

## Geography and Spatial Sciences Program (GSS)

---

### PROGRAM SOLICITATION

NSF 12-570

---

### REPLACES DOCUMENT(S):

PD 98-1352

---



National Science Foundation

Directorate for Social, Behavioral & Economic Sciences  
Division of Behavioral and Cognitive Sciences

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

September 13, 2012

Regular proposal submission deadline

October 11, 2012

Second Thursday in October, Annually Thereafter

DDRI proposal submission deadline

February 14, 2013

Second Thursday in February, Annually Thereafter

DDRI proposal submission deadline

September 05, 2013

First Thursday in September, Annually Thereafter

Regular proposal submission deadline

### IMPORTANT INFORMATION AND REVISION NOTES

---

A revised version of the **NSF Proposal & Award Policies & Procedures Guide** (PAPPG), [NSF 13-1](#), was issued on October 4, 2012 and is effective for proposals submitted, or due, on or after January 14, 2013. Please be advised that the guidelines contained in [NSF 13-1](#) apply to proposals submitted in response to this funding opportunity.

Please be aware that significant changes have been made to the PAPPG to implement revised merit review criteria based on the National Science Board (NSB) report, [National Science Foundation's Merit Review Criteria: Review and Revisions](#). While the two merit review criteria remain unchanged (Intellectual Merit and Broader Impacts), guidance has been provided to clarify and improve the function of the criteria. Changes will affect the project summary and project description sections of proposals. Annual and final reports also will be affected.

A by-chapter summary of this and other significant changes is provided at the beginning of both the [Grant Proposal Guide](#) and the [Award & Administration Guide](#).

*Please note that this program solicitation may contain supplemental proposal preparation guidance and/or guidance that deviates from the guidelines established in the [Grant Proposal Guide](#).*

#### Important Information

This solicitation provides guidance regarding submission of proposals at a time when the Geography and Spatial Sciences (GSS) Program is implementing new processes and timing for the evaluation of proposals.

The solicitation notes that effective in mid-2012, GSS will conduct one annual competition for new research proposals submitted to the program. The next deadline for submission of regular research proposals for this competition will be Thursday, September 13, 2012. In future years, the proposal-submission deadline will be the 1st Thursday of September. Based on the evaluation of proposals in that one annual competition, some investigators may be invited to revise and resubmit proposals for a follow-up competition, but that opportunity will be limited to principal investigators who receive explicit invitations to resubmit from the GSS program officers because of the potential larger-scale, longer-term significance of their projects.

The deadlines for the submission of Doctoral Dissertation Research Improvement (DDRI) proposals will be the 2nd Thursday of October and the 2nd Thursday of February.

The solicitation notes special review criteria that GSS will ask reviewers and panel members to address the expected larger-scale, longer-term significance of a project as well as its likelihood of success.

The solicitation provides more specific guidance regarding many facets of proposal preparation, including clarification of specifications for doctoral dissertation research improvement (DDRI) proposals that previously were on a free-standing GSS

DDRI specifications page. Guidance also is provided for the inclusion of letters of collaboration or letters of commitment as supplementary documents within proposals, with recommended templates for such letters provided in the solicitation.

## SUMMARY OF PROGRAM REQUIREMENTS

---

### General Information

---

Program Title:

Geography and Spatial Sciences Program (GSS)

Synopsis of Program:

As specified in the Geography and Spatial Sciences Program [strategic plan](#), the goals of the NSF Geography and Spatial Sciences (GSS) Program are:

- To promote scientific research in geography and the spatial sciences that advances theory and basic understanding and that addresses the challenges facing society.
- To promote the integration of geographers and spatial scientists in interdisciplinary research.
- To promote education and training of geographers and spatial scientists in order to enhance the capabilities of current and future generations of researchers.
- To promote the development and use of scientific methods and tools for geographic research.

The Geography and Spatial Sciences Program sponsors research on the geographic distributions and interactions of human, physical, and biotic systems on the Earth's surface. Investigations are encouraged to propose plans for research about the nature, causes, and consequences of human activity and natural environmental processes across a range of scales. Projects on a variety of topics (both domestic and international) qualify for support if they offer promise of contributing to scholarship by enhancing geographical knowledge, concepts, theories, methods, and their application to societal problems and concerns. GSS encourages projects that explicitly integrate undergraduate and graduate education into the overall research agenda.

GSS provides support through a number of different funding mechanisms:

- Regular research awards
- Doctoral dissertation research improvement (DDRI) awards
- Faculty early-career development (CAREER) awards
- Awards for conferences, workshops, group-travel support, and community-development or community-serving activities
- Research coordination network (RCN) awards
- Rapid-response research (RAPID) awards
- Early-concept grants for exploratory research (EAGER) and creative research awards for transformative interdisciplinary ventures (CREATIV) may be supported in rare and unusual cases. (GSS strives to be open to ideas and approaches in early stages of development and emphasizes the potential longer-term significance of new lines of inquiry as part of its merit evaluation of all proposals.)

Cognizant Program Officer(s):

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

- Thomas J. Baerwald - Program Director, telephone: (703) 292-7301, email: [tbaerwal@nsf.gov](mailto:tbaerwal@nsf.gov)
- Kelley A. Crews - Program Director, telephone: (703) 292-8457, email: [kcrews@nsf.gov](mailto:kcrews@nsf.gov)
- Daniel Hammel - Program Director, telephone: (703) 292-4995, email: [dhammel@nsf.gov](mailto:dhammel@nsf.gov)
- Tyeshia Roberson - Program Assistant, telephone: (703) 292-8177, email: [tmrobers@nsf.gov](mailto:tmrobers@nsf.gov)

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

- 47.075 --- Social Behavioral and Economic Sciences

### Award Information

---

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 60 to 75

During a fiscal year, GSS expects to recommend (either on its own or jointly with one or more other NSF programs) a total of 25 to 30 regular research project awards, 30 to 35 doctoral dissertation research improvement (DDRI) awards, 2 to 4 faculty early-career development (CAREER) awards, and 3 to 6 awards to support conferences, workshops, group travel, and/or other community-development activities. Depending on circumstances and the quality of proposals submitted to GSS, two or three research coordination network (RCN) awards, RAPID awards, EAGER awards, and/or CREATIV awards may be recommended.

