



National Science Foundation
WHERE DISCOVERIES BEGIN

NSF Grants Conference Proposal Preparation

October 22-23, 2012

Hosted by George Mason University, Arlington, Virginia





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

Deborah Lockhart

Deputy Division Director, Directorate for Computer & Information Science & Engineering, Division of Information & Intelligent Systems

Betty Tuller

Program Director, Directorate for Social, Behavioral & Economic Sciences, Division of Behavioral & Cognitive Sciences

Judy Verbeke

Division Director (Acting), Directorate for Biological Sciences; Division of Biological Infrastructure



Topics Covered

- **Find Funding Opportunities**
- **Proposal and Award Policies and Procedures Guide**
- **Sections of an NSF Proposal**
- **Proposal Development Strategies**
- **Support for Proposal Writing**
- **RAPID, EAGER & CREATIV**



Find Funding Opportunities

The screenshot shows the NSF website's navigation menu. The 'FUNDING' tab is highlighted with a red circle. The menu items are:

- Search Funding Opportunities
- Browse Opportunities A-Z
- Recent Opportunities
- Due Dates
- Preparing Proposals
- Policies & Procedures
- Merit Review
- Interdisciplinary Research
- Transformative Research
- About Funding

Other visible elements include a search bar at the top right, a main banner for 'Understanding Bacterial Crowdsourcing' with a 'FULL STORY' button, and a footer with categories: 'Advancing the Sciences', 'Funding & Supporting', and 'Inspiring & Educating'. Below the footer are several featured articles with images and titles:

- VIMS Researchers Unravel Life Cycle of Blue-crab Parasite** (October 4, 2012)
- A Mammal Lung, In 3-D** (October 2, 2012)
- Home-based Assessment Tool for Dementia Screening** (October 2, 2012)
- URI Scientists: Marine Plants Can Flee to Avoid Predators** (October 1, 2012)
- White Shark Diets Vary With Age and**
- Disappearing Act**



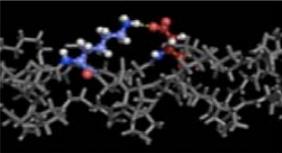
Find Funding Opportunities



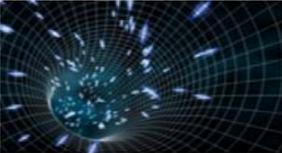
September 27, 2012



Processes in Earth's Crust
Quake
September 26, 2012



Rice University Lab Encodes Collagen
September 25, 2012



A Clock That Will Last Forever
September 24, 2012

NSF Funding & Research Community

SPECIAL NOTICES

Nominations for the 2013 Alan T. Waterman Award Are Being Accepted Through October 31, 2012

National Science Board Accepting Nominations for 2013 Honorary Awards in Science Leadership and Public Service Through November 1, 2012

NSF Notice of Intent to Revise American Recovery and Reinvestment Act (ARRA) Award General Terms and Conditions to Ensure Project Completion by September 30, 2013

NSF Information Related to the American Recovery and Reinvestment Act of 2009

EVENT CALENDAR

09 OCT	Center for e-Design IAB Meeting PARTNERSHIP MEETING
10	Advisory Committee for Geosciences

FUNDING OPPORTUNITIES

Search Funding Opportunities

Enter search term **GO**

Search by Program Area

Select One **GO**

VIEW ALL FUNDING OPPORTUNITIES >

Proposal and Award Policies and Procedures Guide

Prepare a Proposal

Upcoming Due Dates

Submit Proposal to FastLane



NSF News and Information

The screenshot shows the NSF News and Information website. At the top left is the NSF logo and the text "National Science Foundation WHERE DISCOVERIES BEGIN". To the right is a "QUICK LINKS" button and a search bar. Below this is a navigation menu with items: HOME, FUNDING, AWARDS, DISCOVERIES, NEWS (highlighted), PUBLICATIONS, STATISTICS, ABOUT NSF, and FASTLANE. On the left side, there is a "News" section with a "Get News" button and a list of news categories: News From the Field, For the News Media, Special Reports, Research Overviews, NSF-Wide Investments, Speeches & Lectures, NSF Current Newsletter, Multimedia Gallery, and News Archive. Below this is a "News by Research Area" section with links for Arctic & Antarctic, Astronomy & Space, and Biology. In the center, a blue dropdown menu is open, listing: News Home, For News Media, Multimedia Gallery, Special Reports, News from the Field, Research Overviews, Speeches & Lecture, NSF Current Newsletter, NSF-Wide Investments, News Archive, and Search News. On the right, there are "Email" and "Print" buttons, and a list of news items including "rough Awardees Announced" and "gress on Administration's Big". At the bottom, a featured article is shown: "An Advanced Cyberworld for Data Exploration", released October 3, 2012, categorized as "News From the Field".



NSF Website Organization

The screenshot shows the NSF website's main navigation area. At the top, there is a blue header with the NSF logo and the text "National Science Foundation". To the right of the header is an orange "QUICK LINKS" button. Below the header, the page is organized into five main sections, each with a distinct icon and a horizontal line separator:

- Research Areas** (atom icon):
 - › Biological Sciences
 - › Computer & Information Science & Engineering
 - › Cyberinfrastructure
 - › Education and Human Resources
 - › Engineering
 - › Environmental Research & Education
 - › Geosciences
 - › Integrative Activities
 - › International Science & Engineering
 - › Mathematical & Physical Sciences
 - › Polar Programs
 - › Social, Behavioral & Economic Sciences
- Funding & Awards** (star icon):
 - FUNDING INFO**
 - › Search Funding Opportunities
 - › Browse Funding Opportunities A-Z
 - › Recent Funding Opportunities
 - › How to Prepare a Funding Proposal
 - › Grant Proposal Guide
 - › Submit a Proposal to FastLane
 - AWARD INFO**
 - › Managing Awards
 - › Award & Administration Guide
 - › Search Awards
 - › Award Statistics (Budget Internet Info System)
- Contact Us** (envelope icon):
 - › Staff Directory
 - › Organization List
 - › Visit NSF
 - › Work at NSF
 - › Do Business with NSF
 - › Press
 - › Inspector General Hotline
 - › How Do I ...?

