this funding opportunity. Proposers who opt to submit prior to January 5th, 2009, must also follow the guidelines contained in NSF 09-1.

One of the most significant changes to the PAPPG is implementation of the mentoring provisions of the America COMPETES Act. Each proposal that requests funding to support postdoctoral researchers must include, as a separate section within the 15-page project description, a description of the mentoring activities that will be provided for such individuals. Proposals that do not include a separate section on mentoring activities within the Project Description will be returned without review (see the PAPP Guide Part I: *Grant Proposal Guide* Chapter II.C.2.d for further information).

There have been a number of clarifications and updates, including the following:

- The upper limit on the budget for instrument acquisition proposals has been raised to $4 million. Requests over $2 million must be for the **acquisition** of **single** instruments only. Proposal preparation requirements and review criteria for such proposals have been modified accordingly.
- Letters of intent are required for all requests above $2 million.
- Adherence to proposal margin, spacing and font size limitations, consistent with the NSF Grant Proposal Guide (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg) is strictly required and enforced.
- Title VII of the America COMPETES Act of 2007 directs NSF to require cost-sharing in the MRI Program. Therefore, effective FY 2008, NSF will require cost-sharing on all MRI proposals, both acquisition and development, from PhD and non-degree granting institutions. Cost sharing will not be required on proposals from non-PhD granting institutions.
- Operation and maintenance are eligible expenses on acquisition proposals.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Major Research Instrumentation Program (MRI)
Instrument Development and Acquisition

Synopsis of Program:

The Major Research Instrumentation Program (MRI) is designed to increase access to scientific and engineering equipment for research and research training in our Nation's organizations of higher education, research museums, and non-profit research organizations. This program seeks to improve the quality and expand the scope of research and research training in science and engineering, and to foster the integration of research and education by providing instrumentation for research-intensive learning environments. The MRI program encourages the development and acquisition of research instrumentation for shared inter- and/or intra-organizational use and in concert with private sector partners.

The MRI program assists in the acquisition or development of major research instrumentation that is, in general, too costly for support through other NSF programs. For proposals over $2 million, requests **must** be for the **acquisition** of a **single** instrument. For proposals requesting $2 million or less, investigators may seek support for instrument development or for acquisition of a single instrument, a large system of instruments, or multiple instruments that share a common or specific research focus.

Cognizant Program Officer(s):

- Joan M. Frye, Staff Associate, telephone: (703) 292-8040, email: jfrye@nsf.gov
- Randy Phelps, Staff Associate, telephone: (703) 292-8040, email: rphelps@nsf.gov

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

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

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 225 including 6-7 mid-range awards.

Anticipated Funding Amount: $110,000,000 (Proposals submitted in response to this program solicitation will be competing for about $110 million, pending availability of funds, in Fiscal Year 2008. Up to $20 million of these funds will be available for the acquisition of single instruments costing between $2 million - $4 million, i.e., mid-range instrumentation.)

Eligibility Information

Organization Limit:

Proposals may only be submitted by the following:

1. US colleges, universities and organizations of higher education located in the US, its territories and possessions.
2. US independent research museums located in the US, its territories and possessions.
3. US independent nonprofit research organizations located in the US, its territories and possessions, including consortia whose members consist only of organizations described in items (1) and (2). (Requests for instrumentation that will be located at a Federally Funded Research and Development Center (FFRDC) **must** be submitted as consortium proposals. This is the only mechanism by which instrumentation, *whether purchased or developed*, can be placed at an FFRDC.)
4. US small businesses located in the US, its territories and possessions are eligible for instrument development support as private sector partners with submitting organizations; they may not submit proposals as a lead organization.

Organizations that are eligible to submit proposals to NSF's MRI Program are divided into three categories: Ph.D. granting organizations, non-Ph.D. granting organizations, and non-degree granting organizations.

Ph.D. granting organizations are academic organizations that have produced more than 20 Ph.D.s or D.Sci.'s in all NSF-supported fields of science, mathematics or engineering during the previous two academic years (please review NSF's Guide to Programs for NSF supported fields of science, mathematics and engineering: http://www.nsf.gov/funding/browse_all_funding.jsp).

Non-Ph.D. granting organizations are two- and four- year colleges and universities that have

produced 20 or fewer Ph.D.s or D.Sci.'s in all NSF-supported fields of science, mathematics, and engineering during the previous two academic years.

Non-degree granting organizations are independent nonprofit research organizations, research museums, and consortia of eligible organizations.

PI Limit:

None Specified

Limit on Number of Proposals per Organization:

Three (3) as described below.

