Archaeology Program - Doctoral Dissertation Research Improvement Grants (Arch-DDRIG)

PROGRAM SOLICITATION
NSF 23-531

REPLACES DOCUMENT(S):
NSF 15-554

National Science Foundation

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

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

Proposals Accepted Anytime

IMPORTANT INFORMATION AND REVISION NOTES

- This solicitation provides instructions for preparation of proposals submitted to the Archaeology Program (Arch) for Doctoral Dissertation Research Improvement Grants (DDRIG).
- This revision increases the direct cost limit for DDRIG proposals from $20,000 to $25,000; indirect costs are in addition to this direct cost amount and are subject to the awardee's current federally negotiated indirect cost rate.
- This revision eliminates the restriction on the number of times a student may submit a revised application.
- This revision reaffirms the explanation of NSF's mission to support fundamental research, rather than applied research or purely descriptive work.
- Additional solicitation-specific guidelines are described in the proposal preparation and submission instructions below. Failure to comply with the Arch-DDRIG solicitation-specific instructions may result in a proposal being returned without review.
- Proposals submitted in response to this program solicitation must be prepared and submitted via Research.gov or via Grants.gov and may not be prepared or submitted via FastLane.

Any proposal submitted in response to this solicitation should be submitted in accordance with the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG).

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Archaeology Program - Doctoral Dissertation Research Improvement Grants (Arch-DDRIG)

Synopsis of Program:

The Archaeology Program supports anthropologically relevant archaeological research. This means that the value of the proposed research can be justified within an anthropological context. The program sets no priorities by either geographic region or time period. It also has no priorities in regard to theoretical orientation or question and it is the responsibility of the investigator to explain convincingly why the focus of their research is significant and has the potential to contribute to anthropological knowledge. While the program, in order to encourage innovative research, neither limits nor defines specific categories of research, most applications either request funds for field research or the analysis of archaeological material through multiple approaches. The program also supports methodological projects which develop analytic techniques of potential archaeological value.

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.

- John E. Yellen, Program Director, telephone: (703) 292-8759, email: jyellen@nsf.gov

- Don Rimon, Business Operations Analyst, telephone: (703) 292-2960, email: drimon@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

Estimated Number of Awards: 30 to 40

During a fiscal year, the Archaeology Program expects to recommend (either on its own or jointly with one or more other NSF programs) a total of 30 to 40 doctoral dissertation research improvement grant (DDRIG) awards.

Anticipated Funding Amount: $800,000

The anticipated funding amount is about $800,000, pending availability of funds. Project budgets should be developed at scales appropriate for the work to be conducted. The total direct costs for Arch DDRIG awards may not exceed $25,000; indirect costs are in addition to this direct cost amount and are subject to the awardee's current federally negotiated indirect cost rate.

The proposer may concurrently submit a doctoral dissertation proposal to other funding organizations. Please indicate this in the "Current and Pending Support" section of the NSF proposal, so that NSF may coordinate funding with the other organizations. The "Current and Pending Support" section of the NSF proposal should also list the proposal itself. The proposer may submit a DDRIG proposal to only one NSF program although they may request that the proposal be co-reviewed with one or more other NSF programs; actual co-review will be at the discretion of the relevant program officers.

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

* Institutions of Higher Education (IHEs) – doctoral degree granting IHEs accredited in, and having a campus located in, the U.S., acting on behalf of their faculty members.

Who May Serve as PI:

The proposal must be submitted through regular organizational channels by the dissertation advisor(s) on behalf of the graduate student. The advisor is the principal investigator (PI) and the student is the co-principal investigator (co-PI). The student must be the author of the proposal. The student must be enrolled at a U.S. institution but need not be a U.S. citizen. To be eligible to serve as the PI, the advisor must be available during the period of proposal submission and review and during the performance of the research in order to relay information and communications from NSF to the student.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

There are no limitations on the number of DDRIGs that may be submitted by an organization on behalf of a single faculty member during a specific competition or over the course of their career.

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 Research.gov: *NSF Proposal and Award Policies and Procedures Guide* (PAPPG) guidelines apply. The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.
  * 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: https://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:**

    Not Applicable

C. Due Dates

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

    Proposals Accepted Anytime

Proposal Review Information Criteria

Merit Review Criteria:

National Science Board approved criteria apply.

Award Administration Information

Award Conditions:

Standard NSF award conditions apply.

