NSF Dynamic Language Infrastructure - NEH Documenting Endangered Languages (DLI-DEL)

PROGRAM SOLICITATION
NSF 22-615

REPLACES DOCUMENT(S):
NSF 20-603

National Science Foundation
Directorate for Social, Behavioral and Economic Sciences
   Division of Behavioral and Cognitive Sciences
Directorate for Computer and Information Science and Engineering
Directorate for Geosciences
Directorate for Education and Human Resources

National Endowment for the Humanities

Full Proposal Target Date(s):

October 14, 2022

    Senior research and conference proposals

February 15, 2023

February 15, Annually Thereafter

    Senior research and conference proposals

September 15, 2023

September 15, Annually Thereafter

    Senior research and conference proposals

IMPORTANT INFORMATION AND REVISION NOTES

Investigators interested in submitting a DLI-DDRI proposal, please follow guidance and instruction in the separate DLI-DDRI solicitation.

Innovating and migrating proposal preparation and submission capabilities from FastLane to Research.gov is part of the ongoing NSF information technology modernization efforts, as described in Important Notice No. 147. In support of these efforts, 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 revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 22-1), which is effective for proposals submitted, or due, on or after October 4, 2021.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

    NSF Dynamic Language Infrastructure - NEH Documenting Endangered Languages (DLI-DEL)

Synopsis of Program:

This funding partnership between the National Science Foundation (NSF) and the National Endowment for the Humanities (NEH) supports projects to develop and advance knowledge concerning dynamic language infrastructure in the context of endangered human languages — languages that are both understudied and at risk of falling out of use. Made urgent by the imminent loss of roughly half of the approximately 7,000 currently used languages, this effort aims to exploit advances in human-language technology to build computational infrastructure for endangered language research. The program supports projects that contribute to data management and archiving, and to the development of the next generation of researchers. Funding can support fieldwork and other activities relevant to the digital recording, documentation and analysis, and archiving of endangered language data, including the preparation of lexicons, grammars, text samples, and databases. Funding is available in the form of one- to three-year senior research grants and conference proposals. Fellowship support is available through a separate funding opportunity administered by NEH.

Note: a conference proposal should generally be submitted at least a year in advance of the scheduled date of the conference. For additional information about creating and submitting conference proposals, please refer to PAPPG Chapter II. E.9.

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.

- Rachel M. Theodore, Program Director, telephone: (703) 292-4770, email: rtheodor@nsf.gov
- Jorge Valdes Kroff, Program Director, SBE, telephone: (703) 292-7920, email: jvaldesk@nsf.gov
- Kenyatta Johnson, Program Specialist, SBE, telephone: (703) 292-4850, email: kenjohns@nsf.gov
- Jacquelyn H. Clements, Senior Program Officer - NEH, NEH, telephone: (202) 606-8475, email: jclements@neh.gov

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

- 47.050 --- Geosciences
- 47.070 --- Computer and Information Science and Engineering
- 47.075 --- Social Behavioral and Economic Sciences
- 47.076 --- Education and Human Resources

Award Information

Anticipated Type of Award: Standard Grant or Continuing Grant

Estimated Number of Awards: 20 to 25

Award Size and Duration

Senior Research and Conference Projects: Approximately 20-25 Standard or Continuing Grants of up to $450,000 for up to three years. Funding will be available in the form of one- to three-year senior research grants, in addition to conference proposals. Collaborative Senior Research projects should not exceed the $450,000 limit.

Anticipated Funding Amount: $4,800,000

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

Eligibility Information

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Institutions of Higher Education (IHEs) - Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Special Instructions for International Branch Campuses of US IHEs: If the proposal includes funding to be provided to an international branch campus of a US institution of higher education (including through use of subawards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus, and justify why the project activities cannot be performed at the US campus.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.
- Tribal organizations and other American Indian, Alaska Native, and Native Hawaiian serving organizations.

Who May Serve as PI:

There are no program-specific restrictions or limits.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

An individual may be listed as a PI or co-PI on only one Senior Research proposal per Review Cycle. This limit does not apply to Conference/Workshop proposals. CAREER proposals that are submitted to DLI-DEL are reviewed during the Fall Review Cycle; a PI may not submit both a CAREER and a Senior Research proposal in the same cycle.

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:**

  Other budgetary limitations apply. Please see the full text of this solicitation for further information.

