Prediction of and Resilience against Extreme Events (PREEVENTS)

PROGRAM SOLICITATION
NSF 16-562

National Science Foundation

Directorate for Geosciences
Division of Atmospheric and Geospace Sciences
Division of Earth Sciences
Division of Ocean Sciences
Division of Polar Programs

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

July 29, 2016

Last Friday in July, Every Other Year Thereafter

Required for Track 2 Proposals

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

September 20, 2016

Third Monday in September, Every Other Year Thereafter

Track 2 Proposals

Submission Window Date(s) (due by 5 p.m. submitter's local time):

August 01, 2016 - January 04, 2017

Track 1 (conferences): see proposal preparation instructions for further details

January 05, 2017 - January 04, 2018

January 5 - January 4, Annually Thereafter

Track 1 (conferences): see proposal preparation instructions for further details

IMPORTANT INFORMATION AND REVISION NOTES

Due to repairs to the Foundation's electrical systems, there will be no access to FastLane, Research.gov or the NSF website on September 17-18, 2016. The deadline date for Track 2 proposals for this solicitation has therefore been changed to September 20, 2016 at 5:00 PM submitter's local time.

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 16-1), which is effective for proposals submitted, or due, on or after January 25, 2016.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Prediction of and Resilience against Extreme Events (PREEVENTS)

Synopsis of Program:

Natural disasters cause thousands of deaths annually, and in 2013 alone caused over $130 billion in damage worldwide. There is clear societal need to better understand and mitigate the risks posed to the US by natural hazards, consistent with the mandate of the National Science Foundation (NSF) "…to promote the progress of science [and] advance the national health, prosperity, and welfare...."

NSF and the Directorate for Geosciences (GEO) have long supported basic research in scientific and engineering disciplines necessary to understand natural hazards and extreme events, including through the Interdisciplinary Research in Hazards and Disasters (Hazards SEES) program and multiple core programs in the GEO Directorate. PREEVENTS is designed as a logical successor to Hazards SEES and is one element of the NSF-wide Risk and Resilience activity, which has the overarching goal of improving predictability and risk assessment, and increasing resilience, in order to reduce the impact of extreme events on our life, society, and economy. PREEVENTS will

provide an additional mechanism to support research and related activities that will improve our understanding of the fundamental processes underlying natural hazards and extreme events in the geosciences.

PREEVENTS is focused on natural hazards and extreme events, and not on technological or deliberately human-caused hazards. The PREEVENTS portfolio will include the potential for disciplinary and multidisciplinary research at all scales, particularly aimed at areas ripe for significant near- or medium-term advances.

PREEVENTS seeks projects that will (1) enhance understanding of the fundamental processes underlying natural hazards and extreme events on various spatial and temporal scales, as well as the variability inherent in such hazards and events, and (2) improve our capability to model and forecast such hazards and events. **All projects requesting PREEVENTS support must be primarily focused on these two targets.** In addition, PREEVENTS projects will improve our understanding of the effects of natural hazards and extreme events and will enable development, with support by other programs and organizations, of new tools to enhance societal preparedness and resilience against such impacts.

Cognizant Program Officer(s):

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

- Gregory J. Anderson, telephone: (703) 292-4693, email: greander@nsf.gov
- Paul Cutler, telephone: (703) 292-4961, email: pcutler@nsf.gov
- Eric T. DeWeaver, telephone: (703) 292-8527, email: edeweave@nsf.gov
- Eric C. Itsweire, telephone: (703) 292-7593, email: eitsweir@nsf.gov
- Diane McKnight, telephone: (703) 292-4897, email: dmcknigh@nsf.gov
- Ilia I. Roussev, telephone: (703) 292-8519, email: iroussev@nsf.gov
- Deborah K. Smith, telephone: (703) 292-7978, email: dksmith@nsf.gov
- Thomas Torgersen, telephone: (703) 292-8549, email: ttorgers@nsf.gov

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

- 47.050 --- Geosciences

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant or Cooperative Agreement

Estimated Number of Awards: 15 to 20

NSF anticipates funding a total of 15 to 20 proposals pursuant to this solicitation, including both Track 1 and Track 2 projects, subject to availability of funds. NSF anticipates funding a mix of project sizes, with durations up to five years. Note that Track 1 awards will be generally limited to less than $50,000, but under exceptional circumstances may be up to $100,000.

