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Proactive Recruitment in Introductory Science and Mathematics (PRISM)

PROGRAM SOLICITATION
NSF 10-511

REPLACES DOCUMENT(S):
NSF 08-596

National Science Foundation

Directorate for Mathematical & Physical Sciences
Division of Mathematical Sciences

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

March 08, 2010

REVISION NOTES

Please be advised that the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) includes revised guidelines to implement the mentoring provisions of the America COMPETES Act (ACA) (Pub. L. No. 110-69, Aug. 9, 2007.) As specified in the ACA, each proposal that requests funding to support postdoctoral researchers must include a description of the mentoring activities that will be provided for such individuals. Proposals that do not comply with this requirement will be returned without review (see the PAPP Guide Part I: *Grant Proposal Guide* Chapter II for further information about the implementation of this new requirement).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Proactive Recruitment in Introductory Science and Mathematics (PRISM)

Synopsis of Program:

The goal of the program in Proactive Recruitment in Introductory Science and Mathematics is to strengthen the nation's scientific competitiveness by increasing the numbers of well-prepared, successful U.S. undergraduate majors and minors in science and mathematics. The program will fund innovative, potentially transformational partnerships between the mathematical sciences and other science or engineering disciplines that widen the cross section of the mathematical sciences to which freshman and sophomore students are exposed and that provide these students increased opportunities for research experiences involving the mathematical sciences.

Cognizant Program Officer(s):

- Jane P. Gilman, telephone: (703) 292-4872, email: jgilman@nsf.gov
- Bruce Palka, telephone: (703) 292-4856, email: bpalka@nsf.gov
- Dean M. Evasius, telephone: (703) 292-8132, email: devasius@nsf.gov

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

- 47.049 --- Mathematical and Physical Sciences

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 2 to 4

Anticipated Funding Amount: $3,000,000 pending availability of funds. Under this solicitation proposals may be submitted for

funding durations from three to five years. The proposal budget, between $100,000 and $600,000 per year, must be commensurate with the project and thoroughly justified in the proposal.

Eligibility Information

Organization Limit:

Proposals may only be submitted by the following:

- Universities and Colleges -- Universities and four-year colleges accredited in and having a campus located in the US, acting on behalf of their faculty members.

PI Limit:

Proposals must include a Principal Investigator from a department of mathematical sciences and at least one co-Principal Investigator from another science or engineering department in the submitting institution.

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:** Not Applicable
- **Preliminary Proposal Submission:** Not Applicable
- **Full Proposals:**
  - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. 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 .
  - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)

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

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

  March 08, 2010

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

Education of the next generation of the nation's scientific workforce is a crucial element in efforts to improve American competitiveness. Research in science and engineering increasingly relies on mathematical and statistical tools, hence colleges and universities must inspire this next generation to learn more mathematics and statistics, laying the foundation for work in modern scientific research and development.

The NSF program in Proactive Recruitment in Introductory Science and Mathematics (PRISM) seeks proposals to improve the lower-division undergraduate (freshman and sophomore) experience in mathematics and statistics, better preparing undergraduates to major in science, engineering, mathematics, and statistics. Of particular interest are activities that share the excitement of science and mathematics with students, inspiring them to pursue and persist in these often demanding areas. Activities should help students understand both the central role of the mathematical sciences in fostering progress in other scientific disciplines as well as the continuing active development of the mathematical sciences themselves. The program will fund innovative, potentially transformational partnerships between the mathematical sciences and other science or engineering disciplines that widen the cross section of the mathematical sciences to which lower-division students are exposed and that provide increased opportunities for research experiences for lower-division students. Careful attention to mentoring of students, thorough evaluation mechanisms, and plans for sustainability will be essential to successful proposals

It is anticipated that an increase in the number of well-prepared graduates in science, technology, engineering, and mathematics (STEM) majors and minors will be an outcome of successful projects. Projects must include strong plans to proactively identify and recruit capable lower-division students with realistic chances of success in science and mathematics majors, especially those who might not otherwise pursue studies in STEM fields. A compelling proposal will address both the recruitment and retention of the student participants. The design of this program has been shaped by an advisory workshop on Proactive Recruitment in the Lower Division, held in April 2008 in Washington, DC. See http://www.nsf.gov/mps/dms/reports.jsp for the workshop report.