C. Due Dates

- **Full Proposal Target Date(s)**:

  October 14, 2022

  > Senior research and conference proposals

  February 15, 2023

  February 15, Annually Thereafter

  > Senior research and conference proposals

  September 15, 2023

  September 15, Annually Thereafter

  > Senior research and conference proposals

Proposal Review Information Criteria

Merit Review Criteria:

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

Award Administration Information

Award Conditions:

Additional award conditions apply. Please see the full text of this solicitation for further information.

Reporting Requirements:

Additional reporting requirements apply. Please see the full text of this solicitation for further information.

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I. INTRODUCTION

The broad range of human languages provides an incredible resource for better understanding human behavior and cognition. However, roughly half of the world's 7,000 languages are endangered and at risk of extinction. These endangered languages constitute an irreplaceable resource, not only for the communities who use them, but also for scientists and scholars.

- The great variety of these languages represents a vast, largely unmapped territory for which linguists, anthropologists, and cognitive scientists can chart the full capabilities and limits of the human mind.
- Each endangered language embodies unique local knowledge of the cultures and natural systems in the region in which it is spoken.
- These languages are among the few sources of evidence for filling in the record of the human past.

Since the discipline of linguistics is a responsibility both of the National Science Foundation and of the National Endowment for the Humanities, addressing the imminent loss of linguistic and cultural knowledge is a major concern and a priority for both agencies.

Recent advances in human language technology enable novel approaches to language infrastructure and can facilitate prompt and coordinated fieldwork. These advances make it possible not only to document endangered languages, but also to integrate and analyze that body of knowledge in unprecedented ways. Computerization of speech and universal Internet access is transforming the practice of linguistics in the area of endangered languages.

- Linguists will be able to work from shared, common sets of data, rather than from isolated personal data collections.
- The data will be searchable in a large variety of ways. For example, finding all occurrences of a particular phoneme or syntactic feature in a database will become feasible.
- The recorded sounds of a language will be available. Linguists will be able to check written transcriptions; they will be able to focus more attention on such matters as intonation in syntax.
- Interoperable digital repositories will be created.
- Interoperability will drive the development of a unified ontology for linguistics, eventually replacing inconsistent descriptive terminologies.

The endangered languages belong to highly divergent language families, which often present the most extreme cases of language differentiation.

The availability of a wider range of data will enable linguists to achieve much greater time depth, for example, in using the comparative method to reconstruct proto-languages. It will also enable linguists to test more precisely claims about linguistic universals and about what humans can learn. Finally, it will enable computer scientists to test known computational methods and statistical computational tools and to develop new ones.

A coordinated, sustained, and technologically sophisticated interagency initiative by these U.S. partner agencies is intended to complement efforts underway elsewhere in the world sponsored by organizations in the UK including the Endangered Languages Documentation Programme as well as by UNESCO.

II. PROGRAM DESCRIPTION

NSF Dynamic Language Infrastructure – NEH Documenting Endangered Languages (DLI–DEL) is a joint funding program of the National Science Foundation and the National Endowment for the Humanities to develop and advance scientific and scholarly knowledge concerning endangered human languages. Made urgent by the imminent loss of roughly half of the approximately 7000 currently used human languages, DLI–DEL seeks not only to acquire scientific data that will soon be unobtainable, but to integrate, systematize, and make the resulting linguistic findings widely available by exploiting advances in information technology.

Principal Investigators (PIs) may propose projects involving one or more of the following three emphasis areas:

1. Language Description

To conduct fieldwork to record in digital audio and video format one or more endangered languages; to carry out the early stages of language documentation including transcription and annotation; to carry out later stages of documentation including the preparation of lexicons, grammars, text samples, and databases; to conduct initial analysis of findings in the light of current linguistic theory.

2. Infrastructure

To digitize and otherwise preserve and provide wider access to the documentary materials described above, including previously collected materials and those concerned with languages that have recently lost all fluent speakers and are related to currently endangered languages; to create other infrastructures, including conferences to make the problem of endangered languages more widely understood and more effectively addressed.

3. Computational Methods

To further develop standards and databases to make the documentation of a certain language or languages widely available in consistent, archivable, interoperable and web-based formats; to develop computational tools (taggers, parsers, speech recognizers, grammar inducers, etc.) for endangered languages, which present a particular challenge for those using statistical and machine learning, especially deep learning methods, since such languages do not have the large corpora for training and testing the models used to develop those tools; and to develop new approaches to building computational tools for endangered languages, which make use of deeper knowledge of linguistics, including language typology and families, and which require collaboration among theoretical and field linguists and computational linguists, computer scientists and engineers.