Anticipated Funding Amount: $18,000,000 to $25,000,000

under this solicitation, pending availability of funds.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.
- For-profit organizations: U.S. commercial organizations, especially small businesses with strong capabilities in scientific or engineering research or education.
- **NSF-funded FFRDCs** may submit proposals to this competition, provided that (a) the project includes an academic partner institution, (b) the proposal adheres to all NSF budget guidelines, and (c) the proposal budget does not include any costs already covered by Federal funds.

Who May Serve as PI:

- There are no restrictions or limits for investigators from universities and colleges; non-profit, non-academic organizations; and for-profit organizations as defined above.
- **Investigators from NSF-funded FFRDCs** (e.g., National Center for Atmospheric Research/NCAR) may submit proposals to this competition, provided that (a) the project includes an academic partner institution, (b) the proposal adheres to all NSF budget guidelines, and (c) the proposal budget does not include any costs already covered by Federal funds.
- **Participation in any project by investigators from other federal agencies and/or FFRDCs** may be via a letter of participation indicating that those organizations will provide, at no cost, the services and research as indicated in the proposal. Alternatively, **Federal agencies and non-NSF-funded FFRDCs** can participate as subawardees, provided that those organizations include in the proposal a letter from the responsible agency confirming that agency's financial support of the agency's or FFRDC's participation should the project be funded by NSF.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI: 1

There are no limits on Track 1 proposals.

An individual may appear as Principal Investigator (PI), co-PI, Senior Personnel, subawardee, or consultant (or any similar designation), or elsewhere in the proposal budget in no more than one Track 2 proposal. Proposers are responsible for complying with this restriction. In cases where an individual appears in two or more proposals, **any submitted proposals involving that person may be returned without review.**

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

- **Letters of Intent:** Submission of Letters of Intent is required. Please see the full text of this solicitation for further information.
- **Preliminary Proposal Submission:** Not required
- **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:**

  Inclusion of voluntary committed cost sharing is prohibited.

- **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. submitter's local time):

  July 29, 2016

  Last Friday in July, Every Other Year Thereafter

  Required for Track 2 Proposals

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

  September 20, 2016

  Third Monday in September, Every Other Year Thereafter

  Track 2 Proposals

- **Submission Window Date(s)** (due by 5 p.m. submitter's local time):

  August 01, 2016 - January 04, 2017

  Track 1 (conferences): see proposal preparation instructions for further details

  January 05, 2017 - January 04, 2018

  January 5 - January 4, Annually Thereafter

  Track 1 (conferences): see proposal preparation instructions for further details

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:

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

Reporting Requirements:

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

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I. INTRODUCTION

Natural disasters cause thousands of deaths annually, and in 2013 alone caused over $130 billion in damage worldwide. NOAA has estimated that recovery from Hurricane Sandy will cost over $65 billion, and that the 2012 drought cost the US economy over $30 billion. The 2011 earthquake in Japan killed over 15,000 people in one of the most earthquake-prepared nations on Earth, and comparable events will strike the US Pacific Northwest. There is a clear societal need to better understand and mitigate the risks posed to the US by natural hazards, consistent with NSF's mandate "…to promote the progress of science [and] advance the national health, prosperity, and welfare...."

PREEVENTS is one element of the NSF-wide Risk and Resilience activity, which has the overarching goal of improving predictability and risk assessment, and increasing resilience, in order to reduce the impact of extreme events on our life, society, and economy. PREEVENTS is designed as a logical successor to the Hazards SEES program and as an additional mechanism to support research and related activities that will improve our understanding of the fundamental processes underlying natural hazards and extreme events in the geosciences.

PREEVENTS is focused on natural hazards and extreme events, and not technological or deliberately human-caused hazards and/or extreme events (e.g., accidental or deliberate technological disasters, terrorism, war, etc.). The PREEVENTS portfolio will include the potential for disciplinary and multidisciplinary research at all scales, particularly aimed at areas ripe for significant near- or medium-term advances.

II. PROGRAM DESCRIPTION

PREEVENTS seeks to address these issues by supporting projects that will (1) enhance understanding of the fundamental processes underlying natural hazards and extreme events on various spatial and temporal scales, as well as the variability inherent in such hazards and events, and (2) improve our capability to model and forecast such hazards and events. **All projects requesting PREEVENTS support must be primarily focused on these two targets.**

PREEVENTS projects should improve our understanding of the direct and/or cascading effects of natural hazards and extreme events. PREEVENTS projects will enable development, with support by other programs and organizations, of new tools to enhance societal preparedness and resilience against such impacts. PREEVENTS encourages, but does not require, that proposals incorporate these two subsidiary goals.