Anticipated Funding Amount: \$6,000,000 to \$7,000,000 pending availability of funds. Project budgets should be developed at scales appropriate for the work to be conducted. Regular research awards supported by GSS generally range from between \$40,000 to \$400,000. Doctoral dissertation research improvement (DDRI) awards may not exceed \$16,000. Faculty early-career development (CAREER) awards must be a minimum of \$400,000, with CAREER awards supported by GSS rarely exceeding \$550,000. Awards to support conferences, workshops, group travel, and/or other community-development activities generally range between \$20,000 and \$300,000. Research coordination network (RCN) awards generally range between \$300,000 and \$500,000. RAPID awards generally range between \$20,000 and \$60,000. All figures in the preceding sentences are totals that include both direct and indirect

costs for the entire duration of the award. Somewhat larger funding amounts may be possible if other NSF programs participate in joint funding of a project with GSS.

## Eligibility Information

---

### Organization Limit:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the Grant Proposal Guide, Chapter I, Section E.

### PI Limit:

None Specified

### Limit on Number of Proposals per Organization:

None Specified

### Limit on Number of Proposals per PI:

None Specified

## Proposal Preparation and Submission Instructions

---

### A. Proposal Preparation Instructions

- Letters of Intent: Not Applicable
- Preliminary Proposal Submission: Not Applicable
- Full Proposals:
  - Full Proposals submitted via FastLane: NSF Proposal and Award Policies and Procedures Guide, Part I: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg).
  - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=grantsgovguide](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide))

### B. Budgetary Information

- Cost Sharing Requirements: Inclusion of voluntary committed cost sharing is prohibited.
- Indirect Cost (F&A) Limitations: Not Applicable
- Other Budgetary Limitations: Other budgetary limitations apply. Please see the full text of this solicitation for further information.

### C. Due Dates

- Full Proposal Deadline(s) (due by 5 p.m. proposer's local time):
  - September 13, 2012
    - Regular proposal submission deadline
  - October 11, 2012
    - Second Thursday in October, Annually Thereafter
    - DDRI proposal submission deadline
  - February 14, 2013
    - Second Thursday in February, Annually Thereafter
    - DDRI proposal submission deadline
  - September 05, 2013
    - First Thursday in September, Annually Thereafter
    - Regular proposal submission deadline

## Proposal Review Information Criteria

---

Merit Review Criteria: National Science Board approved criteria. Additional merit review considerations apply. Please see the full text of this solicitation for further information.

## Award Administration Information

---

Award Conditions: Standard NSF award conditions apply.

## TABLE OF CONTENTS

---

### Summary of Program Requirements

- I. Introduction
- II. Program Description
- III. Award Information
- IV. Eligibility Information
- V. Proposal Preparation and Submission Instructions
  - A. Proposal Preparation Instructions
  - B. Budgetary Information
  - C. Due Dates
  - D. FastLane/Grants.gov Requirements
- VI. NSF Proposal Processing and Review Procedures
  - A. Merit Review Principles and Criteria
  - B. Review and Selection Process
- VII. Award Administration Information
  - A. Notification of the Award
  - B. Award Conditions
  - C. Reporting Requirements
- VIII. Agency Contacts
- IX. Other Information

## I. INTRODUCTION

---

As specified in the Geography and Spatial Sciences Program [strategic plan](#), the goals of the NSF Geography and Spatial Sciences (GSS) Program are:

- To promote scientific research in geography and the spatial sciences that advances theory and basic understanding and that addresses the challenges facing society.
- To promote the integration of geographers and spatial scientists in interdisciplinary research.
- To promote education and training of geographers and spatial scientists in order to enhance the capabilities of current and future generations of researchers.
- To promote the development and use of scientific methods and tools for geographic research.

The Geography and Spatial Sciences Program sponsors research on the geographic distributions and interactions of human, physical, and biotic systems on the Earth's surface. Investigations are encouraged to propose plans for research about the nature, causes, and consequences of human activity and natural environmental processes across a range of scales. Projects on a variety of topics (both domestic and international) qualify for support if they offer promise of contributing to scholarship by enhancing geographical knowledge, concepts, theories, methods, and their application to societal problems and concerns. GSS encourages projects that explicitly integrate undergraduate and graduate education into the overall research agenda.

GSS provides support through a number of different funding mechanisms:

- Regular research awards, which provide support for individual researchers or teams of researchers for time periods ranging from one to five years to conduct investigations of specific research projects.
- Doctoral dissertation research improvement (DDRI) awards, which provide support for doctoral students for time periods ranging from one to two years to conduct investigations of specific research projects associated with doctoral dissertations (or, in some graduate programs, in publications that substitute for dissertations).
- Faculty early-career development (CAREER) awards, which support individual researchers at early stages in their careers for five years to conduct research programs consisting of multiple research projects and well-integrated educational activities.
- Awards for conferences, workshops, group-travel support, and community-development or community-serving activities, which provide funding for groups of researchers for one to five years to support activities that show strong prospects for enhancing current and future research and related activity within and beyond geography and the spatial sciences.
- Rapid-response research (RAPID) awards, which provide support for individuals or teams of researchers for one to two years to capture ephemeral data that is critical for the conduct of specific, well-formulated research projects.
- Early-concept grants for exploratory research (EAGER) and creative research awards for transformative interdisciplinary ventures (CREATIV) may be supported in rare and unusual cases. (GSS strives to be open to ideas and approaches in early stages of development and emphasizes the potential longer-term significance of new lines of inquiry as part of its merit evaluation of all proposals.)