Both of the following conditions must be met or proposal(s) will be returned without review:

1. An organization may submit or be included as a partner or subawardee in no more than three proposals.
2. If an organization submits or is included as a partner or subawardee in three proposals, at least one of the three proposals must be for instrument development.

NSF reserves the right to carefully examine development proposals to ensure that an institution does not exceed its proposal limit. If NSF determines that a development proposal is an acquisition proposal, and such determination results in an institution exceeding its limit, then said proposal will be returned without review. Please see Section II Program Description, under Instrument Development for further information on topics that are not considered development.

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 (only for acquisition requests between $2 million and $4 million). 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 Specialized. Please see the full text of this solicitation for further information.

Indirect Cost (F&A) Limitations: Not Applicable

Other Budgetary Limitations: Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

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

December 21, 2007

Required only for acquisition requests between $2 million and $4 million. See full text of this solicitation for details.

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

January 24, 2008

Fourth Thursday in January, Annually Thereafter

Proposal Review Information Criteria

Merit Review Criteria: National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

Award Administration Information

Award Conditions: Standard NSF award conditions apply.

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

TABLE OF CONTENTS

I. INTRODUCTION

The Major Research Instrumentation (MRI) Program is designed to increase access to scientific and engineering equipment for research and research training in our Nation's organizations of higher education, research museums, and nonprofit research organizations. This program seeks to improve the quality and expand the scope of research and research training in science and engineering, and to foster the integration of research and education by providing instrumentation for research-intensive learning environments. The MRI program encourages the development and acquisition of research instrumentation for shared inter- and/or intra-organizational use, and in concert with private sector partners.

In 2005, the National Academy of Sciences Committee on Advanced Research Instrumentation carried out a study to assess the needs among academic and national laboratory researchers for mid-range instrumentation and to determine how the federal funding agencies could best meet these needs. The committee summarized its findings in a report, entitled “Advanced Research Instrumentation and Facilities” (http://books.nap.edu/catalog.php?record_id=11520). One key recommendation was that NSF increase the limit on the MRI Program in order to support the acquisition of instrumentation with capital costs greater than $2 million but less than that appropriate for NSF’s Major Research Equipment and Facilities Construction account. The America COMPETES Act of 2007 directs NSF to implement this recommendation. Thus, effective FY 2008, NSF will increase the limit to $4 million on MRI proposals for the **acquisition** of **single instruments.** Up to $20 million will be available in FY 2008 to support this effort, pending availability of funds.

The America COMPETES Act also directs NSF to require cost sharing in the MRI Program. Therefore, effective FY 2008, NSF will require cost sharing on all MRI proposals, both acquisition and development, from Ph.D. and non-degree granting institutions. NSF will not require cost sharing from non-PhD granting institutions. Cost sharing requirements differ for acquisition and development proposals (see section V.B). No waivers will be allowed.

II. PROGRAM DESCRIPTION

MRI Program Goals

The goals of the MRI program are to:

Support the acquisition or development of major state-of-the-art instrumentation for research, research training, and integrated research/education activities at organizations;

Improve access to and increase use of modern research and research training instrumentation by scientists, engineers, and graduate and undergraduate students;

Enable academic departments or cross-departmental units to create well-equipped learning environments that integrate research with education;

Foster the development of the next generation of instrumentation for research and research training; and

Promote partnerships between academic researchers and private sector instrument developers.

MRI Program Scope

The MRI program assists in the acquisition or development of major research instrumentation that is, in general, too costly for support through other NSF programs.

Instrument Acquisition

Mid-range (between $2 million and $4 million) proposals must be for the **acquisition** of **single** instruments only. All other proposals may be for a single instrument, a large system of instruments, or multiple instruments that share a common or specific research focus.

The MRI program will NOT support proposal requests for:

Computer networks used for general-purposes;

General laboratory equipment or assorted instruments that do not share a common or specific research or research training focus;

Instrumentation used primarily for standard science and engineering courses;

Renovation or modernization of research facilities, fixed equipment, or facilities such as research vessels, airplanes, large telescopes, and supercomputing centers. The term "research facilities" refers to the bricks-and-mortar physical plant in which sponsored or unsponsored research activities (including research training) take place, including related infrastructure, systems (e.g., HVAC and power systems, toxic waste removal systems), and fixed equipment. The term "fixed equipment" refers to the permanent components of a research facility that are integral (i.e., built in, rather than affixed) to the facility (e.g., clean rooms, fume hoods, elevators, laboratory casework); their removal would affect the integrity or basic operation of the facility.