Program Tracks

Track 1: Conferences

PREEVENTS is intended to encourage new scientific directions in the domains of natural hazards and extreme events. Proposals may be submitted for conferences that will foster development of interdisciplinary or multidisciplinary communities required to address complex questions surrounding natural hazards and extreme events. Proposals for conferences within a well-established community or a single discipline are not appropriate for PREEVENTS.

PIs for prospective Track 1 proposals are encouraged to contact the PREEVENTS Management Team (preevents@nsf.gov) prior to submitting a proposal. PIs should send a summary of the proposed conference (up to two pages long) that describes the purpose of the conference, the disciplines and communities involved, and how the proposed conference would advance the goals of PREEVENTS. Budgets for Track 1 proposals are generally limited to less than $50,000, but under exceptional circumstances may be up to $100,000.

Track 1 proposals may be submitted at any time within the submission windows given in this solicitation, but proposers should be aware that proposals may **not** be submitted between 5:00 pm and 11:59 p.m. proposer's local time on the last day of the submission window.

PIs for all Track 1 awards will be required to submit to NSF a public report that summarizes the conference activities, attendance, and outcomes; describes scientific and/or technical challenges that remain to be overcome in the areas discussed during the conference; and identifies specific next steps to advance knowledge in the areas of natural hazards and extreme events that were considered during the conference. These reports will be made publicly available via the NSF Web site. Further details will be provided by the cognizant Program Officers and in the award document.

Track 2

PREEVENTS welcomes proposals addressing both primary targets described above, but which may extend beyond what is typically supported by GEO "core" programs due to the scope, scale, and/or complexity of the problem to be studied or approaches to be used; because the problem requires a multidisciplinary approach spanning multiple GEO programs or divisions; or for other similar programmatic reasons. **Track 2 proposals may not request support for generation or collection of new data and/or measures (e.g., field instrument deployments or other similar experiments), but may request support for analysis, synthesis, and/or modeling efforts that use existing data and/or measures.** Proposals for PREEVENTS-relevant projects that include generation or collection of new data/and or measures should be submitted to appropriate GEO programs following the guidelines and requirements of those programs, in order to ensure appropriate consideration of field and/or facility support. Such proposals may be considered for PREEVENTS co-funding after merit review by the managing program.

Track 2 proposals may be submitted for durations of up to five years. Project durations and budgets must be commensurate with the scope of the work proposed, and with guidance provided elsewhere in this solicitation regarding anticipated program resources.

III. AWARD INFORMATION

NSF anticipates funding a total of 15 to 20 proposals pursuant to this solicitation, including both Track 1 and Track 2 projects, subject to availability of funds. NSF anticipates funding a mix of project sizes, with durations up to five years. Note that Track 1 awards will be generally limited to less than $50,000, but under exceptional circumstances may be up to $100,000.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Universities and Colleges - Universities and two- and four-year colleges (including community colleges) accredited in, and having a campus located in, the US acting on behalf of their faculty members. Such organizations also are referred to as academic institutions.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.
- For-profit organizations: U.S. commercial organizations, especially small businesses with strong capabilities in scientific or engineering research or education.

- **NSF-funded FFRDCs** may submit proposals to this competition, provided that (a) the project includes an academic partner institution, (b) the proposal adheres to all NSF budget guidelines, and (c) the proposal budget does not include any costs already covered by Federal funds.

Who May Serve as PI:

- There are no restrictions or limits for investigators from universities and colleges; non-profit, non-academic organizations; and for-profit organizations as defined above.
- **Investigators from NSF-funded FFRDCs** (e.g., National Center for Atmospheric Research/NCAR) may submit proposals to this competition, provided that (a) the project includes an academic partner institution, (b) the proposal adheres to all NSF budget guidelines, and (c) the proposal budget does not include any costs already covered by Federal funds.
- **Participation in any project by investigators from other federal agencies and/or FFRDCs** may be via a letter of participation indicating that those organizations will provide, at no cost, the services and research as indicated in the proposal. Alternatively, **Federal agencies and non-NSF-funded FFRDCs** can participate as subawardees, provided that those organizations include in the proposal a letter from the responsible agency confirming that agency's financial support of the agency's or FFRDC's participation should the project be funded by NSF.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

Limit on Number of Proposals per PI or Co-PI: 1

There are no limits on Track 1 proposals.