## II. PROGRAM DESCRIPTION

---

Through its competitive grants competitions, the Geography and Spatial Sciences (GSS) Program of the U.S. National Science Foundation seeks to advance basic understanding and methods in geography, other spatial sciences, and related fields to enhance fundamental knowledge and address societal problems. GSS is committed to support basic geographic and spatial scientific research as well as wider-ranging interdisciplinary research in which geographers and spatial scientists may play critical roles. In alignment with the NSF strategic plan for Fiscal Years 2012 through 2016, [Empowering the Nation Through Discovery and Innovation](#), GSS expects that the research it supports will draw upon and enhance fundamental theory in geography and/or other spatial sciences, and it will encourage and support potentially transformative research that has potential larger-scale, longer-term significance for both basic understanding and for societal benefit. As noted in the [GSS strategic plan](#), GSS will seek to identify and support research projects that may potentially transform geography, other spatial sciences, and related fields by trying to assess the longer-term potential as well as the more immediate significance of research projects.

Proposals submitted for consideration by the Geography and Spatial Sciences Program at NSF will be most competitive if the research is grounded in relevant geographical theory, if it focuses on one or a few core questions grounded in the theoretical framework that has been established, if it articulates how scientifically sound methods will be used to explore the validity of answers to the core questions, and if the results are likely to contribute not only specific answers to those specific questions but also to the enhancement of broader geographic and/or spatial scientific theory. The project can draw on and contribute to theory in other fields, too, but to obtain at least some funding from GSS, efforts should be made to enhance fundamental geographic theory. The investigators should plan to disseminate their results through presentations and publications for geographers and spatial scientists as well as other relevant communities.

GSS supports research that involves development of methods and techniques to advance geographic and spatial scientific research, but to be most competitive, such methodological development should be linked to inquiries that directly address substantive questions that are grounded in broader theoretical contexts. GSS rarely funds methodological development for its own sake, but the development of new methods that might have much wider-ranging utility can be very attractive when coupled with convincing demonstrations of their practical utility to address compelling substantive problems.

GSS frequently engages in joint review of regular research proposals with other NSF programs. Such joint review (or co-review) entails multiple programs coordinating the review of a single project proposal submitted to NSF. Efforts are made to enable such joint review to provide "double opportunity" rather than "double jeopardy" for applicants, because a single program can provide support for proposed work it finds meritorious even if other programs are not as enthusiastic about the proposed work. Investigators who believe that their work might be appropriate for joint review are encouraged to contact program officers for all programs they think might have interest in their work well in advance of proposal-submission deadlines in order to assess whether joint review may be a viable option and to write their proposal accordingly.

GSS provides support for projects using a set of different funding mechanisms:

1. Regular research awards. These awards provide support for individual researchers or teams of researchers for time periods ranging from one to five years to conduct investigations of specific research projects. Project budgets should be developed at scales appropriate for the work to be conducted. Regular research awards supported by GSS generally range from between \$40,000 to \$400,000. (These totals include both direct and indirect costs for the entire duration of the award. Somewhat larger funding amounts may be possible if other NSF programs participate in joint funding of a project with GSS.)

2. Doctoral dissertation research improvement (DDRI) awards. These awards provide support for doctoral students for time periods ranging from one to two years to conduct investigations of specific research projects associated with doctoral dissertations (or, in some graduate programs, in publications that substitute for dissertations). Project budgets should be developed at scales appropriate for the work to be conducted and may only include costs directly associated with the conduct of dissertation research. Direct costs are to be used for field, lab, and/or data-collection expenses not normally underwritten by the student's university. (Student stipends, tuition expenses, assistantships, and the doctoral advisor's travel expenses are not eligible.) DDRI awards recommended by GSS will not exceed \$16,000, a total that includes both direct and indirect costs over the duration of the award. Additional information about DDRI awards made by GSS and other programs in the Directorate for Social, Behavioral, and Economic Sciences (SBE) is available in the [SBE DDRI solicitation](#).

3. Faculty early-career development (CAREER) awards. These awards provide support for individual researchers at early stages in their careers for five years to conduct research programs consisting of multiple research projects and well-integrated educational activities. Project budgets should be developed at scales appropriate for the work to be conducted. CAREER awards must be a minimum of \$400,000, with CAREER awards supported by GSS rarely exceeding \$550,000. (These totals include both direct and indirect costs for the entire duration of the award. Somewhat larger funding amounts may be possible if other NSF programs participate in joint funding of a project with GSS.) CAREER proposals must be prepared and submitted in accordance with [NSF-wide CAREER specifications](#). Note that the submission deadline for CAREER proposals is at a different time than proposal-submission deadline for other proposals submitted to GSS.

4. Awards for conferences, workshops, group-travel support, and community-development activities. These awards provide funding for groups of researchers for one to five years to support activities that show strong prospects for enhancing current and future research and related activity within and beyond geography and the spatial sciences. Project budgets should be developed at scales appropriate for the work to be conducted. These awards generally range between \$20,000 and \$300,000. (These totals include both direct and indirect costs for the entire duration of the award.) Proposals for any of these kinds of awards must be submitted by the proposal-submission deadline specified for regular research proposals.