Proposals that fall into these categories will be returned without review.

Please note that in accordance with guidelines described in the NSF Grant Proposal Guide, the submission of duplicate proposals is forbidden; duplicate proposals submitted to other NSF programs will be returned without review.

Instrument Development

NSF encourages the development of the next generation of research instrumentation. Accordingly, individual investigators and teams of researchers are encouraged to apply for instrument development support. The maximum request for instrument development remains at $2 million.

The academic research enterprise relies on and produces new generations of sophisticated research instrumentation and software simulations thereof. The right design, development, and manufacturing processes can yield new instruments that are more widely used, open up new areas of research and research training, and have potential as commercial products. This solicitation seeks to expand the research community's capabilities by supporting the development of new instruments or upgrades with enhanced performance. "Performance" includes accuracy; reliability; resolving power; throughput speed; sample capacity; flexibility of operation; breadth of application; user-friendliness; and new types of measurement or information gathering. NSF reserves the right to carefully examine development proposals to ensure that the proposed research is not a standard research project that would otherwise be reviewed in the individual investigator programs. Investigators must describe added performance and the expected impact on the broader research community. Non-compliant proposals will be returned without review.

NSF particularly encourages collaborations between disciplinary scientists and engineers who are knowledgeable in unique instrumentation areas and private sector experts in the area of instrument manufacture. Working together within a framework of concurrent engineering, such partnerships have the potential to create new products with wide scientific and commercial impact.

NSF does not consider the acquisition of individual pieces of equipment simply combined in a new system, the mere purchase of an upgrade, the development of devices or products, or requests for general infrastructure, research, or facilities to be instrument development.

Eligible Fields of Science and Engineering

Proposals will be considered for instrumentation used for NSF-supported fields of science, mathematics, and engineering. Researchers using this instrumentation need not be supported by NSF or the Federal government. The program will not provide support for the acquisition of instrumentation to be used in medical research and medical education (such as medical school courses) or in the conduct of disease-oriented research. MRI will support the development of bioengineering instrumentation that advances bioengineering research and may also have clinical uses.

Research with disease-related goals, including work on the etiology, diagnosis or treatment of physical or mental disease, abnormality, or malfunction in human beings or animals, is normally not supported. Animal models of such conditions or the development or testing of drugs or other procedures for their treatment also are not eligible for support. However, research in bioengineering, with diagnosis- or treatment-related goals, that applies engineering principles to problems in biology and medicine while advancing engineering knowledge is eligible for support. Bioengineering research to aid persons with disabilities also is eligible.

III. AWARD INFORMATION

Proposals submitted in response to this program solicitation will be competing for about $110 million in Fiscal Year 2008; up to $20 million of these funds will be available for mid-range instrument acquisition, pending availability of funds.

The maximum request is $4 million for acquisition proposals or $2 million for development proposals. Acquisition proposals over $2 million must be for single instruments only. The minimum request is $100,000; proposals requesting less than that will be considered only from non-Ph.D. granting organizations or from the disciplines of mathematical science or social, behavioral, and economic science at any eligible organization.

Proposers may request an award period up to three years for acquisition proposals and up to five years for development proposals. The anticipated earliest starting date is August 1st after submission.

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

1. US colleges, universities and organizations of higher education located in the US, its territories and possessions.
2. US independent research museums located in the US, its territories and possessions.
3. US independent nonprofit research organizations located in the US, its territories and possessions, including consortia whose members consist only of organizations described in items (1) and (2). (Requests for instrumentation that will be located at a Federally Funded Research and Development Center (FFRDC) **must** be submitted as consortium proposals. This is the only mechanism by which instrumentation, *whether purchased or developed*, can be placed at an FFRDC.)
4. US small businesses located in the US, its territories and possessions are eligible for instrument development support as private sector partners with submitting organizations; they may not submit proposals as a lead organization.

Organizations that are eligible to submit proposals to NSF's MRI Program are divided into three categories: Ph.D. granting organizations, non-Ph.D. granting organizations, and non-degree granting organizations.

1. Ph.D. granting organizations are academic organizations that have produced more than 20 Ph.D.s or D.Sci.'s in all NSF-supported fields of science, mathematics or engineering during the previous two academic years (please review NSF's Guide to Programs for NSF supported fields of science, mathematics and engineering: http://www.nsf.gov/funding/browse_all_funding.jsp).
2. Non-Ph.D. granting organizations are two- and four- year colleges and universities that have produced 20 or fewer Ph.D.s or D.Sci.'s in all NSF-supported fields of science, mathematics, and engineering during the previous two academic years.
3. Non-degree granting organizations are independent nonprofit research organizations, research museums, and consortia of eligible organizations.