An individual may appear as Principal Investigator (PI), co-PI, Senior Personnel, subawardee, or consultant (or any similar designation), or elsewhere in the proposal budget in no more than one Track 2 proposal. Proposers are responsible for complying with this restriction. In cases where an individual appears in two or more proposals, **any submitted proposals involving that person may be returned without review.**

V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

A. Proposal Preparation Instructions

Letters of Intent *(required)*:

Letters of Intent are only required for Track 2 proposals.

Track 2 proposals may only be submitted by organizations that have submitted the required Track 2 Letter of Intent (LOI) by the LOI due date.

NSF will use LOIs to ensure that the appropriate expertise is available for participation in the review and selection process, to foresee potential conflicts of interest, and to anticipate special award conditions that may be necessary to accommodate the proposed project structure. The LOI is a statement of a proposer's preliminary plans; the senior personnel, partner organizations, and proposed plans may change between submission of the Letter of Intent and submission of the Full Proposal.

A complete PREEVENTS Track 2 Letter of Intent must include the following information, submitted via FastLane no later than the LOI due date:

- Project Title
- In the "Synopsis" Data Field (maximum 2,500 characters of plain text): provide a summary that briefly describes the planned project and identifies the natural hazard and/or extreme event process that would be addressed; explains the scientific motivation for the planned effort; and describes specifically how the planned work would address both of the primary PREEVENTS targets. The synopsis should be sufficiently detailed to permit an appropriate selection of potential reviewers.
- In the "Other Comments" text data field (maximum 2,500 characters of plain text): provide full names and institutional affiliations of the PI, co-PI, and anticipated Senior Personnel and a list of participating organizations
- In the "Point of Contact for NSF Inquiries" field (maximum 255 characters of plain text): Name and contact information for the individual to whom inquiries from NSF should be sent
- In the "Estimated Total Funding Request" field: Estimated total budget request for the entire project.

Upon successful submission of the LOI by the Sponsored Projects Office, please save a PDF copy of the submitted LOI, for use in the corresponding Track 2 full proposal submission.

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:

- Other Participating Organizations are allowed
- Subrecipients may participate in more than one Letter of Intent
- Submission by an Authorized Organizational Representative (AOR) is required when submitting Letters of Intent.
- Point of Contact for NSF Inquiries

  is required when submitting Letters of Intent
- Estimated Total Funding Request

  is required when submitting Letters of Intent
- Submission of multiple Letters of Intent is not allowed

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.

Except as modified below, proposals should be prepared in accordance with the guidelines in the NSF Grant Proposal Guide or Grants.gov Application Guide.

Instructions for Track 1 Full Proposals:

- Proposers should select the "submission window" option on the FastLane cover page. Please note that Track 1 proposals may be submitted at any time during the submission window, with the caveat that no proposals will be accepted between 5:00 p.m. and 11:59 p.m. proposer's local time on the last day of the submission window. However, the proposal can be submitted the next day.
- The project title on the proposal Cover Sheet must begin with "PREEVENTS Track 1:"
- **Results of Prior NSF Support:** Per GPG Section II.C.2.d(iii), Track 1 proposals must include in the Project Description a section describing the results of prior NSF support for all PIs and co-PIs; if a PI or co-PI has had no NSF support in the past five years, insert "No NSF support in the past five years".
- **Supplementary Documents:**
    - **Student Mentoring Plan (SMP; up to 1 page in length)**

      Proposals that request funding to support undergraduate and/or graduate students at any of the participating institutions must include a description of the mentoring activities that will be provided for such individuals, especially those intended to provide preparation for non-academic careers. Only one SMP, of no more than one page in length, is allowed per proposal, even if multiple students from different institutions would be involved. Proposals requesting support for undergraduate and/or graduate students, and lacking this Supplementary Document, **will be returned without review.**

    - **Postdoctoral Mentoring Plan (PMP; up to two pages)**

      All proposals that request funding to support postdoctoral researchers must include a Postdoctoral Mentoring Plan that meets all requirements in GPG Section II.C.2.j.

    - **Data Management Plan (DMP; up to two pages)**

      All proposals must include a data management plan that meets all requirements in GPG Section II.C.2.j and also provides a planned timeline for release of all data, metadata, samples and other research products.