The National Science Foundation
4201 Wilson Boulevard, Arlington,
Virginia 22230, USA

Tel: (703) 292-5111
FIRS: (800) 877-8339
TDD: (800) 281-8749
- Learning Resources** (computer monitor icon):
 - › Film, TV, Exhibits & More!
 - › Slideshows & Photo Galleries
 - › Classroom Resources
 - › Funding for Research on Learning in Formal & Informal Settings
- News & Discoveries** (document icon):
 - › [Recent News](#)
 - › Recent Discoveries
 - › Multimedia Gallery
 - › Special Reports

In the bottom right corner of the screenshot, there is a photograph of a modern, multi-story building with a glass facade, likely the NSF headquarters.



Other Ways to Find Funding

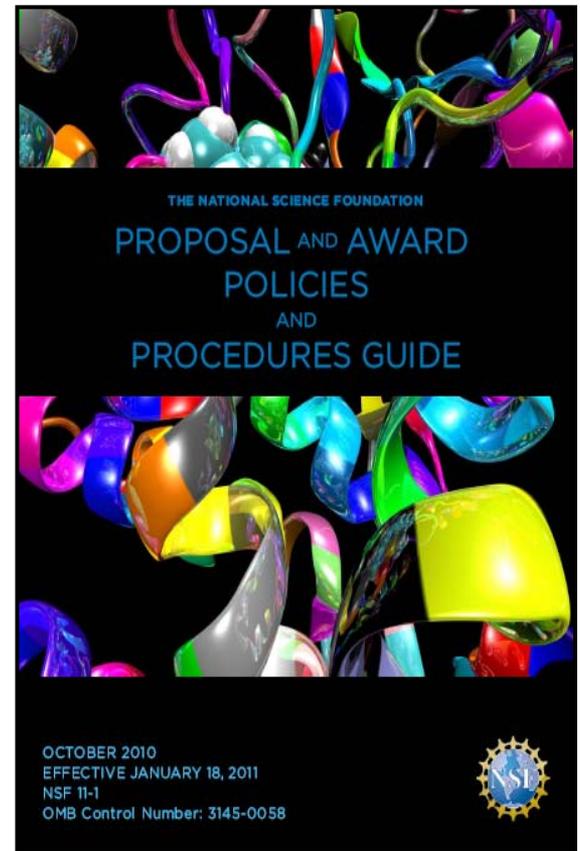


Use Grants.gov's search feature



What is the Proposal & Award Policies & Procedures Guide?

The Proposal and Award Policies and 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:

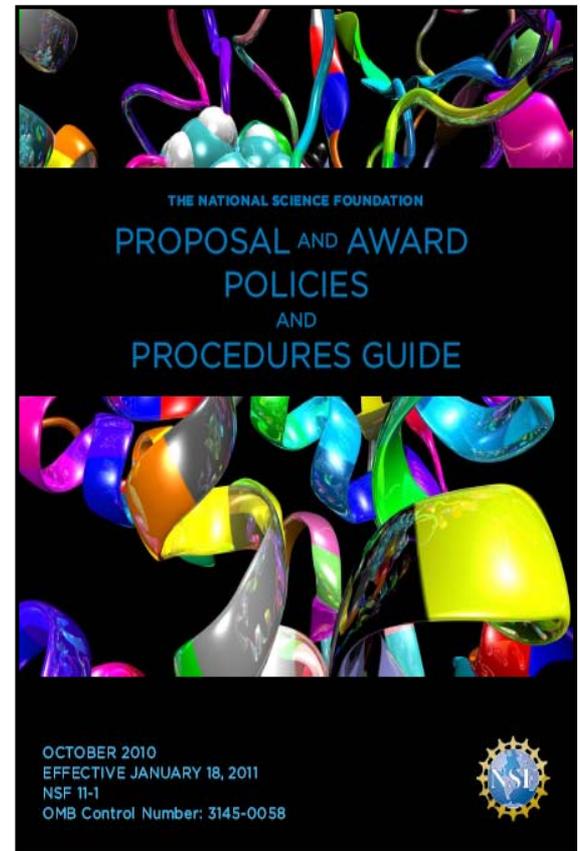




National Science Foundation
WHERE DISCOVERIES BEGIN

What is the Proposal & Award Policies & Procedures Guide?

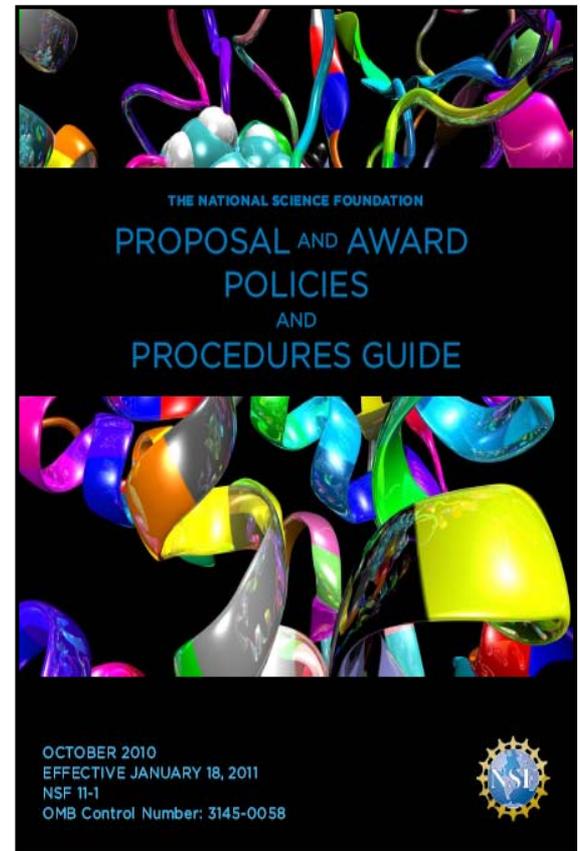
Part I is NSF's proposal preparation and submission guidelines -- the NSF Grant Proposal Guide (GPG) and the NSF Grants.gov Application Guide.