PI Limit:

None Specified

Limit on Number of Proposals per Organization:

Three (3) as described below.

Both of the following conditions must be met or proposal(s) will be returned without review:

1. An organization may submit or be included as a partner or subawardee in no more than three proposals.
2. If an organization submits or is included as a partner or subawardee in three proposals, at least one of the three proposals must be for instrument development.

NSF reserves the right to carefully examine development proposals to ensure that an institution does not exceed its proposal limit. If NSF determines that a development proposal is an acquisition proposal, and such determination results in an institution exceeding its limit, then said proposal will be returned without review. Please see Section II Program Description, under Instrument Development for further information on topics that are not considered development.

Limit on Number of Proposals per PI:

None Specified

Additional Eligibility Info:

None Specified.

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Letters of Intent*(required)*:Letters of intent are required for **all** mid-range instrument acquisition requests over $2 million. Investigators should provide information on the single instrument that they propose purchasing, the estimated costs of the instrument, including shipping and handling, installation, calibration and commissioning, and the estimated national and community impact. Letters of intent should be no more than one-page in length, and should include a list of all on- and off-campus users.

Letter of Intent Preparation Instructions:

When submitting a Letter of Intent through FastLane in response to this Program Solicitation please note the conditions outlined below:

Sponsored Projects Office (SPO) Submission is required when submitting Letters of Intent

Submission of multiple Letters of Intent is Not allowed

Full Proposal Instructions: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the guidelines specified 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-PUBS (7827) or by e-mail from pubs@nsf.gov.

In addition to the NSF GPG, MRI proposals must be prepared in accordance with the following instructions. Where these instructions and those in the GPG do not agree, these instructions take precedence. **PIs should especially note that the GPG requires the use of specific fonts, font sizes and margin sizes; non-compliant proposals may be returned without review.**

1. Cover Sheet: Select this program solicitation number from the pull down list. Where asked to identify the NSF Unit of Consideration, select the appropriate Division within an NSF Directorate or the appropriate Office to consider your proposal. "Major Research Instrumentation" will be automatically selected as the program for your proposal.

   The project title should convey the primary purpose of the proposal, e.g., "MRI: Acquisition of ____", or "MRI: Development of ____". Consortium project titles should be identified in the title: "MRI-Consortium: Acquisition of ___", or "MRI-Consortium: Development of ___"..

   Approval by the Authorized Organizational Representative (AOR) on the Cover Sheet of a proposal signifies that the proposer and all partner organizations understand and agree to the following statement: "The AOR of each organization involved in this proposal is aware of this submission."

2. Project Summary (maximum length, 1 page). Describe the proposed major research instrumentation, the type of research or research training conducted, and the activities that would result if NSF funds the project.

   NOTE: NSF will return without review proposals that do not separately address both merit review criteria (intellectual merit and broader impacts) within the Project Summary.

3. Project Description (maximum length, 15 pages, including all figures and charts). The project description must include items (a)-(d).

   a. *Research Activities (s*uggested length, 9 pages for instrument acquisition; 4 pages for instrument development). Describe the research and research training activities and projects to be conducted with the desired instrumentation, and sources of support, if any. In narrative or tabular form, list by number and type (e.g., senior personnel, postdoctoral fellows, graduate students, undergraduate students) the personnel who will use the instrumentation for research and research training on a regular basis. This section **must** include Results from Prior NSF Support, if any of the PIs have received NSF support for shared research instrumentation within the past five years. Also include information on operation and maintenance, downtime and usage history on the previously funded instrument.

   b. *Description of the Research Instrumentation and Needs* (Suggested length, 2 pages for instrument acquisition; 6 pages for instrument development). Acquisition proposals should include a technical description of the requested instrumentation, including manufacturer and model number where appropriate. The description should be comprehensive enough to allow reviewers to evaluate the extent to which the equipment is essential and appropriate. A listing and/or description of related instrumentation currently available at or near the submitting organization should be provided, and the request should be justified in this context. For development of new instrumentation, present the design concept, rationale, and development methods in sufficient detail to allow evaluation of its technical feasibility. Provide preliminary results from existing equipment, or appropriate calculations or models to indicate the added utility or enhanced performance (e.g., sensitivity, capacity, stability, resolution, or signal-to-noise ratio) to be achieved by the new instrument. Justify the necessity and adequacy of the new instrumentation for the proposed research projects, with reference to existing instruments.

   c. *Impact of Infrastructure Projects* (suggested length, 2 pages). Describe how the instrumentation will contribute to meeting the research and educational goals of the organization or consortium. Indicate how the instrumentation will attract researchers and students, particularly underrepresented groups and women pursuing advanced degrees in science and engineering, and improve the quality of their research training. For instrument development proposals, discuss the potential impact of this activity on the Nation's academic research infrastructure. Describe how students will be involved and how their education will be enhanced through development efforts.