    - **Projects involving non-NSF-funded FFRDCs**

      Should a proposal involving a non-NSF-funded FFRDC be successful, the full FFRDC financial commitment is to be met by the FFRDC agency. It is thus necessary that proposals involving non-NSF-funded FFRDCs be cleared in advance with the relevant agency, and the proposal must include a Supplementary Document from the relevant agency indicating that agency will provide full financial support of the FFRDC's participation.

    - **Projects involving other Federal agencies**

      Should a proposal involving other Federal agencies be successful, the full financial commitment of each other agency is to be met by that agency. It is thus necessary that submissions involving other Federal agencies be cleared in advance with each relevant agency, and the submission must include a Supplementary Document from each agency indicating that agency will provide the services and research as indicated at the proposal, with no cost to NSF.

Instructions for Track 2 Full Proposals:

- The project title on the proposal Cover Sheet must begin with "PREEVENTS Track 2:"
- **Project Descriptions** for Track 2 proposals may be no more than 20 pages long.
- **Results of Prior NSF Support:** Per GPG Section II.C.2.d(iii), all proposals must include in the Project Description a section describing the results of prior NSF support for all PIs and co-PIs; if a PI or co-PI has had no NSF support in the past five years, insert "No NSF support in the past five years".
- **Supplementary Documents:**
    - **Management and Integration Plan (MIP; up to 3 pages in length, PDF format)**

      All Track 2 proposals must include a Management and Integration Plan of up to three pages in length, which will be subject to reviewer, panel, and program evaluation. Track 2 proposals lacking an MIP **will be returned without review**. The MIP should:

        - list all Senior Personnel (including subawardees) in the project (provide the last name, first name, and institution/organization), identify each person's relevant disciplinary expertise, and describe each person's specific role(s) in the proposed project;
        - describe how the group effort will be coordinated;
        - describe how the results of different project elements will be integrated into a coherent whole;
        - describe any collaborations and partnerships and their integration with the project;
        - describe how results, models, and ideas will be disseminated and shared with the research community and stakeholders; and
        - include a clear time line of expected outcomes.

    - **Student Mentoring Plan (SMP; up to 1 page in length)**

      Proposals that request funding to support undergraduate and/or graduate students at any of the participating institutions must include a description of the mentoring activities that will be provided for such individuals, especially those intended to provide preparation for non-academic careers. Only one SMP, of no more than one page in length, is allowed per proposal, even if multiple students from different institutions would be involved. Proposals requesting support for undergraduate and/or graduate students, and lacking this Supplementary Document, **will be returned without review.**

    - **Postdoctoral Mentoring Plan (PMP; up to two pages)**

All proposals that request funding to support postdoctoral researchers must include a Postdoctoral Mentoring Plan that meets all requirements in GPG Section II.C.2.j.

- **Data Management Plan (DMP; up to two pages)**

  All proposals must include a data management plan that meets all requirements in GPG Section II.C.2.j and also provides a planned timeline for release of all data, metadata, samples and other research products.

- **Computational Facilities**

  Projects requiring high-performance computing or other large-scale computational resources must include a Supplementary Document, of no more than one page in length, detailing the specific computational resources needed and the facility/facilities from which such resources would be requested.

- **Projects involving non-NSF-funded FFRDCs**

  Should a proposal involving a non-NSF-funded FFRDC be successful, the full FFRDC financial commitment is to be met by the FFRDC agency. It is thus necessary that proposals involving non-NSF-funded FFRDCs be cleared in advance with the relevant agency, and the proposal must include a Supplementary Document from the relevant agency indicating that agency will provide full financial support of the FFRDC's participation.

- **Projects involving other Federal agencies**

  Should a proposal involving other Federal agencies be successful, the full financial commitment of each other agency is to be met by that agency. It is thus necessary that submissions involving other Federal agencies be cleared in advance with each relevant agency, and the submission must include a Supplementary Document from each agency indicating that agency will provide the services and research as indicated at the proposal, with no cost to NSF.

- **Additional Single Copy Documents**
  - **Project Personnel (text-searchable PDF)**

    Each proposal must submit a single unified participant list for the entire project. For each person known at the time of proposal submission, provide the last name, first name, and institution/organization; undergraduate students, graduate students, and postdoctoral researchers not yet specifically identified do not need to be included in this list. Proposals lacking the list of project personnel **will be returned without review**.