5. Research coordination network (RCNs) awards. These awards provide support for groups of researchers for three to five years to facilitate and broaden interactions within and beyond geographic and spatial science research communities in ways that will enhance basic research activities in the future. Project budgets should be developed at scales appropriate for the work to be conducted. RCN awards generally range between \$300,000 and \$500,000. (These totals include both direct and indirect costs for the entire duration of the award. Somewhat larger funding amounts may be possible if other NSF programs participate in joint funding of a project with GSS.) Additional information about RCN awards is accessible from the [RCN solicitation](#). RCN proposals submitted to GSS must be submitted by the proposal-submission deadline specified for regular research proposals.

6. Rapid-response research (RAPID) awards. These awards provide support for individuals or teams of researchers for one to two years to capture ephemeral data that is critical for the conduct of specific, well-formulated research projects. Although project plans may be precipitated by sudden, unexpected events or circumstances, proposals must show the same theoretical grounding, focus on specific questions, and use of scientifically sound procedures that is expected of regular research proposals. Proposals seeking to gather data quickly and later determine how the data will be used will not be competitive. Project budgets should be developed at scales appropriate for the work to be conducted and generally should focus on activities related to the collection of ephemeral data, not to follow-up analysis and dissemination. RAPID awards generally range between \$20,000 and \$60,000. (These totals include both direct and indirect costs for the entire duration of the award. Somewhat larger funding amounts may be possible if other NSF programs participate in joint funding of a project with GSS.) GSS program officers must be contacted before a RAPID proposal is submitted.

### III. AWARD INFORMATION

---

Anticipated Type of Award: Continuing Grant or Standard Grant

Estimated Number of Awards: 60 to 75

During a fiscal year, GSS expects to recommend (either on its own or jointly with one or more other NSF programs) a total of 25 to 30 regular research project awards, 30 to 35 doctoral dissertation research improvement (DDRI) awards, 2 to 4 faculty early-career development (CAREER) awards, and 3 to 6 awards to support conferences, workshops, group travel, and/or other community-development activities. Depending on circumstances and the quality of proposals submitted to GSS, two or three research coordination network (RCN) awards, RAPID awards, EAGER awards, and/or CREATIV awards may be recommended.

Anticipated Funding Amount: \$6,000,000 to \$7,000,000 pending availability of funds. Project budgets should be developed at scales appropriate for the work to be conducted. Regular research awards supported by GSS generally range from between \$40,000 to \$400,000. Doctoral dissertation research improvement (DDRI) awards may not exceed \$16,000. Faculty early-career development (CAREER) awards must be a minimum of \$400,000, with CAREER awards supported by GSS rarely exceeding \$550,000. Awards to support conferences, workshops, group travel, and/or other community-development activities generally range between \$20,000 and \$300,000. Research coordination network (RCN) awards generally range between \$300,000 and \$500,000. RAPID awards generally range between \$20,000 and \$60,000. All figures in the preceding sentences are totals that include both direct and indirect costs for the entire duration of the award. Somewhat larger funding amounts may be possible if other NSF programs participate in joint funding of a project with GSS.

### IV. ELIGIBILITY INFORMATION

---

Organization Limit:

The categories of proposers eligible to submit proposals to the National Science Foundation are identified in the Grant Proposal Guide, Chapter I, Section E.

PI Limit:

None Specified

Limit on Number of Proposals per Organization:

None Specified

Limit on Number of Proposals per PI:

None Specified

### V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

---

#### A. Proposal Preparation Instructions

---

Full Proposal Preparation Instructions: Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg). Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov). Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: ([http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=grantsgovguide](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=grantsgovguide)). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [nsfpubs@nsf.gov](mailto:nsfpubs@nsf.gov).

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

Collaborative Proposals. All collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. Chapter II, Section D.4 of the Grant Proposal Guide provides additional information on collaborative proposals.

Important Proposal Preparation Information: FastLane will check for required sections of the full proposal, in accordance with *Grant Proposal Guide* (GPG) instructions described in Chapter II.C.2. The GPG requires submission of: Project Summary; Project Description; References Cited; Biographical Sketch(es); Budget; Budget Justification; Current and Pending Support;

Facilities, Equipment & Other Resources; Data Management Plan; and Postdoctoral Mentoring Plan, if applicable. If a required section is missing, FastLane will not accept the proposal.

Please note that the proposal preparation instructions provided in this program solicitation may deviate from the GPG instructions. If the solicitation instructions do not require a GPG-required section to be included in the proposal, insert text or upload a document in that section of the proposal that states, "Not Applicable for this Program Solicitation." Doing so will enable FastLane to accept your proposal.

#### Proposal Format

Proposals not in conformance with the proposal-preparation requirements of the GPG or NSF Grants.gov Application Guide may be returned without review. In some cases noted specifically below, however, guidance provided below for specific parts of proposals and/or for specific kinds of proposals takes precedent over the requirements specified in the GPG and NSF Grants.gov Application Guide. Carefully review this section to ensure that proposals are prepared properly for the specific kind of proposal being submitted to GSS.

#### **Personnel**

Different individuals may play different roles in the conduct of a project. Use the following definitions to determine which personnel fall into which category.

- **Principal Investigators** -- Individuals who will assume responsibility for an award resulting from this competition, will help manage the award, and are listed on the cover sheet of the proposal. (Note that for DDRI proposals, the student's doctoral advisor or some other supervising faculty member should be listed as the PI and the doctoral student whose dissertation research will be supported should be listed as a co-PI.)
- **Senior Personnel** -- All Principal Investigators, any other named senior personnel who will receive salary support, and any non-salaried senior investigators who will play lead roles in the conduct of the project. This group may include active participants in the research team from outside the U.S. (For RCN proposals, all members of the proposed steering committee are considered to be senior personnel.)
- **Project Participants** -- Every person involved with the research project, including students.