      The MRI program anticipates funding only 6-7 mid-range ($2 - 4 million) instruments in FY 2008. Investigators seeking to purchase such instrumentation must address the potential impact of the instrument on both the national level and on the research community of interest by presenting concrete plans for enabling access by external users, especially from undergraduate and/or minority-serving institutions, and by describing the uniqueness of the requested instrumentation.

   d. *Management Plan* (suggested length, 2 pages for instrument acquisition; 3 pages for instrument development)

   For instrument acquisition this plan should describe provisions for maintenance and operation.

   - Specify how and by whom the requested instrumentation will be operated over the period of three years.
   - Describe the technical expertise needed to maintain and operate the instrument with anticipated costs.
   - Describe the facility in which the instrument will be housed.
   - If the instrument will become part of a laboratory that houses similar equipment, include information on usage and downtime.
   - Describe procedures for allocating the new instrument time, if appropriate, and describe plans for attracting new users.
   - Specify the organizational commitments regarding housing and costs associated with instrument maintenance and operations.
   - Given the relatively high operation and maintenance costs of mid-range instrumentation, investigators seeking support for such instrumentation must also provide detailed business and management plans, with information on space, technical staffing for operation, maintenance and training of users, access for external users, and the *long-term* source of funding for operation and maintenance.

   Sufficient detail should be given to enable reviewers to evaluate whether the plan includes appropriate technical expertise and infrastructure to allow effective usage of the instrument as well as facilitate multi-user accessibility.

   For instrument development this plan should detail the design and construction phases of the project.

   - Include plans for making instrument design readily available to other researchers, e.g., for transferring the technology to other U.S. academic, industrial, or government laboratories or for commercializing the instrument.
   - Describe the schedule of the project activities, broken into tasks, and estimate cost of each activity.
   - Describe the technical expertise needed to execute each activity.
   - Include the description of parts and materials needed for the construction phase and the associated costs.
   - Specify timelines and deliverables for each activity. List risks associated with each activity and methods for re-analyzing and modifying the project plan if necessary.
   - Describe the organization of the project staff and methods of assessing performance. For each member of the team, include a description of the responsibilities and explain why a given position is necessary for the

completion of the design and construction of the new instrument.

Sufficient detail should be provided to allow reviewers to analyze the cost of the new technology.

Note: NSF will return without review proposals that do not include a separate section on the management plan as described above.

4. References Cited. Please refer to guidelines in the GPG.

5. Biographical Sketches. Your proposal must include two-page biographical sketches of the PI, Co-PI(s), and senior personnel who are major users of the relevant research instrumentation. Also, provide a brief bio-sketch of the individual responsible for the instrumentation.

6. Budget and Funding. Provide a single cumulative budget page presenting only those eligible project costs that NSF is being asked to fund. Requests for operation and maintenance will be strongly scrutinized and must be well-justified. Cost-sharing, where allowed and required, should be shown on Line M on the proposal budget. The budget justification, which must not exceed three pages, should itemize and explain all eligible project costs, assign each to either the NSF request or institutional cost-sharing, and explain the basis for all cost estimates. Specify the sources and amounts of cost-sharing funds (e.g., state appropriations, department funds, private sources) and a projection of when they will be available. Note that cost-sharing must occur during the award period.

7. Current and Pending Support. Provide a form for the PI, Co-PI(s), and each major user of the instrumentation for whom a biographical sketch is submitted. If an individual has no current or pending support (other than this proposal), completion of the form is not required.

8. Facilities, Equipment, and Other Resources. A list of related instrumentation currently available at or near the performing organization should be provided.

9. Supplementary Documents.

   Required:

   Provide a statement from the sponsored research office classifying the *performing* organization as a non-Ph. D. granting organization, Ph. D. granting organization, or non-degree granting organization (as defined in Section IV). If the proposal involves organizations other than the submitting organization, list all partners and subawardees.

   If there is a subaward, provide a letter from the subawardee's sponsored research organization acknowledging that this proposal is included in the subawardee's institutional limit. Otherwise, the subawardee institution may exceed its limit, with the result that the proposal with the subaward will be returned without review.