Accomplishing the goals of the DLI–DEL program may require multidisciplinary research teams and comprehensive, interdisciplinary approaches across the sciences, engineering, education, and humanities, as appropriate. Interdisciplinary research combining the expertise of scientists expands the rewards of language documentation. In each emphasis area, DLI–DEL encourages collaboration across academic disciplines and /or communities. For example, a DLI–DEL project might pair linguists with computer scientists, geographers, anthropologists, educators, and others as appropriate.

Examples of community collaborations might include scholars working in well-defined partnerships with native speaker communities. DLI–DEL also encourages investigators to include in their project's innovative plans for training native speakers in descriptive linguistics and new technologies which support the documentation of endangered languages. DLI–DEL gives high priority to projects that involve actual recording in digital audio and video format of endangered languages before they become extinct.

Proposed projects may range from a single investigator to a team of investigators working for three years.

The DLI-DEL Program is also interested in contributing to a new generation of scholars through targeted supplements, which support both graduate and undergraduate research experience.

Documentation is a key complement to language revitalization efforts, but DLI does not support projects to revive or expand the actual use of endangered languages. Tribal groups interested in the full range of language revitalization activities should contact the Native Language Program of the Administration for Native Americans in the Administration for Children & Families of the U.S. Department of Health and Human Services .

However, DLI-DEL encourages investigators from Tribal Colleges and Universities Program (TCUP)-eligible institutions to submit either senior research proposals or collaborative proposals from consortia of TCUP-eligible institutions and partnering universities with educational or research ties to TCUP-eligible institutions' faculty or students. While one TCUP-eligible institution may be identified to take the lead on organizational

activities, each institution will independently manage its award.

Examples of collaborations with TCUP-eligible institutions may include:

- Building TCU institutions' research and scholarly training capacity in documentary and descriptive linguistics, computational methodology, archiving and preservation.
- Attracting, retraining, and supporting TCU students in independent research endeavors.
- Non-TCU institutions providing research training to enable the successful transition of TCU students to major research universities.

III. AWARD INFORMATION

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds. NEH's Division of Preservation & Access will support and administer two to four grants.

Award Size and Duration

Senior Research and Conference Projects: Approximately 20-25 Standard or Continuing Grants of up to $450,000 for up to three years. Funding will be available in the form of one- to three-year senior research grants, in addition to conference proposals. Collaborative Senior Research projects should not exceed the $450,000 limit.

IV. ELIGIBILITY INFORMATION

Who May Submit Proposals:

Proposals may only be submitted by the following:

- Institutions of Higher Education (IHEs) - Two- and four-year IHEs (including community colleges) accredited in, and having a campus located in the US, acting on behalf of their faculty members. Special Instructions for International Branch Campuses of US IHEs: If the proposal includes funding to be provided to an international branch campus of a US institution of higher education (including through use of subawards and consultant arrangements), the proposer must explain the benefit(s) to the project of performance at the international branch campus, and justify why the project activities cannot be performed at the US campus.
- Non-profit, non-academic organizations: Independent museums, observatories, research labs, professional societies and similar organizations in the U.S. associated with educational or research activities.
- Tribal organizations and other American Indian, Alaska Native, and Native Hawaiian serving organizations.

Who May Serve as PI:

There are no program-specific restrictions or limits.

Limit on Number of Proposals per Organization:

There are no restrictions or limits.

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

An individual may be listed as a PI or co-PI on only one Senior Research proposal per Review Cycle. This limit does not apply to Conference/Workshop proposals. CAREER proposals that are submitted to DLI-DEL are reviewed during the Fall Review Cycle; a PI may not submit both a CAREER and a Senior Research proposal in the same cycle.

Additional Eligibility Info:

Eligibility requirements for Tribal Colleges and Universities, Alaska Native-serving institutions and Native Hawaiian-serving institutions are described in the solicitation for NSF's Tribal Colleges and Universities Program (TCUP). For more information, visit the TCUP web page, click on the guidelines link, and find the Eligibility Information section.

For-profit organizations are not eligible to apply to this program. However, personnel in for-profit organizations may participate as co-investigators.

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.

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 Research.gov. PAPPG Chapter II.D.3 provides additional information on collaborative proposals.

See PAPPG Chapter II.C.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.

