

How to Prepare an NSF Proposal: The good, the bad, and the ugly.

NCURA 57th Annual Meeting August 4, 2015



Speaker

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



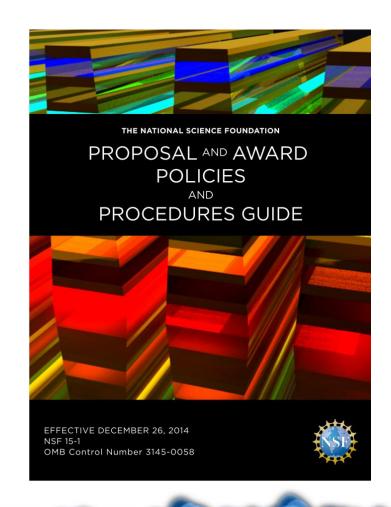
Topics Covered

- Funding Opportunities
- Proposal and Award Policies and Procedures Guide
- Types of Proposal Submissions
- Types of Funding Mechanisms
- Sections of an NSF Proposal



What is the Proposal & Award Policies & Procedures Guide?

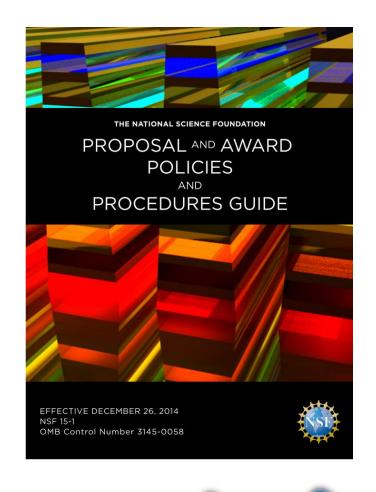
The Proposal and Award Policies and Procedures Guide (PAPPG) contains documents relating to NSF's proposal and award process. It has been designed for use by both our customer community and NSF staff and consists of two parts:





What is the Proposal & Award Policies & Procedures Guide? (Cont'd)

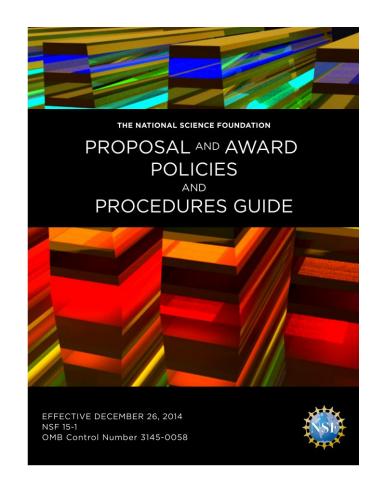
Part I is NSF's proposal preparation and submission guidelines -- the NSF Grant Proposal Guide (GPG) & the NSF Grants.gov Application Guide.





What is the Proposal & Award Policies & Procedures Guide? (Cont'd)

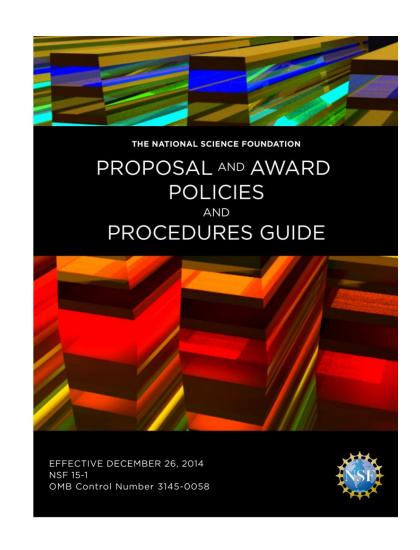
Part II is NSF's award and administration guidelines -- the documents used to guide, manage, and monitor the award and administration of grants and cooperative agreements made by NSF.





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 not be accepted or may be returned without review
- Describes process for withdrawals, returns, and declinations
- Describes the NSF Reconsideration Process





What to Look For in a Program Announcement or Solicitation

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



Navigating a Program Description

Division of Mathematical Sciences

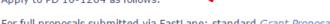
Algebra and Number Theory

CONTACTS

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PROGRAM GUIDELINES

Apply to PD 10-1264 as follows:



For full proposals submitted via FastLane: standard Grant Proposal Guide proposal preparation guidelines apply.