What is the Proposal & Award Policies & Procedures Guide?

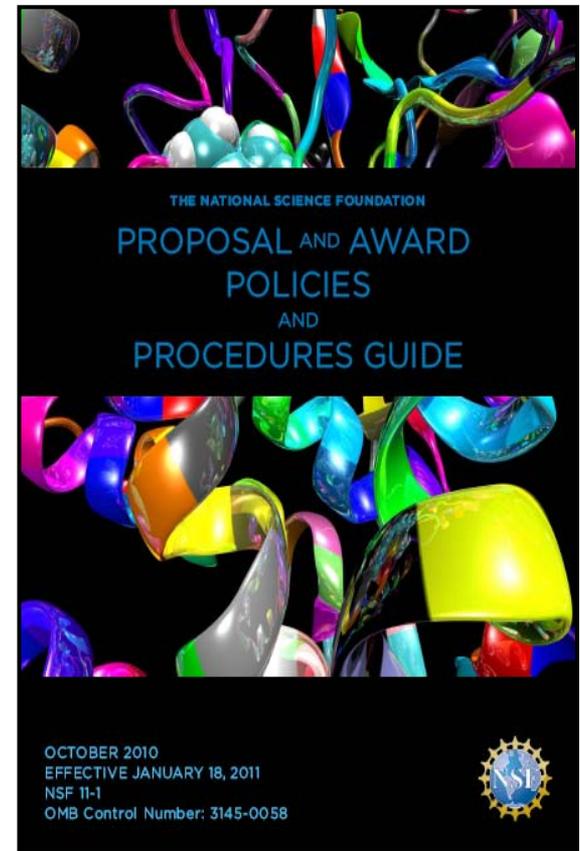
Part II is NSF's award and administration guidelines -- the documents used to guide, manage, and monitor the award and administration of grants and cooperative agreements made by NSF.





Grant Proposal 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 be returned without review
- Describes process for withdrawals, returns, and declinations





Types of Funding Opportunities

Program Descriptions

Proposals for a **Program Description** must follow the instructions in the GPG.

Program Announcements

Proposals for a **Program Announcement** must follow the instructions in the GPG.

Program Solicitations

Proposals must follow the instructions in the **Program Solicitation**; the instructions in the GPG apply unless otherwise stated in the solicitation.

Dear Colleague Letters

Dear Colleague Letters are notifications of opportunities or special competitions for supplements to existing NSF awards.



What to Look For in a Program Announcement or Solicitation

- **Goal of Program**
- **Eligibility**
- **Special proposal preparation and/or award requirements**



Sample Cover Page of a Solicitation

Louis Stokes Alliances for Minority Participation (LSAMP)

PROGRAM SOLICITATION
NSF 12-564



REPLACES DOCUMENT(S):
NSF 11-543



National Science Foundation

Directorate for Education & Human Resources
Division of Human Resource Development



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

August 28, 2012

Bridge to the Doctorate

October 05, 2012

First Friday in October, Annually Thereafter

Bridge to the Doctorate

**Program
Solicitation
Number**

**NSF
Directorates
and Offices
providing
funding for this
opportunity**



Sample Cover Page of a Solicitation

Award Information

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

Estimated Number of Awards: 60



Up to 60 awards will be made across fiscal 2012 and 2013.

In FY 2012, up to 20 Bridge to the Doctorate (BD) grants will be made.

In FY2013, 20 Alliance grants (this includes 5 B2B), up to 15 Bridge to the Doctorate (BD) grants and up to 5 Broadening Participation Research (BPR) in STEM Education grants.

Anticipated Funding Amount: \$20,000,000



\$20,000,000 across fiscal years 2012 and 2013; Subject to the availability of funds.

Number of awards funded by the program per year

Funds available to the program per year



Sample Cover Page of a Solicitation

Eligibility Information

Organization Limit:

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.

PI Limit:

Alliance (including the B2B) and BD: To promote institutional commitments to increase the quality and quantity of under-represented minorities in STEM disciplines, the President or Provost of the lead institution should serve as the Principal Investigator. A full explanation should be provided for a PI designation in variance with this requirement. Co-principal investigators from partner institutions may be designated, as appropriate, for the project.

Broadening Participation Research in STEM Education: Eligible PI/co-PI(s) for proposals applying for educational research or evaluation support should be the individual conducting or responsible for the research or evaluation project. Other potential co-Principal Investigators include collaborators on the research project. At least one of the PI's must have experience in educational research.

Limit on Number of Proposals per Organization:

Alliances (including B2B) and BD: 1

Broadening Participation Research in STEM Education: No limit.

Limit on Number of Proposals per PI:

Alliances (including B2B): 1

Bridge to the Doctorate: 1

Broadening Participation Research in STEM Education: No limit

**Eligibility
information for
institutions/PIs
submitting
proposals**



Types of Proposal Submissions



No Deadlines –
Proposals may be
submitted at any time

F. When to Submit Proposals

Proposers should allow adequate time for NSF review and processing of proposals (see [GPG 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 for review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with [GPG 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 NSF review and processing of proposals (see [GPG 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 for review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with [GPG Chapter II.A](#).