NOTE: The following information supplements the PAPPG standard proposal preparation guidelines for DLI–DEL Senior Research Proposals. Chapter II.E.9 of the PAPPG should be consulted to prepare a Conference proposal.

Proposal Preparation Instructions for DLI–DEL

Title: The title should describe the project in a concise, informative way so that a scientifically or technically literate reader could understand what the project is about.

Project Summary: The Summary of the proposed project should restate the Project Title, include no more than three ISO language codes, if applicable; and identify the most general family/families to which the specific languages(s) belong. Also, indicate if the genetic affiliation of the language is in question.

The Project Summary must consist of an overview, a statement on the intellectual merit of the proposed activity and a statement on the broader impacts of the proposed activity. The overview should briefly describe the proposed project goals and objectives, and the research question or hypothesis to be addressed. In addition to the Data Management Plan required of all NSF proposal submissions, the Project Summary overview should also designate the location where the data will be archived.

Project Description: Included within the 15-page limit is a maximum of five pages detailing the results of work supported in the past five years by NSF or NEH, if any. Also included should be brief sample materials (i.e., entries, records, or database results for specific queries) that illustrate the content and presentation of any final product.

In general, the Project Description should indicate the work to be undertaken, the methodologies to be employed, the schedule according to which the work will be carried out, and the roles and qualifications of the project participants. The two NSF merit review criteria should be addressed explicitly and separately.

In addressing the intellectual merit criterion, including the relevant considerations in Section VI.A. (below), also discuss the degree of endangerment of the language(s) to be investigated and the urgency of the need for documentation and analysis. Describe the level, quality, and accessibility of any existing documentation of the language(s). Discuss any special linguistic, historical, cognitive, cultural, or social significance of the language(s).

The Project Description should discuss plans for archiving recordings, field notes, and processed documentary materials in a stable environment. Simply placing materials on a CD or a website will not in and of itself guarantee sustainable archiving. In discussing methods to be employed in recording, documenting, and archiving the endangered language(s), include reference to current statements of best practices. Discuss aspects of the project that will ensure interoperability with related materials.

In addressing the broader impacts criterion, including the relevant considerations in Section VI. A (below), also discuss collaboration and other arrangements made with the speaker community. Discussion may include reference to the training of native speakers in the practice of linguistics and to the production of resources useful to the community of native speakers.

Discuss any intellectual property issues that might affect the availability of the materials.

Special Information and Supplementary Documentation

Data Management Plan (DMP): In accordance with the guidance in the PAPPG, all proposals must include a plan for data management and sharing the products of research. The solicitation-specific DMP requirements are:

1. The archiving location should appear in the Project Summary.
2. Plans and methodology for the sustainable, long-term archiving of all data and a discussion of interoperability with related materials should appear in the Project Description.
3. PIs and co-PIs with prior awards funded by either or both NSF and NEH should report on data management under "Results from prior NSF support" in accordance with the Data Management Plan for NSF SBE Directorate Proposals and Awards.
4. Budgeted costs for archiving, including the ingestion into the archive, should appear in the Budget and Budget Justification under Other Direct Costs line G6.
5. A letter from the archive selected by the project should appear in Supplementary Documents.
6. The Data Management Plan should appear in Supplementary Documents.

The Data Management Plan for NSF SBE Directorate Proposals and Awards includes information relevant to reporting. In preparing their DMP, proposers should address all five of the points specified in Chapter II, Section C.2.j of the PAPPG and the comparable section of the NSF Grants.gov Application Guide.

The DMP should provide evidence that the proposer has contacted an official repository that meets ISO standards to arrange for long-term archiving of documentation generated by the DLI-DEL project. The language archive selected by a DLI-DEL project must have a long-term institutional commitment to data preservation and access. While the DLI-DEL Program does not sponsor or have an official arrangement with any language archive, these services are provided by DELAMAN member archives and by institutions holding the Core Trust Seal. Regular data backup should be an integral part of the DMP, but this is not to be equated with archiving in an official repository. Backing up data on hard drives, servers, optical media, and cloud-based services does not constitute archiving.

The DMP should include a timeline for completion of archiving activities. Archiving and execution of the Data Management Plan must be completed prior to the submission of the final project report. Final project report approval is contingent upon successful archiving and execution of the Data Management Plan.