For full proposals submitted via Grants.gov: the NSF Grants.gov Application Guide; A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines applies. (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.isp? ods kev=grantsgovguide)

Important Information for Proposers

A revised version of the NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 15-1), is effective for proposals submitted, or due, on or after December 26, 2014. The PAPPG is consistent with, and, implements the new Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) (2 CFR § 200). Please be advised that the guidelines contained in NSF 15-1 apply to proposals submitted in response to this funding opportunity.

DUE DATES

Full Proposal Target Date: October 9, 2015

Second Friday of October

Second Friday in October, Annually Thereafter

Research proposals (as opposed to conference proposals) are expected to be submitted by the target date. An extension may be granted under unusual extenuating circumstances. provided that approval is obtained from the cognizant Program Director prior to the target date.

The Algebra and Number Theory program supports research in algebra, algebraic and arithmetic geometry, number theory, and representation theory.

Conferences

Principal Investigators should carefully read the program solicitation "Conferences and Workshops in the Mathematical Sciences" (link below) to obtain important information regarding the substance of proposals for conferences, workshops, summer/winter schools, and similar activities.

For conference proposals with budgets not exceeding \$50,000, which in accordance with NSF policy can be reviewed internally at NSF, the following target dates are in effect: For an event that will take place at some time prior to October 1 during a given year, the proposal should be submitted in October of the previous year. For an event that will occur in the period October 1 through December 31 of a given year, the proposal should be submitted in May of that year. A conference proposal with a budget request exceeding \$50,000 should be submitted roughly seven months before the event is scheduled to take place, in order to allow time for external review.

RELATED PROGRAMS

Focused Research Groups in the Mathematical Sciences Research Training Groups in the Mathematical Sciences

Faculty Early Career Development Program

Mathematical Sciences Postdoctoral Research Fellowships

NSF Graduate Research Fellowship Program

RELATED URLS

Conferences and Workshops in the Mathematical Sciences

THIS PROGRAM IS PART OF

Disciplinary Research Programs

What Has Been Funded (Recent Awards Made Through This Program, with Abstracts)

Map of Recent Awards Made Through This Program

News



Navigating a Program Solicitation

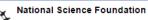
Enhancing Access to the Radio Spectrum (EARS)

PROGRAM SOLICITATION

NSF 15-550

REPLACES DOCUMENT(S):

NSF 14-529



Directorate for Mathematical & Physical Sciences Division of Astronomical Sciences

Directorate for Engineering
Division of Electrical, Communications and Cyber Systems

Directorate for Computer & Information Science & Engineering Division of Computer and Network Systems

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

June 02, 2015

IMPORTANT INFORMATION AND REVISION NOTES

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 15-1), which is effective for proposals submitted, or due, on or after December 26, 2014. The PAPPG is consistent with, and, implements the new Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance) (2 CFR § 200).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Enhancing Access to the Radio Spectrum (EARS)

Opportunities for interdisciplinary research that increases the efficiency of the radio spectrum, expanding the access to wireless-enabled services for all Americans.

Synopsis of Program:

The National Science Foundation's Directorates for Mathematical and Physical Sciences (MPS), Engineering (ENG), and Computer and Information Science and Engineering (CISE) are coordinating efforts to identify bold new concepts with the potential to

Award Information

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 20 to 25

Each proposal may request up to \$750,000 in total funding over a period of up to three years.

Anticipated Funding Amount: \$15,000,000

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.

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 Pl or Co-Pl:

A proposer may be a Principal Investigator (PI) or co-PI on up to two proposals.