Reporting Requirements:

Standard NSF reporting requirements apply.

TABLE OF CONTENTS

I. INTRODUCTION

The Archaeology Program supports anthropologically relevant archaeological research. This means that the value of the proposed research can be justified within an anthropological context. The program sets no priorities by either geographic region or time period. It also has no priorities in regard to theoretical orientation or question and it is the responsibility of the applicant to explain convincingly why these are significant and have the potential to contribute to anthropological knowledge. While the program, in order to encourage innovative research, neither limits nor defines specific categories of research type, most applications either request funds for field research or for the analysis of archaeological material through multiple approaches. The program also supports methodological projects which develop analytic techniques of potential archaeological value.

II. PROGRAM DESCRIPTION

The Archaeology Doctoral Dissertation Research Improvement Grants Program provides funds for items not usually available from the student's U.S. academic institution. The awards are not intended to provide the full costs of a student's doctoral dissertation research. Funds may be used for valid research expenses. The funds may not be used for post-field-research writing, analysis and thesis production costs. Funds may not be used for stipends at the home institution,

tuition or the purchase of textbooks or journals. Further details concerning allowable as well as non-allowable expenses can be found in the budget instructions in section V of this solicitation.

While NSF provides support for doctoral dissertation research, the student (co-PI) is solely responsible for the conduct of such research and preparation of results for publication. NSF, therefore, does not assume responsibility for such findings or their interpretation. This program does not support research with applied, disease-related goals, including research directly focused on the etiology, diagnosis or treatment of disease or dysfunction.

III. AWARD INFORMATION

Anticipated Type of Award: Standard Grant

Estimated Number of Awards: 30 to 40

During a fiscal year, the Archaeology Program expects to recommend (either on its own or jointly with one or more other NSF programs) a total of 30 to 40 doctoral dissertation research improvement grant (DDRIG) awards.

Anticipated Funding Amount: About $800,000

The anticipated funding amount is about $800,000, pending availability of funds. Project budgets should be developed at scales appropriate for the work to be conducted. The total direct costs for Arch DDRIG awards may not exceed $25,000; indirect costs are in addition to this direct cost amount and are subject to the awardee's current federally negotiated indirect cost rate.

The proposer may concurrently submit a doctoral dissertation proposal to other funding organizations. Please indicate this in the "Current and Pending Support" section of the NSF proposal, so that NSF may coordinate funding with the other organizations. The "Current and Pending Support" section of the NSF proposal should also list the proposal itself. The proposer may submit a DDRIG proposal to only one NSF program although they may request that the proposal be co-reviewed with one or more other NSF programs; actual co-review will be at the discretion of the relevant program officers.

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

> Proposals may only be submitted by the following:
>
> - Institutions of Higher Education (IHEs) – doctoral degree granting IHEs accredited in, and having a campus located in, the U.S., acting on behalf of their faculty members.

Who May Serve as PI:

> The proposal must be submitted through regular organizational channels by the dissertation advisor(s) on behalf of the graduate student. The advisor is the principal investigator (PI) and the student is the co-principal investigator (co-PI). The student must be the author of the proposal. The student must be enrolled at a U.S. institution but need not be a U.S. citizen. To be eligible to serve as the PI, the advisor must be available during the period of proposal submission and review and during the performance of the research in order to relay information and communications from NSF to the student.

Limit on Number of Proposals per Organization:

> There are no restrictions or limits.

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

> There are no limitations on the number of DDRIGs that may be submitted by an organization on behalf of a single faculty member during a specific competition or over the course of their career.

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 Research.gov or Grants.gov.

- Full Proposals submitted via Research.gov: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the *NSF Proposal and Award Policies and Procedures Guide* (PAPPG). The complete text of the PAPPG is available electronically on the NSF website at: https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg. Paper copies of the PAPPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov. The Prepare New Proposal setup will prompt you for the program solicitation number.

- 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: (https://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) 292-8134 or by e-mail from nsfpubs@nsf.gov.

See PAPPG Chapter II.D.2 for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in this program solicitation may deviate from the PAPPG instructions.

A list of recent awards made by the program demonstrates the range of sub-fields, methods and topics typically supported. If a researcher is unsure whether the Arch-DDRIG Program and NSF more broadly are appropriate for a proposal topic, they are encouraged to email a one-page summary of their project to the program officer(s) prior to a proposal submission.