II. PROGRAM DESCRIPTION

The goal of PRISM is to strengthen the nation's scientific competitiveness by increasing the numbers of well-prepared, successful U.S. undergraduate majors and minors in science and mathematics. The program will support projects that aim to improve the freshman and sophomore experience in mathematics and science through student involvement in research activities and the creation of a sense of belonging to a scientific community.

In this solicitation, the mathematical sciences are understood to comprise mathematics and statistics. Lower-division students are understood to comprise college freshmen and sophomores.

Required Elements of Proposed Activities

Partnerships among Academic Units

This program intends to support the development of activities that help students understand both the central role of the mathematical sciences in fostering progress in other scientific disciplines and the continuing active development of the mathematical sciences themselves. To this end, the program requires collaborative involvement, from proposal writing through award implementation, of a mathematical sciences department and at least one other science or engineering unit in the institution. Such a partnership could, for example, aim to increase the number of double majors or major/minor combinations between the mathematical sciences and the partner discipline(s), or the partnership might seek to significantly increase the mathematical sciences component of the degree program of the partner discipline(s). The Principal Investigator and co-Principal Investigators on each proposal must represent all of the academic units to be engaged in the proposed activity and all Principal Investigators and co-Principal Investigators must represent STEM disciplines.

This program is predicated on the idea that early engagement with a broad spectrum of subject material within a STEM discipline leads to increased interest and persistence in scientific majors. Consequently, proposed activities should include the following three elements that address early engagement with science and mathematics:

Proactive Recruitment

Because most undergraduate students do not declare majors before their sophomore year, funded projects will necessarily include strong plans to proactively identify and recruit capable lower-division students with realistic chances of success in science and mathematics majors. Proposals should outline specific mechanisms for identification and recruitment of student participants in the activity.

Early Research Experiences

Since research activity fosters a student's early engagement with scientific subject material and understanding of the vitality of scientific disciplines, projects funded by this program must include opportunities for research experiences for lower-division students in the mathematical sciences and/or the partner discipline(s). Here, research is interpreted broadly to include all forms of discovery learning, at levels appropriate to the students, through which students are introduced to the excitement of the research process. These should motivate students to pursue and persist in what can be challenging aspects of scientific endeavor. For the purposes of this program, it is not necessary that research topics be original or that student research experiences lead to publishable results, but the content should be substantial and intellectually stimulating.

Mentoring and Professional Development

Because students at all levels desire and profit from timely information -- necessarily obtained outside traditional coursework -- concerning professional development in the field, projects funded by this program will include careful attention to mentoring and other activities that foster students' sense of membership in the departmental community. Good mentoring should support both the intellectual development and the profession development of students. Intellectual development: beyond the initial research experience(s), students should interact with STEM faculty both in organized seminars and in individual or small group settings. Professional development: students should be guided in developing effective teamwork skills, structuring and leading the learning experiences of others, and improving their scientific communication skills for transmission of scientific ideas in both written and oral formats, particularly through multiple presentations in a spectrum of venues. Proposed activities should also include sound plans for providing students early exposure to a wide range of career options and higher education opportunities for mathematics and science majors.

Required Plans for Evaluation

Proposals should clearly specify measurable goals for the proposed activity and should include specific strategies with quantifiable metrics that can be tracked for evaluation purposes. Use of the services of personnel external to the project with expertise in evaluation is encouraged in planning and conducting evaluations; the associated costs are allowable in proposal budgets. These personnel need not be external to the proposing institution.

In particular, proposals must clearly identify the following:

- the goals to be achieved
- the specific new activities to be conducted, the way in which these address the goals, and the way in which these activities significantly differ from or enhance common practice
- measurable proposed outcomes for the project
- specific methods for evaluation of the success of the activity and for assessment of progress toward the goals

For additional information, investigators should refer to the Field-Tested Learning Assessment Guide (http://www.flaguide.org/intro/contents.php).