   If the development effort involves a private sector partner, submit a letter (one-page maximum) documenting the collaboration.

   Include a letter documenting institutional commitment for required cost-sharing, if applicable.

   Encouraged:

   Include itemized vendor quotes for instrument acquisition proposals.

   Include a letter documenting institutional commitment for operation and maintenance.

   Include **no more than three one-page letters** documenting collaboration from users at organizations other than the submitting organization.

   Not Allowed:

   Letters of support or endorsement, RUI Impact Statements and RUI Eligibility Statements are not allowed. Proposals containing any of these documents may be returned without review.

10. List of Suggested Reviewers (optional). Proposers may submit a list of suggested reviewers (including affiliation) whom they believe are especially well qualified to review the proposal to the "single-copy document" section of FastLane. Proposers may also list persons they would prefer not review the proposal, indicating why.

    NOTE: Proposals containing items other than those required (or encouraged)above and by the Grant Proposal Guide may be returned without review.

    The following information applies only for those MRI proposals that will be reviewed in the Office of Polar Programs:

    The Office of Polar Programs strongly encourages MRI proposals related to all aspects of polar research supported by the Foundation. For any proposals requiring access to the polar regions or polar logistical support, investigators must contact appropriate OPP program managers for guidance about submitting information needed to assess logistical support requirements. This should be done during proposal development. For proposals requiring access to the arctic, contact Simon Stephenson (703-292-7435 or sstephen@nsf.gov). For proposals requiring access to the Antarctic, contact one of the following managers: for projects related to Antarctic marine research, contact Alexander Sutherland (703-292-8032 or alsuther@nsf.gov); for all other Antarctic projects, contact Brian Stone (703-292-8032 or bstone@nsf.gov).

Proposers are reminded to identify the program solicitation number (NSF 08-503) 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: The proposed cost sharing must be shown on Line M on the proposal budget. Documentation of the availability of cost sharing must be included in the proposal. Only items which would be allowable under the applicable cost principles, if charged to the project, may be included as the awardee's contribution to cost sharing. Contributions may be made from any non-Federal source, including non-Federal grants or contracts, and may be cash or in-kind (see OMB Circular A-110, Section 23). It should be

noted that contributions counted as cost-sharing toward projects of another Federal agency may not be counted towards meeting the specific cost-sharing requirements of the NSF award. All cost-sharing amounts are subject to audit. Failure to provide the level of cost-sharing reflected in the approved award budget may result in termination of the NSF award, disallowance of award costs and/or refund of award funds to NSF.

PhD granting institutions and non-degree granting institutions are hereby required to provide 30 percent cost-sharing from non-federal government sources. No exceptions will be made, and non-compliant proposals will be returned without review. Cost-sharing is not required on proposals from non-PhD granting institutions. The maximum award from NSF will be $4 million (acquisition for single instrument only) or $2 million (instrument development or acquisition of multiple instruments) and the minimum award will be $100,000. There is no minimum for awards in the mathematical, social, behavioral, or economic sciences, nor is there a minimum for awards to non-PhD granting institutions. The minimum and maximum award amounts represent NSF's contribution to the project and do not include the institution's cost sharing.

Cost sharing must occur during the award period. Institutions receiving awards with cost sharing requirements must be in compliance with federal regulations; see OMB Circular A-110 (http://www.whitehouse.gov/omb/circulars/a110/a110.html#23) for further details.

Cost Sharing - General Information

The following sections explain how to calculate the cost-sharing requirements for your MRI proposal, how to enter your cost-sharing amount and requested amount in the proposal budget, and what costs may be included in your cost-sharing.

Cost Sharing for Acquisition Proposals

Cost sharing is not required for non-Ph.D.granting institutions.

Ph.D. granting institutions and non-degree granting institutions are required to cost share at a level of 30 percent of total eligible project costs. To calculate your cost sharing requirements for an acquisition proposal:

Add all eligible project costs (see below) for your proposal to determine total project cost.

Calculate 30 percent of your total project cost

Enter your cost-sharing amount, as determined above, on **Line M** of the proposal budget. All entries in the column titled "Funds Requested by Proposer" on the proposal budget should reflect only those costs that are requested from NSF. All entries in this column should total 70 percent of total project cost. **Line L** should reflect the total amount that you are requesting from NSF.

Note that manufacturers' discounts are strongly encouraged for reducing total project cost but may not be designated as cost sharing.