Types of Proposal Submissions



Deadline Dates –
Proposals will not be accepted after this date and time (5 pm submitter's local time)

F. When to Submit Proposals

Proposers should allow adequate time for NSF review and processing of proposals (see [GPG 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 for review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with [GPG Chapter II.A](#).



Types of Proposal Submissions



Submission Windows –
Closing date converts to a
deadline date

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. Letter of Intent

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

A LOI normally contains the 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. A LOI is not externally evaluated or used to decide on funding. The requirement to submit a LOI will be identified in the program solicitation, and such letters are submitted electronically via the NSF FastLane System.



Types of Proposal Submissions



Preliminary Proposals –
Sometimes required,
sometimes optional

2. Preliminary Proposal

Some NSF program solicitations require or request submission of a preliminary proposal in advance of submission of a full proposal. The two 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 where the community senses that a major new direction is being identified, or competitions that will result in a small number of actual awards; and
- increase the overall quality of the full submission.



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

COVER SHEET FOR PROPOSAL TO THE NATIONAL SCIENCE FOUNDATION					
PROGRAM ANNOUNCEMENT/SOLICITATION NO./CLOSING DATE (if not in response to a program announcement/solicitation enter NSF 09-1)					FOR NSF USE ONLY
NSF 98-164					NSF PROPOSAL NUMBER
FOR CONSIDERATION BY NSF ORGANIZATION UNIT(S) (Indicate the most specific unit known, i.e. program, division, etc.)					0840812
CNS - NETWORKING RESEARCH					
DATE RECEIVED	NUMBER OF COPIES	DIVISION ASSIGNED	FUND CODE	DUNS# (Data Universal Numbering System)	FILE LOCATION
08/03/2008	17	05050000 NCR	4097	0748118054568	02/10/2009 10:22am
EMPLOYER IDENTIFICATION NUMBER (EIN) OR TAXPAYER IDENTIFICATION NUMBER (TIN)	SHOW PREVIOUS AWARD NO. IF THIS IS <input type="checkbox"/> A RENEWAL <input type="checkbox"/> AN ACCOMPLISHMENT-BASED RENEWAL		IS THIS PROPOSAL BEING SUBMITTED TO ANOTHER FEDERAL AGENCY? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> IF YES, LIST ACRONYM(S)		
NAME OF ORGANIZATION TO WHICH AWARD SHOULD BE MADE NSF		ADDRESS OF AWARDING ORGANIZATION, INCLUDING 9 DIGIT ZIP CODE Arlington, VA 222302000 US			
AWARDEE ORGANIZATION CODE (IF KNOWN) 4102852000					
NAME OF PERFORMING ORGANIZATION, IF DIFFERENT FROM ABOVE		ADDRESS OF PERFORMING ORGANIZATION, IF DIFFERENT, INCLUDING 9 DIGIT ZIP CODE			
PERFORMING ORGANIZATION CODE (IF KNOWN)					
IS AWARDING ORGANIZATION (Check All That Apply) (See GPG II.C For Definitions)		<input type="checkbox"/> SMALL BUSINESS	<input type="checkbox"/> MINORITY BUSINESS	<input type="checkbox"/> IF THIS IS A PRELIMINARY PROPOSAL THEN CHECK HERE	
		<input type="checkbox"/> FOR-PROFIT ORGANIZATION	<input type="checkbox"/> WOMAN-OWNED BUSINESS		
TITLE OF PROPOSED PROJECT Neural Network Research					
REQUESTED AMOUNT \$	PROPOSED DURATION (1-60 MONTHS)	REQUESTED STARTING DATE	SHOW RELATED PRELIMINARY PROPOSAL NO. IF APPLICABLE		
400,000	0 months				
CHECK APPROPRIATE BOX(ES) IF THIS PROPOSAL INCLUDES ANY OF THE ITEMS LISTED BELOW					
<input type="checkbox"/> BEGINNING INVESTIGATOR (GPG I.G.2)		<input type="checkbox"/> HUMAN SUBJECTS (GPG II.D.6) Human Subjects Assurance Number _____			
<input type="checkbox"/> DISCLOSURE OF LOBBYING ACTIVITIES (GPG II.C)		Exemption Subsection _____ or IRB App. Date _____			
<input type="checkbox"/> PROPRIETARY & PRIVILEGED INFORMATION (GPG I.D. II.C.1.d)		<input type="checkbox"/> INTERNATIONAL COOPERATIVE ACTIVITIES: COUNTRY/COUNTRIES INVOLVED (GPG II.C.2.j)			
<input type="checkbox"/> HISTORIC PLACES (GPG II.C.2.j)					
<input type="checkbox"/> SMALL GRANT FOR EXPLOR. RESEARCH (SGER) (GPG II.D.1)		<input type="checkbox"/> HIGH RESOLUTION GRAPHICS/OTHER GRAPHICS WHERE EXACT COLOR REPRESENTATION IS REQUIRED FOR PROPER INTERPRETATION (GPG I.G.1)			
<input type="checkbox"/> VERTEBRATE ANIMALS (GPG II.D.5) IACUC App. Date _____		PHS Animal Welfare Assurance Number _____			
PI/PD DEPARTMENT Division of Information Systems		PI/PD POSTAL ADDRESS 4201 Wilson Boulevard Arlington, VA 222301000 United States			
PI/PD FAX NUMBER 703-292-3000					
NAMES (TYPED)	High Degree	Yr of Degree	Telephone Number	Electronic Mail Address	
PI/PD NAME Terry Demo	PhD	2005	703-292-1000	td@nsf.gov	
CO-PI/PD					

Electronic Signature



Sections of an NSF Proposal

Project Summary (Required)

The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length.

