Proposal Preparation

National Science Foundation - Spring Grants Conference
Louisville, KY - June 5&6 - Kentucky EPSCoR
Panelists

**Sonia Esperança**
Program Director, Directorate for Geosciences; Division of Earth Sciences

**Jean Feldman**
Head, Policy Office, Office of Budget, Finance & Award Management; Division of Institution & Award Support

**Karen King**
Program Director, Directorate for Education & Human Resources; Division of Research on Learning in Formal & Informal Settings

**Randy Phelps**
Staff Associate, Office of the Director; Office of Integrative Activities
Topics Covered

- Find Funding Opportunities
- Proposal & Award Policies and Procedures Guide
- Types of Proposal Submissions
- Sections of an NSF Proposal
- Postdoctoral Mentoring Plans
- Data Management Plans

“Ask Early, Ask Often!”
Find Funding Opportunities
Find Funding Opportunities

NSF Funding & Research Community

SPECIAL NOTICES

NSF and Congress: Latest Actions
NSF releases DRAFT Proposal & Award Policies & Procedures Guide (PAPPG) in the Federal Register for public comment

Science Policy
Dear Colleague Letter: NSF INCLUDES (Inclusion across the Nation of Communities of Learners of Underrepresented Discoveries in Engineering and Science)

New Steps to Enhance Transparency and Accountability at the National Science Foundation, Important Notice No. 137, January 15, 2015
NSF Strategic Plan for FY 2014-2018

EVENT CALENDAR

* Aug 22, 2016 - Aug 22, 2016*
National Science Foundation at the American Chemical Society Meeting, August 22-24, 2016
OUTREACH

* Aug 23, 2016 - Aug 23, 2016*
National Science Foundation at the American Chemical Society Meeting, August 22-24, 2016
OUTREACH
NSF Award Search
Other Ways to Find Funding

Use Grant.gov’s Search Feature
What is the Proposal & Award Policies & Procedures Guide?

- The Proposal & Award Policies & Procedures Guide (PAPPG) contains documents relating to NSF's proposal and award process. It has been designed for use by both our customer community and NSF staff and consists of two parts.
  - Part I is NSF’s proposal preparation and submission guidelines
  - Part II is NSF’s award and administration guidelines
What is the Proposal & Award Policies & Procedures Guide?

- Provides guidance for preparation and submission of proposals to NSF
- Describes process – and criteria – by which proposals will be reviewed
- Outlines reasons why a proposal may not be accepted or returned without review
- Describes process for withdrawals, returns, and declinations
- Includes policies to guide, manage, and monitor the award and administration of grants and cooperative agreements
# Types of Funding Opportunities

<table>
<thead>
<tr>
<th>Funding Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Descriptions</strong></td>
</tr>
<tr>
<td>Proposals for a Program Description must follow the instructions in the PAPPG.</td>
</tr>
<tr>
<td><strong>Program Announcements</strong></td>
</tr>
<tr>
<td>Proposals for a Program Announcement must follow the instructions in the PAPPG.</td>
</tr>
<tr>
<td><strong>Program Solicitations</strong></td>
</tr>
<tr>
<td>Proposals must follow the instructions in the Program Solicitation; the instructions in the PAPPG apply unless otherwise stated in the solicitation.</td>
</tr>
<tr>
<td><strong>Dear Colleague Letters</strong></td>
</tr>
<tr>
<td>Dear Colleague Letters are notifications of opportunities or special competitions for supplements to existing NSF awards.</td>
</tr>
</tbody>
</table>
What to Look for in a Program Announcement or Solicitation

Goal of Program → Eligibility → Special proposal preparation and/or award requirements
Antarctic Research

PROGRAM SOLICITATION
NSF 17-543

REPLACES DOCUMENT(S):
NSF 16-541

National Science Foundation
Directorate for Geosciences
Division of Polar Programs

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):
May 23, 2017
Sample Cover Page of a Solicitation

**Award Information**

- **Anticipated Type of Award:** Standard Grant or Continuing Grant
- **Estimated Number of Awards:** 50
- **Anticipated Funding Amount:** $55,000,000

The Antarctic Sciences Section anticipates committing approximately $55M as either standard or continuing awards made in response to this solicitation contingent on the availability of funds.
Sample Cover Page of a Solicitation

Eligibility Information

Who May Submit Proposals:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the NSF Proposal & Award Policies & Procedures Guide (PAPPG), Chapter 1.E.