#### **Proposal Cover Sheet**

For the program solicitation number, use the following solicitation numbers:

- For DDRI proposals, use the solicitation number for the [SBE DDRI solicitation](#)
- For CAREER proposals, use the solicitation number for the [CAREER solicitation](#)
- For regular research proposals and all other types of proposals, use the solicitation number for this solicitation

When selecting which NSF organizational unit should consider your proposal, if you want GSS as the primary program to manage your proposal, select BCS-Geography and Spatial Sciences. You may select additional programs if you would like those programs to consider joint review of your proposal with GSS. (If you'd like another program to manage your proposal but have GSS engage in joint review, select that program first and then select BCS-Geography and Spatial Sciences.)

The title of the proposal should describe the project in concise, informative language so that a scientifically or technically literate reader could understand what the project is about. Do not use "cute" subtitles. No special prefixes are needed for regular research proposals or proposals for conferences, workshops, group-travel, or other community-development activities, but use the following prefixes for these other specific types of proposals:

- For DDRI proposals, place "Doctoral Dissertation Research:" at the start of the title.
- For CAREER proposals, place "CAREER:" at the start of the title.
- For RCN proposals, place "RCN:" at the start of the title.
- For RAPID proposals, place "RAPID:" at the start of the title.

Provide complete information requested on the cover sheet for the PI and for up to four co-PIs. Note the following special requirements

- For DDRI proposals, the student's doctoral advisor or some other supervising faculty member should be listed as the PI and the doctoral student whose dissertation research will be supported should be listed as a co-PI.
- For RCN proposals, the network coordinator should be listed as the PI and up to four members of the RCN steering committee listed as co-PIs. Any other members of the RCN steering committee should be entered into FastLane as senior personnel.
- For CAREER proposals, specify only the CAREER applicant as a PI. No co-PIs are permitted.

#### **Project Summary**

As specified in Chapter II, Section C.2.b of the NSF Grant Proposal Guide, the 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. 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.

- For RCN proposals, note special requirements for items to be included in the project summary as specified in the RCN solicitation.

#### **Project Description**

As specified in Chapter II, Section C.2.d of the NSF *Grant Proposal Guide*, the project description should be a clear statement of the work to be undertaken. To be competitive in GSS competitions, GSS recommends that the project description provide clear descriptions of relevant literature and theoretical frameworks within which the project is set, a complete description of the research methods that will be used, and discussion of the expected intellectual merit and broader impacts that may result from the project. PIs are encouraged to note the special review criteria that are used to complement consideration of the NSF merit review criteria and to explicitly identify the expected larger-scale, longer-term significance of their project as well as its likelihood of success. Letters of support from other individuals and/or organizations that are not permitted as supplementary documents may be included in the project description.

- For RCN proposals, note special requirements for items to be included in the project description as specified in the RCN solicitation.

**Please note that per guidance in the GPG, the Project Description must contain, as a separate section within the narrative, a discussion of the broader impacts of the proposed activities. You can decide where to include this section within the Project Description.**

As specified in Chapter II, Section C.2.d.iii of the NSF *Grant Proposal Guide*, the results from prior NSF support should be described in a separate section within the project description if the PI and/or any co-PIs have had NSF funding within the last five years.

- For DDRI proposals, results from prior support do not need to be provided for the PI or any other senior personnel as specified in the SBE DDRI solicitation.

With the exceptions noted below, the project description may not be more than fifteen (15) pages in length. Those exceptions are as follows:

- For DDRI proposals, project description text may not exceed ten (10) pages. Up to two (2) additional pages in the project description may be used to present graphics that illustrate any portion(s) of the project description. These graphics may be maps, photos, satellite imagery, flow charts, or any other format that is predominantly graphic rather than textual. Captions on the graphics pages must be short and cannot incorporate lengthy explanatory statements. Each graphic must be referenced from the text in the project description. Graphics may also be included along with text in the first ten (10) pages of the project description, but Pages 11 and 12 of the project description cannot have any content other than graphics and brief captions.
- For RAPID proposals, as specified in Chapter II, Section D.1 of the *Grant Proposal Guide*, the project description is expected to be no longer than five (5) pages in length. (Note that prior approval from a GSS program officer is required to submit a RAPID proposal of any length to GSS. If a PI wishes to submit a somewhat longer RAPID project description, permission should be obtained from the program director during pre-submission communications.)

### **References**

As specified in Chapter II, Section C.2.e of the NSF *Grant Proposal Guide*, information about references cited in the project description must be provided in a separate section of the proposal.

### **Biographical Sketches**

As specified in Chapter II, Section C.2.f of the NSF *Grant Proposal Guide*, a biographical sketch of no more than two (2) pages in length must be provided for the PI, each co-PI, and each person identified as senior personnel. All biographical sketches should be prepared in conformance with the requirements specified in the *GPG* and should include identification of collaborators and advisors/advisees.

### **Budgets**

As specified in Chapter II, Section C.2.g of the NSF *Grant Proposal Guide*, an annual budget form as well as a cumulative budget form should be prepared for each organization submitting a proposal. If the main organizational budget includes funding for subawards, a subaward budget should be included for each subawardee. The subaward budget should use the NSF budget forms and include an annual budget for each year the subaward will be in effect as well as a cumulative budget. A narrative justification of up to three pages in length should follow each organization's budget forms.

### **Current and Pending Support**

As specified in Chapter II, Section C.2.h of the NSF *Grant Proposal Guide*, Each person identified as a PI, as a co-PI, or as senior personnel must submit a current and pending support form. This proposal is considered a pending activity and should be listed on the form for all PIs and senior personnel.

### **Facilities, Equipment, and Other Resources**

As specified in Chapter II, Section C.2.i of the NSF *Grant Proposal Guide*, a statement should be provided for each organization submitting a proposal specifying the organizational resources available to perform the proposed work. If no special resources are required, a statement to that effect should be provided in this section.