Proposals that do not separately address both merit review criteria will be returned without review.

Text from the GPG

- Organization Name (Identify the organization name of the primary site where the work will be performed, if different than the awardee);
- Street;
- City;
- State;
- Country; and
- 9-digit Zip Code.

For projects that support research infrastructure and tools, such as vessels, facilities, and telescopes, the project/performance site should correspond to the physical location of the research asset. For research assets or projects that are geographically distributed, the proposer should report information for the primary site, as defined by the proposer. For example, proposals for the operations and maintenance of research vessels may list the project/performance site as the vessel's home port.

(h) Other Information

Should any of the following items on the Cover Sheet apply to a proposal, the applicable box(es) must be checked.

- Beginning Investigator (See GPG I.G.2)
- Disclosure of Lobbying Activities (See GPG II.C.1e)
- Proprietary or Privileged Information (See GPG I.D.3 & II.C.1d)
- Historic Places (See GPG II.C.2j)
- Rapid Response Grants (See GPG II.D.1)
- EARly-concept Grants for Exploratory Research (EAGER) (See GPG II.D.2)
- Vertebrate Animals¹⁹ (See GPG II.D.6)
- Human Subjects²⁰ (See GPG II.D.7)
- High Resolution Graphics/Other Graphics Where Exact Color Representation is Required for Proper Interpretation (See GPG I.G.1)
- International Cooperative Activities Country Name(s) (See GPG II.C.2j)

b. Project Summary

The proposal must contain a summary of the proposed activity suitable for publication, not more than one page in length. It should not be an abstract of the proposal, but rather a self-contained description of the activity that would result if the proposal were funded. The summary should be written in the third person and include a statement of objectives and methods to be employed. It must clearly address in separate statements (within the one-page summary):

- the intellectual merit of the proposed activity; and
- the broader impacts resulting from the proposed activity.

It should be informative to other persons working in the same or related fields and, insofar as possible, understandable to a scientifically or technically literate lay reader. **Proposals that do not separately address both merit review criteria within the one-page Project Summary will be returned without review.** To that end, proposers are encouraged to include separate headings within the one page document for both "Intellectual Merit" and "Broader Impacts".

¹⁹ If the proposal includes use of Vertebrate Animals, supplemental information is required. See GPG Chapter II.D.6 for additional information.

²⁰ If the proposal includes use of Human Subjects, supplemental information is required. See GPG Chapter II.D.7 for additional information.



Sections of an NSF Proposal

Project Description (Required)

The two merit review criteria should be addressed with the project description, which, unless otherwise specified in the program solicitation, may not exceed 15 pages.

Text from the GPG

c. Table of Contents

A Table of Contents is automatically generated for the proposal by the FastLane system. The proposer cannot edit this form.

d. Project Description (Including Results from Prior NSF Support)

(I) Content

All proposals to NSF will be reviewed utilizing the two merit review criteria described in greater length in GPG Chapter III.

The Project Description should provide a clear statement of the work to be undertaken and must include: objectives for the period of the proposed work and expected significance; relation to longer-term goals of the PI's project; and relation to the present state of knowledge in the field, to work in progress by the PI under other support and to work in progress elsewhere.

The Project Description should outline the general plan of work, including the broad design of activities to be undertaken, and, where appropriate, provide a clear description of experimental methods and procedures. It must describe as an integral part of the narrative, the broader impacts resulting from the proposed activities, addressing one or more of the following as appropriate for the project: how the project will integrate research and education by advancing discovery and understanding while at the same time promoting teaching, training, and learning; ways in which the proposed activity will broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.); how the project will enhance the infrastructure for research and/or education, such as facilities, instrumentation, networks, and partnerships; how the results of the project will be disseminated broadly to enhance scientific and technological understanding; and potential benefits of the proposed activity to society at large. Examples illustrating activities likely to demonstrate broader impacts are available electronically on the NSF website.

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 GPG Chapter II.C.2.) for additional instructions for preparation of this section).

(II) Page Limitations and Inclusion of Universal 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. Pis are cautioned that the Project Description must be self-contained and that URLs that provide information related to the proposal should 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 abolished between the time of submission and the time of review.

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

(III) Results from Prior NSF Support

If any PI or co-PI identified on the project has received NSF funding in the past five years, information on the award(s) is required. Each PI and co-PI who has received more than one award (excluding amendments) must report on the award most closely related to the proposal. The following information must be provided:

- (a) the NSF award number, amount and period of support;
- (b) the title of the project;



Sections of an NSF Proposal

References Cited (Required)

Reference information is required, and proposers must follow accepted scholarly practices in providing citations for source materials.

Text from the GPG

- (c) a summary of the results of the completed work, including accomplishments related to the Broader Impact activities supported by the award and, for a research project, any contribution to the development of human resources in science and engineering;
- (d) publications resulting from the NSF award;
- (e) evidence of research products and their availability, including, but not limited to: data, publications, samples, physical collections, software, and models, as described in any Data Management Plan; and
- (f) if the proposal is for renewed support, a description of the relation of the completed work to the proposed work.

Reviewers will be asked to comment on the quality of the prior work described in this section of the proposal. Please note that the proposal may contain up to five pages to describe the results. Results may be summarized in fewer than five pages, which would give the balance of the 15 pages for the Project Description.

(iv) Unfunded Collaborations

Any substantial collaboration with individuals not included in the budget should be described and documented with a letter from each collaborator, which should be provided in the supplementary documentation section of the FastLane Proposal Preparation Module. Collaborative activities that are identified in the budget should follow the instructions in GPG Chapter II.D.4.