Who May Serve as PI:

There are no restrictions or limits.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

There are no restrictions or limits.
Types of Proposal Submissions

Proposals may be submitted at any time.

**NO DEADLINES**

Proposers should allow adequate time for processing of proposals (see Chapter I.H for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

1. **Target dates**: dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.

2. **Deadline dates**: dates after which proposals will not be accepted or will be returned without review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with Chapter II.A.
Types of Proposal Submissions

TARGET DATES
Talk to the Program Office if you think you might miss the date

F. When to Submit Proposals

Proposers should allow adequate time for processing of proposals (see Chapter I.H for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

1. Target dates: dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.

2. Deadline dates: dates after which proposals will not be accepted or will be returned without review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with Chapter II.A.
Types of Proposal Submissions

DEADLINE DATES

Proposals will not be accepted after this date and time (5 p.m. submitter’s local time)

F. When to Submit Proposals

Proposers should allow adequate time for processing of proposals (see Chapter 1.H for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

1. Target dates: dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.

2. Deadline dates: dates after which proposals will not be accepted or will be returned without review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with Chapter II.A.
Types of Proposal Submissions

SUBMISSION WINDOWS

Proposals will not be accepted after this date and time (5 p.m. submitter’s local time)

3. Submission windows: designated periods of time during which proposals will be accepted for review by NSF. It is NSF’s policy that the end date of a submission window converts to, and is subject to, the same policies as a deadline date.
Types of Proposal Submissions

LETTERS OF INTENT

Enables better management of reviewers and panelists

1. Letters of Intent

Some NSF program solicitations require or request submission of a letter of intent (LOI) in advance of submission of a full proposal. An LOI is not a binding document. The predominant reason for its use is to help NSF program staff gauge the size and range of the competition, enabling earlier selection and better management of reviewers and panelists. In addition, the information contained in an LOI is used to help avoid potential conflicts of interest in the review process.

An LOI normally contains the Principal Investigator’s (PI’s) and co-PI’s names, a proposed title, a list of possible participating organizations (if applicable), and a synopsis that describes the work in sufficient detail to permit an appropriate selection of reviewers. An LOI is not externally evaluated or used to decide on funding. The requirement to submit an LOI will be identified in the program solicitation, and such letters are submitted electronically to NSF. Failure to submit a required LOI identified in a program solicitation will result in a full proposal not being accepted or returned without review.
Types of Proposal Submissions

PRELIMINARY PROPOSALS

Sometimes required, sometimes optional

2. Preliminary Proposals

Some NSF program solicitations require or request submission of a preliminary proposal in advance of submission of a full proposal. The three predominant reasons for requiring submission of a preliminary proposal are to:

- reduce the proposers' unnecessary effort in proposal preparation when the chance of success is very small. This is particularly true of exploratory initiatives when the community senses that a major new direction is being identified, or competitions that will result in a small number of awards;
- increase the overall quality of the full submission; and
- assist NSF program staff in managing the review process and in the selection of reviewers.
Proposals that do not contain the following required sections may not be accepted by FastLane:

- Project Summary
- Project Description
- References Cited
- Biographical Sketch(es)
- Budget
- Budget Justification
- Current and Pending Support
- Facilities, Equipment and Other Resources
- Data Management Plan
- Postdoctoral Mentoring Plan (if applicable)
Single Copy Documents

- Some proposal documents are for “NSF Use Only” and are not provided to reviewers
  - Authorization to deviate from proposal preparation requirements
  - List of suggested reviewers to include or not to include
  - Proprietary or privileged information
  - Proposal certifications
  - Information about collaborators and other affiliations
Sections of an NSF Proposal

Cover Sheet (Required)
Many of the boxes on the cover sheet are electronically prefilled as part of the FastLane login process.

Example from FastLane
Sections of an NSF Proposal

**Project Summary (Required)**

Text boxes must contain an Overview and Statements on Intellectual Merit and Broader Impacts.

Proposals that do not separately address the Overview and both Merit Review criteria in text boxes will not be accepted by FastLane.

Project summaries with special characters must be uploaded as a PDF document.

---

**Text from the PAPPG**

Each proposal must contain a summary of the proposed project not more than one page in length. The Project Summary consists of an overview, a statement on the intellectual merit of the proposed activity, and a statement on the broader impacts of the proposed activity.