Language documentation is of little value if it cannot be accessed. To that end the DLI-DEL Program expects that the vast majority of data generated by the DLI-DEL project will be publicly accessible with minimal restrictions for non-commercial, educational purposes. (Restrictions on commercial use are acceptable.) The DMP should indicate how archived materials will be made accessible to the public. Any restrictions to be placed on access should be clearly indicated. If the proposer expects access to some materials to be restricted to certain user groups, the DMP should indicate the criteria delineating such user groups and provide an estimate of the percentage of materials that will be so restricted. If time limits are to be placed on access to materials, the DMP should indicate the period of time after which access restrictions will be removed.

DLI-DEL projects funded by the Arctic Social Sciences Program may be asked to submit a revised Data Management Plan in accordance with OPP's data management and reporting requirements (i.e., NSF 16-055).

Statement of Consultation: Include an explicit statement that care has been taken to consult with the relevant parties in the speech communities where the research is to be conducted. The PI should ensure that appropriate permissions for the proposed research have been requested. This statement must be uploaded under "Other Supplementary Documents".

NOTE: In addition to the above documents, a file with up to two pages of examples of interlinear glossing, dictionary format, questionnaires, task protocols, etc. may also be included under "Other Supplementary Documents".

B. Budgetary Information

Cost Sharing:

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 Target Date(s)**:

October 14, 2022

> Senior research and conference proposals

February 15, 2023

February 15, Annually Thereafter

> Senior research and conference proposals

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> Senior research and conference proposals

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 the NSF FastLane system 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.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 PAPPG 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 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.

Additional Solicitation Specific Review Criteria

Reviewers will take into account how well the additional DLI-DEL specifics listed below were addressed in the proposal.

- Discussion of the degree of endangerment of the language(s) to be documented and the urgency of the need for documentation
- Description of the level, quality, and accessibility of any existing documentation of the language(s)
- Discussion of any special linguistic, historical, cognitive, cultural, or social significance of the language(s)
- Discussion of collaborations and other arrangements made with the speaker community which may include reference to the training of native speakers in the practice of linguistics and to the production of resources useful to the community of native speakers.

B. Review and Selection Process

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

NSF will coordinate and manage the review of proposals in consultation with NEH. The process may include ad hoc mail reviewers as needed in combination with panelist reviewers who meet, discuss the proposals, and make recommendations to the NSF. NEH may, through the designated NEH Program Managers, recommend reviewers and may attend the review panel as observers. Copies of proposals and unattributed reviews will be shared with NEH as appropriate. Reviewers will be informed that their unattributed reviews may be shared with other government agencies as specified in the solicitation.

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.

Special Award Conditions:

NEH Award Conditions:

Proposers of the projects identified for NEH funding will be instructed on how to submit documentation to NEH in order to process the award and their proposal will be withdrawn from the NSF system by NSF.

NEH award conditions related to awards to organizations and individuals are available electronically on the NEH website.

Award acknowledgment language: DLI-DEL awardees will be required to include appropriate acknowledgment of the respective party's support in reports and/or publications on work performed under this award. An example of such an acknowledgement would be: "This material is based upon work supported by the National Science Foundation-National Endowment for the Humanities Dynamic Language Infrastructure-Documenting Endangered Languages Program under [Agency's] Award No. [Recipient should enter the awarding agency and awarding agency's award number(s)].

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.

Execution of DMP and archiving required for final project report submission and approval:

Awards made by both NEH and NSF require that archiving and execution of the Data Management Plan must be completed prior to the submission of the final project report. Final project report approval is contingent upon successful archiving and execution of the Data Management Plan.

NEH has its own reporting requirements, which are outlined electronically on the NEH website.

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:

- Rachel M. Theodore, Program Director, telephone: (703) 292-4770, email: rtheodor@nsf.gov
- Jorge Valdes Kroff, Program Director, SBE, telephone: (703) 292-7920, email: jvaldesk@nsf.gov
- Kenyatta Johnson, Program Specialist, SBE, telephone: (703) 292-4850, email: kenjohns@nsf.gov
- Jacquelyn H. Clements, Senior Program Officer - NEH, NEH, telephone: (202) 606-8475, email: jclements@neh.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.

For questions related to DLI-DEL Fellowships, contact:

Suha Kudsieh – NEH, telephone: (202) 606-8593, email: skudsieh@neh.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.E.6 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

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 System of Record Notices, NSF-50, "Principal Investigator/Proposal File and Associated Records," and NSF-51, "Reviewer/Proposal File and Associated Records." 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
Policy Office, Division of Institution and Award Support

Office of Budget, Finance, and Award Management
National Science Foundation
Alexandria, VA 22314

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