Proposal Preparation and Submission Instructions

A. Proposal Preparation Instructions

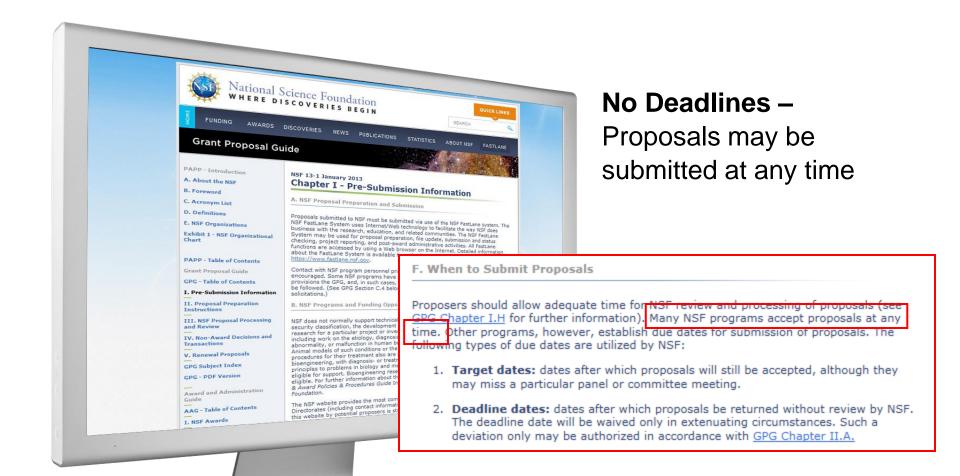
· Letters of Intent: Not required

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









Target Dates – Talk to the Program Office if you think you might miss the date

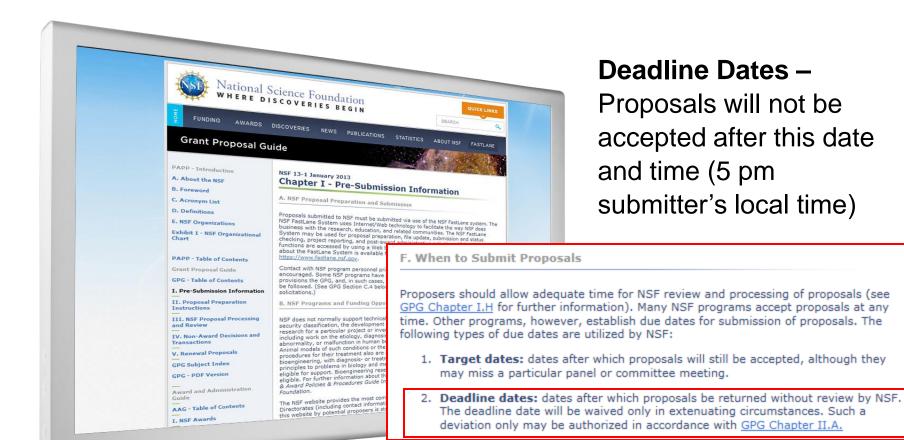
F. When to Submit Proposals

ABOUT NSF FASTLAND

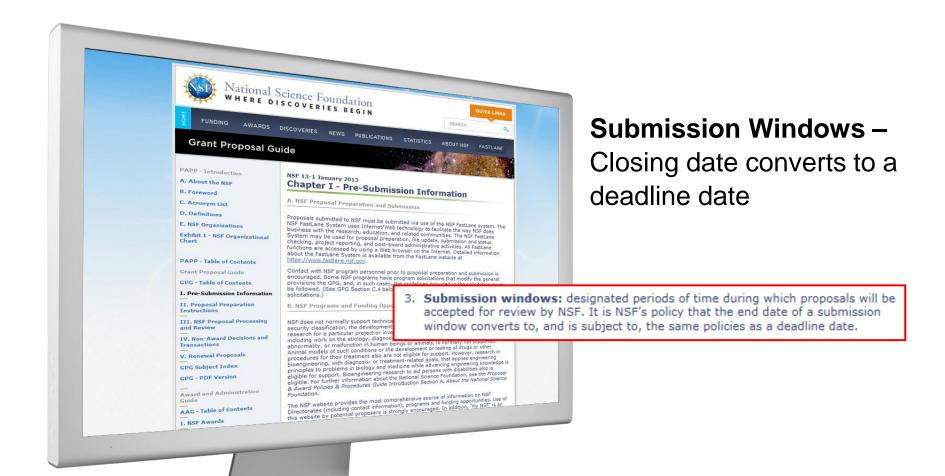
Proposers should allow adequate time for NSF review and processing of proposals (see GPG Chapter I.H for further information). Many NSF programs accept proposals at any time. Other programs, however, establish due dates for submission of proposals. The following types of due dates are utilized by NSF:

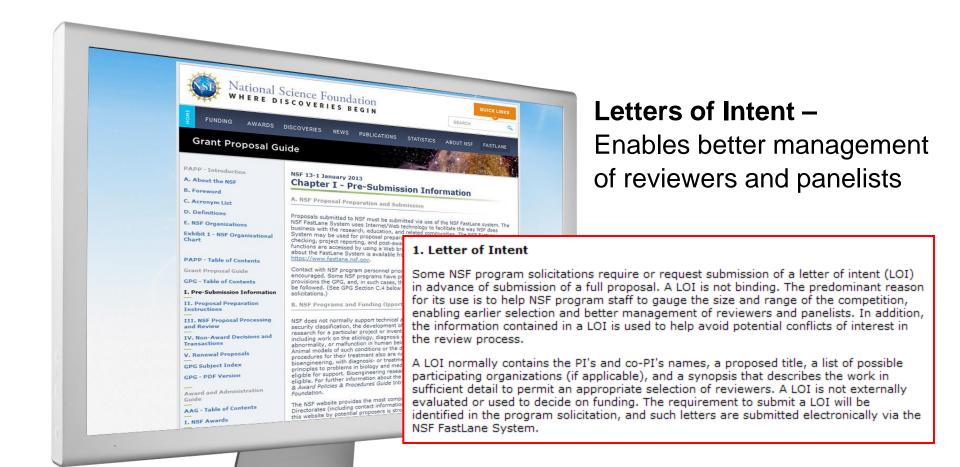
- Target dates: dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.
- Deadline dates: dates after which proposals be returned without review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with GPG Chapter II.A.



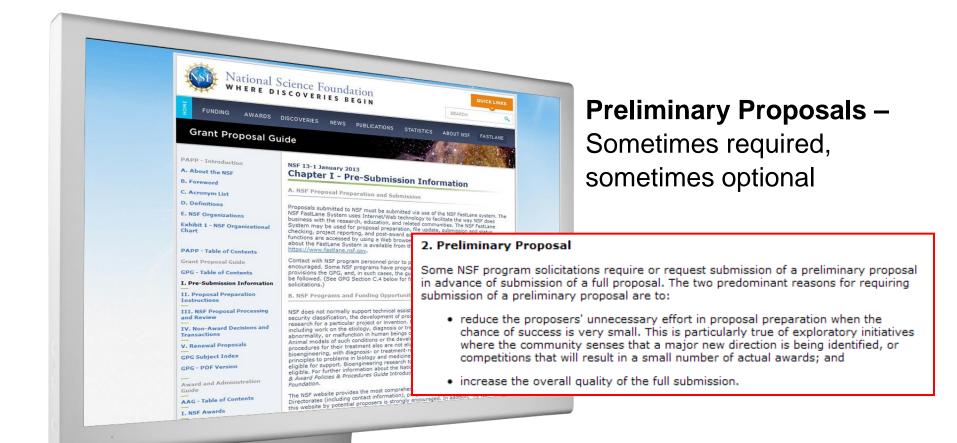














Types of Funding Mechanisms

- Research
- RAPID
- EAGER
- Ideas Lab
- Equipment
- Conference
- International Travel
- Fellowship
- Facility/Center



Proposals Not Accepted

- 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.
 - Demographic information about PIs and co-PIs
 - Authorization to deviate from proposal preparation requirements
 - List of suggested reviewers to include or not to include
 - Proprietary or privileged information
 - Proposal certifications



Cover Sheet

Many of the boxes on the cover sheet are electronically prefilled as part of the FastLane login process.

Example from FastLane

	COVER SHE	ET FC	R PRO	POSAL TO	O THE NATIO	NAL SC	ENCE FO	UNDA	TION
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☐ HISTORIC PLACES			,,		(GPG II.C.2.j)				
☐ SMALL GRANT FOR	EXPLOR. RESEARCH	(SGER) (GPG II.D.1)						
☐ VERTEBRATE ANIM	IALS (GPG II.D.5) IACU Assurance Number	IC App. Da	te						ERE EXACT COLOR PRETATION (GPG I.G.1)
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Division of Info	rmation Systems		4201 V	Vilson Boul	evard				
PI/PD FAX NUMBER			Arling	ton, VA 222	2301000				
703-292-3000		10.50	United	States					-9.4.44
NAMES (TYPED) PI/PD NAME		High D	egree	Yr of Degree	Telephone Numb	er	E	ectronic M	ail Address
Terry Demo		PhD		2005	703-292-100	n td@	ısf.gov		
CO-PI/PD		FIID		2005	/03-292-100	ua.	151.guv		
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NSF Merit Review 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?