Cost Sharing for Development Proposals

Cost sharing is not required for non-Ph.D. granting institutions.

Ph.D. granting institutions and non-degree granting institutions are required to cost share at a level of 30% of the total equipment hardware cost (**Line D** of the proposal budget). To calculate your cost sharing requirement for a development proposal:

Determine total equipment cost by adding all equipment costs to be included in your proposal. NSF defines equipment as an item of property that has an acquisition cost of $5,000 or more (unless the organization has established lower levels) and an expected service life of more than one year. This cost is entered on **Line D** of the proposal budget.

Calculate 30 percent of total equipment cost.

Enter your cost sharing amount, as determined above, on **Line M** of the proposal budget. All entries in the column titled "Funds Requested by Proposer" on the proposal budget should reflect only those costs that you are requesting from NSF. **Line L** should reflect the total amount that you are requesting from NSF.

Note that manufacturers' discounts are strongly encouraged for reducing total project costs, but may not be designated as institutional cost-sharing.

Other Budgetary Limitations:

Eligible Project Costs

For instrument **acquisition** proposals, eligible project costs are limited to instrument purchase, installation, commissioning, and calibration, and the direct and indirect costs of operation, maintenance, and other appropriate technical support during the award period. Salary support, including fringe benefits and indirect costs, is allowed for personnel involved in the operation and maintenance.

For instrument **development** proposals, eligible project costs are limited to parts and materials needed for the construction of the instrument and commissioning costs, as well as the direct and indirect costs associated with support of personnel engaged strictly in the instrument development effort. Requests for personnel support must include a description of the responsibilities of the project co-workers and explain why a given position is necessary for the completion of the design and construction of the new instrument. Sufficient detail should be given to allow reviewers to analyze the cost of the new technology. Support for research to be conducted using the instrument *after* development, operation and maintenance, publication costs, and conference travel are not allowed.

The amount of the NSF request should be based on the net price of the instrumentation, including all academic discounts and other special purchase arrangements. Publication costs, training, and travel costs are not allowed.

Checklist

Are Intellectual Merit and Broader Impacts explicitly and separately addressed in the project summary?

Is the subject matter appropriate for NSF? For MRI? (See section on Eligible Fields of Science and Engineering.)

Are font sizes and margins consistent with the Grant Proposal Guide (http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg)?

Is the project summary compliant in terms of page limits? Project description?

Are Results from Prior Support provided, if applicable?

Is there a separate section for the management plan?

If the equipment is to be placed at an FFRDC, is this a consortium proposal?

Is the performing organization adhering to the three proposal limit? If three proposals, is at least one a development proposal?

Are all items in the budget allowed?

Is the magnitude of the budget request consistent with the solicitation?

If the budget is between $2 - 4 million, is this a request for the acquisition of a single instrument?

For instrument acquisition proposals, are there no more than three letters from users at other institutions?

Is there a letter from the subawardee sponsored research organization certifying that this proposal is included in the subawardee institution's proposal count, if applicable?

Is there a statement indicating the type of performing institution (PhD-granting, non PhD-granting, or non degree-granting)?

Is there a letter of commitment from the institution confirming availability of funds for cost-sharing, if applicable?

C. Due Dates

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

December 21, 2007

Required only for acquisition requests between $2 million and $4 million. See full text of this solicitation for details.

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

January 24, 2008

Fourth Thursday in January, Annually Thereafter

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.

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.

Additional Review Criteria:

In addition to the evaluation criteria stated above, reviewers will assess the following:

Instrument Acquisition Proposals.

The extent of shared use of the instrumentation for research and/or research training.

- Whether the management plan includes sufficient infrastructure and technical expertise to allow effective usage of the instrument; and provides organizational commitments for operations and maintenance.
- Whether the request for operation and maintenance is justified and reasonable in magnitude.
- Plans for using the new or enhanced research capability in teaching, training or learning.
- In addition, for mid-range instrument acquisition proposals: the impact of the instrumentation at the state or national level, and the detailed plans for funding of operation and maintenance.

Instrument Development Proposals:

- Whether the plan has a realistic schedule and mechanisms to deal with potential risks. In addition, the reviewers will evaluate the availability of appropriate technical expertise to design and construct the instrument and the cost of the new technology.
- Whether development of a new instrument is justified. Specifically, reviewers will consider if the proposed instrument will enable new types of measurement or information gathering and if there is a strong need for the new instrument in the larger user community.

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 pubs@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.

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.