  - **Conflicts of Interest Matrix Table (created as a spreadsheet and uploaded as a PDF)**

    Each proposal must include a single table with the names of all individuals associated with the project, including international participants. The table must also include the individuals' conflicts of interest (COIs). Conflicts to be identified include (1) Ph.D. thesis advisors or advisees; (2) collaborators or co-authors, including postdoctoral researchers, for the past 48 months; (3) co-editors of special journal volumes or conference proceedings within the past 24 months; (4) any other individuals with whom or institutions with which the senior personnel (PI, co-PIs, and any named personnel, including on subawards) have financial ties, including advisory committees (please specify type); and (5) any other individual who, if asked to review the proposal, might have a potentially disqualifying conflict of interest as described in the Grant Proposal Guide, NSF 16-1, Exhibit II-2 (http://www.nsf.gov/pubs/policydocs/pappguide/nsf16001/gpg_2.jsp#IIex2). If submitting via Grants.gov, complete the information and attach as a PDF file (see Field 5, Additional Single Copy Documents, on the NSF Grant Application Cover Page). This table will serve as a specifically defined format for the "Collaborators and Other Affiliations Information" required by the GPG.

    For each participant known at the time of proposal submission, the COI matrix must include the information according to the following list, alphabetized by Column A and then Column C):

    - Column A: Last name and first name (in that order) for the PI, co-PI, Senior Personnel, or consultant (including subawardees) on project, or any individual or organization providing a letter of collaboration
    - Column B: Institution of individual in column A
    - Column C: Last name and first name (in that order) of the person with whom there is a conflict of interest for the person in column A
    - Column D: Institution of individual in column C
    - Column E: Type of conflict of interest

    Note that undergraduate students, graduate students, and postdoctoral researchers not yet specifically identified do not need to be included in this list.

    Proposals lacking the COI Matrix Table **will be returned without review.**

  - **Track 2 Letter of Intent (PDF format)**

    Track 2 proposals must include, as a single copy document in PDF format, the corresponding Letter of Intent that was submitted via FastLane in accordance with instructions elsewhere in this solicitation. Proposals lacking this document **will be returned without review.**

  - **Statement of revisions to previously submitted proposals (PDF format, up to 1 page)**

    Proposals submitted to this competition that have previously been declined in any NSF competition must be substantially revised to meet PREEVENTS criteria, and must contain a Single Copy Document, of no more than one page in length, explicitly describing what changes have been made to the proposal.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Other Budgetary Limitations:

- **Track 1 proposals** are generally limited to less than $50,000 but under exceptional circumstances may be supported up to $100,000.
- **Track 2** proposals may not request support for generation or collection of new data and/or measures (see Track 2 description). Track 2 proposals may be submitted for durations of up to five years. Project durations and budgets must be commensurate with the scope of the work proposed, and with guidance provided elsewhere in this solicitation regarding anticipated program resources.
- **Grantee Conference:**

  Budgets for all PREEVENTS proposals (Track 1 and Track 2) must include costs of travel for at least one member of the project team to travel to the Washington, D.C. area to participate in an annual PREEVENTS grantee conference.

- **Expenses associated with international projects**

  This program will support the costs of U.S.-based scientists and their students. International partners are encouraged to seek support from their respective funding organizations. Funding guidelines for involving international partners allow the following expenses to be included in the NSF budget: 1) Travel expenses for U.S. scientists and students participating in exchange visits integral to the project; 2) Limited project-related expenses for international partners to engage in research activities while in the United States as project participants; 3) Project-related expenses for U.S. participants to engage in research activities while abroad.

- **Projects involving FFRDCs**

  If a project involves investigators from any FFRDC, expenses associated with participation of those scientists should be consolidated into a single subaward for the given FFRDC.

- **Projects involving US government agency investigators**

  If a project involves investigators employed by any US government agency, expenses associated with participation of those scientists should be consolidated into a single subaward for the given agency.

C. Due Dates

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

  July 29, 2016

  Last Friday in July, Every Other Year Thereafter

  Required for Track 2 Proposals

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

  September 20, 2016

  Third Monday in September, Every Other Year Thereafter

  Track 2 Proposals

- **Submission Window Date(s)** (due by 5 p.m. submitter's local time):

  August 01, 2016 - January 04, 2017

  Track 1 (conferences): see proposal preparation instructions for further details

  January 05, 2017 - January 04, 2018

  January 5 - January 4, Annually Thereafter

  Track 1 (conferences): see proposal preparation instructions for further details

D. FastLane / Grants.gov Requirements

For Proposals Submitted Via FastLane:

To prepare and submit a proposal via FastLane, see detailed technical instructions 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.