The overview includes a description of the activity that would result if the proposal were funded and a statement of objectives and methods to be employed. The statement on intellectual merit should describe the potential of the proposed activity to advance knowledge. The statement on broader impacts should describe the potential of the proposed activity to benefit society and contribute to the achievement of specific, desired societal outcomes.

The Project Summary should be written in the third person, informative to other persons working in the same or related fields, and, as much as possible, understandable to a scientifically or technically literate lay reader. It should not be an abstract of the proposal.

The Project Summary may ONLY be uploaded as a Supplementary Document if use of special characters is necessary. Such Project Summaries must be formatted with separate headings for Overview, Intellectual Merit and Broader Impacts. Failure to include these headings will result in the proposal being returned without review.

---

11If the proposal includes use of vertebrate animals, supplemental information is required. See Chapter II.D.4 for additional information.
14If the proposal includes use of human subjects, supplemental information is required. See Chapter II.D.5 for additional information.
Project Description (Required)
Proposers should address what they 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.

A separate section within the narrative must include a discussion of the broader impacts of the proposed activities.

Text from the PAPPG

The Project Description must contain, as a separate section within the narrative, a section labeled “Broader Impacts”. This section should provide a discussion of the broader impacts of 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 the achievement of society-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 US; and enhanced infrastructure for research and education.

Plans for data management and sharing of the products of research, including preservation, documentation, and sharing of data, samples, physical collections, curriculum materials and other related research and education products should be described in the Special Information and Supplementary Documentation section of the proposal (see Chapter II.C.2.j for additional instructions for preparation of this section).

(iii) Page Limitations and Inclusion of Uniform Resource Locators (URLs) within the Project Description

Brevity will assist reviewers and Foundation staff in dealing effectively with proposals. Therefore, the Project Description (including Results from Prior NSF Support, which is limited to five pages) may not exceed 15 pages. Visual materials, including charts, graphs, maps, photographs and other pictorial presentations are included in the 15-page limitation. Plans must be self-contained and that URLs must not be used because: 1) the information could circumvent page limitations; 2) the reviewers are under no obligation to view the sites; and 3) the sites could be altered or deleted between the time of submission and the time of review.

Conformance to the 15-page limit will be strictly enforced and may not be exceeded unless a deviation has been specifically authorized. (Chapter II.A contains information on deviations.)

(iii) Results from Prior NSF Support

The purpose of this section is to assist reviewers in assessing the quality of prior work conducted with current or prior NSF funding. If any PI or co-PI identified on the proposal has received NSF support with a start date in the past five years (including any current funding and no cost extensions), information on the award is required for each PI and co-PI, regardless of whether the support was directly related to the proposal or not. In cases where the PI or any co-PI has received more than one award (excluding amendments to existing awards), they need only report on the one award that is most closely related to the proposal. Support includes not just salary support, but any funding awarded by NSF. NSF awards such as standard or continuing grants, Graduate Research Fellowship, Major Research Instrumentation, conference, equipment, travel, and center awards, etc., are subject to this requirement.

The following information must be provided:

(a) the NSF award number, amount and period of support;

(b) the title of the project;
References Cited (Required)
Reference information is required, and proposers must follow accepted scholarly practices in providing citations for source materials.

Text from the PAPPG
Sections of an NSF Proposal

1. Biographical Sketch(es)

(i) Senior Personnel

A biographical sketch (limited to two pages) is required for each individual identified as senior personnel. (See Exhibit I-7 for the definitions of Senior Personnel.) Proposers may elect to use third-party solutions, such as NIH's ScEnCo, to develop and maintain their biographical sketch. However, proposers are advised that they are still responsible for ensuring that biographical sketches created using third-party solutions are compliant with NSF proposal preparation requirements.

The following information must be provided in the order and format specified below. Inclusion of additional information beyond that specified below may result in the proposal being returned without review.

Do not submit any personal information in the biographical sketch. This includes items such as: home address, home telephone, fax, or cell phone numbers, home e-mail address; driver’s license number; marital status; personal hobbies; and the like. Such personal information is not appropriate for the biographical sketch and is not relevant to the merits of the proposal. NSF is not responsible or in any way liable for the release of such material. (See also Chapter III H).