Baseline data appendix. Baseline data for the quantitative metrics relevant to the proposed measurable outcomes of the project, such as the numbers of majors, of minors, and of degrees granted in the participating disciplines, should be collected before proposal submission and included in an appendix in the Supplementary Documentation section of the proposal. Gender, race, ethnicity, and disability data for the pool of potential participants should be given. University registrars or similar institutional offices, rather than individual departments, should be the source of all data. Data should be reported both in absolute terms and as a percentage of the corresponding university-wide quantities. If proposed outcomes involve changes to existing trends, the baseline data furnished should quantify the trends. This appendix must not exceed one page in length per disciplinary unit participating in the project, with a maximum of five pages in all cases. It should be presented in a layout that is easy to read.

The proposal should spell out plans to measure progress during the life of the project in order to make necessary corrections in implementation and to gauge the efficacy of the various intervention elements.

The proposal must include plans to organize and implement midterm review of the project by a team of site visit advisors external to the institution. The size and composition of this advisory review team should be appropriate to the project's size and scope and the number of partner disciplines involved.

Awardees will be required to report data for the quantitative metrics annually for the duration of the grant and asked to track participants through their junior and senior years and through graduation. A plan for tracking post-graduation information is desirable, but not required.

Awardees will be required to report results of the project efforts at an annual PI meeting (US location to be determined) held to share information on effective practices; funds for travel to this meeting of a representative from each participating department should be included in the proposal budget.

Examples of some possible strategies and corresponding evaluation metrics are contained in the report of the workshop on Proactive Recruitment in the Lower Division. That list is not intended to be prescriptive or all-inclusive.

Required Elements of a Proposal

A successful proposal must include following elements:

- well defined partnership(s) between the mathematical sciences and other science or engineering discipline(s); in particular, the lead PI must be an investigator in the mathematical sciences (Mathematics or Statistics) and at least one co-PI must be from another discipline
- primary emphasis on activities for students in the lower undergraduate divisions
- a plan for recruitment, selection, and retention of capable lower-division students with realistic chances of success in science and mathematics majors, including members of underrepresented groups
- a plan for mentored research activities that is focused on student success and that includes learning experiences beyond the traditional curriculum
- a plan for continued intellectual mentoring beyond the initial research experience and initial and subsequent classroom experiences

a comprehensive evaluation plan
- a plan to disseminate results, best practices, and any lab/course materials that arise from the project
- a management plan that describes how major tasks of the project will be handled by project personnel
- a description of which components of the program will be sustained after the life of the grant, and a realistic plan for sustaining those components
- if applicable, the proposal must address results of prior support (In particular, proposals from Investigators with prior support from similar training and research programs must report on the results of the award(s) and clearly identify how this proposal differs from past projects that have been funded.)
- supplemental materials in the appendix must include one page baseline data in an easy to read format as decribed under required plans for evaluation.
- supplemental materials must include a postdoctoral mentoring plan if postdocs are included in the proposed budget

Eligible Budget Items

Proposals may request funds for:

- partial salary compensation for faculty directly involved in the project
- support for direct involvement of graduate students or postdocs in the mentoring and/or the research supervision of undergraduate participants (in the case of PRISM, DMS does not support more than 50% of a postdoc salary; the teaching that a postdoc does must be funded by non-NSF sources.)
- stipends for summer and/or academic year support for undergraduate student participants
- funds for administrative support (which, however, should be limited)
- funds for innovative course/laboratory development and/or software/hardware acquisition directly relevant to the proposed new core research and instructional experience
- funds for evaluation activities: approximately 10% of the budget and/or effort should be devoted to evaluation of the project

General Considerations

The program aims to increase and enhance the mathematical and statistical content of degree plans across mathematics/statistics and science/engineering fields. This program is not meant to encourage one STEM discipline to gain majors at the expense of another.

Activities involving partnerships with high schools or two-year colleges may be proposed where appropriate, but these are not expected to be the primary focus of any proposal.

Proposing institutions are expected to design programs that also attract greater numbers of students from underrepresented groups into mathematics, statistics, science, and engineering.

As part of the project, institutions may propose curriculum changes. However, it is not the intention of this program to support projects focused solely on the development of courses. Proposals with the primary aim of course development should be submitted to the NSF program in Course, Curriculum, and Laboratory Improvement (CCLI).

This solicitation requires partnerships of a mathematical sciences department with at least one other discipline outside the mathematical sciences; proposals for changes in only mathematics and/or statistics departments should be directed to other programs, such as Mentoring through Critical Transition Points, part of the program Enhancing the Mathematical Sciences Workforce (EMSW21) in the 21st Century.