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. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: http://www.grants.gov/web/grants/applicants.html. In addition, the NSF Grants.gov Application Guide (see link in Section V.A) provides instructions regarding the technical 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.

Proposers that submitted via FastLane are strongly encouraged to use FastLane to verify the status of their submission to NSF. For proposers that submitted via Grants.gov, until an application has been received and validated by NSF, the Authorized Organizational Representative may check the status of an application on Grants.gov. After proposers have received an e-mail notification from NSF, Research.gov should be used to check the status of an application.

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. 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 either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with 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. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in the GPG as Exhibit III-1.

A comprehensive description of the Foundation's merit review process is available on the NSF website at: http://www.nsf.gov/bfa/dias/policy/merit_review/.

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Investing in Science, Engineering, and Education for the Nation's Future: NSF Strategic Plan for 2014-2018*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the strategic objectives in support of NSF's mission is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions must recruit, train, and prepare a diverse STEM workforce to advance the frontiers of science and participate in the U.S. technology-based economy. NSF's contribution to the national innovation ecosystem is to provide cutting-edge research under the guidance of the Nation's most creative scientists and engineers. NSF also supports development of a strong science, technology, engineering, and mathematics (STEM) workforce by investing in building the knowledge that informs improvements in STEM teaching and learning.

NSF's mission calls for the broadening of opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which 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.

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

These principles are to be given due diligence by PIs and organizations when preparing proposals and managing projects, by reviewers when reading and evaluating proposals, and by NSF program staff when determining whether or not to recommend proposals for funding and while overseeing awards. Given that NSF is the primary federal agency charged with nurturing and supporting excellence in basic research and education, the following three principles apply:

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge.
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals. These "Broader Impacts" may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified.
- Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement projects. If the size of the activity is limited, evaluation of that activity in isolation is not likely to be meaningful. Thus, assessing the effectiveness of these activities may best be done at a higher, more aggregated, level than the individual project.

With respect to the third principle, even if assessment of Broader Impacts outcomes for particular projects is done at an aggregated level, PIs are expected to be accountable for carrying out the activities described in the funded project. Thus, individual projects should include clearly stated goals, specific descriptions of the activities that the PI intends to do, and a plan in place to document the outputs of those activities.

These three merit review principles provide the basis for the merit review criteria, as well as a context within which the users of the criteria can better understand their intent.

2. Merit Review Criteria

All NSF proposals are evaluated through use of the two National Science Board approved merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (GPG Chapter II.C.2.d.i. contains additional information for use by proposers in development of the Project Description section of the proposal.) Reviewers are strongly encouraged to review the criteria, including GPG Chapter II.C.2.d.i., prior to the review of a proposal.

When evaluating NSF proposals, reviewers will be asked to consider what the proposers want to do, why they want to do it, how they plan to do it, how they will know if they succeed, and what benefits could accrue if the project is successful. These issues apply both to the technical aspects of the proposal and the way in which the project may make broader contributions. To that end, reviewers will be asked to evaluate all proposals against two criteria:

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to
    a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
    b. Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to, the project. NSF values the advancement of scientific knowledge and activities that contribute to achievement of societally relevant outcomes. Such outcomes include, but are not limited to: full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM); improved STEM education and educator development at any level; increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society; development of a diverse, globally competitive STEM workforce; increased partnerships between academia, industry, and others; improved national security; increased economic competitiveness of the United States; and enhanced infrastructure for research and education.

Proposers are reminded that reviewers will also be asked to review the Data Management Plan and the Postdoctoral Researcher Mentoring Plan, as appropriate.

Additional Solicitation Specific Review Criteria

In addition to the National Science Board merit review criteria, reviewers will be asked to apply the following program-specific criteria **when reviewing PREEVENTS Track 2 proposals**:

- How well would the proposed activities enhance understanding of the fundamental processes underlying natural hazards and/or extreme events?
- How well would the proposed activities improve capacity to model and forecast natural hazards and/or extreme events?
- Will the proposed research be broadly applicable and transferable?
- Quality and Appropriateness of the Management and Integration Plan (MIP)
    a. How strong is the MIP?
    b. How qualified is the project PI to carry out the MIP?
    c. Is the research team focused on a cohesive and well-delineated goal or set of goals?
    d. What is the quality of the proposed plan for the dissemination of results, models, tools, and ideas (1) to the research community and (2) to stakeholders?
    e. Is the proposed timeline adequate and appropriate?