(a) Professional Preparation

A list of the individual’s undergraduate and graduate education and postdoctoral training (including location) as indicated below:

<table>
<thead>
<tr>
<th>Undergraduate Institution(s)</th>
<th>Location</th>
<th>Major</th>
<th>Degree &amp; Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Institution(s)</td>
<td>Location</td>
<td>Major</td>
<td>Degree &amp; Year</td>
</tr>
<tr>
<td>Postdoctoral Institution(s)</td>
<td>Location</td>
<td>Area</td>
<td>Inclusive Dates (Years)</td>
</tr>
</tbody>
</table>

(b) Appointments

A list, in reverse chronological order, of all the individual’s academic/professional appointments beginning with the current appointment.

(c) Products

A list of: (i) up to five products most closely related to the proposed project; and (ii) up to five other significant products, whether or not related to the proposed project. Acceptable products must be citable and accessible including but not limited to publications, data sets, software, patents, and copyrights. Unacceptable products are unpublished documents not yet submitted for publication, invited lectures, and additional lists of products. Only the list of ten will be used in the review of the proposal.

Each product must include full citation information including (where applicable and practicable) names of all authors, date of publication or release, title, title of enclosing work such as journal or book, volume, issue, pages, website and URL, or other Persistent Identifier.

If only publications are included, the heading “Publications” may be used for this section of the Biographical Sketch.

(d) Synergistic Activities

A list of up to five examples that demonstrate the broader impact of the individual’s professional and scholarly activities that focused on the integration and transfer of knowledge as well as its creation.

Biographical Sketches (Required)

Biographical sketches are required for all senior project personnel and must not exceed two pages in length, per individual.
Budget (Required)
Each proposal must contain a budget for each year of support requested. The budget justification should be no more than three pages for all years of the project combined. Proposals containing subawards must include a separate budget justification of no more than three pages for each subaward.
Budgetary Guidelines

- Information regarding budgetary guidelines can be found in PAPPG as well as NSF program solicitations.

**Amounts Should Be:**
- Realistic and reasonable
- Well-justified and should establish need
- Consistent with program guidelines

**Eligible costs consist of:**
- Personnel
- Equipment
- Travel
- Participant support
- Other direct costs (e.g., subawards, consultant services, computer services, and publications costs)
NSF Cost Sharing Policy

- Inclusion of voluntary committed cost sharing is prohibited in solicited & unsolicited proposals.
  - To be considered voluntary committed cost sharing, the cost sharing must meet all of the standards of 2 CFR § 215.23, to include identification of cost sharing on the NSF budget.
  - Line M will be “grayed out” in FastLane.
- Organizations may, at their own discretion, continue to contribute any amount of voluntary uncommitted cost sharing to NSF-sponsored projects.
Facilities, Equipment, and Other Resources (Required)
This section of the proposal is used to assess the adequacy of the organizational resources available to perform the effort proposed.

Facilities, Equipment, and Other Resources

**Instructions:** Upload an aggregated description of the internal and external resources (both physical and personnel) that the organization and its collaborators will provide to the project, should it be funded. Describe only those resources that are directly applicable. The description should be narrative in nature and must not include any quantifiable financial information. If there are no Facilities, Equipment, or Other Resources identified, a statement to that effect should be indicated in this section and uploaded into FastLane. See PAPPG II.C.2.i for more information.
Sections of an NSF Proposal

Current and Pending Support (Required)
This section of the proposal calls for information on all current and pending support for ongoing projects and proposals.

Example from FastLane
Sections of an NSF Proposal

Special Information and Supplementary Documentation
This segment should alert NSF officials to unusual circumstances that require special handling; more information can be found in the PAPPG, Chapter II.C.2.j.

Text from the PAPPG

j. Special Information and Supplementary Documentation

Except as specified below, special information and supplementary documentation must be included as part of the Project Description (or part of the budget justification), if it is relevant to determining the quality of the proposed work. Information submitted in the following areas is not considered part of the 15-page Project Description limitation. This Special Information and Supplementary Documentation section also is not considered an appendix. Specific guidance on the need for additional documentation may be obtained from the organization’s SPO or in the references cited below.