(v) Group Proposals

NSF encourages submission of proposals by groups of investigators; often these are submitted to carry out interdisciplinary projects. Unless stipulated in a specific program solicitation, however, such proposals will be subject to the 15-page Project Description limitation established in Section (ii) above. PIs who wish to exceed the established page limitations for the Project Description must request and receive a deviation in advance of proposal submission. (GPG Chapter II.A contains information on deviations.)

(vi) Proposals for Renewed Support

A proposal for renewed support may be either a "traditional" proposal in which the proposed work is documented and described as fully as though the proposer were applying for the first time; or, an "Accomplishment-Based Renewal" (ABR) proposal, in which the Project Description is replaced by copies of no more than six reprints of publications resulting from the research supported by NSF during the preceding three to five year period, plus a brief summary of plans for the proposed support period. (See GPG Chapter V for additional information on preparation of Renewal Proposals.)

9. References Cited

Reference information is required. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the website address also should be identified.²¹ Proposers must be especially careful to follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal. While there is no established page limitation for the references, this section must include bibliographic citations only and must not be used to provide parenthetical information outside of the 15-page Project Description.

²¹If the proposer has a website address readily available, that information should be included in the citation, as stated above. It is not NSF's intent, however, to place an undue burden on proposers to search for the URL of every referenced publication. Therefore, inclusion of a website address is optional. A proposal that includes reference citation(s) that do not specify a URL address is not considered to be in violation of NSF proposal preparation guidelines and the proposal will still be reviewed.



Sections of an NSF Proposal

Biographical Sketches (Required)

Biographical sketches are required for all senior project personnel and must not exceed two pages in length, per individual.

Text from the GPG

f. Biographical Sketch(es)

(f) Senior Personnel

A biographical sketch (limited to two pages) is required for each individual identified as senior project personnel. (See GPG Exhibit II-7 for the definitions of Senior Personnel.) The following information must be provided in the order and format specified below.

Do not submit personal information such as home address; home telephone, fax, or cell phone numbers; home e-mail address; date of birth; citizenship; drivers' license numbers; marital status; personal hobbies; and the like. Such personal information is irrelevant to the merits of the proposal. If such information is included, NSF will make every effort to prevent unauthorized access to such material, but the Foundation is not responsible or in any way liable for the release of such material. (See also GPG Chapter III.G.)

(a) Professional Preparation

A list of the individual's undergraduate and graduate education and postdoctoral training as indicated below:

Undergraduate Institution(s)	Major	Degree & Year
Graduate Institution(s)	Major	Degree & Year
Postdoctoral Institution(s)	Area	Inclusive Dates (years)

(b) Appointments

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

(c) Publications

A list of: (i) up to five publications most closely related to the proposed project; and (ii) up to five other significant publications, whether or not related to the proposed project. Each publication identified must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. If the document is available electronically, the website address also should be identified.

For unpublished manuscripts, list only those submitted or accepted for publication (along with most likely date of publication). Patents, copyrights and software systems developed may be substituted for publications. Additional lists of publications, invited lectures, etc., must not be included.

(d) Synergistic Activities

A list of up to five examples that demonstrate the broader impact of the individual's professional and scholarly activities that focuses on the integration and transfer of knowledge as well as its creation. Examples could include, among others: innovations in teaching and training (e.g., development of curricular materials and pedagogical methods); contributions to the science of learning; development and/or refinement of research tools; computation methodologies, and algorithms for problem-solving; development of databases to support research and education; broadening the participation of groups underrepresented in science, mathematics, engineering and technology; and service to the scientific and engineering community outside of the individual's immediate organization.

(e) Collaborators & Other Affiliations

- Collaborators and Co-Editors.** A list of all persons in alphabetical order (including their current organizational affiliations) who are currently, or who have been collaborators or co-authors with the individual on a project, book, article, report, abstract or paper during the 48 months preceding the submission of the proposal. Also include those individuals who are currently or have been co-editors of a journal, compendium, or conference proceedings during the 24 months preceding the submission of the proposal. If there are no collaborators or co-editors to report, this should be so indicated.

Grant Proposal Guide II-10 NSF 11-1



Sections of an NSF Proposal

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.

Example from FastLane

SUMMARY PROPOSAL BUDGET				YEAR 1		FOR NSF USE ONLY	
ORGANIZATION NSF				PROPOSAL NO.		DURATION (months)	
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR Terry Demo				AWARD NO.		Proposed	Granted
A. SENIOR PERSONNEL: P/PI/D, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Proposed	Funds Requested by proposer	Funds Granted by NSF (if different)	
1.	Terry Demo - none	0.00	0.00	0.00	\$	400,000	\$
2.							
3.							
4.							
5.							
6.	(0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00	0.00	0.00		0	
7.	(1) TOTAL SENIOR PERSONNEL (1 - 6)	0.00	0.00	0.00		400,000	
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1.	(0) POST DOCTORAL SCHOLARS	0.00	0.00	0.00		0	
2.	(0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00	0.00	0.00		0	
3.	(0) GRADUATE STUDENTS					0	
4.	(0) UNDERGRADUATE STUDENTS					0	
5.	(0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					0	
6.	(0) OTHER					0	
TOTAL SALARIES AND WAGES (A + B)						400,000	
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)						0	
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)						400,000	
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT						0	
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)						0	
2. FOREIGN						0	
F. PARTICIPANT SUPPORT COSTS							
1.	STIPENDS \$ 0					0	
2.	TRAVEL 0					0	
3.	SUBSISTENCE 0					0	
4.	OTHER 0					0	
TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANT COSTS						0	
G. OTHER DIRECT COSTS							
1.	MATERIALS AND SUPPLIES					0	
2.	PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION					0	
3.	CONSULTANT SERVICES					0	
4.	COMPUTER SERVICES					0	
5.	SUBAWARDS					0	
6.	OTHER					0	
TOTAL OTHER DIRECT COSTS						0	
H. TOTAL DIRECT COSTS (A THROUGH G)						400,000	
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) (Rate: , Base:)							
TOTAL INDIRECT COSTS (F&A)						0	
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)						400,000	
K. RESIDUAL FUNDS						0	
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)						\$ 400,000	\$
M. COST SHARING PROPOSED LEVEL \$ 0				AGREED LEVEL IF DIFFERENT \$			
PI/PI/D NAME Terry Demo				FOR NSF USE ONLY			
ORG. REP. NAME* Terry Demo				INDIRECT COST RATE VERIFICATION			
		Date Checked	Date Of Rate Sheet	Initials - ORG			