For the following listed items/sections of the proposal, instructions specific to DDRIG proposals under this solicitation are presented:

Proposal Set-Up

Select "Prepare New Full Proposal" in Research.gov. Search for and select this solicitation title in Step 1 of the Full Proposal wizard. The information in Step 2, Where to Apply, will be prepopulated by the system. Select "Research" as the proposal type. In the proposal details section, select "Single proposal (with or without subawards). Separately submitted collaborative proposals will be returned without review. The project title must begin with "Doctoral Dissertation Research:". The title should be descriptive rather than clever. It should emphasize the generalizable science that the research will address, such as the main research question that the student aims to investigate.

You may select additional programs if you would like those programs to consider co-review of your proposal with the Archaeology Program. After the proposal is created, click on the "Manage Where to Apply" link on the proposal main page. This will open the "Manage Where to Apply" page where additional programs can be selected. Note that a request for co-review should be made only when the PIs believe the proposed work makes a strong case for advancing theory and basic knowledge in multiple communities served by multiple programs and when the project description engages literature from those communities. Methods that are relevant to other programs are not sufficient to merit co-review; the contribution must be theoretical and scientific. Not all standing programs support the co-review of DDRIG proposals. You should verify that the proposed program is willing to co-review a DDRIG proposal.

Senior Personnel
List the primary dissertation advisor as the PI and the student as co-PI.

Project Description
This section is limited to 10 single-spaced pages of text and up to 5 additional pages of figures. Text pages can be traded for additional figure pages, but not the reverse.

If the proposal is a resubmission, the first paragraph of the project description should summarize how the proposal has responded to previous reviewer concerns.

The "Results from Prior NSF Support" section is NOT required for DDRIG proposals.

The project description must include:

- A section labeled intellectual merit which describes the intellectual merit – the contribution to anthropological knowledge – of the proposed research.
- A section labeled broader impacts that discusses the broader impacts of the proposed activities and the pathways by which those broader impacts will be realized. Broader impacts are significant effects beyond basic science. They might include communicating results to policy makers, contributing to the knowledge base to solve an important social problem, engaging students of any age in the research enterprise, doing outreach to the public, producing databases that contribute to scientific infrastructure, strengthening international research collaborations, broadening the scientific participation of underrepresented communities, or strengthening research capacity in developing nations. Partisan activities explicitly related to advocacy or activism should not be included.

Budget and Budget Justification
DDRIG awards provide funding for research costs not covered by the student's university. Examples of the kinds of expenses that may be included in a DDRIG proposal budget are (please note that this list is illustrative and not inclusive):

- Costs associated with travel and related expenses to conduct research at field sites, archives, specialized collections or facilities away from the student's campus.
- Costs for equipment necessary for the conduct of the project that will be devoted to the project over the duration of the award. (Note that any equipment purchased with NSF funds becomes property of the awardee institution.)
- Costs for materials and supplies required for the conduct of the project.
- Costs associated with archaeological field survey and excavation.
- Costs for dating and analysis of archaeologically relevant materials.
- Costs for archiving, preservation and public access to primary data.
- Cost to publish in open source journals.

Costs that cannot be reimbursed by DDRIG awards include the following:

- A stipend or salary for the doctoral student or advisor. (Note that salaries or payments for work by other individuals whose assistance is essential to the conduct of the project may be permitted when there is sound justification for such expenses.)
- Costs for tuition, textbooks or other items not directly related to the conduct of dissertation research.
- Costs for travel of the dissertation advisor(s) to the field site or professional meetings.

Facilities, Equipment and Other Resources
If you have resources (such as a research awards from another sources) that will be used to supplement any NSF award, those resources should be listed in this section (rather than in the budget justification).

Data Management Plan
A data management plan (DMP) is required for all research proposals, and proposals that do not include one will be returned.

The DMP should address the following questions:

- What kinds of data, software and other materials will your research produce?
- How will you manage them (e.g., standards for metadata, format, organization, etc.)?
- How will you give other researchers access to your data, while preserving confidentiality, security, intellectual property and other rights and requirements?
- How will you archive data and preserve access in publicly accessible and institutionally maintained repositories in the short and the long term? (A departmental website is not adequate.)