- Postdoctoral Researcher Mentoring Plan. Each proposal that requests funding to support postdoctoral researchers must upload under "Mentoring Plan" in the supplementary documentation section of FastLane, a description of the mentoring activities that will be provided for such individuals. In no more than one page, the mentoring plan must describe the mentoring that will be provided to all postdoctoral researchers supported by the project, regardless of whether they reside at the submitting organization, any subrecipient organization, or at any organization participating in a simultaneously submitted collaborative proposal. Proposers are advised that the mentoring plan must not be used to circumvent the 15-page Project Description limitation. See Chapter II.D.5 for additional information on collaborative proposals. Mentoring activities provided to postdoctoral researchers supported on the project will be evaluated under the Broader Impacts review criterion.

Examples of mentoring activities include, but are not limited to: career counseling; training in preparation of grant proposals, publications and presentations; guidance on ways to improve teaching and mentoring skills; guidance on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas; and training in responsible professional practices.

- Plans for data management and sharing of the products of research. Proposals must include a document of no more than two pages uploaded under "Data Management Plan" in the supplementary documentation section of FastLane. This supplementary document should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results (see Chapter XI.D.4), and may include:

1. the types of data, samples, physical collections, software, curriculum materials, and other materials to be produced in the course of the project;
2. the standards to be used for data and data formats; and content follow...
Special Information and Supplementary Documentation

- Letters of Collaboration
- Data Management Plans
- Post doctoral Mentoring Plans
Mentoring for Postdoctoral Researchers

- Proposals that include funding to support postdoctoral researchers must include a description of the mentoring activities that will be provided for such individuals.

- Proposed mentoring activities will be evaluated as part of the merit review process, under NSF’s Broader Impacts merit review criterion.
Mentoring for Postdoctoral Researchers

• Proposals that identify a postdoc on the budget but do not include a maximum one-page mentoring plan as a supplementary document will be prevented from submission in FastLane.

• For collaborative proposals, the lead organization must submit a mentoring plan for all postdoctoral researchers supported under the entire collaborative project.
Mentoring for Postdoctoral Researchers

Mentoring activities may include:

- Providing career counseling, training in the preparation of grant proposals, or training in responsible professional practices
- Developing publications and presentations
- Offering guidance on techniques to improve teaching and mentoring skills
- Providing counseling on how to effectively collaborate with researchers from diverse backgrounds and disciplinary areas
Data Management Plan Requirements

- All proposals are required to include, as a supplementary doc, a Data Management Plan of up to two pages.
- Plan should describe how the proposal will conform to NSF policy on dissemination and sharing of research results.
- A valid Data Management Plan may include only the statement that no detailed plan is needed, as long as a clear justification is provided.
- Plan will be reviewed as part of the Intellectual Merit and/or Broader Impacts of the proposal.
Data Management Plan Requirements

Dissemination and Sharing of Research Results

NSF DATA SHARING POLICY

Investigators are expected to share with other researchers, at no more than incremental cost and within a reasonable time, the primary data, samples, physical collections and other supporting materials created or gathered in the course of work under NSF grants. Aims are to encourage and facilitate such sharing, see NSF’s Administrative Guide (NSF) Chapter VII.C.4.

NSF DATA MANAGEMENT PLAN REQUIREMENTS

Proposals submitted on or after January 19, 2011, must include a supplementary document of no more than two pages titled “Data Management Plan.” This supplementary document should describe how the proposal will conform to NSF policy on the dissemination and sharing of research results. See Grant Proposal Guide (GPG) Chapter II.G.2.f for full policy implementation.

requirements by directorate, office, division, program, or other NSF unit

Links to data management requirements and plans relevant to specific directorates, offices, divisions, programs, or other NSF units are provided below. If guidance specific to the program is not provided, then the requirements established in Grant Proposal Guide, Chapter II.G.2., apply.

Please note that if a specific program solicitation provides guidance on preparation of data management plans, such guidance must be followed:

- Biological Sciences Directorate (BIO)
  - Directorate-wide Guidance

- Computer & Information Sciences & Engineering (CISE)
  - Directorate-wide Guidance

- Education & Human Resources Directorate (EHR)
  - Directorate-wide Guidance

- Engineering Directorate (ENG)
  - Directorate-wide Guidance

- Geosciences Directorate (GEO)

www.nsf.gov/bfa/dias/policy/dmp.jsp
Ask Early, Ask Often!

nsf.gov/staff
nsf.gov/staff/orglist.jsp
nsf.gov/about/career_opps/rotators/index.jsp