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 evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will be completed and submitted by each reviewer. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

The program may implement a two-stage panel review process, depending on the number and breadth of proposals received. During a first review stage, groups of thematically similar proposals would undergo panel review. The program's management team would consider the panels' advice and, if warranted, select proposals to move on to a second stage of review. Proposals not selected for further consideration may be declined at this point. PIs for proposals selected for further consideration may be invited to provide a written response (maximum of 2 pages) to the stage-one reviews. A second review panel may take into consideration the stage-one reviews and panel summary and the PIs' written response when reviewing a given proposal.

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 strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts upon the Program Officer's recommendation.

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. After an administrative review has occurred, Grants and

Agreements Officers perform 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.

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, 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.

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 notice, 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 notice; (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 notice. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

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

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

Special Award Conditions:

- For each award, one or more project representatives will be required to attend an annual grantee conference where they will (1) report on project progress to other awardees, the funding agencies, and other interested parties and (2) work to integrate their efforts with those of other PREEVENTS awardees.
- PIs for all Track 1 awards will be required to submit to NSF a public report that summarizes the conference activities, attendance, and outcomes; describes scientific and/or technical challenges that remain to be overcome in the areas discussed during the conference; and identifies specific next steps to advance knowledge in the areas of natural hazards and extreme events that were considered during the conference. These reports will be made publicly available via the NSF Web site. Further details will be provided by the cognizant Program Officers and in the award document.

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 no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. 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 Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

More comprehensive information on NSF Reporting Requirements 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.

- PIs will be required to include in their annual reports descriptions of progress toward accomplishment of their project milestones, data management activities including release of products, and student and postdoctoral mentoring activities. Data reporting should conform to current NSF data policy guidelines; PIs should consult the Grant Proposal Guide for further details.

- PIs for all Track 1 awards will be required to submit to NSF a public report that summarizes the conference activities, attendance, and outcomes; describes scientific and/or technical challenges that remain to be overcome in the areas discussed during the conference; and identifies specific next steps to advance knowledge in the areas of natural hazards and extreme events that were considered during the conference. These reports will be made publicly available via the NSF Web site. Further details will be provided by the cognizant Program Officers and in the award document.

VIII. AGENCY CONTACTS

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

General inquiries regarding this program should be made to:

- Gregory J. Anderson, telephone: (703) 292-4693, email: greander@nsf.gov
- Paul Cutler, telephone: (703) 292-4961, email: pcutler@nsf.gov
- Eric T. DeWeaver, telephone: (703) 292-8527, email: edeweave@nsf.gov
- Eric C. Itsweire, telephone: (703) 292-7593, email: eitsweir@nsf.gov
- Diane McKnight, telephone: (703) 292-4897, email: dmcknigh@nsf.gov
- Ilia I. Roussev, telephone: (703) 292-8519, email: iroussev@nsf.gov
- Deborah K. Smith, telephone: (703) 292-7978, email: dksmith@nsf.gov
- Thomas Torgersen, telephone: (703) 292-8549, email: ttorgers@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, "NSF Update" 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 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. "NSF Update" also is available on NSF's website.

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

ABOUT THE NATIONAL SCIENCE FOUNDATION

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

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

NSF receives approximately 55,000 proposals each year for research, education and training projects, of which approximately 11,000 are funded. In addition, the Foundation receives several thousand applications for graduate and postdoctoral fellowships. The agency operates no laboratories itself but does support National Research Centers, user facilities, certain oceanographic vessels and Arctic and Antarctic research stations. The Foundation also supports cooperative research between universities and industry, US participation in international scientific and engineering efforts, and educational activities at every academic level.

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

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment

or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

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

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

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

- **Location:** 4201 Wilson Blvd. Arlington, VA 22230
- **For General Information** (NSF Information Center)**:** (703) 292-5111
- **TDD (for the hearing-impaired):** (703) 292-5090
- **To Order Publications or Forms:**

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

  or telephone: (703) 292-7827
- **To Locate NSF Employees:** (703) 292-5111

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; and project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to proposer institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies or other entities needing information regarding applicants or nominees as part of a joint application review process, or in order to coordinate programs or policy; and to another Federal agency, court, or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004), and NSF-51, "Reviewer/Proposal File and Associated Records," 69 Federal Register 26410 (May 12, 2004). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

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

Suzanne H. Plimpton
Reports Clearance Officer
Office of the General Counsel
National Science Foundation
Arlington, VA 22230