While the Archaeology Program does not sponsor, endorse or have an official arrangement with any data archive, please note that two organizations provide this service:

- Open Context: Contact publish@opentext.org
- The Digital Archaeological Record (tDAR): Contact info@digitalantiquity.org

Proposers should consult NSF Social, Behavioral and Economic Sciences (SBE) Directorate data management guidelines. In addition to NSF guidance, you may find the guidance provided by the Society for American Archaeology (SAA) helpful. Additional resources can be found at the SAA website. When necessary, a proposal may include a request for funds to implement a data management plan.

Supplementary Documentation

Permits, letters of permission and letters of collaboration: If the dissertation project involves collaboration on the part of individuals or organizations in order to carry out the activities and achieve the research goals, brief statements (in the form of letters or free-standing email messages) may be included in the other supplementary documents section. These must be statements of intent to collaborate or commit resources as detailed in the project description or the facilities, equipment or other resources section of the proposal. Such statements must not be letters of recommendation in support of the project. Letters of collaboration should be limited to stating the intent to collaborate and should not contain endorsements or evaluation of the proposed project. As described in the PAPPG, the recommended format for letters of collaboration is as follows:

"If the proposal submitted by Dr. [insert the full name of the Principal Investigator] entitled [insert the proposal title] is selected for funding by NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description or the Facilities, Equipment and Other Resources section of the proposal."

PIs are responsible for obtaining the required authorizations from national, state or local authorities for any collecting or other activities and for advising NSF that they have been obtained or requested. The proposal should briefly describe the permits that are required and the timeline for approvals.

For proposals that require support from centrally supported facilities, investigators must obtain letters of collaboration from the managing organization that follow the standard text described in the PAPPG, and those letters should be included as a supplementary document.

PI/Advisor Statement: The proposal must include a statement from the principal investigator that is uploaded to the supplementary documents section. The following template must be used to prepare the statement; the only changes permitted are provision of information where there are blank lines in the template. The statement must be signed by the PI.

To: NSF Archaeology Program

From: [Printed name of the Principal Investigator]

By signing below, I affirm that I have read the proposal, and that, barring unforeseen circumstances, the student will be prepared to undertake the research within 12 months of the submission window. I agree to be available during the performance of the research in order to relay information and communications from NSF to the student.

If this is a resubmission, I also affirm that the proposal has been substantially revised.

Signed:
Organization:
Date:

Letters of reference or evaluation are NOT allowed. The program does NOT require a letter from the department assessing the student's progress to degree.

Individuals with disabilities who need reasonable accommodations as part of the proposal process must contact the NSF Office of Equity and Civil Rights (OECR) at least 30 days prior to submission.

B. Budgetary Information

Cost Sharing:

Inclusion of voluntary committed cost sharing is prohibited.

Budget Preparation Instructions:

Proposers may request up to $25,000 in direct costs. There are no indirect cost limitations; proposals submitted in response to this solicitation are subject to the awardee's current federally negotiated indirect cost rate. Indirect costs are in addition to (that is, on top of) the maximum direct cost request of up to $25,000. 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. Please allow about six months after proposal submission for an award to be made.

Some countries require an "overhead," essentially an indirect cost payment, to conduct research. Such expenses are allowed but the percentage/amount must

be calculated on NSF expenditures within the country and not on project total direct costs.

C. Due Dates

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

    Proposals Accepted Anytime

D. Research.gov/Grants.gov Requirements

For Proposals Submitted Via Research.gov:

To prepare and submit a proposal via Research.gov, see detailed technical instructions available at: https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_pageLabel=research_node_display&_nodePath=/researchGov/Service/Desktop/ProposalPreparationandSubmission.html. For Research.gov user support, call the Research.gov Help Desk at 1-800-673-6188 or e-mail rgov@nsf.gov. The Research.gov Help Desk answers general technical questions related to the use of the Research.gov system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

For Proposals Submitted Via Grants.gov:

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

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

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

VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES

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

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

Proposers should also be aware of core strategies that are essential to the fulfillment of NSF's mission, as articulated in *Leading the World in Discovery and Innovation, STEM Talent Development and the Delivery of Benefits from Research - NSF Strategic Plan for Fiscal Years (FY) 2022 - 2026*. These strategies are integrated in the program planning and implementation process, of which proposal review is one part. NSF's mission is particularly well-implemented through the integration of research and education and broadening participation in NSF programs, projects, and activities.