The report of the workshop on Proactive Recruitment in the Lower Division (see http://www.nsf.gov/mps/dms/reports.jsp) contains examples of strategies for proposed projects. The examples in the report are not meant to be prescriptive or all-inclusive.

III. AWARD INFORMATION

Under this solicitation proposals may be submitted for funding durations from three to five years. The proposal budget, between $100,000 and $600,000 per year, must be commensurate with the project and thoroughly justified in the proposal. Awards will be funded as standard grants or continuing grants. The NSF expects to fund two to four awards in fiscal year 2010 depending on the quality of submissions and the availability of funds. Estimated program budget, number of awards, and average award size/duration are subject to the availability of funds. Proposals of various sizes and duration are sought.

IV. ELIGIBILITY INFORMATION

Organization Limit:

Proposals may only be submitted by the following:

- Universities and Colleges -- Universities and four-year colleges accredited in and having a campus located in the US, acting on behalf of their faculty members.

PI Limit:

Proposals must include a Principal Investigator from a department of mathematical sciences and at least one co-Principal Investigator from another science or engineering department in the submitting institution.

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

None Specified

Additional Eligibility Info:

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Full Proposal Preparation 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/publications/pub_summ.jsp?ods_key=grantsgovguide). 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.

In determining which method to utilize in the electronic preparation and submission of the proposal, please note the following:

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. Chapter II, Section D.3 of the Grant Proposal Guide provides additional information on collaborative proposals.

The standard Grant Proposal Guide instructions for proposal preparation apply, with the following exceptions.

a. Cover sheet. To facilitate timely processing, the title of the proposed project should begin with the six characters "PRISM:".

b. Project Description. The Project Description must address all of the Required Elements of a Proposal listed in this Program Description. The Project Description may not exceed **20 pages** in length.

c. Supplementary Documentation. This section should contain supplementary documentation that provides, in tabular form, the baseline data appropriate to the project that is requested in the subsection on Required Plans for Evaluation. Collaborative arrangements with partners should be addressed in the project description. The supplementary documentation is limited in length to one page per academic unit participating in the project, with a maximum length of five pages in all cases.

If applicable, the following also should be submitted as supplementary documentation:

- A post-doc mentoring plan, if one or more post-docs will be supported on the project.
- Letters describing collaborative arrangements and commitments, if any. Letters of support are not allowed.

Refer to Section II, Program Description, for additional information about required elements for proposals.

B. Budgetary Information

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

C. Due Dates

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

  March 08, 2010

D. FastLane / Grants.gov Requirements

- **For Proposals Submitted Via FastLane:**

  Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are available at: https://www.fastlane.nsf.gov/a1/newstan.htm. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail fastlane@nsf.gov. The FastLane Help Desk answers general technical questions related to the use of the FastLane

system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this 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 .

- **For Proposals Submitted Via Grants.gov:**

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

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

VI. 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.

Additional Review Criteria:

Reviewers will be asked to interpret the two basic NSF review criteria within the context of PRISM. In addition, reviewers will be asked to assess the following:

- plans for high-quality undergraduate research activities and scientific mentoring of students
- potential impact for producing successful STEM majors
- soundness of the partnership(s) between the mathematical sciences and other science or engineering discipline(s)
- likelihood of success of the plans for recruitment, selection, and retention of participants, including members of underrepresented groups
- plan for the professional development of student participants
- plans for management of the project and for dissemination of results
- plan for sustaining components of the project beyond the grant period

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.

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.

In addition to the FastLane reporting requirements, awardees will be required to report data for the quantitative metrics relevant to the proposed measurable outcomes of the project annually for the duration of the grant. Awardees will be required to report results of the project efforts at an annual PI meeting held to share information on effective practices.

VIII. AGENCY CONTACTS

General inquiries regarding this program should be made to:

- Jane P. Gilman, telephone: (703) 292-4872, email: jgilman@nsf.gov
- Bruce Palka, telephone: (703) 292-4856, email: bpalka@nsf.gov
- Dean M. Evasius, telephone: (703) 292-8132, email: devasius@nsf.gov

For questions related to the use of FastLane, contact:

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

For questions relating to Grants.gov contact:

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

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

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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.

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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.

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