### **Post-Doctoral Mentoring Plan**

As specified in Chapter II, Section C.2.j of the NSF *Grant Proposal Guide*, a post-doctoral mentoring plan should be provided if any funding is requested to support a post-doctoral researcher in the proposal budget. The post-doc mentoring plan must be no longer than one (1) page in length and must be included as a supplementary document. While some NSF programs permit or require a mentoring plan for students to be supported by an award, GSS does not permit the inclusion of a graduate and/or undergraduate student mentoring plan as a supplementary document. PIs who wish to include such plans as part of the project description for their proposal may do so.

### **Data-Management Plan**

As specified in Chapter II, Section C.2.j of the NSF *Grant Proposal Guide*, all proposals must include as a supplementary document a plan for data management and sharing the products of research. The data-management plan to be submitted with a proposal must be no longer than two (2) pages in length and must be included as a supplementary document. For collaborative sets of proposals submitted together for the same project, only one data-management plan should be submitted for the project.

In preparing their data-management plans, PIs are strongly encouraged to address all five of the points specified in the *GPG*. PIs are especially encouraged to specify how they intend to make data, software, and other products of the research readily available to potential users through institutionally based archives, repositories, and/or distribution networks so that the products have easy access for long time periods.

### **Letters of Collaboration or Letters of Commitment**

Brief statements, whether written as letters or as free-standing e-mail messages from individuals and/or organizations that will work with the PIs and/or provide in-kind support for the proposed project, may be included as supplementary documents. Such letters are not needed from individuals included as senior personnel on a project or from subawardee organizations, because their involvement in the project is affirmed by the inclusion of their biographical sketches and/or subaward budgets.

Letters of collaboration or letters of commitment should focus on the willingness of the letter's author to collaborate or provide in-kind support for the project in ways that have been outlined in the project description. Such letters should not argue for support of the project by articulating in greater detail what activities the collaborator will undertake and/or by elaborating reasons for supporting the project. Such additional text may be included in the project description of the proposal but is not permitted in a supplementary

document.

GSS program directors recommend the use of a template like one of the following for letters of collaboration or letters of commitment. If one of these templates or very similar text is not used, the text provided by the letter's author should be equally brief and to-the-point. Inclusion of longer letters may result in the PIs being forced to remove such letters (with no other changes to the proposal permitted), or NSF may return the proposal without review.

Suggested template for a letter of collaboration:

To: NSF Geography and Spatial Sciences (GSS) Program

From: \_\_\_\_\_  
(Printed name of the individual collaborator or name of the organization and name and position of the official submitting this memo)

By signing below (or transmitting this message electronically), I acknowledge that I am listed as a collaborator on the proposal titled "\_\_\_\_\_(proposal title)\_\_\_\_\_" with \_\_\_\_\_(PI name)\_\_\_\_\_ as the Principal Investigator. I agree to undertake the tasks associated with me as described in the project description of this proposal.

Signed: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Date: \_\_\_\_\_

Suggested template for a letter of commitment:

To: NSF Geography and Spatial Sciences (GSS) Program

From: \_\_\_\_\_  
(Printed name of the individual collaborator or name of the organization and name and position of the official submitting this memo)

By signing below (or transmitting this message electronically), I acknowledge that I will assist the investigator(s) in the conduct of work outlined in the proposal titled "\_\_\_\_\_(proposal title)\_\_\_\_\_" with \_\_\_\_\_(PI name)\_\_\_\_\_ as the Principal Investigator. I commit to provide or make available the resources designated in the proposal.

Signed: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Date: \_\_\_\_\_

Lengthier letters from others that articulate what activities a collaborator may undertake and/or that provide arguments for support of a project may be included in the project description.

(Note: When special program solicitations, like the Facilitating Research at Primarily Undergraduate Institutions solicitation, permit special kinds of supplementary documents, they may be permitted in proposals submitted to GSS. If you have questions regarding the appropriateness of certain kinds of submissions, contact the GSS program officers well in advance of the proposal-submission deadline for clarification.)

#### ***IRB and/or IACUC Certifications.***

If the submitting organization's Institutional Review Board (IRB) has approved plans for research involving human subjects or the Institutional Animal Care and Use Committee (IACUC) has approved research involving vertebrate animals, certification of that may be included on appropriate sections of the cover sheet. Documentation of the certification may be included as a supplementary document, but that is not required if sufficient information is provided by the sponsored research office on the cover sheet of the proposal.

If the IRB and/or IACUC have not approved the research plans when the proposal is submitted, the appropriate box(es) should be checked on the cover sheet and "Pending" should be listed on the line that follows. If IRB or IACUC approval is granted while the proposal is under review at NSF, certification of the approval should be sent to the managing GSS program director. If the IRB or IACUC asks that plans be forwarded to it for approval, have the application ready to go, because notification from the program director that she/he would like to recommend the proposal for an award may come with a very brief time period during which necessary materials (including the IRB or IACUC certification) must be obtained. If the required certifications cannot be supplied quickly, GSS program directors may have to turn their attention to other meritorious projects that can be funded right away.

Most IRB or IACUC approvals are valid for specific time periods. If the expiration of the current approval will occur before or soon after the possible start date for an award, be prepared to seek renewal of the approval so that you have active certification if you are informed the proposal will be recommended for funding. Once you receive written certification that your renewal has been approved, forward it to the managing program officer of your proposal.

#### ***Other Supplementary Documents***

Unless authorized here or in the Grant Proposal Guide, no other materials should be included in this section. Survey or interview protocols are not permitted in this section, nor are reprints of articles previously published by the investigators. Proposals that include materials in this section that belong in the project description may be returned without review.