1 *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET



Budgetary Guidelines

Information regarding budgetary guidelines can be found in both the **GPG** and in the **Award & Administration Guide (AAG)**, 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.**



Sections of an NSF Proposal

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.

Example from FastLane

FACILITIES, EQUIPMENT & OTHER RESOURCES

FACILITIES: Identify the facilities to be used at each performance site listed and, as appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to the project. Use "Other" to describe the facilities at any other performance sites listed and at sites for field studies. USE additional pages as necessary.

Laboratory:

Clinical:

Animal:

Computer:

Office:

Other:

MAJOR EQUIPMENT: List the most important items available for this project and, as appropriate identifying the location and pertinent capabilities of each.

OTHER RESOURCES: Provide any information describing the other resources available for the project. Identify support services such as consultant, secretarial, machine shop, and electronics shop, and the extent to which they will be available for the project. Include an explanation of any consortium/contractual arrangements with other organizations.



Sections of an NSF Proposal

Current & 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

Current and Pending Support (See GPG Section II.C.2.h for guidance on information to include on this form.)				
<small>The following information should be provided for each investigator and other senior personnel. Failure to provide this information may delay consideration of this proposal.</small>				
Investigator:		<small>Other agencies (including NSF) to which this proposal has been/will be submitted.</small>		
Support: <input type="checkbox"/> Current <input type="checkbox"/> Pending <input type="checkbox"/> Submission Planned in Near Future <input type="checkbox"/> *Transfer of Support				
Project/Proposal Title:				
Source of Support:				
Total Award Amount: \$		Total Award Period Covered:		
Location of Project:				
Person-Months Per Year Committed to the Project.		Cal:	Acad:	Sumr:
Support: <input type="checkbox"/> Current <input type="checkbox"/> Pending <input type="checkbox"/> Submission Planned in Near Future <input type="checkbox"/> *Transfer of Support				
Project/Proposal Title:				
Source of Support:				
Total Award Amount: \$		Total Award Period Covered:		
Location of Project:				
Person-Months Per Year Committed to the Project.		Cal:	Acad:	Sumr:
Support: <input type="checkbox"/> Current <input type="checkbox"/> Pending <input type="checkbox"/> Submission Planned in Near Future <input type="checkbox"/> *Transfer of Support				
Project/Proposal Title:				
Source of Support:				
Total Award Amount: \$		Total Award Period Covered:		
Location of Project:				
Person-Months Per Year Committed to the Project.		Cal:	Acad:	Sumr:
Support: <input type="checkbox"/> Current <input type="checkbox"/> Pending <input type="checkbox"/> Submission Planned in Near Future <input type="checkbox"/> *Transfer of Support				
Project/Proposal Title:				
Source of Support:				
Total Award Amount: \$		Total Award Period Covered:		
Location of Project:				
Person-Months Per Year Committed to the Project.		Cal:	Acad:	Sumr:
Support: <input type="checkbox"/> Current <input type="checkbox"/> Pending <input type="checkbox"/> Submission Planned in Near Future <input type="checkbox"/> *Transfer of Support				
Project/Proposal Title:				
Source of Support:				
Total Award Amount: \$		Total Award Period Covered:		
Location of Project:				
Person-Months Per Year Committed to the Project.		Cal:	Acad:	Sumr:

*If this project has previously been funded by another agency, please list and furnish information for immediately preceding funding period.

Page G-0 USE ADDITIONAL SHEETS AS NECESSARY



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 GPG Chapter II.C.2.j.

Text from the GPG

Costs of entertainment, amusement, diversion and social activities and any costs directly associated with such activities (such as tickets to shows or sporting events, meals, lodging, rentals, transportation and gratuities) are unallowable. Travel, meal and hotel expenses of grantee employees who are not on travel status are unallowable. Costs of employees on travel status are limited to those allowed under the governing cost principles for travel expenses.

(b) Meals and Coffee Breaks

No NSF funds may be spent on meals or coffee breaks for intramural meetings of an organization or any of its components, including, but not limited to, laboratories, departments and centers.

(c) Alcoholic Beverages

No NSF funds may be spent on alcoholic beverages.

Additional information on charging certain types of costs generally associated with meetings and conferences to NSF awards is available in AAG Chapter V.C.5.

h. Current and Pending Support

This section of the proposal calls for required information on all current and pending support for ongoing projects and proposals, including subsequent funding in the case of continuing grants. All current project support from whatever source (e.g., Federal, State, local or foreign government agencies, public or private foundations, industrial or other commercial organizations) must be listed. The proposed project and all other projects or activities requiring a portion of time of the PI and other senior personnel must be included, even if they receive no salary support from the project(s). The total award amount for the entire award period covered (including indirect costs) must be shown as well as the number of person-months per year to be devoted to the project, regardless of source of support. Similar information must be provided for all proposals already submitted or submitted concurrently to other possible sponsors, including NSF. Concurrent submission of a proposal to other organizations will not prejudice its review by NSF. Note the Biological Sciences Directorate exception to this policy, however, delineated in GPG Chapter I.G.2.