Project Summary

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 GPG

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.

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

- 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.2i)
- 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)
- International Cooperative Activities Country Name(s) (See GPG II.C.2j)

Project Summary

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, insofar as possible, understandable to a scientifically or technically literate lay reader. It should not be an abstract of the proposal.

Proposals that do not contain the Project Summary, including an overview and separate statements on intellectual merit and broader impacts will not be accepted by FastLane or will be returned without review. 21 Additional instructions for preparation of the Project Summary are available in FastLane.

Table of Contents

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

Project Description (including Results from Prior NSF Support)

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

Grant Proposal Guide



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

additional information.

The proposal includes use of Human Subjects, supplemental information is required. See GPG Chapter II.D.7 for

If a Project Summary contains special characters, it must be uploaded as a Supplementary Document.

Project Description

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 GPG

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. 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. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified. These issues apply to both the technical aspects of the proposal and the way in which the project may make broader contributions.

The Project Description must contain, as a separate section within the narrative, 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 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.

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 ILC.2.i. for additional instructions for preparation of this section).

 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. Pls 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 (including any current funding) in the past five years, information on the award(s) is required, irrespective of whether the support was directly related to the proposal or not. Funding includes not just salary support, but any funding awarded by NSF. 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;
- a summary of the results of the completed work, including accomplishments, described in two separate sections, related to the Intellectual Merit and Broader Impact activities supported by the award;
- (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

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Results from Prior NSF Support

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Text from the GPG

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. Proposers should address what they want to do, why they want to do it, how they plan to do it, how they wall know if they succeed, and what benefits could accrue if the project is successful. The project activities may be based on previously established and/or innovative methods and approaches, but in either case must be well justified. These issues apply to both the technical aspects of the proposal and the way in which the project may make brader contributions.

The Project Description must contain, as a separate section within the narrative, 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 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.

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 ILC.2.j. for additional instructions for preparation of this section).

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(iii) Results from Prior NSF Support

If any PI or co-PI identified on the project has received NSF funding (including any current funding) in the past five years, information on the award(s) is required, irrespective of whether the support was directly related to the proposal or not. Funding includes not just salary support, but any funding awarded by NSF. 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;
- a summary of the results of the completed work, including accomplishments, described in two separate sections, related to the Intellectual Merit and Broader Impact activities supported by the award;
- (d) publications resulting from the NSF award;
- 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

Grant Proposal Guide II-9 NSF 13-1



Results from Prior NSF Support

Results from Prior NSF Support (extracted from 92-89)

If the Principal Investigator(s) has received NSF funding in the past five years, information on the prior award is required:

- 1. The NSF award number, amount, and period of support;
- 2. The title of the project;
- 3. A summary of the results of the completed work, including, for a research project, its contribution to the development of human resources in science and engineering;
- 4. List of publications resulting from the NSF award;
- 5. Brief description of available data, samples, physical collections, and other related research products not described elsewhere; and
- 6. If the proposal is for a renewal of a grant, a description of the relation of the completed work to the proposed work.

Results from Prior NSF Support (extracted from 15-1)

If any PI or co-PI identified on the project has received NSF funding (including any current funding) in the past five years, information on the award(s) is required, irrespective of whether the support was directly related to the proposal or not. In cases where the PI or co-PI has received more than one award (excluding amendments), they need only report on the one award most closely related to the proposal. Funding includes not just salary support, but any funding awarded by NSF. The following information must be provided:

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

(b)the title of the project;

(c)a summary of the results of the completed work, including accomplishments, supported by the award. The results must be separately described under two distinct headings, Intellectual Merit and Broader Impacts;

(d) a listing of the publications resulting from the NSF award (a complete bibliographic citation for each publication must be provided either in this section or in the References Cited section of the proposal);

(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.



References Cited

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

Text from the GPG

(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. See also instructions for completion of the Facilities, Equipment or Other Resources section of the proposal (GPG II.C.2.i).