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

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

A. Merit Review Principles and Criteria

The National Science Foundation strives to invest in a robust and diverse portfolio of projects that creates new knowledge and enables breakthroughs in understanding across all areas of science and engineering research and education. To identify which projects to support, NSF relies on a merit review process that incorporates consideration of both the technical aspects of a proposed project and its potential to contribute more broadly to advancing NSF's mission "to

promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense; and for other purposes." NSF makes every effort to conduct a fair, competitive, transparent merit review process for the selection of projects.

1. Merit Review Principles

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

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

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

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

2. Merit Review Criteria

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

The two merit review criteria are listed below. **Both** criteria are to be given **full consideration** during the review and decision-making processes; each criterion is necessary but neither, by itself, is sufficient. Therefore, proposers must fully address both criteria. (PAPPG Chapter II.D.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 PAPPG Chapter II.D.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 other underrepresented groups 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.

B. Review and Selection Process

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

Reviewers will be asked to evaluate proposals using two National Science Board approved merit review criteria and, if applicable, additional program specific criteria. A summary rating and accompanying narrative will generally be completed and submitted by each reviewer and/or panel. 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 strives to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. Large or particularly complex proposals or proposals from new awardees may require additional review and processing time. The time interval begins on the deadline or target date, or receipt date, whichever is later. The interval ends when the Division Director acts

upon the Program Officer's recommendation.

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

Once an award or declination decision has been made, Principal Investigators are provided feedback about their proposals. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers or any reviewer-identifying information, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

VII. AWARD ADMINISTRATION INFORMATION

A. Notification of the Award

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

B. Award Conditions

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

*These documents may be accessed electronically on NSF's Website at https://www.nsf.gov/awards/managing/award_conditions.jsp?org=NSF. Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-8134 or by e-mail from nsfpubs@nsf.gov.

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

Administrative and National Policy Requirements

Build America, Buy America

As expressed in Executive Order 14005, Ensuring the Future is Made in All of America by All of America's Workers (86 FR 7475), it is the policy of the executive branch to use terms and conditions of Federal financial assistance awards to maximize, consistent with law, the use of goods, products, and materials produced in, and services offered in, the United States.

Consistent with the requirements of the Build America, Buy America Act (Pub. L. 117-58, Division G, Title IX, Subtitle A, November 15, 2021), no funding made available through this funding opportunity may be obligated for an award unless all iron, steel, manufactured products, and construction materials used in the project are produced in the United States. For additional information, visit NSF's Build America, Buy America webpage.

C. Reporting Requirements

For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer no later than 90 days prior to the end of the current budget period. (Some programs or awards require submission of more frequent project reports). No later than 120 days following expiration of a grant, the PI also is required to submit a final project report, and a project outcomes report for the general public.

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

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

More comprehensive information on NSF Reporting Requirements and other important information on the administration of NSF awards is contained in the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) Chapter VII, available electronically on the NSF Website at https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

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:

- John E. Yellen, Program Director, telephone: (703) 292-8759, email: jyellen@nsf.gov

- Don Rimon, Business Operations Analyst, telephone: (703) 292-2960, email: drimon@nsf.gov

For questions related to the use of NSF systems contact:

- NSF Help Desk: 1-800-673-6188

- Research.gov Help Desk e-mail: rgov@nsf.gov

For questions relating to Grants.gov contact:

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

IX. OTHER INFORMATION

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

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this mechanism. Further information on Grants.gov may be obtained at https://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 (FASED) provide funding for special assistance or equipment to enable persons with disabilities to work on NSF-supported projects. See the *NSF Proposal & Award Policies & Procedures Guide* Chapter II.F.7 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 https://www.nsf.gov
>
> - **Location:**   2415 Eisenhower Avenue, Alexandria, VA 22314
>
> - **For General Information**   (703) 292-5111

(NSF Information Center)**:**

- **TDD (for the hearing-impaired):**   (703) 292-5090

- **To Order Publications or Forms:**

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

        or telephone: (703) 292-8134

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

PRIVACY ACT AND PUBLIC BURDEN STATEMENTS

Policies and Important Links | Privacy | FOIA | Help | Contact NSF | Contact Web Master | SiteMap

National Science Foundation, 2415 Eisenhower Avenue, Alexandria, Virginia 22314, USA
Tel: (703) 292-5111, FIRS: (800) 877-8339 | TDD: (703) 292-5090 or (800) 281-8749

Text Only