If the project now being submitted has been funded previously by a source other than NSF, the information requested in the paragraph above must be furnished for the last period of funding.

I. Facilities, Equipment and Other Resources

This section of the proposal is used to assess the adequacy of the organizational resources available to perform the effort proposed. Proposers should describe only those resources that are directly applicable. Proposers should include an aggregated description of the resources that the organization will provide to the project, should it be funded. Such information must be provided in this section, in lieu of other parts of the proposal (e.g., budget justification, project description). The description should be narrative in nature and must not include any quantifiable financial information. Reviewers will evaluate the information during the merit review process and the cognizant NSF Program Officer will review it for programmatic and technical sufficiency.

Although these resources are not considered cost sharing as defined in 2 CFR § 215.23 (OMB Circular A-110), the Foundation does expect that the resources identified in the Facilities, Equipment, and Other Resources section will be provided, or made available, should the proposal be funded. AAG Chapter II.B.1 specifies procedures for use by the awardee when there are postaward changes to objective, scope or methodology.

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 sponsored projects office or in the references cited below.



Special Information and Supplementary Documentation

- **Postdoctoral Mentoring Plans**
- **Data Management Plans**
- **Letters of Support versus Letters of Commitment**



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

- **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



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.**



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 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

The screenshot shows the NSF website page for Data Management Plan Requirements. The page header includes the NSF logo and navigation links: HOME, FUNDING, AWARDS, DISCOVERIES, NEWS, PUBLICATIONS, STATISTICS, ABOUT, and FastLane. A search box is located in the top right corner. The main content area is titled "Dissemination and Sharing of Research Results" and contains the following sections:

- 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. Grantees are expected to encourage and facilitate such sharing. See [Award & Administration Guide \(AAG\) Chapter VI.D.4.](#)
- NSF Data Management Plan Requirements**

Proposals submitted or due on or after January 18, 2011, must include a supplementary document of no more than two pages labeled "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.C.2.i](#) 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.C.2.i](#) apply.

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

 - Engineering Directorate (ENG)
 - [Directorate-wide Guidance](#)
 - Geological Sciences Directorate (GEO)
 - [Division of Earth Sciences](#)
 - [Integrated Ocean Drilling Program](#)
 - [Division of Ocean Sciences](#)
 - Mathematical and Physical Sciences Directorate (MPS)
 - [Division of Astronomical Sciences](#)
 - [Division of Chemistry](#)
 - [Division of Materials Research](#)
 - [Division of Mathematical Sciences](#)
 - [Division of Physics](#)
 - Social, Behavioral and Economic Sciences Directorate (SBE)
 - [Directorate-wide Guidance](#)

[Data Management & Sharing Frequently Asked Questions \(FAQs\)](#) - updated November 30, 2010

<http://www.nsf.gov/bfa/dias/policy/dmp.jsp>



Proposal Development Strategies

Key Questions for Prospective Investigators

- What do you intend to do?
- Why do you want to do it?
- How do you plan to do it?
- How will you know if you succeed?
- What benefits would accrue if the project is successful?

These questions apply both to the technical aspects of the proposal and the way in which the project may make broader contributions.



Proposal Development Strategies for Individual Investigators

- **Determine your long-term research and education goals**
- **Develop your bright idea**
 - Survey the literature
 - Contact other investigators currently working on the same subject
 - Prepare a brief concept paper
 - Discuss with your colleagues and mentors
- **Read solicitation instructions carefully**



Proposal Development Strategies for Individual Investigators

- **Prepare to carry out your project**
 - Determine available resources
 - Realistically assess your needs
 - Develop preliminary data
 - Present to your colleagues, mentors, and students
- **Determine possible funding sources**
- **Understand the ground rules**



Find Support for Proposal Writing

- **NSF Publications**
 - Program announcements and solicitations
 - Proposal & Award Policies & Procedures Guide
 - Program Web pages
 - Funded project abstracts
 - Reports and special publications
- **Targeted workshops**
- **Program Officers**
- **Mentors on Campus**
- **Former panelists**
- **Sponsored Research Office**
- **Successful proposals**

Finally, serving as a reviewer is helpful as well!



Grants for Rapid Response Research (RAPID)

The RAPID funding mechanism is for projects having a severe urgency with regard to availability of, or access to data, facilities or specialized equipment, including quick-response research on natural or anthropogenic disasters and similar unanticipated events.



RAPID

- **Requests may be for up to \$200K and for one year of duration**
- **The project description is expected to be brief; no more than five pages**
- **Only internal merit review is required for RAPID proposals. Under rare circumstances, Program Officers may elect to obtain external reviews. If external merit review is to be used, then the PI will be informed**



EARLY-concept Grants for Exploratory Research (EAGER)

- **The EAGER funding mechanism may be used to support exploratory work in its early stages on untested, but potentially transformative, research ideas or approaches.**
- **This work is considered especially "high risk-high payoff" because it involves radically different approaches, applies new expertise, or engages novel disciplinary or interdisciplinary perspectives.**



EAGER

- **Requests may be for up to \$300K and for two years of duration**
- **Only internal merit review is required. Under rare circumstances, Program Officers may elect to obtain external reviews. If external merit review is to be used, then the PI will be informed**
- **No-cost extensions, and requests for supplemental funding may be requested but are subject to full external merit review**



National Science Foundation
WHERE DISCOVERIES BEGIN

For More Information

Ask Early, Ask Often!

[nsf.gov/staff](https://www.nsf.gov/staff)

[nsf.gov/staff/orglist.jsp](https://www.nsf.gov/staff/orglist.jsp)

[nsf.gov/about/career_opps/rotators/index.jsp](https://www.nsf.gov/about/career_opps/rotators/index.jsp)