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. Plis who wish to exceed the established page limitations for the Project Description must request and receive a deviation in advance of proposal submission. (GPG Chateful 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" (ARB) 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.)

e. 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. 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.

If there are no references cited, a statement to that effect should be included in this section of the proposal and uploaded into FastLane.

f. Biographical Sketch(es)

(i) 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.

²⁰If 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.





Biographical Sketches

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

Text from the GPG

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 (vears

(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 10 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 Uniform Resource Locator (URL) or other Persistent Identifier.

(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.
- Graduate Advisors and Postdoctoral Sponsors. A list of the names of the individual's own graduate advisor(s) and principal postdoctoral sponsor(s), and their current organizational affiliations.
- Thesis Advisor and Postgraduate-Scholar Sponsor. A list of all persons (including their
 organizational affiliations), with whom the individual has had an association as thesis advisor, or with
 whom the individual has had an association within the last five years as a postgraduate-scholar sponsor.

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Budget

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 BUDG	ET Y	EAR_	1	R NSF USE	ONLY	,
ORGANIZATION		PRC	POSAL			N (months)
NSF						Granted
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Terry Demo		NSF Fund	ed	Funds		Funds
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3.						
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5.					_	
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B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)	0.00	0.00	0.00		_	
O) POST DOCTORAL SCHOLARS O) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00	0.00	0.00		0	
3. (0) GRADUATE STUDENTS	0.00	0.00	0.00		0	
4. (0) UNDERGRADUATE STUDENTS					0	
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					0	
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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

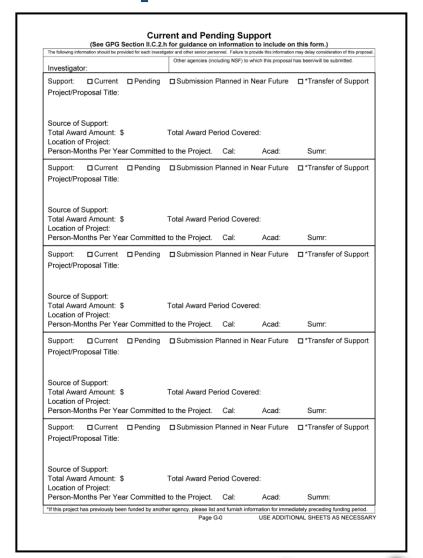
- Inclusion of voluntary committed cost sharing is prohibited in solicited & unsolicited proposals.
 - To be considered voluntary committed cost sharing, the cost sharing must meet all of the standards of <u>2 CFR § 200.306</u>, to include identification of cost sharing on the NSF budget.
 - Line M will 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.



Current & Pending Support

This section of the proposal calls for information on all current and pending support for ongoing projects and proposals.

Example from FastLane





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.

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 GPG II.C.2.i for more information.

Upload File



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

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 this project, and any 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. The Biological Sciences Directorate exception to this policy is delineated in GPG Chapter 1,6.2.

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 resources available to perform the effort proposed to satisfy both Intellectual Merit and Broader Impacts review oriteria. Proposers should describe only those resources that are directly applicable. Proposers should include an aggregated describe only internal and external resources (both physical and personnel) that the organization and its collaborators 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.

If there are no Facilities, Equipment and Other Resources to describe, a statement to that effect should be included in this section of the proposal and uploaded into FastLane.

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.

Postdoctoral Researcher Mentoring Plan. Each proposal³³ that requests funding to support postdoctoral researchers³⁴ must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals. If a Postdoctoral Researcher Mentoring Plan is

Grant Proposal Guide

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³⁰ For purposes of meeting the mentoring requirement, simultaneously submitted collaborative proposals, and, collaborative proposals that include subawards, constitute a single unified project. Therefore, only one mentoring plan may be submitted for the entire project.

³⁴ In situations where a postdoctoral researcher is listed in Section A of the NSF Budget, and is functioning in a Senior Project personnel capacity (i.e., responsible for the scientific or technical direction of the project), a mentoring plan is <u>not</u> required.

Special Information and Supplementary Documentation

Postdoctoral Mentoring Plans

Data Management Plans

Letters of Support versus Letters of Collaboration

International Implications



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



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



For More Information..... Ask Early, Ask Often!

policy@nsf.gov