Failure to provide the required annual or final project reports 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 following topics should be addressed in all MRI annual and final project reports:

For Instrument Acquisition Proposals

- Status of order, delivery, and installation;
- Brief description of research projects that were enabled by the instrument;
- Number of students with hands-on experience, to include demographic information (indicate undergraduate or graduate, gender, ethnicity/race, disability, major). Note: provide percentages for demographic data; do NOT identify specific students by ethnicity, race or disability status;
- A list of the research groups granted access and the titles of the research and institutional affiliation, to include both on-campus and outside users;
- Data on usage and downtime;
- A short description of the management plan, noting deviations from the plan as described in the proposal;
- Changes in sources and/or scheduling of cost-sharing;
- Description of setbacks and resulting change of plans; and
- Information on broader impacts activities to date.

For Instrument Development Proposals

- Status of development effort to date;
- Number of student participants, to include demographic information (indicate undergraduate or graduate, gender, ethnicity/race, disability, major). Note: provide percentages for demographic data; do NOT identify specific students by ethnicity, race or disability status;
- Information on broader impacts activities to date;
- New industrial partnerships;
- Technology transfer (e.g., design and/or instrument);
- A short description of the management plan, noting deviations from the plan as described in the proposal;
- Changes in sources and/or scheduling of cost-sharing;
- Description of setbacks and resulting change of plans; and
- Modifications in timeline.

VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- Joan M. Frye, Staff Associate, telephone: (703) 292-8040, email: jfrye@nsf.gov
- Randy Phelps, Staff Associate, telephone: (703) 292-8040, email: rphelps@nsf.gov

For questions related to the use of FastLane, contact:

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

Additional contact information for NSF's Major Research Instrumentation Program is as follows:

Office of Integrative Activities
Major Research Instrumentation Program
National Science Foundation, Room 1270
4201 Wilson Boulevard
Arlington, VA 22230
(703) 292-8040

E-Mail: mri@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, MyNSF (formerly the Custom News Service) is an information-delivery system 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 or the user's Web browser each time new publications are issued that match their identified interests. MyNSF also is available on NSF's Website at http://www.nsf.gov/mynsf/.

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.

RELATED NSF PROGRAMS FOR RESEARCH INSTRUMENTATION

Program Title	Brochure	Telephone
Atmospheric Sciences Mid-Size Infrastructure Opportunity	NSF 07-602	703-292-8529
Advanced Technologies and Instrumentation (ATI)	No Publication Number	703-292-4892
Chemistry Research Instrumentation and Facilities: Departmental Multi-User Instrumentation (CRIF:MU)	NSF 07-552	703-292-4953
Chemistry Research Instrumentation and Facilities: Instrumentation Development (CRIF:ID)	NSF 04-534	703-292-4953
Chemistry Research Instrumentation and Facilities: Cyberinfrastructure and Research Facilities (CRIF:CRF)	NSF 07-518	703-292-4962
CISE Computing Research Infrastructure	NSF 06-597	703-292-8950
Cyberinfrastructure for Environmental Observatories: Prototype Systems to Address Cross-Cutting Needs	NSF 06-505	703-292-8527
Earth Sciences: Instrumentation and Facilities (EAR/IF)	NSF 07-553	703-292-8558
Graduate Student and Optical Instrumentation Support Related to the Advanced Modular Incoherent Scatter Radar (AMISR)	NSF 05-564	703-292-9022
High Performance Computing System Acquisition: Towards a Petascale Computing Environment for Science and Engineering	NSF 05-625	703-292-8527
Improvements in Facilities, Communications, and Equipment at Biological Field Stations and Marine Laboratories (FSML)	NSF 05-550	703-292-9063
Instrument Development for Biological Research	NSF 07-568	703-292-8470
Instrumentation for Materials Research	NSF 07-600	703-292-4920
Instrumentation for Materials Research - Major Instrumentation Projects (IMR-MIP)	NSF 05-513	703-292-4920
Next Generation Cyberinfrastructure Tools	NSF 05-563	703-292-7025
Proposal Submission Guidelines for the Integrative Programs Section: Oceanographic Instrumentation	NSF 04-052	703-292-8583
Oceanographic Technology and Interdisciplinary Coordination Program (OTIC)	No publication number	703-292-8583
Program for Research and Education with Small Telescopes (PREST)	NSF 04-557	703-292-4909
Scientific Computing Research Environment for the Mathematical Sciences (SCREMS)	NSF 07-502	703-292-4859

Small Business Innovation Research and Small Business Technology Transfer Programs Phase I (SBIR/STTR)	NSF 07-586	703-292-7051

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 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: 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; 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