- For DDRI proposals, a statement from the department chair or the advisor certifying the student's progress towards the degree should NOT be included. GSS funding decisions will be based on the quality and the coherence of the project as described in the proposal, not on the positive comments that others may make about the doctoral student. (This clarifies for GSS the possible inclusion of such letters, which are permitted or required by other SBE programs.)
- For RCN proposals, one-page summaries of the relationship between the proposed RCN project and the current research activities for each investigator should NOT be included as supplementary documents. Such information may be included for some or all of the members of the steering committee within the project description, or brief reference to relevant activities may be specified in the list of "synergistic activities" in the biographical sketches of the steering committee members. (This deviates from the specifications in the RCN solicitation, which permits such statements as supplementary documents.)

#### ***Appendices***

No appendices are permitted.

## B. Budgetary Information

---

Cost Sharing: Inclusion of voluntary committed cost sharing is prohibited

Other Budgetary Limitations:

Project budgets should be developed at scales appropriate for the work to be conducted. Within that context, the following budgetary ranges and limitations should be considered. Note that all figures provided are total support (including both direct and indirect costs) for the duration of a project. Except when there are fixed upper limits for specific kinds of awards, somewhat larger funding amounts may be possible if other NSF programs participate in joint funding of a project with GSS

- For regular research proposals, there are no absolute limitations, but awards supported by GSS generally range from between \$40,000 to \$400,000. Regular research awards may be up to five years in duration.
- For DDRI proposals, total awards recommended by GSS may not exceed \$16,000. Student stipends, tuition expenses, assistantships, and the doctoral advisor's travel expenses are NOT eligible for support. Travel to conferences to disseminate the results of research and obtain constructive feedback prior to completion of the dissertation may be included in the proposal, but DDRI awards recommended by GSS should not have direct conference travel costs that exceed \$1,000 for one conference or a total of \$1,500 for two conferences. DDRI awards will not be recommended by GSS solely to support travel to conferences to disseminate research results. DDRI awards may be up to two years in duration.
- For CAREER proposals, awards recommended by GSS must be for a minimum of \$400,000. CAREER awards supported by GSS rarely exceed \$550,000. CAREER awards must be five years in duration.
- For proposals seeking support for conferences, workshops, group travel, and/or other community-development activities, there are no absolute limitations, but these kinds of awards supported by GSS generally range between \$20,000 and \$300,000. These kinds of awards may be up to five years in duration.
- For RCN proposals, awards recommended by GSS may not exceed \$500,000. RCN awards supported by GSS generally range between \$300,000 and \$500,000. RCN awards may be up to five years in duration.
- For RAPID proposals, awards recommended by GSS may not exceed \$200,000. RAPID awards recommended by GSS generally range between \$20,000 and \$60,000. RAPID awards may be up to two years in duration.

## C. Due Dates

---

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

September 13, 2012

Regular proposal submission deadline

October 11, 2012

Second Thursday in October, Annually Thereafter

DDRI proposal submission deadline

February 14, 2013

Second Thursday in February, Annually Thereafter

DDRI proposal submission deadline

September 05, 2013

First Thursday in September, Annually Thereafter

Regular proposal submission deadline

Effective in mid-2012, the Geography and Spatial Sciences (GSS) Program will conduct one annual competition for new research proposals submitted to the program. The next deadline for submission of regular research proposals for this competition will be Thursday, September 13, 2012. In future years, the proposal-submission deadline will be the 1st Thursday of September. Based on the evaluation of proposals in that one annual competition, some investigators may be invited to revise and resubmit proposals for a follow-up competition, but that will be limited to proposals whose principal investigators received explicit invitations to resubmit from the GSS program officers. Details are provided in the "Timing of Proposal Submission and Evaluation" section below.

Note that the deadlines on the 2nd Thursday of October and the 2nd Thursday of February apply only to the submission of Doctoral Dissertation Research Improvement (DDRI) proposals.

See the GSS Program solicitation for more information.

## D. FastLane/Grants.gov Requirements

---

- For Proposals Submitted Via FastLane:

Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are available at: <https://www.fastlane.nsf.gov/a1/newstan.htm>. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail [fastlane@nsf.gov](mailto:fastlane@nsf.gov). The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

**Submission of Electronically Signed Cover Sheets.** The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: <https://www.fastlane.nsf.gov/fastlane.jsp>.

- For Proposals Submitted Via Grants.gov:

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. Comprehensive information about using Grants.gov is available on the Grants.gov Applicant Resources webpage: [http://www07.grants.gov/applicants/app\\_help\\_reso.jsp](http://www07.grants.gov/applicants/app_help_reso.jsp). In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: [support@grants.gov](mailto:support@grants.gov). The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

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

## VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

---

Proposals received by NSF are assigned to the appropriate NSF program for acknowledgement and, if they meet NSF requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF either as *ad hoc* reviewers, panelists, or both, who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts of interest with the proposal. In addition, Program Officers may obtain comments from site visits before recommending final action on proposals. Senior NSF staff further review recommendations for awards. A flowchart that depicts the entire NSF proposal and award process (and associated timeline) is included in the GPG as [Exhibit III-1](#).

A comprehensive description of the Foundation's merit review process is available on the NSF website at: [http://nsf.gov/bfa/dias/policy/merit\\_review/](http://nsf.gov/bfa/dias/policy/merit_review/).

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in [Empowering the Nation Through Discovery and Innovation: NSF Strategic Plan for Fiscal Years \(FY\) 2011-2016](#). These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

One of the core strategies in support of NSF's mission is to foster integration of research and education through the programs, projects and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students, and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the variety of learning perspectives.

Another core strategy in support of NSF's mission is broadening opportunities and expanding participation of groups, institutions, and geographic regions that are underrepresented in STEM disciplines, which is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

### A. Merit Review Principles and Criteria

---

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

#### 1. Merit Review Principles

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

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

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

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

## 2. Merit Review Criteria

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

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

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

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

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

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

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

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

### Additional Solicitation Specific Review Criteria

As noted in the [GSS strategic plan](#), GSS encourages and supports potentially transformative research that has potential larger-scale, longer-term significance for both basic understanding and for societal benefit. To help identify research projects that may potentially transform geography, other spatial sciences, and related fields, GSS seeks to assess the longer-term potential as well as the more immediate significance of research projects. As a complement to assessing the intellectual merit and the potential broader impacts of a proposed project, members of GSS advisory panels and other reviewers will be asked to provide responses to two questions:

- ***What is the expected larger-scale, longer-term significance of the project (as described in the proposal) if the project is conducted successfully?***
- ***What is the likelihood that the project (as described in the proposal) will be conducted successfully?***

Reviewers and GSS advisory panel members will be asked to assign scores in response to each of these questions using a 7-point scale:

*What is the expected larger-scale, longer-term significance of the project (as described in the proposal) if the project is conducted successfully?*

- 7 Extremely significant
- 6 Very significant
- 5 Significant
- 4 Moderately significant
- 3 Somewhat significant
- 2 Very mildly significant
- 1 Not significant

*What is the likelihood that the project (as described in the proposal) will be conducted successfully?*

- 7 Very, very likely to succeed
- 6 Very likely to succeed
- 5 Reasonably likely to succeed
- 4 Moderate chances of success
- 3 Minor chances of success
- 2 Minimal chances of success
- 1 Very unlikely to succeed

Proposals generally will be most competitive if both scores assessing potential significance and likelihood of success are high. In order to facilitate lines of inquiry with high potential significance, GSS program officers will invite PIs with especially promising proposals to revise and resubmit their proposals prior to the next proposal-submission deadline. The deadline for resubmission of proposals will be in the letters of invitation sent to PIs when their proposals are formally declined by NSF. PIs will have six to eight

weeks to revise and resubmit proposals if they wish to do so. Revised proposals will then be evaluated independently to determine whether the proposed work maintains a high level of potential significance while increasing confidence in its likelihood of success.

## B. Review and Selection Process

---

Proposals submitted in response to this program solicitation will be reviewed by Ad hoc Review and/or Panel Review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

## VII. AWARD ADMINISTRATION INFORMATION

---

### A. Notification of the Award

---

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

### B. Award Conditions

---

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (GC-1); \* or Research Terms and Conditions \* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

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

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

### C. Reporting Requirements

---

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). Within 90 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

Failure to provide the required annual or final project reports, or the project outcomes report, will delay NSF review and processing of any future funding increments as well as any pending proposals for all identified PIs and co-PIs on a given award. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through Research.gov, for preparation and submission of annual and final project reports. Such reports provide information on accomplishments, project participants (individual and organizational), publications, and other specific products and impacts of the project. Submission of the report via Research.gov constitutes certification by the PI that the contents of the report are accurate and complete. The project outcomes report also must be prepared and submitted using Research.gov. This report serves as a brief summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted on the NSF website exactly as it is submitted by the PI.

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the *NSF Award & Administration Guide (AAG)* Chapter II, available electronically on the NSF Website at

## VIII. AGENCY CONTACTS

---

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

General inquiries regarding this program should be made to:

- Thomas J. Baerwald - Program Director, telephone: (703) 292-7301, email: [tbaerwal@nsf.gov](mailto:tbaerwal@nsf.gov)
- Kelley A. Crews - Program Director, telephone: (703) 292-8457, email: [kcrews@nsf.gov](mailto:kcrews@nsf.gov)
- Daniel Hammel - Program Director, telephone: (703) 292-4995, email: [dhammel@nsf.gov](mailto:dhammel@nsf.gov)
- Tyeshia Roberson - Program Assistant, telephone: (703) 292-8177, email: [tmrobers@nsf.gov](mailto:tmrobers@nsf.gov)

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: [fastlane@nsf.gov](mailto:fastlane@nsf.gov).

For questions relating to Grants.gov contact:

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

For all general inquiries to the GSS program, please email [gss-info@nsf.gov](mailto:gss-info@nsf.gov). This email will reach all current GSS program officers and one of them will reply to you.

## IX. OTHER INFORMATION

---

The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this website by potential proposers is strongly encouraged. In addition, "My NSF" is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF [Grants Conferences](#). Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. "My NSF" also is available on NSF's website at <http://www.nsf.gov/mynsf/>.

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

## ABOUT THE NATIONAL SCIENCE FOUNDATION

---

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

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

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

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

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090 and (800) 281-8749, FIRS at (800) 877-8339.

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

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

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

- Location: 4201 Wilson Blvd. Arlington, VA 22230
- For General Information (NSF Information Center): (703) 292-5111
- TDD (for the hearing-impaired): (703) 292-5090
- To Order Publications or Forms:
  - Send an e-mail to: [nspubs@nsf.gov](mailto:nspubs@nsf.gov)
  - or telephone: (703) 292-7827
- To Locate NSF Employees: (703) 292-5111

## PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

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

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

Suzanne H. Plimpton  
 Reports Clearance Officer  
 Division of Administrative Services  
 National Science Foundation  
 Arlington, VA 22230

[Policies and Important Links](#) | [Privacy](#) | [FOIA](#) | [Help](#) | [Contact NSF](#) | [Contact Web Master](#) | [SiteMap](#)



The National Science Foundation, 4201 Wilson Boulevard, Arlington, Virginia 22230, USA  
 Tel: (703) 292-5111, FIRS: (800) 877-8339 | TDD: (800) 281-8749

Last Updated:  
 11/07/06  
[Text Only](#)